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High-growth countries are more efficient in using their capital investment

Table 2. Investment rate and its efficiency in developing countries, 1971-1992

Country grouping and item	*1971-1981*	*1982-1992*	*1971-1992*
Developing countries			
GDP growth	5.7	4.2	5.0
Investment rate	21.7	21.7	21.7
Incremental capital-output ratio	3.2	3.7	3.2
Inverse of capital-output ratio	0.31	0.27	0.31
High-growth countries			
GDP growth	7.1	6.9	7.0
Investment rate	22.2	25.6	23.8
Incremental capital-output ratio	2.4	2.9	2.5
Inverse of capital-output ratio	0.42	0.34	0.40
Medium-growth countries			
GDP growth	5.3	2.8	4.1
Investment rate	21.3	19.6	20.5
Incremental capital-output ratio	3.6	3.7	3.4
Inverse of capital-output ratio	0.28	0.27	0.29
Low-growth countries			
GDP growth	3.0	0.6	1.8
Investment rate	21.7	17.4	19.6
Incremental capital-output ratio	4.6	6.6	4.9
Inverse of capital-output ratio	0.22	0.15	0.20

Source: *World Economic Outlook* (Washington, D.C., International Monetary Fund, May 1993).

Hence, there is a justification for Governments not only to encourage higher investment rates, but also to ensure that scarce investment resources are used efficiently. The efficiency of both private and public investment is influenced by the broader policy environment in which they operate. Constraints on new firms competing in the existing market, relative price misalignment, mandatory credit-allocation schemes and excessive controls and licensing requirements on investment all contribute to a lowering of the rate of return on investment, and hence a decline in its efficiency. The adoption of a low-protection trade regime and the encouragement of domestic market deregulation can have a significant impact by increasing competitive pressures on domestic enterprises to improve their efficiency and to achieve internationally competitive performance standards.[1, 2] On the other hand, outward-looking policies could also promote investment efficiency, as exemplified by the experience of countries in East Asia, including, more recently, China. Meanwhile, conditions favourable to the development of technological capabilities and human resources can also promote productivity growth and investment efficiency, as discussed in the sections below.

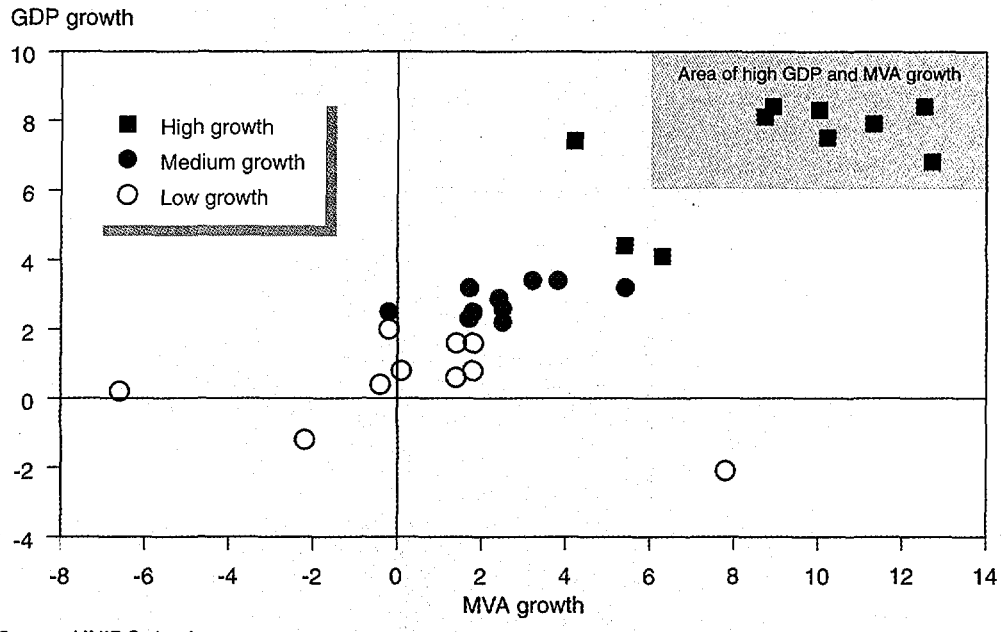
Type of investment

Does the sectoral allocation of investment affect economic growth? In particular, does industrial investment yield higher social returns than other forms of investment? Should Governments and international agencies be concerned about the size of the manufacturing sector and its relative contribution to national income? There is an important tradition in economics that would give an affirmative answer to the foregoing questions. That manufacturing is an engine of growth role is supported by the statistical relationship between the growth of manufacturing and the growth of national income. Fast-growing economies tend to have a relatively rapid rate of manufacturing growth and, conversely, slow-growing economies tend to have a slow rate of manufacturing growth (see figure 2).

According to a long-held view, a dynamic relationship exists between the growth of manufacturing output and the growth of productivity, which is attributed to learning by doing and technological improvements. There are two additional arguments that attach special importance to the growth of the manufacturing sector. The first

Manufacturing plays a significant role in economic growth

Figure 2. Average rates of GDP and MVA growth in selected countries, 1970-1995
(Percentage)



Source: UNIDO database.

Note: Countries were divided into three equal groups, classified as high-growth, medium-growth and low-growth on the basis of their ranking in GDP during the period 1970-1995. Each point on the graph represents the average rates of GDP growth and investment of a selected country within each group.

relates to the symbiotic relationship between the manufacturing and service sectors. The service sector depends heavily on the size and rate of growth of the manufacturing sector, and the pace of industrial growth generates demand in the service sector. The second argument relates to the links between manufacturing output and exports. Expanding trade in manufactured products increases the availability of more specialized intermediate inputs and machinery from trading partners. In addition, it gives the domestic economy access to many types of productive knowledge not embodied in material inputs. The extent of international trade in manufactured products therefore affects the rate of productivity growth and the overall rate of growth of the economy.*

Is investing in physical capital sufficient to sustain growth? A further direction for empirical investigation has been to examine whether the composition of investment makes a difference to growth performance. The simplistic notion that capital accumulation alone is sufficient to guarantee long-term growth has often been challenged. Sustained growth depends on human capital and technological knowledge as well as on the accumulation of physical capital. If the concept of capital is broadened to include human capital—that is, the knowledge and skills embodied in the workforce—and the investment made in expanding the stock of human capital is added to investment in physical capital (see box 2), then the empirical evidence shows a much stronger relationship between investment (physical and human) and economic growth.

A recent study shows that in the high-growth economies of East Asia, roughly two thirds of growth during the period 1960-1985 can be explained by a combination of investments in physical and human capital; the remaining one third is a residual, at least some of which is due to technical change that can be attributed to the growth

*P. M. Romer, "Two strategies for economic development using ideas and producing ideas", *Proceedings of the World Bank Annual Conference on Development Economics: Supplement to World Bank Economic Review* (Washington, D.C., World Bank, 1992), pp. 63-92, emphasizes the importance of the transmission of ideas.

of technological capital.* The study also shows that 34 per cent of the difference in predicted growth rates between the high-growth group in East Asia and the countries of Latin America is due to higher rates of physical investment, while 38 per cent of the growth difference is due to higher investment in human capital. On the other hand, differences in human capital are the predominant factor in explaining the growth difference between Africa and the high-growth countries of East Asia. In such comparisons, however, many of the differences remain unexplained. The analysis fails to reflect particular aspects of economies in Latin America and sub-Saharan Africa that contribute to a poor growth performance, which is likely to be, at least in part, the result of government policy in those regions.

There is a close relationship between the accumulation of physical capital and technological change. If productivity growth is related to the accumulation of physical–and human–capital, and is thereby made endogenous, then the increase in capital will at the same time contribute to technical progress. Empirical evidence has confirmed the close correlation between investment and technological progress, which, together, show a strong interrelationship with economic growth (see box 3).

*These results are reported in World Bank, *The East Asian Miracle: Economic Growth and Public Policy*, World Bank Policy Research Report (Washington, D.C.,1993), table 1.9.

Investment in human capital and technology needs to be considered

Box 2. Definition of investment

A simple definition of investment is expenditure for purposes other than immediate consumption. It is helpful, however, to distinguish between different forms of investment, which can have different growth effects. Three separate categories fall under the broad definition of investment:

(a) Additions to physical capital, which can, in turn, be subdivided into equipment and structures;

(b) Additions to human capital primarily through expenditure on education;

(c) Additions to technological capital in the form of expenditure on research and development.

Technological change affects the investment rate and hence growth

Box 3. Investment, technical progress and output growth

The rate of technological change, or innovation, is undoubtedly an important factor affecting the rate of investment, as most technological innovation is in new machinery and equipment. Clearly, the separation customarily made in the neoclassical growth model *à la* Solow between investment and innovation is artificial.[a]

A number of recent empirical studies for testing the endogenous growth theory reveal the interrelationship between technical progress and investment. For example, it has been suggested that the simultaneous movement of investment ratios and growth rates observed in the cross-country data sets may be largely caused by the action of a third factor, namely, technological innovation.[b] There is also a close correlation between technological progress and investment shown by a positive and statistically significant correlation between total factor productivity growth and the ratio of investment in equipment to GDP for a large sample of developing countries.[c] An extremely high rate of productive investment in new capital goods embodying advanced, often imported, technology has been critical for successful transformation and upgrading of the newly industrializing economies (NIEs) of East Asia, where late industrialization has been proceeding through learning and adaptation of foreign technology.

[a]Klaus Schmidt-Hebbel, Luis Serven and Andres Solimano, "Savings and investment: paradigms, puzzles and policies", *The World Bank Research Observer*, vol. 11, No. 1 (1996), pp. 87-117, and Yilmaz Akyuz and Charles Gore, "The investment-profits menu in East Asian industrialization", *World Development*, vol. 24, No. 3 (1996), pp. 461-470.

[b]Robert G. King and Ross Levine, "Capital fundamentalism, economic development and economic growth", *Carnegie-Rochester Conference Series on Public Policy*, No. 40 (June 1994), pp. 259-300.

[c]J. Bradford De Long and Lawrence H. Summers, "How strongly do developing economies benefit from equipment investment?", *Journal of Monetary Economics*, No. 32 (1993), pp. 395-414.

What type of physical investment matters? It has been argued that physical investment in equipment is considerably more important in growth terms than the equivalent investment in buildings. The premise is based on an external benefit whereby returns to society from investment in equipment are judged to exceed those to individual investors as a result of the transfer of knowledge and learning that accompany such investment. If the investment in equipment of one firm embodies new technology, other unrelated firms can benefit from the spread of knowledge arising from that investment. The argument in favour of the special role of investment in equipment says nothing directly about whether the equipment involved should be locally produced or imported. It does stress the need to keep down the relative price of machinery and equipment in order to allow savings to go further and purchase a greater quantity of equipment, which can be interpreted as an argument against protecting domestic producers of equipment, even in the presence of important external benefits from local production.

Although the hypothesis that investment in equipment plays a special role in growth is controversial, with empirical evidence both for and against it, the theory is in line with the interpretation of many economic historians concerning the critical role of investment in equipment in the long-term growth of currently industrialized economies and high-growth NIEs of East Asia.*

Does public investment drive out private investment? Recent studies have emphasized the differential effect of public and private investment on growth.[3, 4, 5] That is partly due to the increasing role that private investment has played in economic development over the past decades as a result of the rapid trend towards liberalization of the world economy. In industrialized countries, the major share of investment, as conventionally measured, comes from the private sector. In recent years, approximately 20 per cent of GDP has been invested in those countries, less than one fifth of which has been public sector investment.[6] The proportion of investment accounted for by the public sector is more variable in developing countries, depending on the size of the public sector and the level of development. In countries such as Chile or Thailand, the public sector share of investment is similar to that in industrialized countries. On the other hand, it may exceed 50 per cent in countries such as India and those in sub-Saharan Africa (see table 3).[7, 8]

*The case was put by J. Bradford De Long and Lawrence H. Summers, "How strongly do developing economies benefit from equipment investment?", *Journal of Monetary Economics*, vol. 32, No. 3 (1993), pp. 395-414.

Private investment accounts for an increasing share of total investment in many developing countries

Table 3. Investment by region, weighted averages, 1970-1994
(Percentage of GDP)

Region and type of investment	*1970-1979*	*1980-1989*	*1990-1994*
East Asia			
Private	18.0	19.4	25.5
Public	6.6	8.2	8.5
Total	24.6	27.6	34.0
Latin America			
Private	13.2	14.1	14.7
Public	6.8	6.3	5.4
Total	20.0	20.4	20.1
Sub-Saharan Africa			
Private	12.2	9.8	10.0
Public	13.6	9.5	6.3
Total	25.8	19.3	16.3

Source: International Finance Corporation, *Trends in Private Investment in Developing Countries, 1990-1994*, Discussion Paper No. 28 (Washington, D.C., 1995).

Different types of public investment are likely to have different effects on private investment and overall growth. For example, public investment in basic infrastructure, such as roads, ports and telecommunications, which support private investment projects, is likely to have a major impact on growth and could attract private investment, whereas public investment in industrial and commercial projects, where public enterprises compete with private firms, may discourage private investment and have a less favourable impact on growth.

Direct public sector investment in physical and human capital formation may also be needed to overcome market failure. In East Asia and elsewhere, investment in human capital formation to create an educated and skilled workforce has contributed significantly to growth. In the low-income countries of Africa and South Asia, market failure is widespread and investment in the private sector constrained. In such circumstances, public investment in infrastructure can act as a powerful catalyst to investment in the private sector and growth. It is noteworthy, however, that in recent years there has also been increasing participation by the private sector in the development of physical and human capital in developing countries.

Does foreign direct investment have a differential effect on growth as compared with investment

*of domestic resources?** Worldwide flows of FDI have increased dramatically in recent years. FDI is a composite bundle of assets, covering resources for investment, transfer of technology and other so-called intangible assets. The revival of interest in capital accumulation and economic growth has encouraged research into the channels through which FDI might be expected to promote economic growth. Since FDI is a composite of capital, know-how and technology, its impact on growth is multiple. The various effects can be both positive and negative.

Positive effects arise mainly through transfer of technology and other intangible assets, such as skills and know-how, which lead to improved efficiency in the use of resources and increased productivity. Through capital accumulation, FDI can enhance growth by encouraging the incorporation of new inputs and technologies into production in the recipient country. Through transfers of knowledge, FDI is expected to improve existing labour training and the acquisition and diffusion of skills as well as to introduce new management practices and organizational arrangements. Negative economic effects can arise from FDI if the market power of the transnational corporation allows it to generate abnormally high profits and transfer them abroad, rather than reinvest them in the local economy.

There is a substantial body of evidence to show that the productivity of transnational corporations is superior to that of domestic firms. Likewise, numerous empirical studies confirm the presence in host countries of spillover effects from transnational corporations that create benefits for the local economy. Transnational corporations can also assist domestic exporters in gaining access to international markets and building linkages with international networks. On the whole, the evidence seems to support the view that FDI tends to have net positive effects on the economy of the host country in terms of productivity and efficiency gains.

Do such gains translate into higher long-term economic growth?** Here again, recent empirical evidence suggests that the contribution of FDI to growth in developing countries is positive, although the effectiveness of FDI in promoting growth is dependent on the type of trade regime in place in the host country. FDI under a regime of open trade is likely to promote growth. That can be explained by the higher rate of technical innovation and spillover benefits associated with FDI as opposed to domestic investment.

*E. M. Graham, *Foreign Direct Investment in the World Economy*, IMF Working Paper (Washington, D.C., International Monetary Fund, June 1995), pp. 120-135, summarizes the recent evidence on this issue.

**E. Borensztein, J. De Gregorio and J.-W. Lee, *How does Foreign Direct Investment Affect Economic Growth?*, IMF Working Paper (Washington, D.C., International Monetary Fund, 1994), concentrates on the impact of FDI on growth, as does V. N. Balasubramanyam, M. Salisu and D. Sapsford, "Foreign direct investment and growth", *Economic Journal*, vol. 106, No. 434 (January 1996), pp. 92-105.

Key determinants of investment: some policy concerns

If the growth of manufacturing and the growth of national income are intrinsically linked, the crucial policy question is how best can the expansion of manufacturing be stimulated. Given the links between investment and economic growth, a similar relationship should hold between manufacturing investment and growth. In the following analysis, therefore, the focus will be on manufacturing investment as a means of stimulating manufacturing growth.

In all countries, investment in manufacturing is subject to sharp fluctuations, largely owing to the complex interrelationship between income and investment, whereby investment is both a cause of and a response to changes in income. The obvious reasons for investment decisions are reasonably well understood, although the precise underlying factors may be more difficult to disentangle.

Investment-profit nexus

If the aim is to maximize long-term profits, then a firm will decide to invest if the investment adds more to revenue than to costs. Since the focus is on the long term, the discounted stream of future revenue should therefore exceed the discounted stream of future costs, both revenue and costs being discounted at an interest rate that reflects the cost of funds to the firm. Under such conditions, the investment must add to the net worth of the firm and technically can be said to have a positive net present value. Hence, factors that raise expected long-run revenue, reduce expected long-run costs or lower the expected interest rate on funds will have a positive effect on investment.

On the cost side, shortages of skilled labour or particular material inputs are likely to cause either cost increases or shortfalls in production. Some shortages might be remedied by a change of policy coupled with adjustments in the overall policy framework. Removal of barriers to labour mobility, in the form of wage controls or an active State-run training programme, may assist in dealing with the issue of skill shortages. Similarly, if scarce material imports are available abroad but not

domestically, liberalization of import controls can promote fuller utilization of capacity. Fluctuations in exchange rates will have an impact on costs as well as revenue, and will be significant where imports are a high proportion of either investment or operating costs. Tax policy can also be influential, since taxes on inputs raise costs to investors and taxes on profits reduce the net revenue accruing from an investment.

Most countries currently have some form of investment incentive programme designed to encourage investment by reducing the tax burden on firms. Tax concessions are the most commonly encountered investment incentives. They can take a variety of forms and can be automatic or discretionary, general or selective, temporary or permanent. Recent empirical literature examines the impact of specific types of tax incentive commonly used in developing countries.[9] Preferential corporate tax rates are found to be a poor instrument for promoting new investment because the tax concession is not directly related to the volume of new investment. The granting of tax holidays creates the additional problem of encouraging the shift of taxable income into the firm during the holiday period. Investment tax credits for research and development (R & D) and the acquisition of equipment embodying advanced technologies have been found empirically to be more effective.[10]

Some of the most obvious influences on revenue consist in responses to economic policy. The growth of demand in a particular market may be strongly influenced by the wider macroeconomic environment, so that deflationary fiscal and monetary policies leading to a contraction of real disposable incomes will reduce current demand. Hence, if low current demand influences expected future demand, an investment would be postponed. Similarly, an inappropriate exchange rate policy in the form of an overvalued rate for the local currency can give an inadequate incentive to manufacturing investment because of the obstacle it creates for achieving price competitiveness in export markets.

Surveys of manufacturing have often revealed that the rate of return that investors require to justify their new investment is considerably higher than prevailing real interest rates.* Anecdotal evidence suggests that required real rates of return are even higher, at levels of 20 per cent or more, in developing countries and economies in transition. Such high returns are normally rationalized as a risk premium, given the uncertainty attached to manufacturing investment, particularly in low-income economies.

Table 4 provides a regional comparison of the average rates of return on manufacturing investment by corporations in the United States of America from 1980 to 1993. The figures indicate that, on average, manufacturing investment in developing countries recorded a higher return compared with that in industrialized countries during the period, providing an incentive for foreign investment by industrialized countries. During the 1980s, Asia was the most profitable regional location and Latin America the least profitable. During the early 1990s, however, the profitability of Latin America improved, while that of Asia declined considerably.

Manufacturing investment in developing countries provides higher returns compared with that in industrialized countries

Table 4. Rates of return on foreign manufacturing investment for United States corporations, 1980-1993 (Average annual percentage returns)[a]

Region or country grouping	*1980-1993*	*1985-1989*	*1990-1993*
Africa	16.7	23.3	16.1
Asia	20.8	24.0	18.2
Latin America	13.1	15.4	17.4
Industrialized countries	13.0	17.5	13.1

Source: United Nations Conference on Trade and Development, *World Investment Report 1995* (Geneva, 1996).

[a]Returns are presumed to be net of local tax.

Uncertainties depress investment

In addition to the investment-profit nexus, instability can also depress investment because of the heightened uncertainty that it creates (see box 4). Sources of uncertainty relevant to investment decisions are diverse. They include uncertainty regarding such matters as the demand for and prices of output, interest rates and the real exchange rate, tax policies, the political and social situation and the credibility of policy reforms. Adequate levels of manufacturing investment will not be forthcoming in an environment of high and fluctuating inflation, where nominal interest rates are high and where exchange rates are either unstable

*For example, a figure of between 17 per cent and 20 per cent in normal terms is reported in the United Kingdom of Great Britain and Northern Ireland, which is equivalent to a real return of more than 15 per cent. See S. Bond and T. Jenkinson, "The assessment: investment performance and policy", *Oxford Review of Economic Policy*, vol. 12, No. 2 (1996). For an example of a survey of investors' intentions in a developing country, Nepal, see R. Chitrakar, *Foreign Investment and Technology Transfer in Developing Countries* (Avebury, Aldershot, 1994).

or significantly overvalued. As evidence of this, the strong investment performance of the economies of East Asia during the period since 1980 can be compared with that of many economies in Latin America, where macroeconomic instability provides a key to explaining the much weaker investment performance in the region.

Certainly, the investment pause—the weak and delayed investment observed in the aftermath of adjustment programmes in developing countries—can be explained by the problem of the credibility of policies, as well as by the difficulties of maintaining macroeconomic stability on a sustainable course. The credibility problem can pose a major constraint on fixed investment in reforming economies. Unless investors are fully convinced that reforms are permanent, their concern that reforms may be reversed will become a key consideration in their investment decisions,[11,12] because the possibility of policy reversal increases the option value of waiting before undertaking investment projects. When reform policies are perceived as unsustainable or as only short-term measures in the light of the marked social costs involved, the time horizons of decisions made by investors may be substantially shortened. This may be the chief obstacle to eliciting the desired responses of the private sector to policies of economic reform.[11]

Investors prefer to wait and see in an environment of high uncertainty

Box 4. Theory of investment under uncertainty

The intrinsically volatile nature of private investment is well recognized in any conventional Keynesian investment function, since an investor's expectation of future income streams from investment introduces an uncertainty as a key factor affecting investment decisions. However, a recent, rapidly growing body of literature on investment makes the powerful investment-deterrent effect of uncertainty a focal point of analysis.[a] The new theory is built on the following distinctive characteristics surrounding fixed investment decisions:[b]

(a) Investment decisions inevitably have to face uncertainty about future returns and costs. At best, investors can attach subjective probabilities to the possible outcomes;[c]

(b) Most fixed capital investments are partly or completely irreversible: the initial cost of investment is at least partly sunk. Hence, an investment decision is a choice to incur a sunk cost;

(c) Investors can control the timing of investment and postpone it in order to acquire more information about the future. They have the option of delaying the investment.

In light of the partial or complete irreversibility of capital investments, investors have an incentive to postpone commitments and wait for new information. The option value of waiting can be considerable, especially in a highly uncertain environment. According to such an option-based investment model, the optimal investment policy should balance the value of waiting for new information with the cost of postponing the investment in terms of foregone returns. The anticipated return must exceed the purchase and installation cost by an amount equal to the value of keeping the option alive.

The critical threshold that must be reached by the expected returns required to trigger investment is influenced by uncertainty and irreversibility. If volatility increases, the profitability threshold for investment will also rise. Under such conditions, firms will be more reluctant to invest, in order to avoid being caught with too much capital should the future turn out to be worse than expected. Hence, the new approach concludes that uncertainty and instability may be seriously harmful to fixed investment decisions, and that changes in uncertainty may have a strong effect on aggregate demand.

A number of studies have confirmed that high levels of uncertainty and instability severely deter private investment. An increase in the volatility of interest rates reduces investment, while sunk costs of entry may discourage firms from moving into export activities that would appear profitable in the light of the current level of the real exchange rate. Therefore, the volatility of the variables may have a more important effect on investment than do their actual levels. Focusing on the effects of credibility, Iberra shows that the estimated path of the probability of reversal of reform explains the slump in private investment following trade liberalization during the late 1980s in Mexico.[d]

Other studies also confirm that macroeconomic instability, measured by the volatility of the terms of trade, levels of inflation, the real exchange rate etc., has a visible adverse effect on private investment, and that private investment is profoundly affected by political and social instability, measured by the degree of income inequality, rapid government turnover or indicators of enforcement of property rights.

The policy implications of the new literature on the theory of investment under uncertainty can be far-reaching in relation to the pace and sequence of reform policies. For example, the theory suggests

that if the timing of investment is affected by uncertainty, ensuring the stability and predictability of the policy environment can assume pivotal importance in restoring the confidence needed to encourage private investment, rather than just changing price levels and policy incentives.

[a]Avnish K. Dixit and Robert S. Pindyck, *Investment under Uncertainty* (Princeton, N.J., Princeton University Press, 1994); Klaus Schmidt-Hebbel, Luis Serven and Andres Solimano, "Savings and investment: paradigms, puzzles and policies", *The World Bank Research Observer*, vol. 11, No. 1 (1996), pp. 87-117; Luis Serven and Andres Solimano, eds., *Striving for Growth after Adjustment: the Role of Capital Formation* (Washington, D.C., World Bank, 1993); Luis Serven, "Irreversibility, uncertainty and private investment: analytical issues and some lessons for Africa", paper presented at the African Economic Research Consortium Workshop, Nairobi, May 1996; Pasquale Scaramozzino, "Investment irreversibility and finance constraints", *Oxford Bulletin of Economics and Statistics* (forthcoming, 1997).

[b]Dixit and Pindyck, op. cit.

[c]Here, it is useful to make a clear distinction between the two interrelated concepts used in finance and investment literature: uncertainty and risk. For risk, the distribution of outcomes may be summarized by a probability distribution. In contrast, with uncertainty, no probability distribution can be attached to the expectation of an outcome. Risks can be managed, to the extent they can be quantified and anticipated with a known degree of probability. Thus, Serven and Solimano (*Striving for Growth after Adjustment . . .*, p.106) have noted that: "The effect of uncertainty is independent of investors' risk preferences or the extent to which risks may be diversifiable. Investors may be risk-neutral and their risks diversifiable, but investment would still be hostage to the perceived degree of uncertainty."

[d]Luis Alberto Ibarra , "Credibility of trade policy reform and investment: the Mexican experience", *Journal of Development Economics*, vol. 47 (1995), pp. 39-60.

The impact of uncertainty may be most relevant to investment in the manufacturing sector, where sunk costs of entry and exit are generally high. In particular, the deterrence of the investment by the resulting prevalence of short-term considerations can be most acutely felt in more skill- and knowledge-intensive industries for which the learning and gestation period is longer. Thus, the perception that reforms may be unsustainable may have a particularly adverse long-term effect on industrialization and diversification, as is the case in Ghana (see box 5).[13]

In general, investors face a choice between irreversible fixed investment and more liquid assets. Faced with investment irreversibility and doubts about policy, they are likely to exercise an option to wait. As a result, a revival of private investment is hard to stimulate. Since the sustainability of a reform programme depends on its ability to generate sufficient fixed investment, the economy could remain trapped in a situation of perpetual low investment. Lack of sufficient investments may further delay growth, increase social hardship and ultimately force the reversal of the reforms, confirming the initial scepticism of investors.

High uncertainties affect manufacturing investment

Box 5. Impact of uncertainty on the investment performance of Ghana

The case of Ghana provides a striking example of the poor response of private investment to reforms. During the reform years of 1985 to 1991, Ghana "had made great strides in creating a positive environment for increased investments and exports. The foreign exchange regime is favourable, and while the investment climate is not perfect, it has improved significantly."[a] Despite the progress in policy reforms, the response of the private sector has been poor compared with the expectations of the Government and donor agencies. "In the reform year, new private investments fell well below planned targets, and capacity utilization of existing firms remained low. By 1990 the manufacturing sector (which is mainly private) utilized only 37 per cent of its capacity after rising from less than 20 per cent in 1983. Low investment in the manufacturing sector is also reflected in the fact that during 1984-1991, the manufacturing sector contribution to GDP averaged only 9 per cent, compared to the peak figure of 20 per cent in 1976. At its lowest point, in 1983, its contribution was 7 per cent."[b]

Aryeetey (1994) explains such a situation in the context of the theory of principal and agent, that is, Government and the private investor, respectively. An agent has to make an investment decision in an environment of high uncertainty, where the policy credibility with regard to the sustainability of reforms in the medium to long term is a main source of anxiety. In such an environment, the agent chooses to put capital into short-term assets in sectors of the economy with relatively lower sunk costs

Box 5. *(continued)*

and shorter turnover periods, such as trading, rather than into long-term physical investments. Consequently, the distributive trade subsector becomes a booming sector. Instead of embarking on a steady path towards industrialization and diversification, "Ghana has become a nation of traders. There have been newspaper reports of investors obtaining international loans to import inputs for their manufacturing plants with public guarantees and then diverting these to import finished consumer items for retailing."[c]

[a]*Trade and Investment Project Document* (Washington, D.C., United States Agency for International Development, 1992) cited in Ernest Aryeetey, "Private investment under uncertainty in Ghana", *World Development*, vol. 22, No. 8 (1994), pp. 1211-1221.

[b]Ibid.

[c]Ibid.

Notes

[1]C. Kirkpatrick, "Does trade liberalization assist third world industrial development?", *International Review of Applied Economics*, vol. 9 (1995), pp. 22-41.

[2]J. Sachs and A. Warner, "Economic reform and the process of global integration", *Brooking's Papers on Economic Activity*, No. 1 (1995).

[3]Luis Serven and A. Andres Solimano, eds., *Striving for Growth after Adjustment: the Role of Capital Formation* (Washington, D.C., World Bank, 1993).

[4]R. Ram, "Productivity of public and private investment in developing countries: a broad international perspective", *World Development*, vol. 24, No. 8 (1996), pp. 1371-1378.

[5]W. Easterly and S. Rebelo, "Fiscal policy and economic growth: an empirical investigation", *Journal of Monetary Economics*, vol. 32, No. 3 (1993), pp. 417-458.

[6]International Monetary Fund, "Saving in a growing world economy", *World Economic Outlook* (Washington, D.C., May 1995), pp. 67-89.

[7]David Goldsbrough and others, *Reinvigorating Growth in Developing Countries*, International Monetary Fund Occasional Paper 139 (Washington, D.C., International Monetary Fund, July 1996).

[8]World Bank, *Adjustment in Africa: Reforms, Results, and the Road Ahead* (New York, Oxford University Press, 1994).

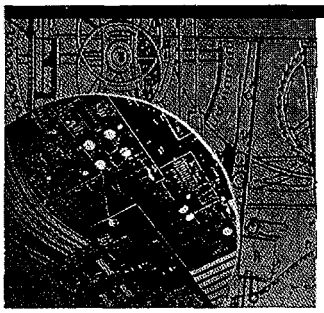
[9]Klaus Schmidt-Hebbel, Luis Serven and Andres Solimano, "Saving and investment: paradigms, puzzles and policies", *World Bank Research Observer*, vol. 11, No.1 (1996), pp. 61-86.

[10]J. M. Mintz, "Corporate tax holidays and investment", *World Bank Economic Review*, vol. 4 (1990), pp. 81-102.

[11]Dani Rodrick, "Policy uncertainty and private investment in developing countries", *Journal of Development Economics*, No. 36 (October 1991), pp. 229-242.

[12]Luis Serven, "Irreversibility, uncertainty and private investment: analytical issues and some lessons for Africa", paper presented at the African Economic Research Consortium Workshop, Nairobi, May 1996.

[13]Ernest Aryeetey, "Private investment under uncertainty in Ghana", *World Development*, vol. 22, No. 8 (1994), pp. 1211-1221.



2

Global industrial change: the role of investment

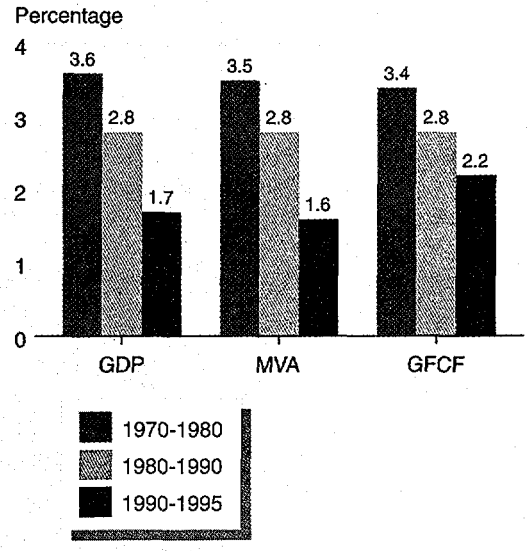
One of the main features of global economic development over the past two and a half decades has been the prolonged sluggishness of average world GDP growth. After expanding strongly at approximately 5 per cent per year during the post-war golden age of unparalleled prosperity from 1950 to 1973,[1] the world economy overheated in the early 1970s because of mounting inflationary pressures. The oil price rises instituted by the Organization of Petroleum Exporting Countries (OPEC) in 1974 marked the beginning of a prolonged period of economic downturn, which persisted into the 1990s. The average annual rate of growth of GDP fell steadily from 3.6 per cent during the 1970s to 2.8 per cent and 1.7 per cent respectively during the 1980s and the first half of the 1990s (see figure 3).

In industrialized countries, the annual GDP growth dropped by almost half, from 3.2 per cent during the 1970s to 1.7 per cent during 1990-1996. The fall was even sharper for economies in transition, many of which are still facing considerable problems in their reform process. In those economies, a positive growth rate of 5.4 per cent during the 1970s was quickly reversed into a negative rate of -8.2 per cent during the 1990s. In contrast, the decline in developing countries as a whole was less severe with average GDP growth declining from 5.7 per cent to 4.9 per cent during the period. At the same time, growth in developing countries as a whole outpaced that of industrialized countries and economies in transition.

Capital formation contributed to a high percentage of world economic growth during the golden age, a period characterized by considerable growth in manufacturing, as many developing countries aggressively pursued industrialization as a strategy for rapid socio-economic development. For many countries, however, the growth of capital formation and manufacturing declined rapidly from the early 1970s in tandem with the period of slower world economic growth. Growth of world gross fixed capital formation and MVA fell steadily

Investment and manufacturing growth fell steadily between 1970 and 1995

Figure 3. Growth rates of world GDP, MVA and GFCF, 1970-1995



Source: UNIDO database.

Note: GFCF denotes gross fixed capital formation.

from 3.4 per cent and 3.5 per cent per year, respectively, during the 1970s to 2.2 per cent and 1.6 per cent per year, respectively, during the first half of the 1990s, while their respective contributions to GDP growth* also dropped from 21.7 per cent and 23.4 per cent to 17.4 per cent and 19.3 per cent during the same period.

Such trends in aggregate performance masked vast differences in economic and industrial performance among various developing countries and economies in transition. While many countries

*The contribution to GDP growth is calculated by multiplying the respective growth rates of developing countries by their share in GDP at the base year. The percentage share of the contribution is the ratio of the contribution to GDP growth expressed as a percentage.

experienced declining economic growth linked to decreasing investment and falling MVA growth rates, a number, notably in East and South-East Asia, were still able to sustain robust growth supported by high rates of investment and industrialization. The sections below offer some insights into the pattern of economic growth, particularly in investment and manufacturing, in developing countries and economies in transition from 1970 to 1995.

DEVELOPING COUNTRIES

In developing countries, economic performance over the last 25 years has been influenced by several external shocks, including two oil crises, an economic slowdown in the industrialized countries, a sharp drop in the terms of trade, a sharp rise in real interest rates on a global level in the 1980s and external payment problems (see box 6). The annual GDP growth in developing countries slowed from 5.7 per cent during the 1970s to 3.5 per cent during the 1980s. It then gathered momentum, growing at a rate of 4.7 per cent per annum during the 1990s, as structural adjustment programmes were established (see table 5).

Developing countries felt severe repercussions of external shocks in the 1980s

Box 6. External shocks and the debt crisis in the 1980s

The world economy experienced a turbulent period of uncertainty during the 1980s, the major changes being:

(a) The surge in oil prices during 1979, which raised world petroleum prices by more than 100 per cent from 1978 to 1980, and by a total of 150 per cent from 1978 to 1981;

(b) A restrictive monetary policy on the part of the industrialized countries to contain the inflationary impact of the rise in oil prices that raised the London Interbank Offered Rate for dollar-denominated credits from just over 10 per cent in 1979 to 19 per cent in 1981;

(c) A major decline in the trade in non-oil goods of developing countries, caused by the recession, mainly during the period 1981-1982;

(d) The unfavourable effects of the above-mentioned developments, which combined to undermine the credit standing of many of the countries affected and brought the supply of foreign bank credit to an abrupt halt.

The period from 1974 to 1982 was characterized by large capital flows. The surge in oil prices during the periods 1973-1974 and 1979-1980 generated a massive increase in foreign exchange earnings on the part of the oil-exporting countries, which many of them were unable to absorb domestically. At the same time, many industrialized countries sought to offset the resulting inflationary pressures by pursuing restrictive domestic policies which limited their absorption of capital flows from the oil exporters. A large number of developing countries were able, therefore, to increase their foreign borrowing to a significant extent, often on relatively favourable terms.

The severe external shocks of the 1980s forced developing countries to make adjustments, both by limiting demand and by significant restructuring, in order to increase export competitiveness. Permanent restructuring is, however, a time-consuming process, while external payments crises require immediate attention. As most developing countries lacked sufficient foreign exchange to absorb the external shocks, they were forced to reduce macroeconomic growth and implement particularly severe import cutbacks. Still worse, they tended to make adjustments by cutting investment more deeply than consumption.

More importantly, many developing countries were forced to make a sharp reduction in the import of industrial intermediate goods and capital goods in response to mounting current account deficits. As most developing countries were at an embryonic stage of development and were so highly dependent on the import of capital goods and basic industrial goods, a reduction in import capacity tended to depress manufacturing output.

Source: J. J. Polak, *Financial Policies and Development* (Paris, Organisation for Economic Co-operation and Development, 1989).

Growth of investment has surpassed that of consumption in the 1990s

Table 5. Main sources of growth in developing countries, 1970-1995
(Percentage)

Type of growth and sector	Average growth rate				Share of contribution to GDP growth			
	1970-1980	1980-1990	1990-1995	1970-1995	1970-1980	1980-1990	1990-1995	1970-1995
GDP	5.7	3.5	4.7	4.6	100	100	100	100
Government consumption	8.1	2.0	3.5	4.7	20.5	10.5	11.4	14.7
Private consumption	5.5	3.6	5.3	4.7	60.6	63.3	69.5	63.9
Gross fixed capital formation	7.8	1.9	6.9	5.2	30.7	14.9	34.0	25.4
Agriculture	2.7	3.4	2.4	2.9	10.5	16.0	8.2	13.9
Manufacturing	6.8	4.6	6.9	5.9	21.3	26.0	32.1	22.9
Services	6.3	3.6	4.5	4.9	50.3	49.4	46.4	47.6

Source: UNIDO database.

Note: The sum of supply and demand components is not equal to 100 per cent, because the external sector on the demand side and the mining and construction sectors on the supply side are not included.

Growth was widespread during the 1970s, but a series of external shocks since the early 1980s, notably the 1982 debt crisis, revealed vast differences in the ability of various regions to sustain growth. Countries in Asia were, in general, more successful at handling external shocks, while those in Africa and in Latin America and the Caribbean failed to regain their past record of high growth performance, which was reflected in a decline in per capita income.

Investment has been the engine of growth in developing countries, where, in contrast to industrialized countries, aggregate growth in recent decades has been quelled by high investment demand. During the last 25 years, gross fixed capital formation contributed approximately one quarter of GDP growth in developing countries, with the average growth rate exceeding that of private and government consumption. Developing countries also spent a higher percentage of GDP on investment compared with industrialized countries, the rate of investment rising from 23 per cent in 1970 to approximately 26 per cent in 1995 (see figure 4).

Investment growth in developing countries was strongest during the 1970s when it was boosted by a sharp rise in oil prices and aggressive government-led industrialization programmes. It was also stimulated by the easy availability of external financing during a period of high liquidity in oil money. The growth rate fell sharply after the debt crisis, however, to an annual average of 1.9 per cent during the 1980s, as external sources of investment finance dried up. Growth recovered to 6.9 per cent during the 1990s, boosted by strong growth in Asia and recovery in Latin America as structural adjustment programmes helped to restore investor confidence. Meanwhile, private consumption was maintained at a rate of 65 per cent after the debt crisis, while government consumption fell from its high of approximately 20 per cent in 1982 to 14 per cent by 1995, in tandem with the increasing pace of liberalization and privatization.

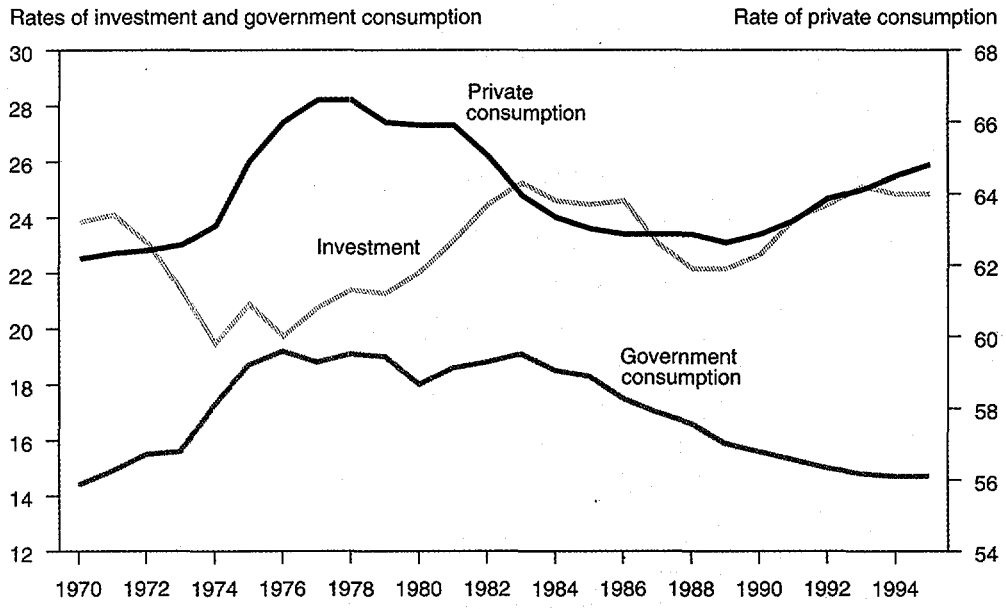
In manufacturing, developing countries on the whole have made good progress over the past two and a half decades. The share of manufacturing in the GDP of developing countries rose from 17.6 per cent in 1970 to 24.1 per cent by 1995, thus effectively overtaking the share of manufacturing in the GDP of industrialized countries. The increase in the growth of manufacturing exceeded growth increases in both agriculture and services throughout the period, and the contribution of manufacturing to GDP growth increased from 21.3 per cent during the 1970s to 32.1 per cent during the first half of the 1990s. Growth was well supported by strong external demand, with the export of manufactured goods growing at 9.3 per cent annually during the period.

Over the years, developing countries as a whole have gradually been moving towards an industrial structure that is based on higher-technology industries rather than dominated by labour-intensive, resource-based low-technology industries.* In 1970, low-technology textiles and petroleum were

*Since rapid technological change has given a new dimension to the classification of industries according to technological content, the analysis contained in the present chapter is based on a broad classification at the three-digit level of the International Standard Industrial Classification of All Economic Activities (ISIC) (see the technical notes included in the statistical annex to the present *Global Report*). Low-technology industries include traditional labour-intensive industries, while high-technology industries refer to industries producing non-electrical machinery, electrical machinery and scientific and professional goods.

Average rate of investment in developing countries has recovered during the 1990s

Figure 4. Rates of investment and consumption in developing countries, 1970-1995
(Percentage of GDP)



Source: UNIDO database.

Note: Investment is defined as gross fixed capital formation.

among the top three manufacturing industries. They have now been replaced by higher-technology industries, such as electrical machinery and transport equipment, as a result of strong growth in those industries, notably in East and South-East Asia. Manufacturing industries in developing countries have also diversified over the years. High-technology industries have registered the strongest growth, at 6.9 per cent per annum, raising their share of MVA from 11.4 per cent in 1970 to 17.1 per cent in 1994.

Latin America and the Caribbean

The road to higher economic growth in Latin America and the Caribbean has not been easy during the last two and a half decades, especially during the 1980s. In common with most other developing regions, Latin America and the Caribbean has been vulnerable to the external shocks mentioned above. Unlike some other developing regions, however, it has not been as successful in implementing the adjustments required to respond to such shocks and other barriers to growth. As a result, the region has not been able to sustain the high growth that it enjoyed during the golden age. Annual GDP growth fell sharply from 5.5 per cent during the 1970s to 1.1 per cent during the 1980s, before recovering to 3 per cent during the first half of the 1990s (see table 6). On average, the annual GDP growth has been lower in Latin America and the Caribbean than the aggregate average growth of the GDP of developing countries during the same period. The per capita income of the region has declined steadily over the years and, by the early 1990s, was overtaken by that of East and South-East Asia, excluding China.

Investment undermined by uncertainties

The slower GDP growth of the region during the period from 1970 to 1995 coincided with a time of falling investment. During the 1970s, the region had the highest rate of investment of all developing countries, with investment accounting for more than 28 per cent of GDP. That pattern changed markedly, however, as a result of the 1982 debt crisis (see figure 5). Many Governments in the region responded to the debt crisis by curtailing investment rather than consumption, which resulted in structural weaknesses that impeded

External shocks caused investment growth to fall steeply during the 1980s

Table 6. Main sources of growth in Latin America and the Caribbean, 1970-1995
(Percentage)

	Average growth rate				*Share of contribution to GDP growth*			
Type of growth and sector	*1970-1980*	*1980-1990*	*1990-1995*	*1970-1995*	*1970-1980*	*1980-1990*	*1990-1995*	*1970-1995*
GDP	5.5	1.1	3.0	3.2	100	100	100	100
Government consumption	5.9	0.8	1.6	3.0	13.4	9.4	6.5	11.4
Private consumption	5.2	1.2	3.9	3.3	64.7	71.9	86.6	70.3
Gross fixed capital formation	6.1	(3.2)	4.3	1.9	30.1	(80.9)	26.4	16.0
Agriculture	3.1	1.9	1.7	2.3	6.1	14.0	5.3	7.8
Manufacturing	5.5	0.4	2.2	2.8	25.2	9.1	17.4	21.6
Services	6.1	1.4	3.5	3.7	58.2	69.7	66.1	59.7

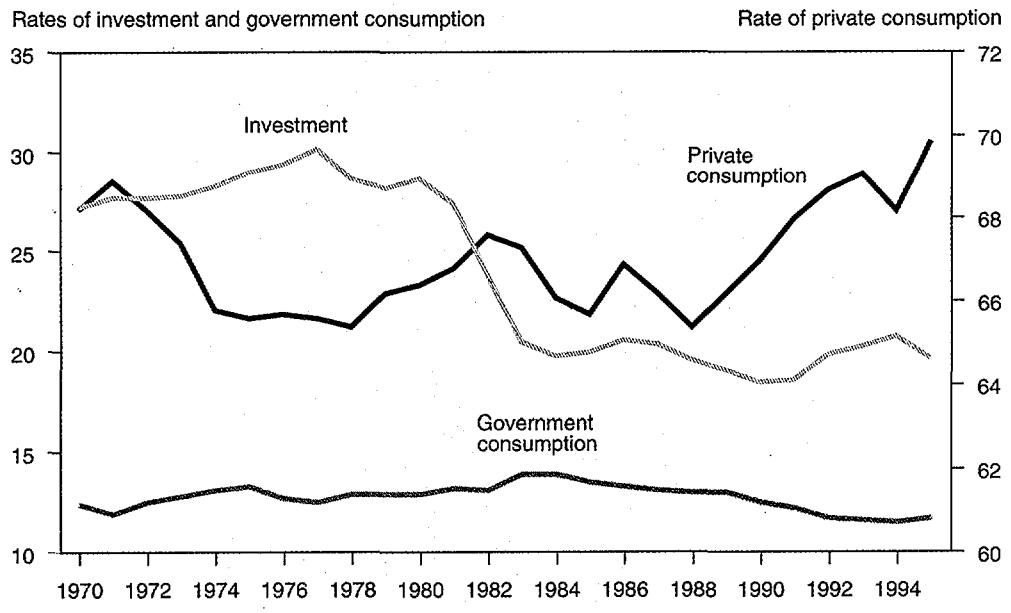
Source: UNIDO database.

Note: The sum of supply and demand components is not equal to 100 per cent, because the external sector on the demand side and the mining and construction sectors on the supply side are not included.

sustainable long-term growth. Annual investment contracted by 4.5 per cent during the period from 1982 to 1985 in the wake of the crisis, while private consumption and government consumption rose by 0.6 per cent and 2.1 per cent respectively during the same period. The rate of investment has also fallen sharply to about 20 per cent since 1982, while the rate of private consumption, seemingly unaffected by the crisis, rose steadily to 77 per cent by 1995.

Rate of investment in Latin America and the Caribbean is still lower than during the 1970s

Figure 5. Rates of investment and consumption in Latin America and the Caribbean, 1970-1995
(Percentage of GDP)



Source: UNIDO database.

Note: Investment is defined as gross fixed capital formation.

Since the early 1990s, investment demand in Latin America and the Caribbean has recovered strongly, stimulated by regional integration programmes, such as the North American Free Trade Agreement (NAFTA) and the Mercado Común del Sur (Southern Cone Common Market), by restored foreign confidence after the implementation of a series of economic reform measures, by the increasing pace of privatization and by the implementation of strategies to boost exports. During the early 1990s, investment growth exceeded growth in private and government consumption, while the rate of investment increased from 18.6 per cent in 1991 to 20.7 per cent in 1994. In early 1995, financial problems re-emerged in Mexico, resulting in the dramatic withdrawal of foreign capital from the region. This had a spillover effect into other countries in the region, especially Argentina, and also led to a sharp contraction in investment in the region. Structural reforms since 1995, however, have restored confidence among foreign investors, as reflected in rising FDI inflows.

The contribution of exports to the GDP of the region increased gradually over the period. Although the share of exports in the GDP of the region increased from 13 per cent in 1970 to 19 per cent in 1995, it was still lower than the aggregate average of developing countries, reflecting the relative isolation of the region from the global economy. The contribution of exports to GDP growth was also offset by the high rate of imports, which exceeded exports throughout the period, except from 1983 to 1992. The persistence of that trend was the main cause of both the debt crisis in the 1980s and the financial instability in Mexico in 1995.

Services grow, manufacturing declines

The region has experienced a declining rate of manufacturing during the last 25 years. MVA grew at a lower rate than services, its share in GDP falling steadily from 25.0 per cent to 22.7 per cent. By contrast, the share of services in GDP rose by 6.1 percentage points to 58.4 per cent by 1995. The contribution of manufacturing to GDP growth also dropped from 25.2 per cent to 17.3 per cent. At the same time, the share of the region in the MVA of developing countries continued to decline. In 1970, the region accounted for slightly more than half of the MVA of developing countries but, by 1995, its share had gone down to approximately one quarter.

The region has been slow in restructuring its industries towards high-technology areas during the last 25 years. Unlike countries in East and South-East Asia, its industries are still dominated by labour-intensive, resource-based, low-technology industries, which accounted for slightly more than 60 per cent of the MVA of the region in 1994. Although medium-technology industries, especially those related to the natural resources of the region, such as petrochemicals, made modest progress by increasing their share of MVA to 26.5 per cent in 1994 from 18.8 per cent in 1970, the MVA share

Investment in high-technology industries is small and falling

Table 7. Investment composition in selected countries in Latin America, 1970-1994

		Share of manufacturing investment			
Country	*Type of industry*	*1970*	*1980*	*1990*	*1994*
Bolivia	Low-technology	97.9	91.6	91.9	91.2
	Medium-technology	1.9	6.4	7.8	5.7
	High-technology	—	1.7	0.2	2.6
Chile	Low-technology	81.1	91.2	81.5	78.7
	Medium-technology	14.2	6.4	13.1	18.3
	High-technology	4.7	2.2	5.3	2.7
Colombia	Low-technology	86.2	73.2	73.9	76.0
	Medium-technology	9.5	20.8	20.5	19.2
	High-technology	3.6	5.0	4.8	4.4
Peru	Low-technology	73.0	69.1	81.0	72.2
	Medium-technology	18.6	22.6	9.1	22.9
	High-technology	5.5	7.2	4.9	2.4
Venezuela	Low-technology	84.4	81.4	84.2	88.4
	Medium-technology	13.1	14.1	12.1	9.2
	High-technology	2.1	4.2	3.5	2.3

Source: UNIDO database.

Note: Industries are classified as low-, medium- and high-technology industries and other manufacturing industries.

of high-technology industries remained unsatisfactory at a stable rate of approximately 12 per cent throughout the period. That figure was lower than the average for developing countries in general.

The industrial structure of Latin America and the Caribbean was reflected in the pattern of manufacturing investment in selected countries of the region (see table 7). For countries such as Bolivia, Chile, Colombia, Peru and Venezuela, high-technology industries accounted for a much smaller, falling percentage of total manufacturing investment, less than 5 per cent on average, compared with that of low-technology industries, which accounted for at least 70 per cent of total manufacturing investment.

Need to restore investment rate to sustain long-term growth

The Latin America and the Caribbean region faces the challenge of restoring its economic growth and enhancing its international competitiveness against a background of rapid globalization. There is an urgent need for the region to bring about a sustained reversal in its declining investment rate. Greater emphasis needs to be placed on the role of investment in economic development rather than consumption. While it is important that living standards should be maintained, if consumption continues to take priority over investment, the result will be unsustainable growth, which will not only reduce future consumption but may give rise to serious social problems. In restoring the investment rate, policy planners must ensure high investment efficiency in order to enhance the competitiveness of the region.

Another challenge facing the region is the need for diversification of its manufacturing and export bases. Progress in that direction, to date, has been modest. In the face of rapid technological development and growing competition, however, a move into high-technology, high-value-added industries is imperative. A larger proportion of new investment, therefore, needs to be channelled efficiently into high-technology and export-oriented industries (see box 7). There is also a need for the region to continue to implement reform and liberalization measures. Greater emphasis should be placed on the private sector and foreign investment, and investment should also be increased in the development of technological resources and human capital. An environment conducive to investment and macroeconomic stability are two important prerequisites for successful industrial restructuring and the establishment of higher value-added industries.

New investment needs to support export-oriented industrialization

Box 7. The export drive of Latin America: the key role of investment

In recent years, Latin American countries have increased their exports substantially from $92 billion in 1985 to $155 billion in 1994. During the same period, manufactured exports rose from $22 billion to $87 billion. Although the improvement in export performance in many countries was due, initially, to a decrease in domestic demand, investment has been required to sustain export growth, particularly in countries where domestic demand has recovered and there has been an improvement in the exchange rate. While systematic information on investments aimed at increasing the export-supply capability of the region is not yet available, there is a large body of evidence to suggest that such investments have been substantial, particularly in the manufacturing sector.

Among some of the most visible cases of export-oriented investment in the industrial sector are investments in large commodity producers: soya-bean processing in Argentina, paper pulp in Brazil and Chile, and steel and glassware in Mexico.

In addition to such instances of large-scale industrial investment, however, there is an abundance of regional export-oriented industrial investment that is much harder to depict statistically than investment in large commodity-processing plants. Such industrial investment is the main form of investment taking place in manufacturing firms in most Latin American countries, as those firms try to upgrade their production capability to improve competitiveness, particularly in export markets. Such investments have been made, for example, in printing firms in Chile, food-processing plants in Mexico and in many other industrial branches in the countries of the region.

It is in Mexico that the most obvious examples of substantial export-oriented investment are to be found. Thanks to that type of investment, the current export structure of Mexico is strikingly different from that of 1980, when oil accounted for 60.9 per cent of exports and other leading export products were mainly agricultural. While oil remained the main export product of Mexico in 1994 with a 10.9 per cent share of total exports, the next nine leading export items were all manufactured goods, such as automobiles, insulated wire and cable, televisions, engines and products with a high-technology content, such as electronic equipment and vehicle parts. In 1995, the share of manufactured goods in the

Box 7 *(continued)*

total exports of the country was 73 per cent, excluding goods from export-processing zones. Such a performance could not have been achieved without significant investment in export capability. It is also a striking performance for a country in a region where 50 per cent of exports in 1994, including those from Mexico, were mainly primary products. A large share of export-oriented investment in Mexico has come from transnational corporations, particularly the automobile industry, which has localized production in the country to be close to its main market, the United States. That trend became even stronger after the signing of NAFTA. Investments by transnational corporations, however, do not wholly explain the transformation of the Mexican economy into an export-oriented manufacturing economy. Investments in many firms throughout the country also contributed to the transformation, as Mexican firms took the decision to upgrade, both to cope with changes in the domestic market and to break into export markets.

Export-oriented investment by Mexican firms was strongly backed by support from the Banco Nacional de Comercio Exterior (BANCOMEXT), the export bank of Mexico. BANCOMEXT provided over $14 billion in 1994, both in direct financial support and in collateral, to more than 1,900 exporting firms. The bank also has special programmes that allow firms with the potential to become exporters to invest in establishing an export-supply capability. That is one example of what Latin American countries can do to encourage investment in export-oriented manufacturing firms.

Source: Carla Macario, *Experiencias Exitosas de Exportacion: Las Principales Lecciones de Brasil, Chile, Colombia y México* (Successful export experiences: the main lessons from Brazil, Chile, Colombia and Mexico) (Santiago de Chile, Economic Commission for Latin America and the Caribbean, 1996).

Sub-Saharan Africa

Since the early 1970s, the discouraging rate of economic growth in sub-Saharan Africa has become a source of increasing concern, not only because of the inherent waste of resources, but also because of the social and political problems associated with slow growth. The average annual rate of GDP growth in the region from 1970 to 1995, 2.4 per cent, was the lowest in the developing world. Growth in GDP has fallen to well below the average annual population growth of the region since the mid-1970s, resulting in a drop in real per capita income and a widening income gap relative to other developing regions.

Lowest investment rate among developing countries

The region of sub-Saharan Africa had a good investment record during the 1970s. Spurred by high commodity and oil prices, gross fixed capital formation grew at 4.3 per cent annually, which was well above the average GDP growth rate for the region (see table 8). The sharp fall in commodity prices during the 1980s, however, revealed the extreme vulnerability of the region and structural weaknesses associated with investment. Past investment demand in the region was met largely by high import levels, financed externally, and from export earnings. Regional export earnings, on the other hand, were highly dependent on a narrow base of commodities and trading partners. Oil, for example, accounted for more than 40 per cent of the exports of the region during the period from 1970 to 1995, and many countries depended heavily on just one or two commodities for their foreign exchange earnings.

Europe accounted for more than 50 per cent of the total exports of the region. Fluctuations in commodity and oil prices, as well as the weaker economic performance of Europe, had a considerable influence on the investment performance of the region. Moreover, domestic savings rates were low.

As a result, during the 1980s, when commodity prices fell and the economic performance of industrialized countries, particularly those in western Europe, slowed sharply, external payment problems emerged. The response of the region was similar to that of Latin America. In an attempt to secure additional resources to service its debts, sub-Saharan Africa sought to improve its trade balance by reducing investment and imports. The curtailment of imports, which comprised a large proportion of capital goods and raw materials used as inputs for investment and production, led to a decline in industrial production and infrastructure development, hampering further investment growth.

Investment growth fell sharply to below zero in the 1980s and 1990s. The share of investment in a declining GDP also fell during the period, with the rate of investment spending dropping from a high of 27 per cent during the mid-1970s to 15 per cent by 1995, making it the lowest among the developing regions (see figure 6). By contrast, spending on private consumption and public consumption was among the highest in the developing world, accounting for a relatively stable share of more than 75 per cent and 14 per cent of the GDP of the region respectively during the same period.

Contribution of investment to GDP growth has been negative over the past 15 years

Table 8. Main sources of growth in sub-Saharan Africa, 1970-1995
(Percentage)

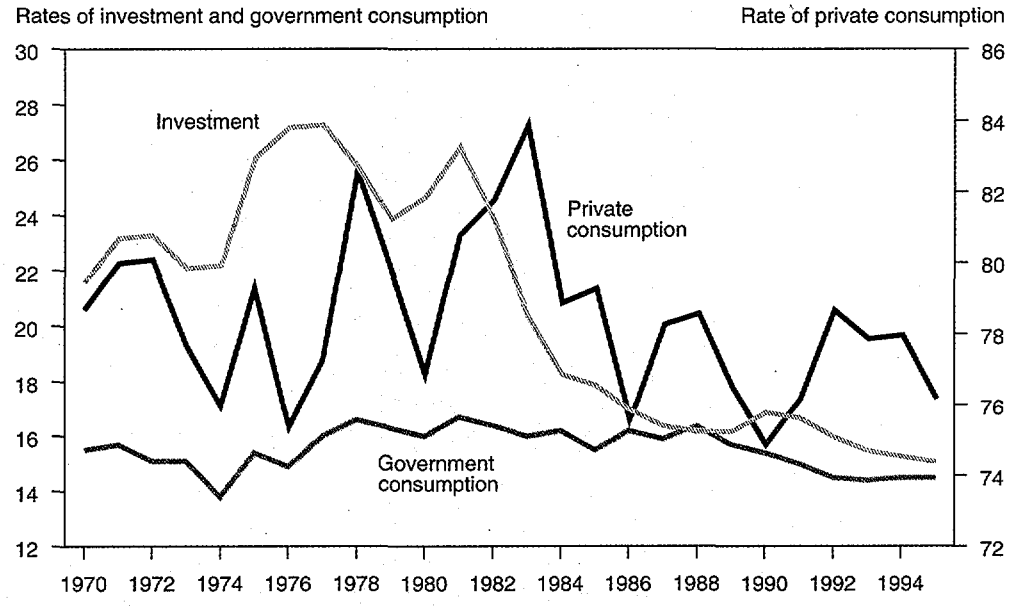
Type of growth and sector	Average growth rate				Share of contribution to GDP growth			
	1970-1980	1980-1990	1990-1995	1970-1995	1970-1980	1980-1990	1990-1995	1970-1995
GDP	2.9	2.3	1.6	2.4	100	100	100	100
Government consumption	3.2	1.9	0.4	2.1	17.1	13.5	3.4	13.7
Private consumption	2.7	2.0	2.0	2.3	72.2	68.2	90.2	74.4
Gross fixed capital formation	4.3	-1.5	-0.6	1.0	31.8	-16.6	-6.3	8.6
Agriculture	0.3	1.6	1.1	1.0	3.5	21.7	19.4	16.0
Manufacturing	2.1	2.3	0.2	1.8	7.8	10.4	1.1	8.2
Services	5.1	4.3	2.2	4.2	52.3	70.1	61.6	52.6

Source: UNIDO database.

Note: The sum of supply and demand components is not equal to 100 per cent, because the external sector on the demand side and the mining and construction sectors on the supply side are not included.

Rate of investment in sub-Saharan Africa has declined steadily since the early 1980s

Figure 6. Rates of investment and consumption in sub-Saharan Africa, 1970-1995
(Percentage of GDP)



Source: UNIDO database.

Note: Investment is defined as gross fixed capital formation.

Negligible contribution from manufacturing

The modest role played by manufacturing in the economic development of sub-Saharan Africa was reflected in its small and declining share of GDP. Manufacturing accounted for only 11.2 per cent of the GDP of the region in 1970 and had dropped to 9.7 per cent by 1995. The rate of growth of MVA was lower than the average GDP growth of the region during the period. In 1970, the region accounted for less than 5 per cent of the MVA of

Low-technology industries account for the largest investment share

Table 9. Investment composition for selected countries in sub-Saharan Africa, 1970-1994 (Percentage)

Country	Type of industry	Share of manufacturing investment			
		1970	1980	1990	1994
Cameroon	Low-technology	51.9	30.8	94.5	83.6
	Medium-technology	43.7	65.5	3.9	14.8
	High-technology	4.2	2.5	1.6	1.4
Kenya	Low-technology	92.1	75.8	62.7	58.8
	Medium-technology	5.5	21.9	25.9	23.5
	High-technology	1.6	2.1	7.3	12.1
Nigeria	Low-technology	83.6	74.4	68.8	73.8
	Medium-technology	14.3	23.0	28.5	23.5
	High-technology	1.0	2.5	2.7	2.7
United Republic of Tanzania	Low-technology	79.0	82.5	83.4	87.9
	Medium-technology	11.9	13.3	14.7	10.4
	High-technology	6.4	3.9	1.3	1.2
Zambia	Low-technology	47.3	51.6	71.0	84.2
	Medium-technology	46.8	45.7	23.9	11.7
	High-technology	5.4	2.5	5.1	4.2
Zimbabwe	Low-technology	76.2	81.2	75.3	85.8
	Medium-technology	19.0	13.6	13.1	10.9
	High-technology	4.2	4.3	5.6	3.0

Source: UNIDO database.
Note: Industries are classified as low-, medium- and high-technology industries and other manufacturing industries.

all developing countries, but by 1994, it had dropped sharply to 1.8 per cent. Meanwhile, agriculture, which had been the mainstay of the economy of the region, recorded the same pattern of growth. The share of agriculture in GDP dropped from 39.8 per cent in 1970 to 27.9 per cent in 1995, while the share of agriculture among all developing countries fell from 13.7 per cent to 8.5 per cent. By contrast, the service sector grew at a buoyant annual rate of 4.2 per cent during the period, well above the average GDP growth rate of the region. By 1995, the share of the service sector in GDP had risen to 46.6 per cent from 30.2 per cent in 1970.

Sub-Saharan Africa is still very much dominated by labour-intensive, resource-based, low-technology industries. Manufacturing continues to be narrowly focused on the primary processing of locally produced agricultural and mineral commodities, which have lower income elasticities in international markets. In 1970, low-technology food processing, beverage and textile industries were the three largest manufacturing industries, accounting for a combined share of 45.4 per cent of GDP. In 1994, these industries continued to be the top three manufacturing industries, with a combined share of 43.7 per cent of GDP, suggesting that progress made so far in broadening the manufacturing base of the region had been disappointing. Moreover, high-technology industries accounted for less than 3.6 per cent and 0.7 per cent of the MVA of the region and of developing countries respectively during the period (see table 9).

The industrial investment pattern of the region corresponds to its industrial structure, with low-technology industries accounting for a much larger share of total manufacturing investment. In selected countries where data were available, the average share of investment spending in low-technology industries exceeded 85 per cent during the first half of the 1990s, while the average share of investment spending in high-technology industries was less than 3 per cent. The exception was Kenya, where the investment share in high-technology industries rose steadily from 2.1 per cent in 1980 to 12.1 per cent in 1994. Kenya is also one of the few countries in the region able to sustain high economic growth.

Investment needed in agro-based manufacturing

Among the myriad problems faced by the region are mounting poverty, overdependence for export earnings on a small number of agricultural commodities, a small and narrow manufacturing base, high population growth, low savings and investment rates, low human capital development, high

debt servicing, poor infrastructure and structural rigidities, as well as political instability in many countries.

Widespread poverty and a high burden of debt have led to lower consumption demand and lower savings and investment rates, which, in turn, have hindered growth and reduced productivity. There is a need to remove those constraints to growth in order to break the vicious circle of low savings, low investment and low income. In this regard, the assistance of the international community will help to speed up the process. The challenge is to accelerate and sustain economic growth within the region at a higher pace than population growth, which averaged from 2.5 per cent to 3 per cent annually during the period from 1980 to 1995. That could be achieved only by raising the investment rate of the region. It has been estimated that the region would need to invest at least 13 per cent of GDP just to maintain its existing capital stock.[2] The current rate of investment of approximately 15 per cent is, therefore, unlikely to be sufficient to boost economic growth to a higher level than population growth.

Such an investment strategy should be combined with a strategy that promotes industrial development, strong structural adjustment programmes, political stability and higher investment in human capital. Progress towards regional integration, especially with South Africa, will help to stimulate investment. The industrial priority of the region should be to boost manufacturing and build a diversified and efficient manufacturing base. Given the current stage of economic development and the existing production structures within the region, faster manufacturing growth would have to be built initially on labour-intensive, low-technology industries closely linked to agriculture, so that initial comparative advantages could be gained in a relatively short time (see box 8).

On this basis, UNIDO has, in partnership with its African development partners, sponsored and launched the Alliance for Africa's Industrialization (AAI), which aims at fostering a sustainable industrial base in the region. The main feature of AAI is that it ensures African ownership with direct involvement of African development partners in the conceptualization and operational aspects of AAI. Programmes within the framework of AAI are initially focused on linking industry with agriculture and on mobilizing private investment for industrial development.

In time, the region will have to face the challenge of broadening and deepening its manufacturing base and expanding into skill-intensive industries with higher income elasticities in the international market.[3] This would require technological capabilities to be upgraded and human capital to be developed. Greater involvement in investment by foreign investors and the domestic private sector would help to quicken the process.

Low-technology industrialization can be a platform to high technology

Box 8. Should developing countries pursue technology upgrading?

Despite the tendency to see advanced technology as the key to industrial development, labour- and resource-intensive production also plays an important role in industrial development. First, production based on exploitation of sources of immediate comparative advantages, such as abundant labour or natural resources, has characterized the economic history of all countries that have subsequently established strong positions in manufactured exports. Secondly, for most developing countries that are still to enter international trade in manufactured goods in a sustained way and that are technologically weak, there is no real alternative. Thirdly, there are important complementarities between low- and high-productivity growth paths. Export markets built initially on technologically unsophisticated products can provide the foreign exchange needed to sustain investment in more sophisticated goods. The rate of acquiring new skills and improving productivity in more sophisticated goods increases in direct proportion to the rate of investment in them. Low-technology exports must therefore be regarded as an essential part of any strategy of skills acquisition and technology upgrading. Fourthly, it is important to establish a strong base of low-technology exports as a hedge against the risks that may be associated with a shift to higher-technology production. Fifthly, low-productivity exports create more employment per unit of output. In periods when international trade grows slowly, unlike the past 20 years or so, that may be an important consideration in terms of income distribution. The only drawback may be that low-productivity manufacturing often requires wages to be held down to maintain competitiveness.

When countries have built up commercial experience in the export of technologically unsophisticated manufactured goods, as well as technological capabilities in the production and service sectors, a shift to higher-productivity exports may become desirable. Such a shift is described as technology upgrading. Technology upgrading has four key advantages:

Box 8 *(continued)*

(a) First, if exports of technologically unsophisticated manufactured goods are successful, countries will ultimately have to face the need to introduce higher-productivity technologies. It is not clear to what extent the shift would be mediated by the market alone;

(b) Secondly, technology upgrading allows a real wage increase, without necessarily diminishing the share of profits in value added. This helps to preserve investment incentives and, provided the aggregate level of employment is maintained by sufficient growth in export demand, it also has positive implications for income distribution. The shift to higher productivity and higher-wage production may displace women workers, but the development of service-sector employment can counterbalance the negative effect on the gender division of labour;

(c) Thirdly, technology upgrading enables a shift towards products with a higher income elasticity of demand in the markets of industrialized countries, and thus helps to maintain export demand;

(d) Fourthly, technology upgrading makes it possible for a country to respond to competition from lower-wage economies. Upgrading allows a country to increase its market share in goods that are more technologically sophisticated, while leaving room for lower-wage economies to increase their market share in basic manufactured goods. It would thus appear to be in the collective interest to encourage exporters that are already successful to upgrade.

Source: C. M. Cooper, "Technology, manufactured exports and competitiveness", background paper for the UNIDO Global Forum on Industry, Perspective for 2000 and Beyond, held at New Delhi from 16 to 18 October 1995.

North Africa and western Asia

From 1979 to 1995, the pattern of aggregate economic growth of North Africa and western Asia has correlated closely with the movement of oil prices. That is hardly surprising, as the region possesses approximately 60 per cent of the oil reserves and approximately 20 per cent of the natural gas reserves of the world. A large share of the domestic income of the region derives from the extraction and processing of oil and gas. The share of mining in GDP ranged between 40 and 54 per cent during the period, while oil revenues accounted for about 80 per cent of total export earnings and government revenues.

In tandem with the trend in oil prices, the GDP of the region grew at 6.3 per cent annually during the 1970s, but fell 1.4 per cent during the 1990s (see table 10). Annual per capita income growth fell from 3.5 per cent to -1 per cent during the period, below that of Latin America and the Caribbean since the oil price fall in 1986.

Investment tied to oil prices

In North Africa, annual investment grew at 10.4 per cent during the 1970s, buoyed by a sharp rise in oil prices. Much of the investment went into expanding the production capacity of oil and oil-related industries. During the 1980s, when oil

Investment cut reduced in favour of consumption as a response to debt crisis

Table 10. Main sources of growth in North Africa and western Asia, 1970-1995
(Percentage)

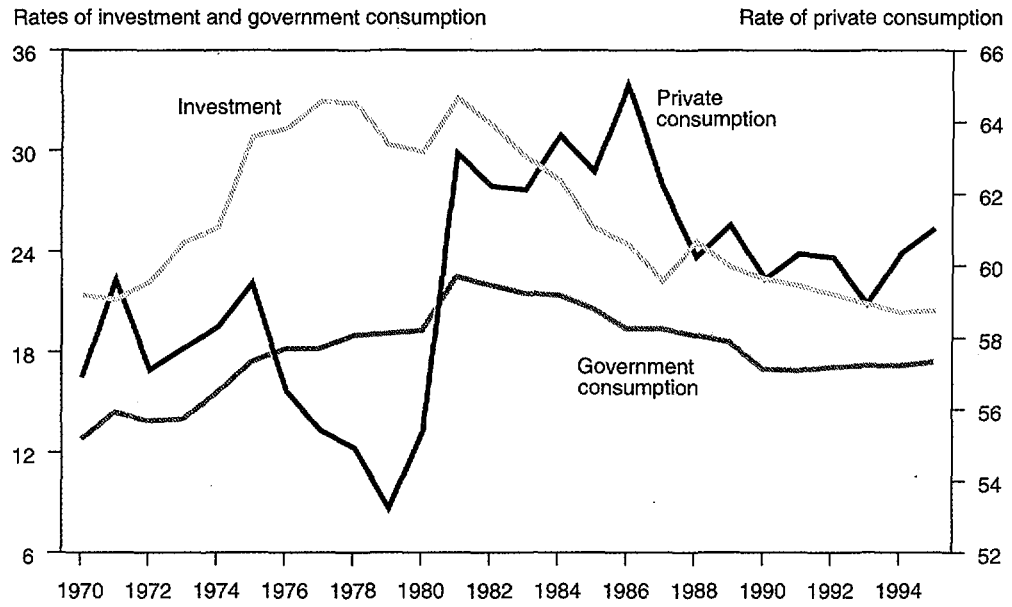
	Average growth rate				*Share of contribution to GDP growth*			
Type of growth and sector	*1970-1980*	*1980-1990*	*1990-1995*	*1970-1995*	*1970-1980*	*1980-1990*	*1990-1995*	*1970-1995*
GDP	6.3	1.1	1.4	3.2				
Government consumption	10.4	1.9	1.0	5.1	21.1	32.3	15.3	20.1
Private consumption	6.9	3.3	1.9	4.4	50.1	142.8	83.6	63.3
Gross fixed capital formation	11.2	(0.6)	2.6	4.6	29.4	-13.6	40.8	23.8
Agriculture	3.6	2.9	1.7	2.9	9.3	32.2	18.1	14.7
Manufacturing	7.7	5.2	3.6	5.9	9.5	41.8	34.2	14.3
Services	6.8	0.8	1.2	3.2	54.2	36.6	44.4	50.6

Source: UNIDO database.

Note: The sum of supply and demand components is not equal to 100 per cent, because the external sector on the demand side and the mining and construction sectors on the supply side are not included.

Investment pattern in North Africa follows oil price movements

Figure 7. Rates of investment and consumption in North Africa, 1970-1995
(Percentage of GDP)



Source: UNIDO database.

Note: Investment is defined as gross fixed capital formation.

prices fell, annual investment demand contracted by 0.4 per cent, before recovering to grow at 0.4 per cent per annum from 1990 to 1995. The rate of investment similarly dropped from a high of 33 per cent at the end of the 1970s to 20.4 per cent in 1995, close to the level it had attained before the first energy crisis in 1973 (see figure 7). On the other hand, the rate of government consumption and private consumption increased from 13.1 per cent and 55.6 per cent respectively in 1970 to 18 per cent and 58.2 per cent respectively in 1995, although all those rates were lower than those of the early 1980s.

A similar growth pattern was recorded in western Asia during the period. GDP slowed from 6.3 per cent annually during the 1970s to 0.5 per cent during the 1990s, while the investment rate fell from a high of 30 per cent during the early 1980s to approximately 24 per cent by 1995 (see figure 8). During the period, the rate of private consumption and government consumption increased from some 41 per cent and 23 per cent to 64 per cent and 31 per cent, respectively, giving western Asia the highest rate of government consumption in comparison with other developing countries.

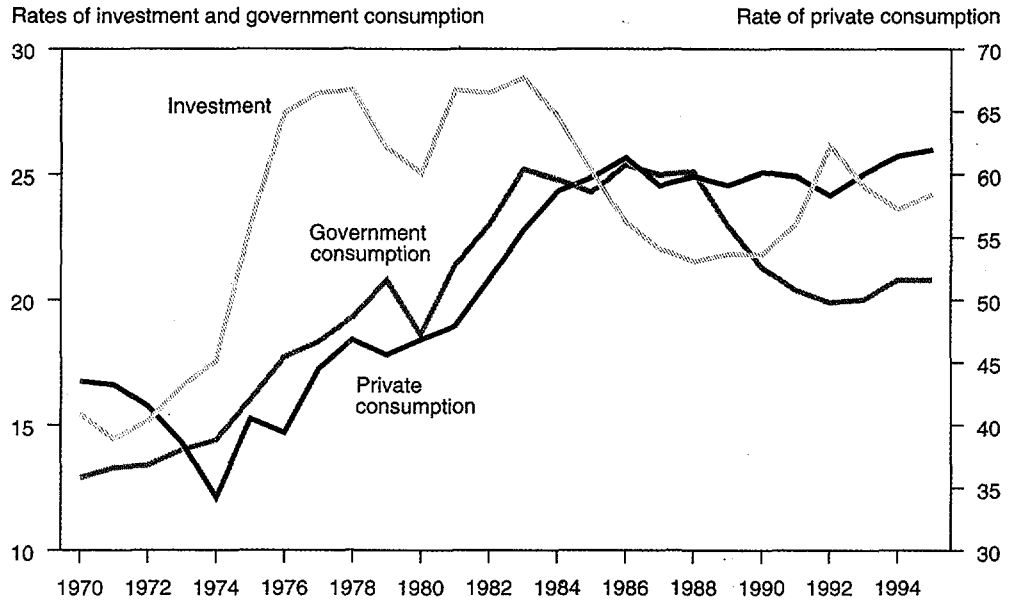
Dependence on oil

Over the past decades, the growth of manufacturing in North Africa and western Asia as a whole has exceeded that of both agriculture and services, as well as average GDP growth of the region. Growth was centered mainly in oil-related industries, however, which were vulnerable to fluctuations in oil prices. Growth fell steadily from 7.7 per cent during the 1970s to 3.5 per cent during the 1990s. Although the share of manufacturing in GDP rose consistently from 8 per cent in 1980 to 15 per cent in 1995, the increase was mainly at the expense of a declining mining sector. In comparison with other developing countries, industry in North Africa and western Asia has made limited progress during the last 25 years. The share of the region in the MVA of developing countries has stayed relatively stable, ranging between 7.8 per cent and 9 per cent during the period.

In 1970, petroleum refining was the largest industry in the region, accounting for approximately 16 per cent of total MVA. Petroleum refining maintained its leading position throughout the

Much of the investment in western Asia goes into oil and oil-related industries

Figure 8. Rates of investment and consumption in western Asia, 1970-1995
(Percentage of GDP)



Source: UNIDO database.

Note: Investment is defined as gross fixed capital formation.

1980s and 1990s, although its share had receded to approximately 12 per cent by 1994. Industry as a whole benefited from high investment rates in this sector, following the sharp rise in oil prices, with MVA growing by 7.6 per cent annually during the 1970s. With the sharp drop in oil prices in 1986, however, growth began to slow down. Between 1970 and 1994, petroleum refining contributed approximately 13 per cent to the MVA growth of the region, compared with 11 per cent and 9 per cent for the food and textile industries, respectively.

In terms of technological progress, the share of high-technology industries in the MVA of the region rose from 4.6 per cent in 1970 to 8.2 per cent in 1994. The percentage share of the region in the total MVA of high-technology industries among all developing countries, however, was relatively low, ranging between 3.4 per cent and 5.2 per cent during the period. That trend corresponded to the investment pattern of major countries in the region (see table 11). In contrast with western Asian countries, such as the Islamic Republic of Iran and Turkey, which spent approximately 10 per cent of their total manufacturing investment on high-technology industries during the 1990s, North African countries such as Egypt, Morocco and Tunisia spent only between 4 per cent and 6 per cent of their investment in that category of industries.

Need to diversify investment and manufacturing

Over the past decade, investment has been concentrated in the expansion of capacity in oil and oil-related industries in North Africa and western Asia. Extreme regional dependence on non-sustainable natural resources, such as oil, calls into question the ability of the region to sustain long-term growth, as the continued extraction of natural resources depletes the primary capital asset of the region, reducing future flows of income and thus consumption. In order to secure future income levels, once oil reserves are exhausted, a sufficiently large share of national income must be saved and invested in non-oil assets.

As has been the case with investment, manufacturing activities in North Africa and western Asia have remained at a relatively low level and have been concentrated in the oil and oil-related industries. Progress in diversifying the manufacturing

Western Asian countries spent more than North African countries on high-technology industries

Table 11. Investment composition for selected countries in North Africa and western Asia, 1970-1994 (Percentage)

Country	Type of industry	Share of manufacturing investment			
		1970	1980	1990	1994
Egypt	Low-technology	64.1	83.2	73.2	54.7
	Medium-technology	27.0	13.6	23.0	30.8
	High-technology	8.6	3.2	3.7	6.1
Iran (Islamic Republic of)	Low-technology	60.3	62.2	68.4	76.0
	Medium-technology	31.4	10.4	18.5	13.9
	High-technology	8.2	27.4	12.4	9.9
Morocco	Low-technology	88.0	85.6	75.9	87.4
	Medium-technology	8.1	8.9	19.1	9.3
	High-technology	3.4	5.3	4.9	3.2
Tunisia	Low-technology	85.3	82.9	82.9	82.5
	Medium-technology	11.6	14.6	8.8	10.1
	High-technology	1.3	1.9	7.1	5.7
Turkey	Low-technology	63.9	64.8	74.0	68.2
	Medium-technology	25.3	26.9	18.0	21.6
	High-technology	10.5	8.3	7.8	8.7

Source: UNIDO database.

Note: Industries are classified as low-, medium- and high-technology industries and other manufacturing industries.

base of the region has so far been slow, and investment has been driven largely by the public sector with limited, but growing, participation by the private sector. FDI inflows have declined since the 1980s, and represented less than 5 per cent of the total inflows into the developing countries in 1995. In order to enhance long-term growth, the region would need to increase investment, particularly in high-technology industries, sustain economic reforms, increase savings rates and encourage the participation of private and foreign investors by increasing the pace of privatization. Credible reform policies need to be implemented in order to sustain FDI flows.

South Asia

The region of South Asia was relatively insulated from the external shocks of the 1980s, reflecting its lower degree of openness to the global economy than other regions. That, in turn, caused other, negative effects on the local economy. Growth was slow by the standards of developing countries, and domestic industries were less competitive in the world market. The gradual economic liberalization of the 1980s gave momentum to regional growth in GDP, which climbed from 3.3 per cent per annum during the 1970s to 5.3 per cent during the 1980s (see table 12). During the period 1990-1991, economic performance was, however, adversely affected by the crisis in the region of the Persian Gulf and the recession in industrialized countries. Balance-of-payments problems emerged during the period, aggravated by the sharp fall in the level of remittances from South Asians working in the States of the Persian Gulf, as well as by the cost of evacuating them from the zone of conflict during the hostilities in the Persian Gulf in early 1991. Subsequently, the economic growth of the region received a boost from further reforms, especially in India, and GDP growth surged sharply, supported by a large inflow of FDI.

Liberalization boosts investment

During the past 25 years, the economic performance of the region has been determined by higher rates of growth in government consumption and investment spending, the growth rate of both having outstripped that of private consumption. During the same period, the proportion of investment and government consumption in GDP rose steadily from 17 per cent and 8.4 per cent to 23 and 11.5 per cent, respectively (see figure 9). In particular, the rate of investment has surged since 1993, as FDI inflows increased in response to the liberalization efforts in the region. By contrast, spending rates for private consumption fell from 71.4 per cent to 63.5 per cent during the same 25-year period.

Contribution of private consumption to GDP growth declines steadily

Table 12. Main sources of growth in South Asia, 1970-1995
(Percentage)

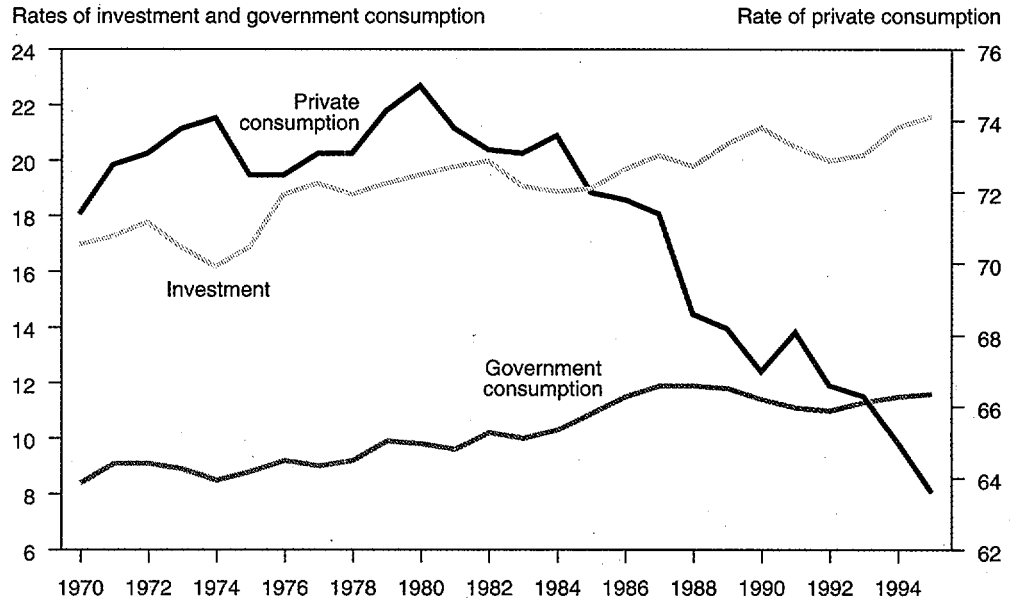
Type of growth and sector	Average growth rate				Share of contribution to GDP growth			
	1970-1980	1980-1990	1990-1995	1970-1995	1970-1980	1980-1990	1990-1995	1970-1995
GDP	3.3	5.3	4.5	4.3	100	100	100	100
Government consumption	4.9	6.9	4.8	5.7	12.4	12.7	12.2	11.0
Private consumption	3.8	4.1	3.4	3.9	82.4	58.3	50.8	63.5
Gross fixed capital formation	4.8	6.2	4.9	5.4	24.4	22.7	23.3	21.0
Agriculture	1.9	3.2	3.3	2.7	23.6	22.4	22.1	26.2
Manufacturing	4.3	6.9	4.6	5.4	15.5	17.2	15.9	15.0
Services	4.3	6.2	5.1	5.2	49.4	49.4	52.7	46.1

Source: UNIDO database.

Note: The sum of supply and demand components is not equal to 100 per cent, because the external sector on the demand side and the mining and construction sectors on the supply side are not included.

Rate of investment in South Asia has surged in recent years as a result of liberalization

Figure 9. Rates of investment and consumption in South Asia, 1970-1995
(Percentage of GDP)



Source: UNIDO database.

Note: Investment is defined as gross fixed capital formation.

The contribution from the external sector has increased sharply during the 1990s, led by a growth in Indian exports. The annual exports of the region grew by 10.9 per cent during the first half of the 1990s, compared with 6.4 per cent during the 1970s. The share of annual exports in GDP increased similarly, from 5.4 per cent in 1970 to 12.3 per cent in 1995, compared with 7.6 per cent and 12.8 per cent for imports over the same period. Despite impressive growth, the share of exports of South Asia remained modest, compared with that of other developing regions.

Manufacturing-led growth

Manufacturing benefited from reforms in industrial and foreign investment policies initiated by major South-East Asian countries at different times since the beginning of the 1980s. The fruits of the reform of the industrial sector have been particularly evident in recent years, with MVA growth surging by more than 8 per cent since 1994, compared with an annual average of 4.3 per cent during the 1970s. In line with higher growth, the share of manufacturing in GDP increased from 12.2 per cent in 1970 to 15.3 per cent in 1994. That was at the expense of agriculture, which dropped from 42.1 per cent to 28.5 per cent during the same period.

Over the years, the region made some progress in diversifying its industrial base and upgrading its technological capability. The MVA share of low-technology industry fell from 67 per cent in 1970 to 57.4 per cent in 1994, while that of medium- and high-technology industries rose correspondingly. The top three industries in 1970 were low-technology textiles, food-processing and iron-and-steel industries, which, together, accounted for a 41.6 per cent share in MVA. In 1994, the medium-technology, industrial chemicals industry replaced iron and steel among the top three industries, and the combined MVA share of the three industries fell to 32 per cent. Diversification, however, appears to be towards medium-technology industries rather than high-technology industries. During the period from 1980 to 1994, the MVA share of high-technology industries increased only marginally from 13.5 per cent to 14.2 per cent, which is lower than the average figure for developing countries in general.

The investment pattern of major countries in the region, such as India and Pakistan, shows a different picture (see table 13). While the share of investment in high-technology industries in those countries remained relatively low, investment in low-technology industries increased at the expense of medium-technology industries. With MVA growth for medium-technology industries having been buoyant during the period, investment data suggest that the growth in medium-technology industries has been increasingly derived from increases in productivity.

Investment in infrastructure is crucial

Economic deregulation and liberalization have brought buoyant economic growth to South Asia in recent years, with the large domestic market of the region, the well-established legal system, the strong engineering base and the large English-speaking labour force continuing to attract foreign investment.[4]

The region has also been able to exploit its comparative advantage in labour-intensive industries and to compete with some success in international markets on the basis of cost rather than quality. Low-value-added products, such as textiles, still dominate a large percentage of both the MVA and the exports of the region. As liberalization continues and tariff rates fall, many domestic industries will face mounting competitive pressure from imports. At the same time, globalization has changed the notion of international competition, with traditional price-based competitiveness being replaced by competitiveness based on technological capability. The region thus faces the challenge

Low- and medium-technology industries take the majority of manufacturing investment

Table 13. Investment composition in selected countries in South Asia, 1970-1994
(Percentage)

		Share of manufacturing investment			
Country	*Type of industry*	*1970*	*1980*	*1990*	*1994*
India	Low-technology	56.1	63.4	62.0	64.5
	Medium-technology	33.5	26.0	26.0	23.4
	High-technology	10.1	10.5	11.7	11.9
Pakistan	Low-technology	75.9	60.6	80.8	81.6
	Medium-technology	16.5	35.4	13.7	12.6
	High-technology	4.6	3.6	5.1	5.7
Sri Lanka	Low-technology	82.3	50.0	85.1	74.8
	Medium-technology	11.0	46.0	13.8	20.1
	High-technology	4.8	3.2	0.7	2.6

Source: UNIDO database.

Note: Industries are classified as low-, medium- and high-technology industries and other manufacturing industries.

of enhancing its industrial competitiveness through more diversified and more efficient export-oriented industrial structures. That will require new investments in export-oriented industries, in upgrading of both technological capability and human capital, and in the development of efficient physical infrastructure. There is also a need to promote participation by the private sector and to sustain FDI inflows into the country.

East and South-East Asia

Over the past 25 years, the region has recorded what has often been called a miraculous economic performance. Annual GDP grew strongly at 7.4 per cent during the period from 1970 to 1995, well in excess of both the average world rate of 2.9 per cent and the average rate for developing countries of 4.6 per cent (see table 14). Superior growth performance raised the per capita income of some countries, especially the Asian NIEs, to a level comparable with that of industrialized countries, and the region has become a model that many developing countries hope to emulate.

Numerous reasons have been put forward to explain the impressive economic performance of the region, particularly that of the Asian NIEs. Those include high levels of education, diversification of the export base, high savings rates, sound macroeconomic management and, most strikingly, the unusually high rates of investment and industrialization.

Investment stimulates growth

From 1970 to 1995, investment in the region grew at an annual compound rate of 9.5 per cent, which is considerably higher than that of industrialized countries and developing countries in general. Growth was stimulated by the expansion of international trade, rapid technological change and rapid growth of FDI. As a result, the rate of investment spending in the region rose from 20 per cent to 33 per cent of GDP during the period (see figure 10). The increase in the rate of investment was in direct contrast to the rate of consumption in both the private sector and the public sector, with spending on consumption, as a percentage of GDP, falling from respectively 61.7 per cent and 14.2 per cent in 1970 to 54.5 per cent and 11 per cent in 1995. Against a background of growing GDP, the decline in consumption helped to bolster savings, which, in turn, were mobilized to finance the high investment demand of the region.

Undisturbed by the external shocks affecting many other developing regions, the exports of East and South-East Asia grew at a double-digit rate during the period. Manufactured goods constituted a large percentage of exports, growing at a rate of 11.5 per cent per annum during the period. On average, the external sector has been able to provide a net positive contribution to GDP growth, with exports outstripping imports since the 1980s.

Impact of manufacturing on GDP

From 1970 to 1995, manufacturing was the key contributor to growth in the region, increasing at an annual average rate of 9.4 per cent, compared with 8 per cent and 2.8 per cent for services and agriculture. The share of manufacturing in the GDP of the region surged from 17.2 per cent in 1970 to 26.9 per cent in 1994, while the share of manufacturing in the GDP of developing countries

Investment contributed to increasing the growth rate of GDP

Table 14. Main sources of growth in East and South-East Asia, 1970-1995
(Percentage)

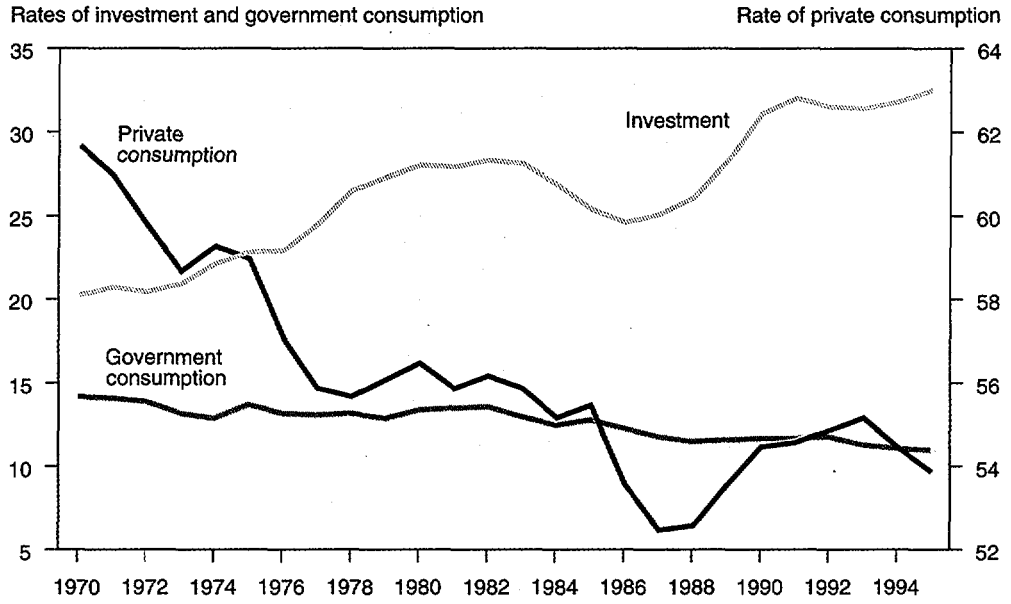
	Average growth rate				*Share of contribution to GDP growth*			
Type of growth and sector	*1970-1980*	*1980-1990*	*1990-1995*	*1970-1995*	*1970-1980*	*1980-1990*	*1990-1995*	*1970-1995*
GDP	8.0	7.1	6.9	7.4	100	100	100	100
Government consumption	7.4	5.7	5.5	6.3	13.1	10.7	9.4	12.1
Private consumption	7.1	6.7	6.7	6.9	54.4	53.4	52.8	56.9
Gross fixed capital formation	11.6	8.2	7.9	9.5	29.3	32.5	35.5	25.9
Agriculture	3.1	2.8	2.3	2.8	9.4	6.0	3.4	9.3
Manufacturing	11.4	8.5	7.4	9.4	24.4	28.1	28.6	21.8
Services	8.4	7.9	7.5	8.0	47.6	52.1	54.8	49.0

Source: UNIDO database.

Note: The sum of supply and demand components is not equal to 100 per cent, because the external sector on the demand side and the mining and construction sectors on the supply side are not included.

Rate of investment in East and South-East Asia has soared, while rates of consumption have fallen

Figure 10. Rates of investment and consumption in East and South-East Asia, 1970-1995
(*Percentage of GDP*)



Source: UNIDO database.

Note: Investment is defined as gross fixed capital formation.

more than doubled during the same period. The contribution of manufacturing to GDP growth in the region also increased from 24.4 per cent during the 1970s to 28.6 per cent during the first half of the 1990s, while the contribution of agriculture dropped from 9.4 per cent to 3.4 per cent. In tandem with manufacturing, the service sector enjoyed buoyant growth. The share of services in GDP rose to 31.9 per cent from 20.3 per cent, while the contribution of services to GDP growth rose from 47.6 per cent to 54.8 per cent.

The region underwent significant structural orientation towards high-technology industries during the period. In 1970, low-technology industries accounted for 67 per cent of the MVA of the region, while high-technology industries accounted for approximately 11.2 per cent. By 1994, the share of low-technology industries had dropped to 53.6 per cent, while that of high-technology industries had more than doubled to 22.8 per cent. The achievements of high-technology industries can be viewed from a wider perspective. In 1970, the share of the region in low-, medium- and high-technology industries in the total MVA of developing countries were at about the same level, approximately 14 per cent. By 1994, the respective shares of those industries in regional MVA had risen to 33.2 per cent, 25.6 per cent and 48.4 per cent respectively, suggesting a higher pace of growth in high-technology industries.

The impressive growth of high-technology industries was supported by a correspondingly high rate of investment in those industries. The average proportion of investment spending channelled into high-technology industries in Hong Kong, the Republic of Korea and Singapore, for example, rose from 17.2 per cent, 5.1 per cent and 11.1 per cent respectively during the 1970s to 24.8 per cent, 25.3 per cent and 48.8 per cent respectively during the first half of the 1990s. That was at the expense of the falling share in investment spending of low-technology industries (see table 15). The rates given for the first half of the 1990s are comparable with, if not greater than, those of industrialized countries. Among the countries of the Association of South-East Asian Nations (ASEAN), high-growth Malaysia spent about one third of manufacturing investment on high-technology industries in 1994, compared with 16.7 per cent for the low-growth Philippines.

High proportion of manufacturing investment channelled into high-technology industries in Asian NIEs

Table 15. Investment composition in selected countries and areas in East and South-East Asia, 1970-1994 (Percentage)

Country/territory	Type of industry	Share of manufacturing investment			
		1970	1980	1990	1994
Hong Kong	Low-technology	48.9	61.2	56.9	55.9
	Medium-technology	30.3	14.7	10.5	15.5
	High-technology	17.2	21.9	30.3	24.8
Indonesia	Low-technology	77.1	76.5	76.5	67.1
	Medium-technology	21.7	18.8	18.2	25.9
	High-technology	1.1	4.3	4.6	6.4
Malaysia	Low-technology	67.0	60.7	43.6	42.6
	Medium-technology	18.1	17.6	17.3	23.2
	High-technology	13.7	21.2	38.5	33.8
Philippines	Low-technology	87.3	70.0	67.5	66.5
	Medium-technology	7.8	22.8	16.7	15.9
	High-technology	4.8	6.9	15.4	16.7
Republic of Korea	Low-technology	75.3	55.2	51.9	43.2
	Medium-technology	16.4	33.7	28.1	30.9
	High-technology	5.1	10.7	19.1	25.3
Singapore	Low-technology	72.6	56.8	35.1	32.8
	Medium-technology	14.3	14.2	16.2	17.6
	High-technology	11.1	27.6	47.6	48.8

Source: UNIDO database.

Note: Industries are classified as low-, medium- and high-technology industries and other manufacturing industries.

East and South-East Asia must invest in technological capabilities

The region of East and South-East Asia comprises a diverse group of economies at varying stages of economic development. On the one hand, it contains approximately 17 per cent of the total number of least developed countries (LDCs) in the world and, on the other, it has many rapidly industrializing countries, some of which have attained a per capita income level similar to that of industrialized countries.

Growth fundamentals in the Asian NIEs remained strong despite occasional cyclical slowdowns, such as the slump in electronics exports in 1996. Domestic demand and growing intra-regional trade, which have been fuelled by years of buoyant regional economic performance, both helped to support growth. The NIEs of the region, however, face increasing competition in international markets from many developing countries, notably those of ASEAN and China. The investment rate of NIEs will be threatened by rising consumption rates as living standards improve. The NIEs also face the challenge of maintaining their market position by increasing productivity against a background of rising business costs and increasing environmental pressures.

On the other hand, the ASEAN countries, plagued by concerns over current account deficits and overheating economies in recent years, face a different set of challenges, with doubts about macroeconomic stabilization undoubtedly affecting future investment demand, in particular FDI inflows. Measures to remove capacity constraints by restraining demand and encouraging investment in infrastructure projects are, however, currently in hand, and they will pave the way for sustainable long-term growth. Moreover, there is a need for ASEAN countries to enhance their international competitiveness by investing in the broadening and deepening of their technological capability and human capital.

China

Since the institution of economic reforms in 1978, the performance of China has been extraordinary. The GDP of the country has grown with increasing vigour, rising from 5.9 per cent annually during the 1970s to 8.8 per cent during the 1980s, before surging to 11.4 per cent during the first half of the 1990s (see table 16). By 1995, China had more than doubled its GDP share, accounting for approximately 14 per cent of the GDP share of developing countries during the year. Average per capita income in China has risen by 6.5 per cent annually in real terms during the last 25 years.

Investment is gaining priority over consumption

Table 16. Main sources of growth in China, 1970-1995
(Percentage)

Type of growth and sector	Average growth rate				Share of contribution to GDP growth			
	1970-1980	1980-1990	1990-1995	1970-1995	1970-1980	1980-1990	1990-1995	1970-1995
GDP	5.9	8.8	11.4	8.1	100	100	100	100
Government consumption	10.0	10.0	13.5	10.7	12.7	12.5	14.5	9.9
Private consumption	6.3	8.1	13.9	8.5	55.2	49.3	61.3	54.0
Gross fixed capital formation	7.0	8.8	18.2	9.9	27.6	25.6	41.0	28.2
Agriculture	4.9	8.4	3.7	6.1	26.2	27.3	8.9	23.3
Manufacturing	8.3	8.3	16.9	10.0	39.9	33.4	50.4	34.8
Services	3.5	10.1	8.7	7.1	17.6	27.2	20.5	26.2

Source: UNIDO database.

Note: The sum of supply and demand components is not equal to 100 per cent, because the external sector on the demand side and the mining and construction sectors on the supply side are not included.

Investment rate of China highest of all developing countries

Rapid economic growth in China has been supported by a high investment rate and buoyant export performance. Investment was required for modernizing and restructuring the economy after the 1978 reforms. The average rate of investment spending rose from 30 per cent during the mid-1980s to 40 per cent in 1995, stimulated by decentralization in both the investment system and the economic system, by rapid expansion of non-State-owned enterprises, by high domestic savings and by large inflows of FDI (see figure 11). An outstanding feature of the change in demand structure was the correlation between the sharp increase in investment and the declining trend in private consumption, with gains in investment being made at the expense of consumption, as in the case of Asian NIEs. During the period from the mid-1980s to 1995, the rate of spending on private consumption fell from 51 per cent to 46 per cent, while the rate of government spending declined from 14 per cent to 13 per cent. As in the case of the Asian NIEs, the drop in the rate of consumption led to higher savings, which were used to finance increased investment.

A further driving force in the economy has been extremely rapid export growth. Total exports grew at 17.8 per cent per year from 1970 to 1995, well above the average growth rate of world exports. That impressive performance was supported by equally strong exports of manufactured goods, which surged by 18 per cent annually during the period. As a result of such a performance, China is now in the same class as the countries with the highest growth in exports, such as the Asian NIEs, Malaysia and Thailand.

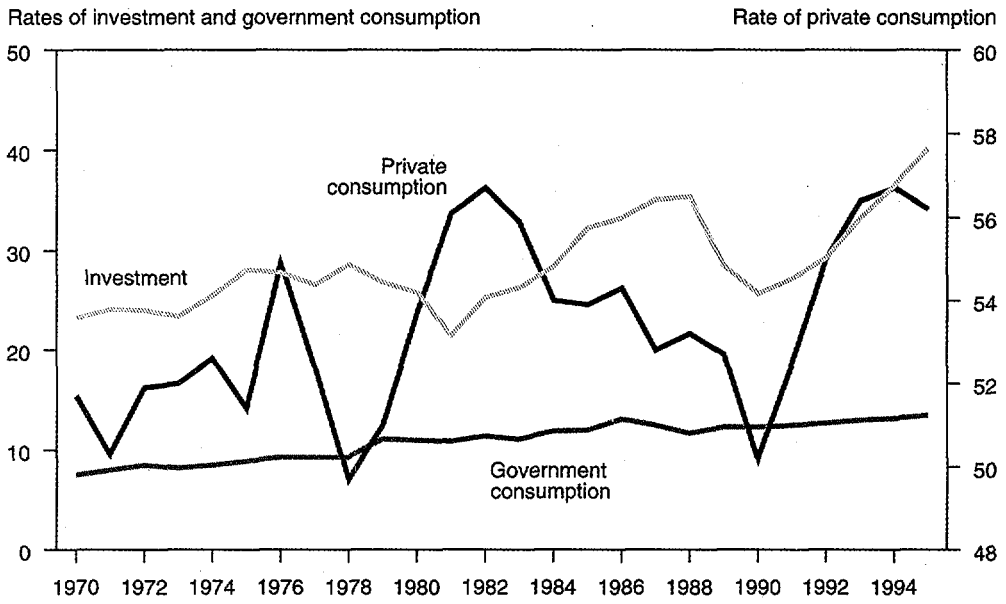
High-technology industries of China losing ground to those of East and South-East Asia

The economic structure of China has also undergone considerable change since the reform process. Rapid growth in manufacturing has meant a growth in MVA which, at 10.6 per cent, has annually outstripped that of average GDP growth. After the reforms, manufacturing emerged as the most important industrial sector, with the share of manufacturing in GDP rising from 24 per cent in 1970 to 43 per cent in 1995. In the same year, the share of manufacturing in GDP in developing countries rose from 9 per cent to 25 per cent. Agriculture and services also grew annually at 6.1 per cent and 7.6 per cent respectively during the period, but their share of GDP fell from 33 per cent and 32.5 per cent to 19.8 per cent and 28.8 per cent respectively.

Before the reforms, the industrial structure of China was similar to that of other centrally planned economies, such as those of central Europe and the former Union of Soviet Socialist Republics, with a high investment concentration in heavy industries and considerable neglect of light industries. The pattern changed considerably after the reform process. In contrast to the State-owned heavy industries, small- and medium-scale industries, many of which belonged to collective town and village enterprises, and to a lesser extent, private firms, have enjoyed rapid growth since the reforms (see box 9). The sharp growth in those industries contributed greatly to the success of the reforms, by helping successfully to bridge the gap in demand for consumer goods, both from domestic sources and from export markets.

Rate of investment in China is one of the highest in the world

Figure 11. Rates of investment and consumption in China, 1970-1995
(Percentage of GDP)



Source: UNIDO database.

Note: Investment is defined as gross fixed capital formation.

There are many types of non-State enterprises

Box 9. The non-State industrial sector of China

There are six tiers of government in China: central, provincial, prefectural or municipal, county or district, township and village. Enterprises under the direct authority of the central Government or of provincial governments are considered State-owned; all others are considered to be in the non-State sector. Non-State enterprises are, in turn, classified into three main types: collectives, individual businesses and other enterprises.

Collectives can be urban or rural, depending on their affiliation. Enterprises affiliated to a district government under a municipality or a county are regarded as large urban collectives. Those affiliated to a neighbourhood are labelled small collectives. Urban cooperatives are also included in the category of urban collectives. Rural collectives include township and village enterprises and rural cooperatives. Collectives are distinct from State-owned enterprises in that they are not managed by, nor do they report to, the industrial ministries or bureaux or the representatives of such bodies. Collectives operate largely in a market-based environment. From the point of view of ownership, collectives are regarded as publicly owned because, in principle, their ownership is shared by the community. Many are, however, private enterprises because they are basically partnerships hiring several employees from the local community. That is particularly true of cooperatives. The dividing line between collectives and private enterprises is thus becoming increasingly blurred.

The remaining categories of the non-State sector make up what is officially regarded as the private sector. An individual business is defined as a business that is owned by a household or an individual, and employs no more than seven people. The category of other enterprises consists of private enterprises owned by a household or an individual and employing more than seven workers, of foreign enterprises and of joint ventures.

Source: International Monetary Fund, *China at the Threshold of Market Economy*, Occasional Paper No. 107 (Washington, D.C., September 1993).

If classified by technological content, the composition of industries remained relatively stable from 1970 to 1994, although both low- and medium-technology industries grew at a slightly higher rate than that of high-technology industries (see table 17). The aggregate data, however, masked the structural changes within each category of industry. For example, within the high-technology industries, an 8.4 percentage point drop in the MVA share of non-electrical machinery during the period was mainly offset by a 7.5 percentage point gain in the MVA share of electrical machinery. Similarly, the drop in textiles, which is in the category of low-technology industries, was buffered by increases in food, beverages, tobacco and wearing apparel.

Compared with other developing countries, the share of China in low-technology industries increased by five percentage points during the period at the expense of a sharp decline in the same sector in Latin America and the Caribbean. On the other hand, China lost to East and South-East Asia approximately seven percentage points of the share of developing countries in MVA. The poorer performance in high-technology industries was reflected in the investment pattern of China, which reveals that investment spending in high-technology industries dropped sharply from more than 30 per cent of the total manufacturing investment before the reform period to less than 10 per cent during the first half of the 1990s. By contrast, investment spending on low-technology industries increased from 45 per cent during the 1970s to 80 per cent during the 1990s.

Sustaining the investment rate through quality improvement

Following a sharp rise in investment linked to rapid economic growth, the rate of investment of China has reached a very high level and is difficult to improve further. In the short term, the urgent need to improve the physical infrastructure and develop the regions in the interior of the country may help to sustain the investment rate. In the face of the efforts of the Government to cool the overheating economy by imposing a restrictive fiscal and monetary policy, however, it is imperative for future growth that the quality or efficiency of investment should be improved. Although the investment efficiency of the State-owned enterprises leaves much to be desired, there is unlikely to be any radical reform of the sector in the near term.[5] Improvements in efficiency are therefore likely to come from the rapidly growing non-State industries.

Another challenge facing China is the need for the technological capability of the country to be upgraded so as to keep pace with change. With the high-technology industries of China accounting for a declining share of investment among developing countries, more investment must be channelled into those industries and into building technological capabilities to reverse the trend. As foreign investment brings new technology and production methods, it is important for the country to maintain an attractive investment climate. Macroeconomic stabilization and reforms must, therefore, continue, so that any uncertainties likely to adversely affect FDI inflows can be reduced.

Low-technology industries still account for an increasing share of manufacturing investment

Table 17. Investment composition in China, 1970-1994
(Percentage)

	Share of manufacturing investment			
Type of industry	*1970*	*1980*	*1990*	*1994*
Low-technology	45.2	55.1	74.2	79.9
Medium-technology	9.7	16.8	11.8	8.5
High-technology	38.5	23.9	10.5	8.9

Source: UNIDO database.

ECONOMIES IN TRANSITION

The process of moving from a centrally planned economy to a market economy in central and eastern Europe and in the States that emerged from the former Soviet Union has proved to be a long and difficult one. Reforms in those countries, unlike those in China, have been accompanied by sharp falls in both output and demand, resulting in a corresponding drop in real income levels and living standards. After more than five years of reform, many countries, notably the Russian Federation and other member States of the Commonwealth of Independent States (CIS), are still struggling economically and have a contracting GDP.

During the 1970s, as many of the economies of the region, especially the former Soviet Union, were large oil exporters, the region benefited from higher oil prices, with GDP growing at a buoyant rate of 5.3 per cent annually, above the world average (see figure 12). Structural weaknesses and inefficiency emerged during the 1980s, however, even before the transition to a market economy began, and that led to a deceleration in GDP growth to an annual average of 2 per cent. Growth plunged further to -9.8 per cent during the 1990s, following the onset of transition in the late 1980s.

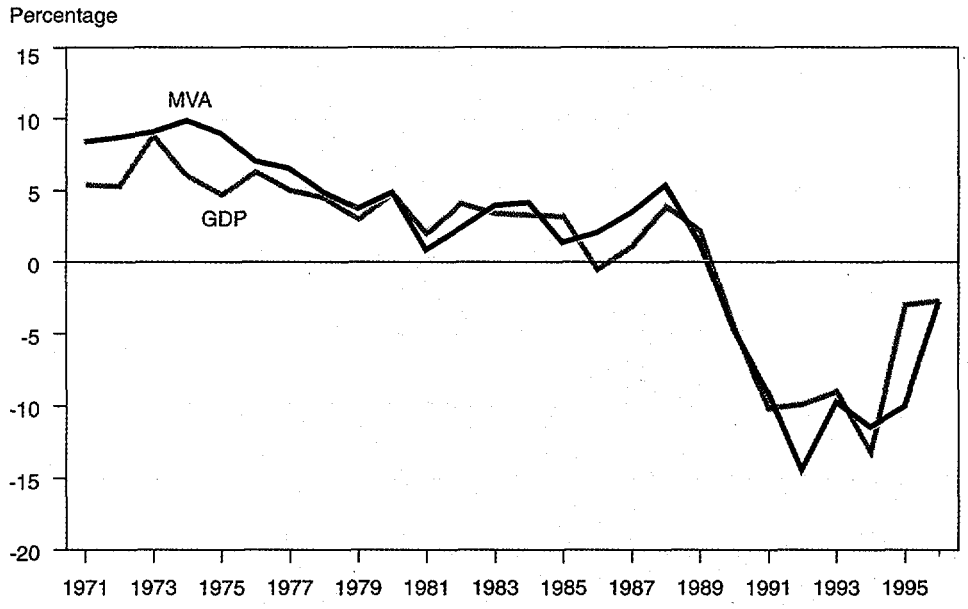
Investment collapses

Under the planned economy, the demand structure of the region remained relatively stable with greater emphasis being placed on investment. The investment rate was relatively high by world standards. Indeed, the average rate for the former Soviet Union was over 30 per cent during the period from 1980 to 1989.[6] Capital investment was, however, determined centrally by planners, and decisions were taken on the basis of quantitative targets without due consideration being given to the prevailing market conditions. As a result, there was widespread inefficiency in the use of investment resources.

During the early years of transition, the investment rates of the economies in transition contracted considerably in line with the sharp fall in GDP. In many countries of the region, the fall in investment was much more severe than the fall in consumption. As a result, the rate of investment in

GDP growth in the economies in transition fell sharply at the outset of reform

Figure 12. Growth rates of GDP and MVA in the economies in transition, 1970-1996



Source: UNIDO database.

Investment rate recovered in more advanced economies in transition

Table 18. Investment rate in selected economies in transition, 1989-1995
(Percentage of GDP)

Country	*Type of investment*	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*
Albania	Government	..	..	6.0	4.0	8.0	8.0	10.0
	Non-government	..	..	0	1.0	6.0	7.0	9.0
Bulgaria	Domestic	32.9	25.6	22.6	19.9	14.2	14.6	15.2
	Private	1.5	0.9	0.6	0.4	3.1	3.4	3.7
	State-sector	31.4	24.7	22.0	19.5	11.0	11.2	11.5
Czech Republic	Domestic	26.8	28.6	29.9	24.0	17.0	20.4	22.1
	Private	1.1	1.5	2.8	3.3	4.1	6.1	6.7
	State-sector	25.7	27.1	27.1	20.7	12.9	14.3	15.4
Hungary	Domestic	26.1	24.0	20.8	19.5	23.1	22.9	23.4
	Private	9.8	6.6	8.4	9.7	7.4	6.7	6.7
	State-sector	16.3	17.4	12.4	10.2	15.7	16.2	16.7
Poland	Government	4.0	3.6	4.1	3.7	3.4	3.2	3.6
	Non-government	24.7	23.9	15.8	11.4	13.0	13.4	13.8
Romania	Domestic	25.8	30.2	28.0	32.3	30.1	28.7	27.2
	Private		3.8	4.1	4.8	4.9	5.4	5.8
	State-sector	25.8	26.4	23.9	27.5	25.2	23.3	21.4
Russian Federation	Gross	..	30.1	36.3	34.3	31.3	28.9	..
Slovakia	Government	..	..	..	..	4.1	4.2	4.8
	Non-government	..	..	..	..	17.7	12.9	14.1

Source: *World Economic and Social Survey 1996* (United Nations publication, Sales No. E.96.II.C.1).

those countries fell sharply to below 20 per cent during the first two years of reform but has since recovered (see table 18). The sharp decline in the investment rate occurred despite the urgent need for massive new investment to restructure the economy and modernize outdated capital stock.

Several factors explain the sharp fall in the investment rate of the region. First, the production of consumer goods contracted sharply, as demand was adversely affected by a considerable drop in real incomes and purchasing power. The situation was further aggravated by the preference of consumers for imported goods, which became readily available with the introduction of currency convertibility and import liberalization. The production of capital goods was also reduced by the collapse of State procurement and a reduction in military expenditure following the end of the arms race. Secondly, the move to a market economy meant a large reduction in traditional State investment. Public investment was further affected by the collapse in budgetary revenues. Thirdly, there was an adverse impact on the balance of trade of oil-importing countries in the region, as oil subsidies were removed and trade in oil and other oil-related raw materials began to move closer to world market prices. This happened at a time when industries needed restructuring to gear them towards energy-saving methods of production. Fourthly, external demand was affected by the loss of traditional markets following the break-up of the trade relations of the former Council for Mutual Economic Assistance (CMEA), one of the effects of which was to reduce the importance of the former Soviet Union as a major market for the countries of central and eastern Europe.

Damping down manufacturing

The process of transition has strongly influenced the sectoral allocation of investment. Investment in agriculture has continued to fall in many countries of the region, with the exception of Kazakstan and Slovenia. In some countries such as Kyrgyzstan, Latvia, Lithuania and Romania, investment in agriculture has fallen by more than 10 per cent.[7] Investment in industry has also suffered during the transition process. From 1989 to 1993, the share of industry in total investment fell in 13 of the 16 countries of the region for which data are available, the most affected being Slovenia, with a fall of 9.9 per cent, and the Russian Federation and Slovakia, both with a fall of 7.5 per cent.

By contrast, the service industries, as a group, registered large investment gains. That was not surprising, since, because of the inherent structural patterns of the centrally planned economies, the base investment figure for the sector was very low. Among the subsectors of the service industry,

however, there were significant differences in investment performance. Trade, for example, was a clear beneficiary of increased investment, partly because of its strength in the development of the private sector and partly because of its relatively low capital-intensiveness. Increases in investment share were also recorded in transport and telecommunications in most countries.

During the era of the planned economy, the industrial structure of the region was biased towards the production of capital goods, while production of consumer goods was neglected. As a result, the current share of high-technology industries in GDP is relatively strong by world standards, having increased from 20.4 per cent in 1970 to about 24 per cent in 1990. During the transition process, the share remained relatively stable although, in absolute terms, MVA declined considerably. Manufacturing investment data for selected countries in the region show a mixed pattern (see table 19). Since the reforms, decreases in high-technology investment have been recorded in many economies in transition such as the Czech Republic, Slovakia and the former Soviet Union. That suggests that there has been a shift to consumer goods in response to the sharp rise in demand for such goods in those economies since the reforms.

Restoring investment rates, capacity utilization and investment efficiency

The investment rate in the region has been recovering in recent years, although it is still much lower than the levels reached during the period prior to the reforms and the levels of developing countries in general. To gain comparative advantage, more investment needs to be channelled into replacing the large proportion of capital stocks made obsolete by rapid changes in technologies and demand patterns. There is also a need to improve the rate of capacity utilization of productive assets, currently averaging less than 70 per cent. Obsolete machinery and lack of demand for the goods produced partly explain the large margin of idle capacity. Nevertheless, there is still a substantial proportion of unexplained idle capacity that could be utilized to increase output without increasing investment.

Apart from the volume of investment, efficiency of investment is another issue of considerable

Surge in investment in low-technology industries in the former Soviet Union

Table 19. Investment composition in selected economies in transition, 1970-1994
(Percentage)

		Share of manufacturing investment			
Country	*Type of industry*	*1970*	*1980*	*1990*	*1994*
Former Czechoslovakia[a]	Low-technology	62.3	59.0	52.6	46.5
	Medium-technology	21.3	19.3	22.3	34.4
	High-technology	15.2	20.8	23.3	17.0
Hungary	Low-technology	59.5	61.6	62.3	61.8
	Medium-technology	23.5	19.5	24.9	23.6
	High-technology	15.0	16.7	11.7	14.0
Poland	Low-technology	58.4	53.0	58.7	66.9
	Medium-technology	24.0	20.7	29.3	19.9
	High-technology	17.3	25.8	11.3	12.2
Romania	Low-technology	56.7	50.0	61.7	68.1
	Medium-technology	20.7	26.1	17.6	14.4
	High-technology	19.6	21.8	17.3	5.6
Slovenia	Low-technology	99.3	86.3	55.3	46.6
	Medium-technology	0.2	4.0	28.1	39.3
	High-technology	0.4	8.8	16.5	13.7
Former Soviet Union[b]	Low-technology	53.9	48.1	49.4	61.4
	Medium-technology	17.7	17.6	12.3	5.9
	High-technology	21.1	26.8	29.0	21.6

Source: UNIDO database.

Note: Industries are classified as low-, medium-, high-technology industries and other manufacturing industries.

[a]Data for the Czech Republic and Slovakia are combined in the totals for 1994.

[b]CIS countries since 1992.

importance for economies in transition. Experience indicates that a high level of investment is a necessary, but not a sufficient, condition for fast economic growth. The composition and quality of investment, together with human capital development and technological know-how, are also critical. Investment is particularly urgent because of the competition the region faces as a result of increasing economic liberalization. New investment must be more responsive to market needs and directed to the development of infrastructure, technological capability and human resources. Increasing the pace of privatization will not only help to attract investment resources from both domestic and foreign private investors, but also raise investment efficiency.

Another challenge facing the region is its ability to reduce the uncertainties and instabilities inherent in the reform process. Too much uncertainty will impede progress towards increasing investment. Attempts to stabilize the economy at the macroeconomic level must continue to restore the creditworthiness of the region in order to attract a sustainable level of FDI inflows.

Notes

[1]Angus Maddison, *Monitoring the World Economy, 1820-1999*, Development Centre Studies (Paris, Organisation for Economic Co-operation and Development, 1995), p. 73.

[2]International Finance Corporation, *Trends in Private Investment in Developing Countries 1990-1994*, Discussion Paper No. 28 (Washington, D.C., 1995).

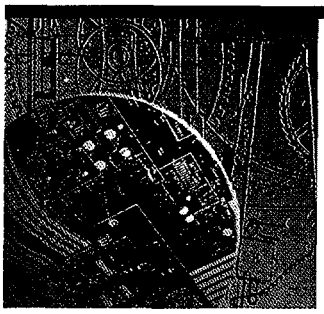
[3]United Nations Industrial Development Organization, *Industrial Development: Global Report 1996* (Vienna, Oxford University Press, 1996), chap. 2.

[4]C. P. Oman, D. H. Brooks and C. Foy, *Investing in Asia* (Paris, Organisation for Economic Co-operation and Development, 1997).

[5]Organisation for Economic Co-operation and Development, "From reform to growth: China and other countries in transition in Asia and central and eastern Europe", Development Centre document, Chung H. Lee and Helmut Reisen, eds. (Paris, 1994).

[6]*World Economic and Social Survey 1996* (United Nations publication, Sales No. E.96.II.C.1).

[7]European Bank for Reconstruction and Development, *Transition Report 1995: Investment and Enterprise Development* (London, 1995).



3

Financing industrial investment

Overview

World investment demand is expected to rise in the years ahead. For developing countries, it is estimated that, within a decade, investment could rise in absolute terms by nearly 50 per cent compared with the estimated level in 1994, while in the economies in transition, investment demand is expected to rise by 5 per cent or more annually over the next 10 years.[1]

Measures to boost investment will not succeed if the required financing, which comes from savings (see box 10), is not available. The projected increase in the global demand for investment, therefore, raises some doubts as to whether it can be matched by the likely increases on the supply side. As much of the increase will need to come from domestic sources, the mobilization of savings has become a crucial policy concern.

Effective mobilization of domestic savings will promote the efficient utilization of such resources as well as increase the volume of financial resources for investment purposes. In that respect, a number of lessons can be drawn from different groups of countries. First, raising public savings by fiscal consolidation and discipline is an effective way to raise the overall level of savings. Secondly, strengthening the banking system and non-bank financial institutions increases confidence in the financial system, and hence encourages private savings. An efficient financial system will also help to increase the efficiency of resource allocation. Thirdly, positive real interest rates accompanied by other elements of a stable macroeconomic environment can contribute to higher corporate and household savings. Finally, income growth has a positive impact on savings.

An increase in investment must be met by an increase in savings

Box 10. Definitions of savings

Most definitions view savings as a residual concept involving the amount of output of an economy that is not consumed but is used to generate income in future. All economic agents both save and invest. Their investment intentions are independent of their plans to save. As a consequence, some economic agents usually save more than they invest, while others have to complement their own savings with the savings of others to meet their investment plans. Financial markets channel savings into investment, and they bring demand for capital and supply of capital into equilibrium through interest rates.

The concept of savings distinguishes between private savings, generated by households and enterprises, and public savings. Households typically contribute by far the largest share to aggregate savings. In contrast to households, which are net providers of financial resources to enterprises and the public sector in practically all economies, enterprises usually spend much of their savings from retained profits. With regard to government savings, fiscal policy is of prime importance. It encompasses revenue measures, particularly taxation, as well as expenditure measures, both of which determine the overall net savings of a Government.

Another distinction can be made between domestic and national savings. The former incorporates savings that are generated by national and foreign entities domestically, that is, in a particular country, while the concept of national savings includes savings generated by national entities in the home country and abroad. Domestic savings, therefore, do not take into account the outcome of two flows that are important for many countries: the flow of savings generated by nationals working abroad who

Box 10 *(continued)*

repatriate part of their savings; and the flow of interest payments on foreign debt and of profits on foreign investments. Countries in which national savings exceed domestic savings tend to be countries with a considerable inflow of remittances, while countries in which domestic savings exceed national savings are usually countries with obligations to make high interest payments or experiencing a high outflow of profits from foreign investment.

In contrast to domestic or national savings, foreign savings are savings that have been generated in other countries by economic agents who are not nationals of the country importing the savings and who make those savings available for investment in that country.

Source: Economic and Social Commission for Asia and the Pacific, "Industrial finance in Asia and the Pacific" (Bangkok, March 1996), part one.

Financial institutions play a critical role in mobilizing domestic financial resources from savers to investors. The precise role of the financial institutions depends, however, on the stage of development of the financial sector. In the early stage, the sector is dominated by banks, while financial markets and non-bank financial institutions play a more prominent role at a later stage. The process of evolving from a barter system to a money economy is clearly confirmed by different characteristic patterns observed in the financial sector of countries at different levels of economic development. In low-income developing countries and in economies in transition, the intermediation role of the financial sector is still rather limited, as suggested by various international indicators of financial deepening, and the financial sector is strongly dominated by banks. On the other hand, the financial sector in more advanced developing economies has deepened and broadened significantly over the past decade, following increases in the activities of both the banking sector and the rapidly developing non-bank financial institutions, especially stock markets. Some of the more advanced developing economies, including Chile, Malaysia, Republic of Korea, South Africa, Taiwan Province of China and Thailand, now have banks and markets as developed, if not as mature, as those of some industrialized countries.

For industrial investment, loans from the domestic banking sector are by far the most important source of formal financing in a large majority of developing countries and in all economies in transition. Lending to firms in the industrial sector usually accounts for between a quarter and one third of total bank lending, making that sector the most important borrower in many countries. Banks tend to prefer lending to large, well-established industrial enterprises, while lending to small firms and entrepreneurs is either very limited or even non-existent. Because of macroeconomic considerations and an aversion to risk linked with efforts to contain losses from bad debts, banks have generally concentrated on short-term loans for working capital.

Demand for long-term financial resources has been increasingly met by domestic equity markets in a growing number of middle- and high-income economies. For the time being, those markets are of importance only for large enterprises. In Chile, Malaysia, Mexico, Republic of Korea, Taiwan Province of China and Thailand, for example, equity issues financed more than one third of the increase in net assets of large firms during the second half of the 1980s and early 1990s.[2] Industry continues to be either the largest of the major players, or at least one of the top two or three, in emerging stock markets, although in recent years its relative importance, measured as a share in total market capitalization, has declined as compared with that of utilities and financial institutions. With the liberalization of international capital flows, foreigners are becoming increasingly important investors in emerging stock markets.*

Domestic savings are often insufficient to finance the investment needs of developing countries, in particular those with low incomes. Foreign savings thus represent an alternative source of accumulation of investment. The distinctive quality of foreign financial sources enables them to make a contribution to economic development that goes well beyond their purely financial function.** By bridging the gap between savings and investment, capital inflows also help to meet the need for foreign exchange. That is particularly important in less developed economies, which are usually highly

*The term emerging stock market applies to any stock market in a developing country or an economy in transition.

**Capital flows to developing countries and economies in transition can be divided into two main groups, private flows and official development finance. Official development finance includes official development assistance and official non-concessional loans, both coming either from direct bilateral channels or through multilateral financial institutions. Private capital flows include FDI and portfolio equity investment, both of which are non-debt-creating flows, and bank lending and bond financing, which are the major debt-creating flows.

dependent on imports for domestic investment. In addition, foreign capital inflows, especially in the form of FDI, are usually accompanied by new technology, better management practices and improved access to foreign markets, as discussed in chapter 1 above, all of which are scarce in many developing countries and economies in transition.

Despite the advantages, only a small proportion of investment is financed from foreign sources because of the preference for domestic savings and investment, the limited mobility of international capital and other factors. During the period 1990-1995, foreign financing met, on average, 5.8 per cent of the total financial needs of developing countries, and less in the case of the economies in transition. Similar proportions are projected for the years to come.[3]

Total financial flows to developing countries and economies in transition increased dramatically during the past decade as a result of the policy reforms introduced in the late 1980s and continued in the first half of 1990s. With official flows stagnating, the surge in total inflows has come almost entirely from private sources. A sound macroeconomic framework, effectively regulated and supervised banking and stock markets and strong economic prospects have caused foreign investors to take a more positive view of the creditworthiness and viability of developing countries and economies in transition, and have thus contributed to large private capital flows to those countries and economies. The bulk of the flows, however, have gone to middle-income countries, the only exceptions being the two large low-income countries, China and India, and 12 countries have received some 80 per cent of the total inflows.[4]

Among the various foreign sources of industrial investment, equity financing has become by far the most important. Industry continues to be the major destination of flows of both FDI and portfolio equity investment into developing countries and economies in transition, although it is losing some ground to services and economic infrastructure. It is estimated that in 1995 alone, some $50 billion (in net terms) was channelled into industry in developing countries and economies in transition through FDI, and manufacturing accounted for more than one half of total FDI flows to some major recipient countries, including China, Hungary, Indonesia, Mexico, Poland, Republic of Korea and Thailand. In addition to FDI, industrial companies in developing countries and economies in transition have also tapped resources on the international equity market. Since that market is accessible only to large and well-established companies, the volume of international equity issues by firms in developing countries and economies in transition remains rather low. In 1996, for example, industrial companies in those economies raised some $5 billion on the international equity market.

In contrast to foreign equity financing, whereby resources are almost exclusively used for corporate financing, a significant part of foreign debt financing, especially of bond financing, goes to sovereign borrowers to finance deficits in the balance of payments. Firms in the industrial sector in developing countries and economies in transition are active players on both the foreign equity and debt financing markets, access to which is restricted to industrial companies in a relatively small number of those countries and economies which are deemed to be creditworthy. The sector, which participates in between a quarter and one third of total international bank lending to the countries and economies concerned, raised, in 1996, international bank credits amounting to an estimated $20 billion to $30 billion. In the same year, it raised about half of the amount on the international bond market.

With access to foreign savings from private sources being limited to a relatively small number of middle-income developing countries and economies in transition, the majority of low-income countries remain largely dependent on official flows to meet the need for foreign capital. Although industry has never been a major recipient of financing from those sources, its share in such financing has been declining in recent years. Stagnation in total aid flows and changed priorities for aid allocation seem to be the main explanations for the decline in bilateral aid commitments for industry to less than $1 billion in 1995, or less than 2 per cent of total bilateral aid. At the same time, the importance of industrial projects is also diminishing for multilateral financial institutions as their non-project lending is increasing and as a growing number of countries have turned to international capital markets for industrial financing. It is estimated that projects in the industrial sector account, on average, for less than 5 per cent of the total loan commitments of those institutions, whereas a decade ago the share of such projects was at least twice as high.

As the decline in official flows is expected to continue in the future, it is of the utmost importance for government authorities in low-income economies to strengthen their efforts in the mobilization of domestic savings by creating a sound framework for macroeconomic policy. Such a framework would also facilitate inflows of private sector capital, and, together with improved management of aid, increase the capacity of a country to use foreign aid effectively.

Regional trends in national savings

During the past 25 years, world savings rates—savings as a proportion of output—have declined, coinciding with a period of declining rates of investment. From a peak of 25 per cent in 1974, the world savings rate declined to an annual average of 22.4 per cent for the period 1982-1989, and remained at practically the same level during the period 1990-1995 (see table 20). The level of world savings during the 1990s has therefore been on average more than two percentage points less than that of two decades ago.

Industrialized countries

As roughly one half of total world savings is generated by industrialized countries, savings trends in those countries have a strong impact on the total supply of world financial resources available for investment. In industrialized countries, savings rates have declined steadily since the beginning of the 1970s, dropping from an average of 23 per cent of GDP for the period 1974-1981 to below 20 per cent during the first half of the 1990s. In 1993, their savings rate fell to its lowest level of 18.9 per cent, before recovering slightly during the following two years mainly as a result of the improved fiscal performance of many industrialized countries. Most of the industrialized countries have savings rates of between 18 and 27 per cent, with the exception of the United Kingdom and the United States, which have rates of about 15 per cent, and Japan, which has a rate of more than 30 per cent.

Breaking down the national savings data of industrialized countries reveals significant differences between savings trends in the private and public sectors. Savings in the private sector, usually analysed in industrialized countries within the

World savings and investment rates have declined in recent decades

Table 20. National savings and total investment by region, 1974-1995

	Percentage of GDP		
Economic grouping and item	*1974-1981*	*1982-1989*	*1990-1995*
World			
Savings	24.9	22.4	22.5
Investment	24.7	23.3	23.5
Industrialized countries			
Savings	23.1	21.0	19.9
Investment	23.2	21.5	20.4
Developing countries[a]			
Savings	26.6	22.7	25.7
Investment	25.9	24.5	27.4
Africa			
Savings	29.0	17.6	17.6
Investment	31.9	22.4	20.7
Asia			
Savings	26.5	27.2	31.4
Investment	25.7	28.1	32.2
Middle East[b]			
Savings	35.4	18.0	19.9
Investment	25.4	22.3	23.3
Western hemisphere			
Savings	20.6	19.4	18.2
Investment	24.0	20.1	20.4
Economies in transition			
Savings	..	..	25.6
Investment	..	..	26.8

Source: International Monetary Fund, *World Economic Outlook: October 1996* (Washington, D.C., 1996).

Notes: Country group averages are weighted by GDP valued at purchasing power parities as a share of total world GDP.

[a]Excluding economies in transition.

[b]Including Cyprus, Egypt, Libyan Arab Jamahiriya, Malta and Turkey.

framework of a general life-cycle model,* remained relatively stable at approximately 20 per cent between the early 1970s and the late 1980s. Virtually all the decline in aggregate savings therefore took place in the public sector, especially in government savings. While the 1980s saw a sharp drop in government savings in many industrialized countries, the beginning of the 1990s was characterized by some fiscal improvements, although the situation subsequently worsened.

Developing countries

In contrast to the steady decline in national savings in industrialized countries since the early 1970s, savings rates in developing countries, which account for about 45 per cent of world savings, have gone through two contrasting periods. During the period 1974-1989, the national savings rates of developing countries fell from an average of nearly 27 per cent (1974-1981) to 23 per cent (1982-1989). From the mid-1980s, the average rate increased steadily to 25.7 per cent by the first half of the 1990s. As a consequence, savings currently represent a significantly higher proportion of GDP in developing countries than in most industrialized countries. The boost in the savings of developing countries has been due almost exclusively to increases in Asian countries, while savings rates have stagnated in Africa or declined in Latin America.

In Asia, savings rates not only are very high, averaging 31 per cent during the 1990s, but have been continuously rising during the last two decades, in sharp contrast to savings rates in industrialized countries and other developing regions, which have been less than 20 per cent. The high savings rate may be explained by a variety of interrelated factors, which, though of varying importance in individual economies, are unique to the region (see box 11).

*The model suggests that individuals borrow and save in order to smooth their consumption over time on the basis of their anticipated lifetime income. Under the model, the behaviour of the private sector with regard to saving is directly influenced by its assessment of how the future pattern of income and consumption will be affected by government policy. Another important implication of the model is that savings rates change systematically over the lifetime of an individual. The larger the proportion of income that goes to the labour force, the higher the national savings rate. The life-cycle model predicts that the savings rate declines as the retired proportion of the population increases.

Consumption restraints and government intervention contribute to high savings in Asia

Box 11. Specific features of high savings rates in Asia

Cultural value of savings

The prevailing ideologies, religions and philosophies in East Asia have traditionally put a high value on personal savings. In particular, the Chinese and Japanese have always saved, if only to provide for their old age, emergencies caused by natural disasters (such as floods and earthquakes), sickness etc. in the absence of government assistance. The tendency to save led at an early stage to the establishment of savings schemes and institutions. It also helped Governments to impose mandatory savings schemes and fostered the development of a financial system. Other cultural aspects of savings in Asia include intergenerational transfers, attitudes to risk and uncertainty, as well as, at least in the beginning, the absence of consumer goods.

Government-imposed mandatory savings schemes

The cultural preference for savings has made it relatively easy for Governments to boost domestic savings through the establishment of mandatory savings schemes such as the provident funds in Malaysia and Singapore, as well as of government savings banks and postal savings schemes in various countries. In particular, the Central Provident Fund in Singapore has proved to be a major instrument in the mobilization and allocation of savings.

Restraints on domestic consumption

East and South-East Asian economies have been able to grow thanks to restraints on domestic consumption, which were initially based on the relative absence of consumer goods and the bias towards savings. Governments have also curbed consumption to control balance-of-payment deficits through excise and value added taxes.

Source: "*Regional perspective on industrial investment: East, South-East and South Asia*", contribution of the Economic and Social Commission for Asia and the Pacific.

Savings rates are especially high in East and South-East Asia. In 1996, for example, China, Indonesia, Malaysia, Republic of Korea and Thailand had rates of more than 35 per cent of GDP, with that of Singapore reaching 56 per cent.[5] The ability of those countries to generate high rates of domestic savings was one of the determining factors in their achieving sustained and impressive rates of industrial growth. The factors stimulating the flow of savings have included: the pursuit of a broadly market-based strategy of industrial development, supported by strong and consistent public policy, especially price stability; the maintenance of positive real interest rates; and the development of the financial sector. As incomes have grown and financial deepening proceeded, the supply of financial resources has tended to disappear as a constraint on industrial development. Although the financial sector in those countries has always been less open to internal and external competition, high rates of financial savings as well as the targeting of those savings on key industries have provided a basis for guiding sectoral policies within the overall framework of a strategy of market-based industrial development.[6]

In South Asia, although savings rates have increased since the 1980s, they continue to be low, particularly in countries such as Bangladesh and Nepal, both of which are resource-poor countries. In 1996, their respective savings rates were only 5.8 and 10 per cent. Low per capita income, severe distortions of the capital market, costly financial intermediation, and institutional weaknesses in policy support and implementation have led to insufficient growth in the supply of investment resources, with a debilitating effect on the creation of a competitive industrial base. A general lack of focus on the development of key and profitable manufacturing industries has contributed to the emergence of a weak economic base from which only limited financial resources could be mobilized. As incomes have begun to rise and more rational choices are being made in allocating investment resources, there are indications that the resource situation in those countries will improve, with more favourable consequences for industrial development.[7]

In contrast to the positive savings trends in Asian economies, Latin America suffered a decline in national savings rates during the early 1990s. The average rate for the region as a whole fell by more than three percentage points, from 22.4 per cent for the period 1987-1989 to 18.5 per cent during 1992-1993. Although it recovered to 19.1 per cent during 1994-1995, it is still well below the rates registered before the external debt crisis arose.[8] The general decline in national savings is attributable to a drastic decline in private savings—triggered by the rapid growth in consumption by the private sector—in almost all the countries within the region. Meanwhile, public savings have increased as a result of the significantly stronger fiscal position of many Latin American countries, although national savings rates vary widely from country to country. In six of them, including Brazil, Chile and some States of Central America, savings rates averaged more than 20 per cent during the first half of the 1990s while in another eight countries, including Panama and Peru, the rates were less than 15 per cent.[9]

Africa has traditionally been the developing region with the lowest savings rate as a proportion of GDP. During the first half of the 1990s, the rate declined, from 18.5 per cent in 1991 to 15.4 per cent in 1993, but then recovered from those losses in the following two years. In 1995, Africa registered its highest savings rate for years, 19.1 per cent. Though still low compared with that of Asian economies, the increase in savings has been an integral part of the marked overall improvements in the economic performance of Africa in the last two years. In 1995, the combined GDP of Africa rose by 3 per cent and recovery continued in 1996, with the growth rate expected to average 5.3 per cent. The improvement in growth stems largely from favourable commodity prices and good weather, which led to a rise in agricultural output.[10]

Although no data are available on the sectoral structure of national savings, it is fairly safe to assume that both public and private savings have been rising. Such a rise in public savings would be reflected in significantly reduced fiscal imbalances. Whereas in 1993 the aggregate government budget deficit in Africa still accounted for 8.5 per cent of total GDP, by 1995 the deficit had been more than halved, to 3.8 per cent, with further declines expected in the years to come. During that period, Nigeria, for example, reversed its record deficit of 17.4 per cent into a surplus of 0.4 per cent.[11]

There are other developments that bode well for private savings in Africa. In the past, activity in the private sector was strongly impeded by a wide range of structural, legal, administrative and other institutional constraints in virtually all countries of the region. Those impediments, combined with the impact of external shocks, especially declining terms of trade and debt-servicing problems, have contributed to the declines in real per capita income, and consequently to reduced private savings. In recent years, however, as part of their structural adjustment programmes, many African countries have implemented measures designed to overcome those impediments and stimulate the

development of the private sector. Although the range and effectiveness of reform measures have varied from country to country, they have usually included the reduction of inflation rates, the introduction of more realistic exchange rates, the liberalization of trade and systems of exchange, as well as restructuring of the public sector, greater private-sector participation in the economy, development of the financial sector and fiscal reform.

Economies in transition

The transition of countries of central and eastern Europe from centrally planned to market economies has been accompanied by dramatic changes in the volume and structure of national savings. Before the transition, those countries had extremely high savings rates, often approaching 30 per cent of GDP. Their rates were much higher than those of industrialized countries and above the average savings rates of developing countries as a whole. High savings rates were a reflection of the high levels of inefficient centrally planned investments required to boost declining growth rates. In terms of structure, the bulk of capital was accumulated by enterprises, while household savings were relatively low compared with those in market economies.[12]

During the early stages of transition, the savings rate for the region as a whole declined by more than a quarter, from 30.4 per cent in 1991 to 21.4 per cent in 1995. The sharp decline in aggregate savings during the early years of transition may be attributed to the following two factors: the reduction in enterprise savings as a result of the fall in corporate profits caused by the deep recession and the measures of price liberalization introduced as part of the reform process; and the decline in government savings resulting from a combination of reduced revenues and increased expenditures on social security transfers and servicing of the external debt. Although household savings as a proportion of GDP recovered from their lowest point, the increase was not sufficient to offset the decline in enterprise and government savings.

As the transition proceeds, economic recovery and enterprise restructuring are expected to result in the increased profitability of enterprises. Fiscal stabilization measures have already paved the way towards reducing government budget deficits and increasing government savings, and growing income should result in higher household savings. National savings rates in the region are therefore expected to rise, a prospect already confirmed to some extent by the experience of some countries in the more advanced stages of transition.

Domestic funding alternatives for industrial investment

Since the mid-1980s, the mobilization of savings for investment in productive assets has emerged as a priority concern in the development programmes of practically all developing countries. For economies in transition, such efforts have become pressing since the beginning of reform in 1990. Faced with a drastic decline in output and a reduced inflow of foreign resources, those economies have little option but to intensify their efforts to mobilize domestic resources for development. While development alone requires vast amounts of investment capital, large-scale technological development and industrial restructuring have contributed to an even higher demand for investment finance.[13]

There are several other explanations for the renewed interest in the mobilization of domestic resources in developing countries and economies in transition. First, the experiences of rapidly growing Asian economies clearly demonstrate that high domestic savings and investment rates are crucial for sustained and robust economic growth. The importance of domestic savings for growth has been further reinforced by systematic evidence from some industrialized countries, especially Japan. Secondly, in all countries, with the exception of some low-income countries in sub-Saharan Africa, investment has been financed mainly from domestic resources. Thirdly, too much dependence on external capital can subject economies to an undesirable degree of foreign control. For example, portfolio investment inflows may have a negative impact on domestic monetary policy, while overborrowing from commercial banks may lead to a debt crisis and net capital outflows.

The mobilization of domestic financial resources is a multifunctional process that facilitates development through its contribution in the following two main areas: increasing the volume of savings; and enhancing the efficiency of financial intermediation between savers and investors.

The mobilization of domestic resources is a complex long-term process in which all economic agents, including households, the corporate sector and the Government, have their role to play. It is important to ensure that such a process is given priority attention not only in government programmes, but also in the actual implementation of the policy measures required, and that the public at large is made aware of both the benefits of savings and the measures introduced to boost savings. All the measures adopted, though they might be radically different, should have one common objective–the stimulation of savings, which is in turn affected by many factors (see box 12).

Savings patterns differ between different regions of the world

Box 12. Determinants of domestic savings

There is an extensive literature on the determinants of savings. In general, two fundamentally different theories can be identified. According to the life-cycle theory, savings result from a choice between present and future consumption. That view is based on the intertemporal smoothing of consumption with interest rates, a key mechanism by which savings and investment are balanced. The income theory establishes a close link between income and consumption, the residual being savings. According to that theory, consumption and consequently savings are determined by current income patterns, with interest rates having a reduced effect on the balance between savings and investment. There have been attempts to reconcile the two theories by viewing permanent income as the driving force in the consumption process.[a]

The discussion of the determinants of national savings is still very much open. A wide range of variables that affect savings have been identified, but the relationship between them is often theoretically and empirically inconclusive. Although most determinants of savings are universal, they have a different importance for various groups of countries. Demographic factors, particularly an increased population of dependent elderly persons, are perceived as key determinants of private savings rates in industrialized countries. Some studies have played down the importance of demographic changes as a major contributor to falling private savings rates in those countries during the 1980s, but with regard to the long term, there seems to be much wider consensus on the issue.[b]

In the developing world, private savings are influenced by other determinants. A low level of per capita income is the main reason why household savings may be essentially zero in countries that are at, or close to, subsistence levels of income. In addition to a low propensity to save, low-income countries are typically characterized by other patterns unfavourable to the mobilization of private savings, such as a shorter life expectancy than in industrialized countries, uncertainty regarding the macroeconomic environment, underdeveloped financial markets and lack of confidence in the banking sector.

Savings in economies in transition have some specific characteristics not observed in other regions. Under central planning, public savings—comprising government savings and savings of State-owned enterprises—contributed the lion's share to aggregate savings, while the relative importance of private savings was almost marginal. As there were practically no private enterprises, private corporate savings did not really exist. In addition, household savings were highly depressed, as there was little incentive to save because of the absence of many types of consumer goods and virtually guaranteed employment and State provision of social services, including pensions.[c]

[a]International Monetary Fund, *World Economic Outlook:* May 1995 (Washington, D.C., 1995).

[b]Robert Vos, "Prospects of financial flows to developing countries in the 1990s: the global macroeconomic trade-offs", in *International Monetary and Financial Issues for the 1990s* (New York, United Nations, 1993), vol. II.

[c]European Bank for Reconstruction and Development, *Transition Report 1996* (London, 1996).

For the mobilization of household savings, which contribute by far the largest share to aggregate savings, macroeconomic stability is crucial. Higher household savings can be generated through a variety of means, including maintenance of low inflation, real positive interest rates on savings, discouragement of non-essential personal consumption, fair income distribution through taxation, sound employment policies aimed at producing goods in demand at home and abroad and curbs on capital flight. A liberal foreign exchange regime, market-determined interest rates and sound and stable legal and financial systems are also essential to boost personal savings.

In contrast to households, enterprises usually spend much of their savings from retained earnings. Enterprises nevertheless have some scope for mobilization of savings, especially through internal financial management. Corporate savings may be boosted by appropriate government measures, such as tax incentives on corporate profits, if those profits are used for new investments. Governments can also influence the price at which companies borrow money, but changes in interest rates have, as already discussed, an offsetting effect on different segments of national savings.

Fiscal policy is of prime importance to government savings. It encompasses measures designed to raise revenue, particularly taxation, as well as expenditure measures. Rationalizing government spending involves a whole set of policy measures that many developing countries have applied in recent years to reduce budget deficits. Prudent fiscal policy is also aimed at preventing the Government from running up an unsustainably high public debt. The experiences of countries in central and eastern Europe clearly confirm that point.[14]

The shortage of savings is a result not only of a lack of capital, but also of weaknesses in the intermediation between savers and investors. In many cases, a low volume of savings is accompanied by a poor performance of financial institutions in the mobilization of savings in a form that permits intermediation, and by problems in the efficient allocation of those savings to the most productive uses. While high levels of domestic savings are commendable, they are not an end in themselves, and only assume importance if utilized properly and efficiently. In that regard, financial institutions play an essential role. They are expected to attract savings from households and the corporate sector by offering a wide range of safe financial assets with competitive returns. The integrity and stability of the financial institutions has to be maintained by ensuring that savings are lent to only creditworthy investors and consumers. The experiences of Asian countries show that some financial institutions, notably those in the public sector and postal savings schemes geared to mobilizing small savings, have been able to generate large pools of investment resources.[15] Some countries in the region, such as Singapore, have generated substantial savings through mandatory savings schemes, while others have opted for contractual savings schemes. Such schemes—especially life-insurance and pension funds—are also playing an increasingly important role in Latin America and economies in transition.

The experience of many developing countries also suggests that a well-functioning financial sector can help to mobilize domestic financial resources and promote efficiency in their allocation. That conclusion is borne out by data on financial intermediation. While in low-income African countries, the ratio of broad money to GDP was only about 0.25 during the period 1984-1992, in the newly industrializing economies of Asia that ratio was more than 0.70. Though part of the difference can be explained by varying stages of economic development, the other part reflects differences in government policies related to development of the financial sector. Typically, the financial policies of low-income countries are characterized by the maintenance of artificially low interest rates. During the period 1984-1993, for example, average real interest rates in the group of low-growth countries was -2.8 per cent, in contrast to the positive rate of 2.9 per cent in the group of high-growth countries.[16]

Bank financing

In many developing countries and economies in transition, banks are typically the only major source of formal financing for industrial investment, since capital markets are underdeveloped and do not therefore provide alternative financial instruments. In addition to ensuring the intermediation of national savings between lenders and savers, banks typically have many other roles to play in developing countries and economies in transition. They are very often the only institutions producing the information necessary for intermediation, providing the portfolio diversification necessary for risk reduction, and helping to monitor corporate governance.

Figure 13 provides information on the importance of banks as intermediators between savers and investors for 14 developing countries in Asia and Latin America. Although all of the countries concerned have already established capital markets and their activity has been quickly growing, banks continue to play a dominant role as financial intermediators in most of them. In only three—Chile, Malaysia and Republic of Korea—was the share of the banks in total financial intermediation less than 65 per cent of the total in 1994, while in another nine of them, the share was 80 per cent or more. No data are available for other developing countries and economies in transition. However, since in most of the countries capital markets and non-banking financial institutions have either not yet been established or are of negligible importance, it is fairly safe to estimate that in most of them the bank intermediation ratio is very close to 100 per cent.

While the banks are important for developing countries and economies in transition, they are also at the hub of economic and financial activity in industrialized countries. They are different from other financial institutions, in that they are an important factor in the implementation of monetary policy. Banks continue to be a major funding source in many industrialized countries, if not for all sectors of the economy, then at least for small and medium-sized companies. Moreover, practically all economic sectors depend on banks for short-term loans.

Profile of bank financing

No empirical data for a reasonably large number of countries are available to serve as a basis for a comprehensive analysis of the sectoral allocation of bank credits in developing countries and economies in transition, and of the maturity aspects and the size of loans provided to industry. Nevertheless, on the basis of fragmentary data for individual countries and small groups of countries, some general patterns can be discerned.

First, industry accounts for a significant proportion of total bank credits in developing countries

and economies in transition, although the degree of preponderance varies from country to country, reflecting differences in the importance of industry in the economies concerned. Industry accounted for between 22 and 26 per cent of total bank commitments in Brazil, Egypt, Malaysia and Thailand. In Bangladesh and the Czech Republic, its share was 32 per cent and 35 per cent respectively.[17] Industry consumed by far the largest share of total bank credits in the former centrally planned economies, at least partly because industry typically accounted for a much higher proportion of total output—about 50 per cent—than in most other economies. Since the beginning of the transition process, lending to enterprises, many of them in the industrial sector, has declined drastically in the economies concerned, mainly because of the imposition of hard budgetary constraints on loss-making State-owned enterprises.[18]

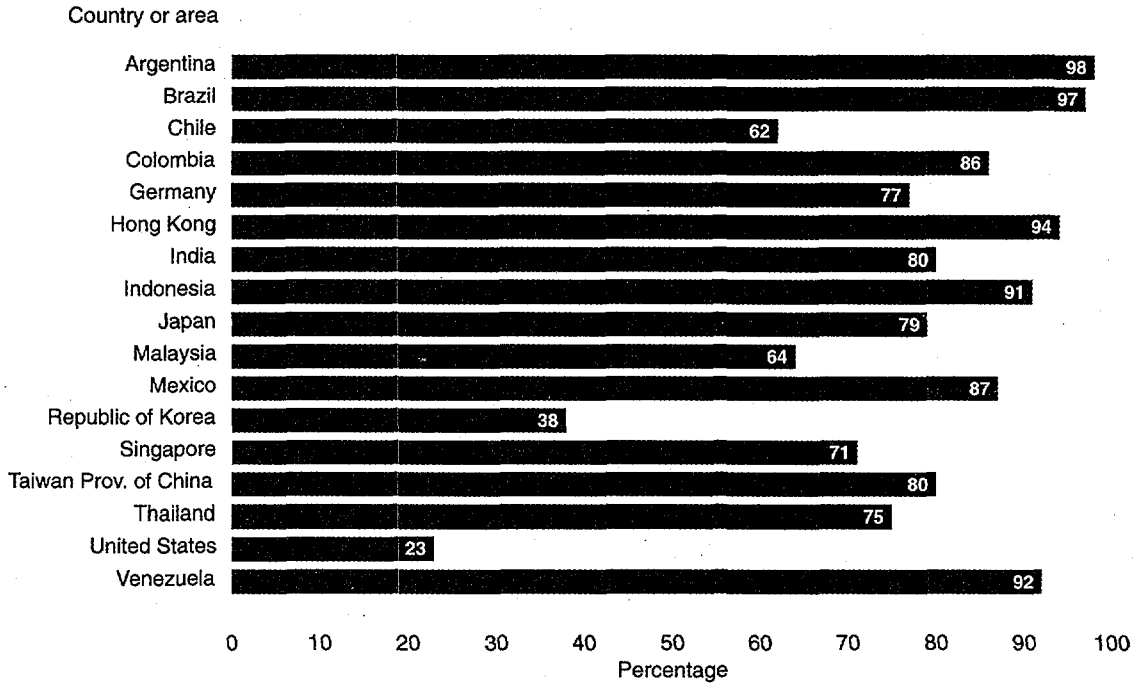
Secondly, macroeconomic considerations and a general attitude of risk aversion linked with efforts to contain losses from bad debts have led commercial banks in many developing countries and economies in transition to concentrate their lending operations on short-term loans for working capital. In five States of central Europe, for example, short-term loans constitute about one half of the total stock of the banking sector, while flow figures indicate that new loans made to enterprises are increasingly on a short-term basis.[19] Short-term loans also make up the bulk of bank lending in sub-Saharan Africa.* The short-term character of loans is mainly due to the short-term nature of deposits and the uncertain macroeconomic environment in those countries.

Thirdly, banks in many developing countries and economies in transition are characterized by a high concentration of their portfolio of loans in existing customers, primarily large and medium-

*A survey of 200 large and small manufacturing enterprises in each of five countries, Cameroon, Ghana, Kenya, United Republic of Tanzania and Zimbabwe, revealed a virtual absence of medium- and long-term debt instruments required for investment financing. See Tyler Biggs and Srivastara Pradeep, *Structural Aspects of Manufacturing in Sub-Saharan Africa*, World Bank Discussion Paper No. 346 (Washington, D.C., World Bank, 1996), pp. 6-9.

Banks continue to play a dominant role as financial intermediators

Figure 13. Share of banks in financial intermediation[a] in selected countries and areas, 1994



Source: Bank for International Settlements, cited in "The road to financial integration: private capital flows to developing countries", World Bank internal document (Washington, D.C., World Bank, 1997).

[a] Assets of banks as a percentage of the total assets of banks and non-bank financial institutions.

sized companies, while the access of small enterprises and individual entrepreneurs to bank loans is either very limited or denied. Banks are reluctant to lend to the latter group of potential clients because they view such operations as highly risky and costly. Moreover, a majority of entrepreneurs and small enterprises are unable to provide the collateral usually required by banks. In circumstances where a limited number of small entrepreneurs have established access to formal financial institutions, the vast majority is dependent on costly informal arrangements.

Impact of the health of the banking sector on macroeconomic stability

Although the financial sector in developing countries and economies in transition tends to be dominated by banks to a larger extent than in industrialized countries, the soundness of banking systems is usually more precarious in developing countries and economies in transition. Weaknesses in their banking systems, characterized by thin and concentrated markets, a high proportion of non-performing loans and substantial operating costs, typically result in wide spreads between lending and deposit rates. Although spreads in interest rates differ significantly from country to country, they are generally at least twice as high in developing countries and economies in transition as in industrialized countries. Wide spreads have adverse effects on the allocation of credits, since potentially viable projects may not be funded at all, or their financing may be delayed, while high lending rates may trigger large-scale liquidity problems for borrowers. The consequence in either case might be to create serious impediments to economic growth or to increase the severity of an economic downturn.

Deregulation of financial systems in developing countries and economies in transition has been accompanied by large increases in inflows of foreign capital through the intermediation of domestic banks, thus demonstrating the importance of a healthy financial system for maintaining overall macroeconomic stability. Since banks play a more dominant role in financial intermediation in those countries and economies, the soundness of their banking system is even more important than that of the banking system in industrialized countries. It is therefore important for policy makers in developing countries and economies in transition to deal with the fragility of the banking system as a matter of the highest priority (see box 13).

Impact of banking reform remains limited

Box 13. Reform of the financial system in economies of transition

In the centrally planned economies, the banking system, consisting of the State central bank and specialized banks controlled by the central bank, constituted practically the whole of the financial system, since there was virtually no securities market and the only non-bank financial institutions were a few State insurance companies. Banks under such a system were largely passive, since they only served as a channel for transferring State funds to enterprises. They were not required to assess the creditworthiness of clients, since funds for State-owned enterprises were automatically generated when needed by firms to meet the production targets established by the authorities under the central plan.

The transition to a market economy has completely transformed the role of the banking system in the countries of central and eastern Europe. Banks have been forced to operate as professional bankers, and not as mere passive distributors of credits. Like banks in market economies, they are required to be active partners in meeting the financial needs of their clients and to adhere to established performance criteria under the regulations governing capital adequacy and the new accounting rules regarding provisions for bad debts. The transformation of the banking system has a number of distinguishing features, including the following:

(a) Highly concentrated banking markets. The top five banks in Belarus, Czech Republic, Hungary, Poland, Romania, Slovakia, Slovenia and Ukraine accounted for between 63 and 79 per cent of the market in 1994.[a] Those high shares, a direct legacy of the pretransition period, reflect the continued dominance of State banks or former State banks;

(b) Bad debts. Before the transition, banks were typically engaged in lending at favourable terms to enterprises in financial difficulty. In many countries, Governments pressed banks to make direct loans to inefficient State-owned companies, and the banks operated without adequate supervision. The adoption of tight fiscal policies aimed at reducing inflation has subsequently revealed significant weaknesses in bank balance sheets. Non-performing loans have been found to account for a large portion of bank portfolios in the three more advanced economies in transition. The situation is even

Box 13 *(continued)*

more difficult in other economies in transition. In the Baltic States, the Russian Federation and other CIS States, for example, estimates of the ratio of non-performing loans to total loans range between 14 and 65 per cent;[b]

(c) High transaction costs. The high level of non-performing debts has compelled banks in many economies in transition to maintain wide margins between lending and deposit rates. In more advanced economies in transition, spreads range between 4 per cent in Slovakia and 13 per cent in Estonia. In most industrialized countries, margins are approximately 3 per cent.[b] The high transaction costs of banks are also due to operating expenses, which, because of the lower efficiency of the banking system, are typically twice as high as in industrialized countries.

Banks in central and eastern Europe have also found it difficult to expand their balance in real terms because of the lack of staff with experience in credit and risk analysis, the lack of a banking culture that emphasizes the need for cooperation with enterprises and the lack of information concerning the financial position or creditworthiness of enterprises and owners. Despite all those problems, some economies in transition have made considerable progress in transforming their banking systems through a combination of policy measures. In addition to the creation of a two-tier banking system and the liberalization of interest rates, government policies have usually included regulatory reform, recapitalization and privatization of State-owned banks and the establishment of new private banks. Countries in the region differ greatly in the relative importance assigned to each of the three policy areas.

Although many economies in transition have pursued a comprehensive strategy designed to transform their banking system, the available data indicate that the role of the banking system in intermediation is still very limited, if broad money as a percentage of GDP is taken as an indicator of financial depth. Although the ratio of 26 per cent in 1995 for the economies in transition as a group is above the corresponding ratio for the least developed countries, it is still well below the ratio of 102 per cent for high-growth developing economies and the 68 per cent recorded by the industrialized countries. Moreover, the average value for the economies in transition fails to reflect the marked differences between more advanced economies in transition, mainly those in central and eastern Europe, with a ratio of 47 per cent, and less advanced economies in transition, mainly CIS States, with a ratio of only 17 per cent.[b]

[a]European Bank for Reconstruction and Development, *Transition Report 1995* (London, 1995).
[b]International Monetary Fund, *World Economic Outlook: October 1996* (Washington, D.C., 1996).

Capital markets

Capital markets are another source of financing for industrial investment, through the issuing of bonds on primary markets for corporate debt or financial instruments on domestic equity markets. Although equity markets have evolved to become an important source of corporate financing in a growing number of developing countries and economies in transition, the development of bond markets is of much more recent origin. A lack of well-established institutional investors and other infrastructure has not allowed bond financing to play a more prominent role in the corporate financing of those countries and economies. The available information indicates that bonds issued by corporations on domestic bond markets of developing countries reached an average annual level of between $4 billion and $7 billion during the period 1988-1992.[20] Though the volume of bonds issued on those markets has increased in recent years, it has not changed the main structural characteristic of capital markets in developing countries and economies in transition, namely a strong concentration of activities on equity markets. The section below focuses on the development of the equity market as a source of finance for industrial investment.

Rapid expansion of stock markets

While the importance of the banking system to national economic development has long been recognized, the contribution of the stock market has been less obvious. Each of them provides different types of financial services, but both mobilize savings and contribute to their more effective allocation. Credit markets complement rather than substitute for stock markets. As economies and enterprises mature, the roles of the market change, from simple debt financing with non-tradable instruments for all firms through equity financing of larger firms to debt and equity financing for large and small firms.[21]

As financial intermediators, stock markets are responsible for a growing proportion of total savings in many of the more advanced developing countries, particularly in East Asia, despite the

continued growth of bank deposits in practically all developing countries and economies in transition. In Malaysia and Thailand, for example, equity markets accounted for respectively 79 per cent and 56 per cent of total savings in 1994, while in Chile they accounted for 80 per cent.[22] Stock markets provide an important source of investment capital in many other countries as well, particularly for large enterprises.

Over the last 10 years, stock markets have been expanding rapidly in many developing countries, and since the early 1990s, a similar trend has been observed in a number of economies in transition. The combined market capitalization, that is, the value of the shares quoted on the market at market price, of 60 emerging markets increased from less than $240 billion in 1986 to nearly $1,900 billion in 1995 (see table 21). Since their growth has been much stronger than the increase in the combined capitalization of industrialized countries during the same period, emerging markets now account for more than 10 per cent of total world market capitalization, compared with 3.6 per cent in 1986.[23] Although stock markets in industrialized countries, such as Germany, Japan, United Kingdom and United States are still significantly larger, market capitalization in some of the developing countries and economies in transition now approaches that of many industrialized countries. For example, the size of equity markets in Chile, Malaysia, Philippines and Thailand, measured by the ratio of market capitalization to GDP, already exceeded that of the United States in 1994.[24]

In tandem with the rise in market capitalization, the volume of stocks traded in emerging markets increased from $83 billion in 1986 to $1,033 billion in 1995. The turnover ratio of emerging markets, representing the value of total shares traded as a proportion of market capitalization, also rose from 35 per cent in 1986 to 55 per cent in 1995, indicating their increased liquidity, that is, the ability to buy and sell securities easily.[25]

Industrial firms as important players on emerging stock markets

The importance of stock markets as sources for financing industrial investment can be gauged from their share in the overall market using an indicator such as the Global Index of the International Finance Corporation (IFC), which covers a representative sample of all stocks listed on emerging markets.* Although their relative importance has been declining, manufacturing firms have dominated the stock market in developing countries and economies in transition. Of all the stocks included in the IFC Global Index, manufacturing firms accounted for 44 per cent of the total market capitalization in 1989, although their share had dropped to 33 per cent by 1995.[26] Manufacturing continues to be the sector with the largest market share in 12 of 26 developing countries and economies in transition, followed by finance and insurance, which constitute the most important sector in eight economies, by transportation, communications and utilities, the leading sector in four, and mining, the leading sector in two (see table 22). The general pattern, however, conceals significant differences between different economies, as shown in figure 14. In some, such as India and Indonesia, manufacturing firms continue to account for more than 70 per cent of total stock-market capitalization. In others, including Argentina, Jordan, Malaysia, Peru, Portugal, South Africa, Sri Lanka and Thailand, their share had fallen to 25 per cent or less by 1995.

*The IFC Global Index includes 1,590 stocks from 27 developing countries and economies in transition. Market capitalization of those stocks was equivalent to 57 per cent of the total market capitalization of developing countries and economies in transition in 1994 (International Finance Corporation, *Emerging Stock Market Factbook, 1996* (Washington, D.C., 1996)).

Stock markets have been expanding rapidly in developing countries and economies in transition

Table 21. Stock market growth in developing countries and economies in transition, 1986-1995

Item	Emerging markets		Developed markets		World	
	1986	1995	1986	1995	1986	1995
Market capitalization (billions of dollars)	239	1 896	6 276	15 892	6 515	17 788
Number of listed domestic companies	9 618	19 397	18 555	19 467	28 173	38 864
Trading volume (billions of dollars)	83	1 033	3 491	10 633	3 574	11 666
Trading volume as a proportion of market capitalization (percentage)	35	55	56	67	55	66

Source: International Finance Corporation, *Emerging Stock Market Factbook, 1996* (Washington, D.C., 1996), pp. 16-23.

Manufacturing is a dominant sector in emerging stock markets

Table 22. Industry concentration in the IFC Global Composite Index, end-1995

Market	*Sector with the largest share of market capitalization*	*Sector share of market capitalization (percentage)*
Africa, Europe and Middle East		
Greece	Manufacturing	44.2
Hungary	Manufacturing	48.1
Jordan	Finance, insurance and real estate	63.7
Nigeria	Manufacturing	66.9
Poland	Finance, insurance and real estate	48.0
Portugal	Finance, insurance and real estate	54.1
South Africa	Mining	26.2
Turkey	Manufacturing	58.1
Zimbabwe	Finance, insurance and real estate	38.5
Latin America		
Argentina	Mining	39.9
Brazil	Transportation, communications and utilities	48.6
Chile	Transportation, communications and utilities	49.1
Colombia	Manufacturing	54.3
Mexico	Manufacturing	29.7
Peru	Transportation, communications and utilities	43.2
Venezuela	Manufacturing	42.5
East Asia		
China	Manufacturing	49.1
Philippines	Finance, insurance and real estate	46.6
Republic of Korea	Manufacturing	47.2
Taiwan Province of China	Finance, insurance and real estate	47.3
South Asia		
India	Manufacturing	77.7
Indonesia	Manufacturing	71.6
Malaysia	Transportation, communications and utilities	24.8
Pakistan	Manufacturing	60.7
Sri Lanka	Finance, insurance and real estate	48.4
Thailand	Finance, insurance and real estate	46.5
IFC Global Composite Index	Manufacturing	33.4

Source: International Finance Corporation, *Emerging Stock Market Factbook, 1996* (Washington, D.C., 1996), p. 65.

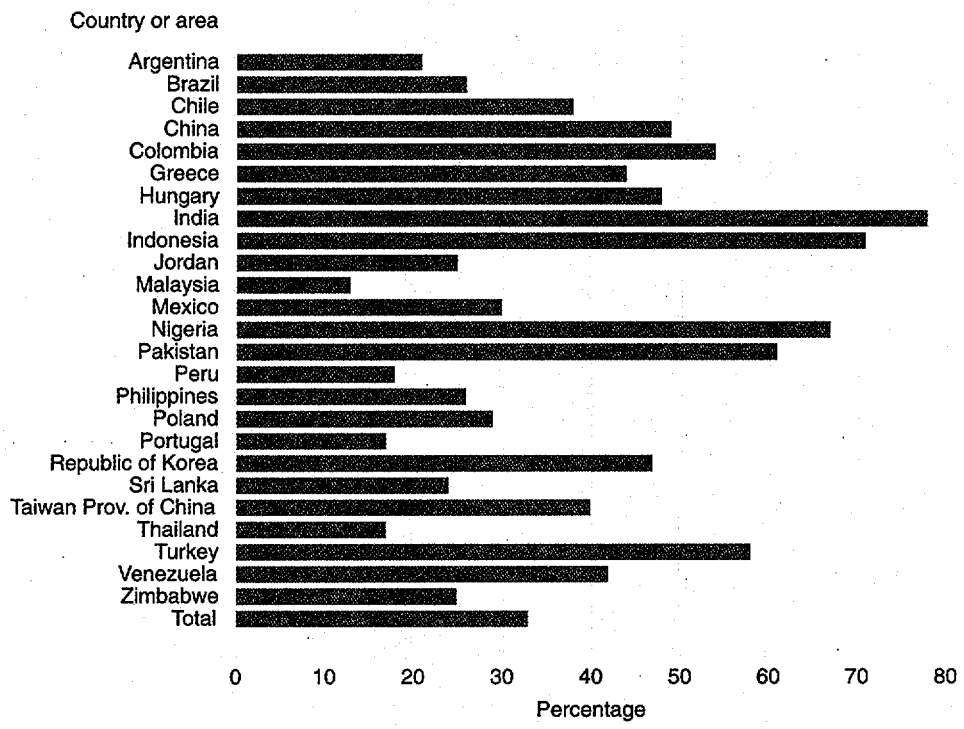
Factors influencing the growth of emerging stock markets

The growth of emerging stock markets has been encouraged by wide-ranging policies of macroeconomic and structural reform, of both a legislative and economic nature, in many developing countries and economies in transition. Those policies, accompanied by declining fiscal deficits and inflation, realistic and stable exchange rates and improved economic incentives, have provided an environment in which the domestic private sector has begun to flourish. The process of privatization has further promoted activity on the stock market by expanding the supply of shares. Moreover, as Governments have liberalized or even eliminated restrictions on capital flow, improved information on listed shares and strengthened the protection of investors, emerging markets have become increasingly interesting for foreign investors.

Two other key factors that attract foreign investment in emerging stock markets are higher profits and better risk diversification. Investments in those markets have generated higher yields than investments in traditional markets, even with adjustments for greater risk. Investors from industrialized countries also benefit from a diversification of their portfolios, since returns on emerging markets appear not to be closely correlated with those on the markets of industrialized countries. Several observers have attributed the surge of the early 1990s in equity investment in developing countries to a fall in United States interest rates during the period

Importance of stock markets as a source of financial investment varies among developing countries

Figure 14. Importance of manufacturing in the IFC Global Composite Index, end 1995
(Percentage of market capitalization)



Source: Calculated on the basis of data contained in *Emerging Stock Markets Factbook, 1996* (Washington, D.C., International Finance Corporation, 1996).

1989-1993. But to attribute that growth mainly to lower United States interest rates ignores the fact that liberalization had only just made such investment practicable in many countries.

Financial systems and industrialization

How well have different financial systems performed in relation to investment finance? What are the most appropriate systems for promoting industrial development based on a secure supply of savings with long maturity periods?

Unlike the financial needs of working capital and trading activities, fixed investment in manufacturing for industrial development requires long-term funding and large commitments of investible funds. At an early stage of economic development, because of the prevalence of short-term liability and the limited maturity transformation in financial systems, long-term financial provisions are generally few relative to the need to finance capital-intensive fixed investment. The relative scarcity of long-term finance is one of the most commonly observed examples of incomplete markets, a condition arising from market failures in the financing of economic development.*

The capital market as a source of long-term financing

One of the measures frequently adopted in the past to overcome the shortage of long-term finance in developing countries was a supply-side approach, whereby specialized institutions such as development finance institutions were created for fixed investment.[27] In recent years, however, with the demise of development finance institutions, capital markets have been increasingly seen as a credible alternative source of long-term investment financing. Indeed, in the light of the mismatching

*A missing insurance market for a high level of risk is another well-known example of incomplete markets (Juro Teranishi, "Market failures and government failures: a conceptual framework and Japan's experience", background paper for the Conference on Market and Government: Foe or Friends?, International Conference on the World Economy in Transition, held at Hitosubashi University, Tokyo, in February 1996).

maturities of financial assets and the shortage of long-term finance, many policy makers have turned to the development of the capital market to channel long-term funds into the productive sectors, while the banking system provides short-term finance to investors.

The capital market allows banks and other financial institutions such as pension funds and life insurance companies to absorb investment through the sale of long-term financial assets to households, either directly or via pension funds or insurance. Hence, an active and broad-based capital market can alleviate the acute shortage of term loans and equity financing, and transform and lengthen credit maturities as well as reduce the credit risks inherent in transactions between individuals.

Specialization, therefore, is possible.[28] In an efficient capital market, stocks are often used to finance very risky and highly productive projects, while banks, because of the non-contingent nature of bank loans, finance investments that are more secure and that yield lower revenues.*

By providing efficient and transparent price indicators and liquidity in the secondary market for equities and bonds, the capital market can be used for the vigorous arbitrage of the portfolios of bondholders and shareholders.** A developed secondary market can induce those investors with a preference for short-term liquid assets to participate in markets for long-term securities and bonds, in the knowledge that those long-term assets can be easily disposed of on the secondary markets. Only under those conditions can the maturity transformation take place. Capital markets can thus be seen as a means of allowing the speedy allocation of assets and portfolios to the public and of facilitating their diversification, thus injecting a higher degree of competition into the financial system.

In recent years, the need for a broad-based capital market has been increasingly debated in the context of privatization programmes. For many, it appears that successful privatization and development of the capital market are mutually reinforcing.*** In particular, privatization through capital markets is preferred to divestiture through direct sales as a mechanism for ensuring more efficient mobilization of resources, equitable distribution of assets, greater transparency in matters of policy and better monitoring of performance.[29]

Because of the perceived benefits, the development of capital markets has become an essential component of structural adjustment programmes. Capital markets, however, take time to develop and mature, and often fail to perform many of the functions ascribed to them in the short term. The paucity of financial instruments and potential investors inhibits development of the market. In many countries, long-dated government securities and bonds tend to be placed outside the market with quasi-public institutions and held to maturity. In most cases, the market in corporate bonds and other private stocks is at a very early stage of development in economies where the public sector has hitherto dominated. Many family-owned indigenous enterprises are understandably reluctant to go public. Tax policy in favour of deposit income over dividends is also seen as impeding a transfer from a bank-based financial system to a system based on the capital market.

The development of functioning markets requires not just a broadening of the range of instruments and an increase in the number of market players, but more extensive trading to allow for realistic portfolio adjustment and risk management. It also demands more effective management of monetary and fiscal policy together with a stable macroeconomic environment. Financial markets, like any other markets, can only develop if the environment is sufficiently stable and predictable for investors to assess price information accurately and take calculated risks. If markets are subject to extreme variability in supply and demand, prices will be unable to transmit information efficiently; where markets have few players and few counters, then prices do not convey real opportunity costs and values; and where markets are volatile, effective risk management is constrained.

The failure of markets to provide for term lending must be examined in the context of the above-mentioned constraints and not simply with a view to creating additional instruments. Hence, the sustained development of the markets requires a system that is capable of reducing risks. An appropriate regulatory and supervisory framework should also be in place to prevent damaging practices such as insider trading or illegal takeovers and mergers.

*The non-contingent nature of bank loans allows successful investors to keep any profits that are left and failed investors to transfer their losses to the banks.

**According to the hypothesis of efficient markets, share prices on stock markets always fully reflect all available information about economic fundamentals. In practice, however, that hypothesis is often rejected even for highly developed markets.

***Adam and others (1992) critically review this proposition. They argue that while privatization can make a major contribution to the deepening of equity markets, a positive outcome from the concurrent implementation of privatization programmes and development of the capital market is by no means automatically assured. See Christopher S. Adam, William P. Cavendish and Percy S.Mistry, *Adjusting Privatization: Case Studies from Developing Countries* (London, James Curry Publishing, 1992).

Are capital markets a relevant source of investment financing for low-income countries?

With regard to the sequencing of the development of the financial sector, many argue that the capital market could achieve its full potential only at a later stage of economic development.[30] It has been suggested that the relative importance of bank-based finance and capital-market-based finance in economic development is related to the life cycle of firms and economies.[31] In their early years of existence when screening and monitoring are important, and before establishing a reputation, firms are heavily dependent on bank finance. Later, as economies and firms mature and problems of asymmetry of information become less pronounced, bank finance dwindles in importance relative to capital markets, which take on an increasing proportion of corporate risk.

In view of the historical evolution of financial systems referred to above, it is unrealistic to expect discernable benefits from development of the capital market in the immediate future for many low-income developing countries. Underdeveloped capital markets are not capable of assessing and reducing risks. They cannot be expected to provide significant sources of new capital. Moreover, banking institutions often play a major role as providers of liquidity in the initial stages of development of capital markets. Meanwhile, bank finance is expected to remain the major source of external financing of investment for some years to come. As policies are introduced to encourage capital markets, improvement in the operations of banking institutions should be given due attention so that economies could eventually benefit from the advantages of both bank-based and capital-market-based finance.* Sound and dynamic banking and financial institutions are essential for the development of capital markets (see box 14).

*Blommestein and Spencer argue that instituting investment funds—a hybrid of the banking system and capital markets—may be a practical way forward for economies in transition, which typically face conditions such as a shortage of domestic savings, rudimentary capital markets and an inadequate capacity for evaluating risks (Hans J. Blommestein and Michael G. Spencer, *The Role of Financial Institutions in the Transition to a Market Economy* (Washington, D.C., International Monetary Fund, 1993)).

Financial sector of Latin America is still dominated by banks

Box 14. Financial liberalization in Latin America

Unlike in some Asian countries, where non-bank financial institutions have already become a highly important part of the financial sector, in Latin America, the sector is still heavily dominated by banks. Nevertheless, non-bank institutions, especially stock markets, are gaining in importance, and represent the most dynamic part of the financial sector in many countries of the region.

Until the mid-1980s, countries of the region were characterized by the following forms of Government intervention in the banking sector:[a]

(a) Administrative control of interest rates. Governments of many Latin American countries have opted for controlled interest rates as an instrument to increase investment and accelerate growth, as well as to reduce the costs of public sector borrowing and thus ease the pressure of budget deficits. In circumstances of high inflation, interest rates have often been negative in real terms. During the period 1978-1988, for example, interest rates were highly negative in many countries, including Argentina, Brazil, Mexico and Peru;

(b) Directed credit programmes. Such programmes, operated through a number of mechanisms, such as specialized development banks and direct loans from central banks, were intended to serve a number of objectives, including the provision of credit to small and medium-sized entrepreneurs with no or weak access to regular bank financing;

(c) Requirement to maintain a high bank reserve. Such a requirement has often been established to tighten the monetary supply and reduce monetary pressures;

(d) State ownership of commercial and development banks. Such banks have been the institutional mechanism for implementing targeted credit programmes.

For Latin America, the external debt crisis of the early 1980s opened a period of severe macroeconomic stabilization accompanied by structural reforms, an integral part of which was the reform of the financial sector. In most countries in the region, reforms began in the late 1980s. The only exceptions were Argentina, Chile and Uruguay, where reforms were initiated in the 1970s, and Mexico, which embarked on the reform of its financial sector in 1985.

Box 14 *(continued)*

By and large, reforms of the financial sector included liberalization measures to eliminate the control of interest rates, to dismantle directed credit programmes, to reduce reserve requirements and to privatize or liquidate State-owned banks. Additional measures have usually included improved regulation of banks and capital markets as well as measures aimed at increasing the independence of central banks. By 1996, the region had almost completely liberalized its interest rates. In 23 of 26 countries, deposit rates of commercial banks are currently determined by the market, while lending rates of commercial banks are freely determined in 19 countries. In addition, no countries increased the funding of their directed credit programmes in real terms, none allowed commercial bank supervision to deteriorate significantly, and none permitted their central bank to become less independent during the period between 1988 and mid-1996.[a]

[a]International Development Bank, *Economic and Social Progress in Latin America: 1989 Report* (Washington, D.C., Johns Hopkins University Press, 1996).

Recent literature on corporate finance suggests, however, that the superiority of bank-based indirect finance over capital-market-based direct finance may be more permanent, regardless of the stage of financial development, largely because of a more efficient mode of corporate governance of banks. Thus, it has been argued that when resources for investment are provided by a large number of savers, financial intermediaries can economize on fixed costs of collecting information about investors and supply external finance more efficiently. Such a result would require that the costs of providing appropriate incentives for intermediaries to act in the interest of savers do not outweigh the reduction in costs that would result from delegating the collection of information to the intermediaries.[32]

Direct access to foreign sources of funding for the industrial sector

If capital inflows are considered from a purely financial point of view, the importance of foreign savings are found to be very limited, as suggested by table 23. For example, the share of total investment of developing countries financed by foreign savings during the period 1982-1989 was 7.3 per cent, which represented only 1.8 per cent of their total GDP for that period. During the first half of the 1990s, both ratios declined to 5.8 and 1.6 per cent respectively. For the economies in transition, the inflows were even lower.

Foreign capital accounts for a small percentage of GDP and of total investment in developing countries and economies in transition

Table 23. Net capital inflows as a proportion of GDP and total investment, 1982-1995
(Percentage)

Economic grouping, region	*1982-1989*	*1990-1995*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*
			A. As percentage of GDP					
Developing countries	-1.8	-1.6	-0.5	-1.7	-1.6	-2.9	-1.4	-1.6
Africa	-4.8	-3.1	-0.9	-2.4	-3.6	-4.0	-3.8	-3.9
Asia	-1.0	-0.8	-0.3	—	-0.4	-2.0	-0.7	-1.4
Europe and Middle East	-4.3	-3.4	-1.4	-8.9	-3.7	-5.6	0.2	-0.8
Western hemisphere	-2.2	-2.2	-0.3	-1.4	-2.7	-3.4	-3.0	-1.9
Economies in transition	—	-1.2	-1.3	-0.7	-2.4	-0.8	-0.9	-1.3
			B. As percentage of total investment					
Developing countries	7.3	5.8	1.9	6.5	5.9	10.2	5.0	5.6
Africa	21.4	15.0	4.7	11.5	17.1	20.7	18.2	17.0
Asia	3.6	2.5	1.0	—	1.3	5.9	2.1	4.1
Europe and Middle East	19.3	14.6	6.1	37.1	14.9	23.3	—	3.5
Western hemisphere	3.5	10.8	1.5	7.2	13.1	16.4	14.5	9.5
Economies in transition	—	4.5	4.5	2.3	8.1	3.2	3.9	5.7

Source: Calculated from International Monetary Fund, *World Economic Outlook: October 1996* (Washington, D.C., 1996), pp. 237-240.

Among developing countries, the dependence on foreign savings is highest in Africa. As a whole, more than 17 per cent of the investment in the region was financed by foreign savings during the period 1992-1995. In many African countries, the share could be as high as two thirds of total investment.[33] In other developing countries, a lower dependence on foreign capital was evident in regions with a stronger capacity for domestic savings. In Asia, for example, foreign capital financed an average of only 2.5 per cent in its total investment during the period 1990-1995. Some East Asian economies, such as Hong Kong, Taiwan Province of China and especially Singapore, have consistently had savings surpluses since the early 1980s, while others in South Asia still rely heavily on foreign inflows to bridge the gap between savings and investment.[34] In Latin America, foreign savings play an increasing role in financing investment, as reflected in their rising share in total investments, which increased from approximately 7 per cent in 1991 to an average level of more than 13 per cent during the period 1992-1995.

Despite the small percentage deployed for financing investment, foreign savings play a critical role in the economic development of many developing countries, especially the low-income ones. External capital inflows can assist in financing domestic investment, thereby helping countries that may be trapped in conditions of low growth and low savings to invest more and boost economic growth. They can also help countries to adjust to economic shocks—either internal, such as harvest failure, or external, such as changes in world commodity prices. Inflows may also improve access to world markets for goods, and thereby support a reorientation of trade policies from import substitution to export promotion, as has occurred in the Republic of Korea and Taiwan Province of China.

The question is whether foreign savings complement domestic savings and thus promote growth by increasing aggregate savings or whether they substitute for domestic savings that have been used for increasing consumption. Empirical evidence on the issue is inconclusive. Some studies confirm a negative relationship between domestic and foreign savings in certain developing countries. Evidence, for example, suggests that about 40 per cent of foreign aid goes into increased consumption rather than investment. A similar conclusion can be drawn from the recent experience with capital inflows into Latin America. In Asia, however, foreign savings have been accompanied by growing national savings and investment rates.[35]

During the past decade, the pattern of foreign capital inflows into developing countries and economies in transition has changed. Unlike most of the 1980s, when financial flows to developing countries and economies in transition were strongly depressed because of the external debt crisis, the first half of the 1990s has been characterized by more than a doubling of the inflow of financial resources into those countries and economies (see table 24). The increase in net aggregate resource inflows has been accompanied by substantial changes in their structure. The most striking structural change is that virtually all growth in financial flows has come from private sources. Following the surge of private capital into East Asia and Latin America, financing from those sources almost quadrupled during the period 1990-1995 for developing countries and economies in transition as a group, while the volume of official development flows remained more or less stagnant in nominal terms. As a consequence, their share, as a proportion of the total net inflows, declined from 57 to 28 per cent during the period. Nevertheless, they still account for about a half of total net flows to North Africa, South Asia and western Asia. Representing almost 80 per cent of total inflows, official flows continue to be especially important for low-income countries in sub-Saharan Africa.

Another feature of the foreign capital inflows is the shift from bank to non-bank debt financing. Commercial banks have lost their importance in providing financial resources to developing countries. While in 1980, that is, before the debt crisis, commercial banks accounted for more than one third of the total net flows to developing countries, a decade later, their share had fallen to less than 2 per cent. In the following years, borrowing from banks revived somewhat, to 7 per cent of total flows in 1995, but it has been increasingly concentrated on short-term trade finance and on private project finance on a limited-recourse basis.

The shift away from bank financing has been accompanied by a change in the structure of bank lending. During the 1970s and 1980s, bank credits were raised almost exclusively by sovereign borrowers and in the form of general-purpose financing. General-obligation debt is usually low-cost, involves substantial control by the borrower and entails little risk-sharing between lenders and borrowers. During the 1990s, however, more and more bank lending is occurring in the form of project financing on a limited-recourse basis. Under that form of debt financing, in which risks are shared among project sponsors, creditors have to rely primarily on the cash flow of the project for debt servicing.

In addition to bonds, equity financing is the other large and growing private source of finance for developing countries and economies in transition. While in 1990 FDI and portfolio equity

investments accounted for less than one third of total capital flows to those countries and economies, in 1995 their share increased to almost a half. Those non-bank sources of financing have flourished because of a combination of several factors. Some of them, such as improved macroeconomic stability, are of a more general character and have stimulated both forms of financing, while others have been more important either for FDI or for portfolio equity investment.

Net foreign capital inflows into developing countries have risen sharply

Table 24. Net external capital inflows into developing countries
(Billions of dollars)

Economic grouping, region and type of inflow	*1980*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*
All developing countries[a]							
Private	53.3	44.0	61.6	100.3	154.2	158.8	167.1
Foreign direct investment	5.1	25.0	35.0	46.6	63.3	80.1	90.3
Commercial bank lending	32.2	1.7	2.5	13.8	-4.9	9.2	17.1
Other[b]	13.4	10.6	3.7	12.6	6.9	2.4	4.0
Portfolio debt	2.6	3.0	12.8	13.2	38.3	32.2	33.7
Portfolio equity	—	3.7	7.6	14.1	45.6	34.9	22.0
Official development finance	35.1	57.9	65.5	55.0	53.0	48.6	64.2
Total net capital inflows	88.4	101.9	127.1	155.3	207.2	207.4	231.3
East Asia and the Pacific							
Private	8.9	20.5	26.2	44.7	62.9	78.3	98.0
Foreign direct investment	1.3	11.0	13.9	21.7	37.9	43.0	53.7
Commercial bank lending	5.0	4.7	6.0	8.8	-3.9	3.4	..
Other[b]	2.4	2.3	1.9	6.3	2.3	5.1	..
Portfolio debt	0.2	0.2	3.3	2.8	8.5	13.2	..
Portfolio equity	—	2.3	1.1	5.1	18.1	12.6	12.2
Official development finance	4.3	8.4	8.4	8.7	10.3	8.0	10.3
Total net capital inflows	13.2	28.9	34.6	53.4	73.2	85.3	108.3
Europe and central Asia[a]							
Private	11.9	8.2	7.0	21.6	25.0	15.6	17.3
Foreign direct investment	0.7	2.1	4.4	6.3	8.3	8.4	12.5
Commercial bank lending	6.2	-5.4	-6.3	0.6	0.4	-1.0	..
Other[b]	5.0	7.9	4.4	8.7	4.2	0.6	..
Portfolio debt	—	3.4	4.6	6.0	11.9	5.7	..
Portfolio equity	—	0.2	—	0.1	0.2	1.9	1.6
Official development finance	3.4	6.9	16.2	12.6	12.2	11.2	9.4
Total net capital inflows	15.3	15.1	23.2	34.2	37.2	26.8	26.7
Latin America and the Caribbean							
Private	24.5	12.2	22.6	30.3	58.7	49.6	34.0
Foreign direct investment	6.2	7.8	12.6	14.5	15.7	20.8	17.8
Commercial bank lending	16.5	2.9	1.9	4.8	-0.1	5.5	..
Other[b]	1.1	0.3	-1.9	-1.9	-1.9	-2.5	..
Portfolio debt	0.8	0.1	4.1	4.8	19.8	12.7	..
Portfolio equity	—	1.1	6.2	8.2	25.2	13.2	6.2
Official development finance	5.4	9.3	7.7	4.1	5.5	1.5	14.8
Total net capital inflows	29.9	21.5	30.3	34.4	64.2	51.1	48.8
Middle East and North Africa							
Private	-1.2	0.5	2.2	0.3	3.7	4.1	7.1
Foreign direct investment	-3.3	2.8	1.8	2.1	3.8	3.7	2.1
Commercial bank lending	0.2	-1.4	1.7	-0.2	-1.4	1.8	..
Other[b]	1.8	-0.7	-1.1	-1.3	2.2	-1.1	..
Portfolio debt	—	-0.2	-0.1	-0.2	-0.8	-0.4	..
Portfolio equity	—	—	—	—	—	0.1	0.1
Official development finance	9.5	9.4	9.3	7.2	5.4	6.2	6.3
Total net capital inflows	8.3	9.9	11.5	7.5	9.1	10.3	13.4

Economic grouping, region and type of inflow	*1980*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*
South Asia							
Private	1.3	2.4	2.1	2.9	4.7	7.4	6.0
Foreign direct investment	0.2	0.5	0.5	0.6	0.8	1.2	2.1
Commercial bank lending	1.0	1.7	0.2	1.8	0.9	−0.7	..
Other[b]	0.1	−0.2	0.1	0.3	0.5	0.4	..
Portfolio debt	—	0.3	1.4	−0.2	0.5	0.2	..
Portfolio equity	—	0.1	—	0.4	2.0	6.2	1.4
Official development finance	5.3	7.0	8.8	6.4	5.4	6.4	6.4
Total net capital inflows	6.6	9.4	10.9	9.3	10.1	13.8	12.4
Sub-Saharan Africa							
Private	7.9	0.2	1.0	0.3	−0.8	4.7	4.9
Foreign direct investment	—	0.9	1.8	1.5	1.8	3.0	2.2
Commercial bank lending	3.2	−0.7	−0.4	−2.1	−0.7	0.1	..
Other[b]	3.1	1.0	0.3	0.6	−0.4	—	..
Portfolio debt	1.5	−0.9	−0.6	0.1	−1.6	0.8	..
Portfolio equity	—	—	—	0.1	0.1	0.9	0.5
Official development finance	7.2	16.9	15.3	16.0	14.3	15.4	17.2
Total net capital inflows	15.1	17.1	16.3	16.3	13.5	20.1	22.1

Source: Calculated from World Bank, *World Debt Tables 1996* (Washington, D.C., 1996).

[a]The *World Debt Tables* include economies in transition as well as Greece, Republic of Korea, South Africa and Turkey as developing countries, but not Portugal or Taiwan Province of China.

[b]Includes credits from manufacturers, exporters and other suppliers of goods and bank credits covered by a guarantee of an export credit agency. Non-guaranteed debt for 1980 is not allocated between bank loans and bonds, and thus is assumed to consist wholly of bank loans.

Foreign direct investment

FDI constitutes a relatively stable element of international private capital flows that is insulated from short-term and cyclical pressures, since it primarily reflects the long-term strategies of transnational corporations. For developing countries and economies in transition, FDI has become not only the single largest source of net capital inflow, but also the only source showing a continued upward trend. The volume of FDI flows into those countries and economies almost tripled between 1990 and 1995. As a result, the share of developing countries in global inflows of FDI rose from 21 per cent during the period 1988-1992 to 32 per cent in 1995, while that of economies in transition increased from 0.8 to 3.8 per cent.[36]

The main feature of FDI in developing countries and economies in transition is its highly concentrated flow into a few of them. In 1995, almost 80 per cent of such FDI went to no more than 12 countries, with China accounting for more than 40 per cent of total inflows (see table 25). Of the 12, nine were middle-income economies, including Indonesia, Malaysia and Thailand in Asia, Argentina, Brazil, Chile and Mexico in Latin America, and Hungary and Poland, two economies in transition in central and eastern Europe. With the exception of China, low-income countries are virtually excluded from world FDI flows, accounting for less than 5 per cent of the total of such flows into developing countries in 1995.[37]

Sectoral distribution of inflows of foreign direct investment

The sectoral structure of FDI inflows differs considerably among developing countries. In low-income countries, FDI is mostly resource-based, with petroleum- and mineral-producing countries, such as Angola, Nigeria, Gabon and Ghana, attracting the largest amount. By contrast, the manufacturing sector continued to attract the bulk of FDI in Asian countries, although during the 1990s the flows are generally shifting away from the manufacturing and resource-based sectors to service industries, such as telecommunications, transport, banking and public utilities. The strong bias of FDI towards the manufacturing sector in Asia is mainly due to the large-scale relocation of production facilities by Japan into the region.

In Latin America, the bulk of recent FDI inflows has been directed to the purchase of existing companies through privatization programmes. In 1990, for example, investments associated with privatization accounted for $2.5 billion, equivalent to 28 per cent of total FDI inflows into the region.[38] If infrastructure-related FDI is excluded, manufacturing seems to constitute the largest share of total FDI in many countries of the region. For example,

two thirds of FDI flows into Mexico in 1993 went to manufacturing, particularly to the automotive industry, while in Colombia, the proportion was around 40 per cent during the period 1990-1994.[39]

In the economies in transition, foreign investment in greenfield projects are slowly gaining in importance, especially in countries where positive GDP growth has resumed. About one half of the accumulated FDI in those economies is concentrated in manufacturing, including engineering, automobile production and the chemical industry. During the first years of transition, most of the investment in the manufacturing sector was made in industries operating at above-average levels of technological productivity and efficiency. As a consequence, many large companies that were in urgent need of technological and managerial transformation failed to attract potential foreign investors. More recently, however, foreign investors have started to express interest in a broader segment of industrial firms.[40]

Major concerns about foreign direct investment

Despite the growing importance of FDI as a source of investment finance, concerns have been raised about the net benefits of FDI to host economies. The benefits may come in the form of improved use of resources as a result of the transfer of capital, technology and human skills to subsidiary or affiliated companies. Through linkages with foreign companies, local partners, suppliers and distribution and service companies can become more efficient. The affiliate may have easier access than local companies to foreign markets through trade with other companies in the parent group or through the sales network and marketing efforts of the parent company. The presence of the affiliate may force local rivals to become more competitive, and the training and know-how provided may benefit other businesses when its staff moves on to other employment.

The main concern about FDI is that transnational corporations will use their market power to generate huge profits that benefit their shareholders rather than the host economy. If local competitors are driven out of business, the growth of industry in a country could be impeded, especially if a foreign company subsequently pulls out. The potential for earning immense profits is increased if local prices are controlled rather than determined by the market, thus giving the transnational corporation access to local resources at below the internationally prevailing price. Subsidies and other incentives to investment represent added costs to the host country. Because of concern about exploitation by large companies, many developing countries restricted or prevented FDI before the 1980s.

Empirical evidence is overwhelmingly positive with regard to both the direct benefits of FDI in improving technical efficiency and its spillover effects. There is also evidence that, except for very poor countries, which lack a minimum threshold stock of human capital, FDI contributes more to growth than domestic investment in developing

Foreign direct investment is concentrated in Asia and Latin America

Table 25. Net FDI in developing countries and economies in transition, selected years (Billions of dollars)

Economic grouping and region	*1990*	*1993*	*1994*	*1995*
All developing countries	25.0	68.3	80.1	90.3
East Asia and the Pacific	11.0	37.9	43.0	53.7
Europe and Central Asia	2.1	8.3	8.4	12.5
Latin America and the Caribbean	7.8	15.7	20.8	17.8
Middle East and North Africa	2.8	3.8	3.7	2.1
South Asia	0.5	0.8	1.2	2.0
Sub-Saharan Africa	0.9	1.8	3.0	2.2
Low-income countries of which:	5.5	31.8	39.4	42.6
China	3.5	27.5	33.8	38.0
Middle-income countries	19.5	36.5	40.7	47.7
Percentage share of top 12 countries	68.0	81.2	76.0	79.2

Source: World Bank, *World Debt Tables 1996* (Washington, D.C., 1996), p. 17.

countries, because it involvesmm the transfer of technology and leads to a more than proportionate increase in total investment. Other evidence, however, shows that FDI is only beneficial in stable, open economies in which prices and capital flows are not distorted by government intervention. In more managed economies, by reducing total investment and growth, it could be counter-productive.[41]

Portfolio equity investment

The growth of portfolio equity investment (PEI) in developing countries has been explosive since the end of the 1980s, fuelled mainly by the rapid liberalization of the financial sector in many developing countries. It has also been boosted by the strategy of portfolio diversification increasingly applied by large investors in many industrialized countries, by low interest rates in those countries, and by significantly improved macroeconomic fundamentals in many developing countries and economies in transition. In addition, investors in portfolio equity have been attracted by higher yields than typically achieved with investment in domestic stocks. As a result, during the period 1990-1993, the volume of PEI rose more than tenfold to become the fastest-growing component of private capital inflows into developing countries and economies in transition (see table 26). In 1993, PEI was also the second most important source of private capital for those countries and economies (see table 24). During 1994-1995, however, PEI fell drastically to a level less than half of that reached in the peak year.

Developments in 1994 and 1995 confirmed that FDI and PEI, as the two forms of non-debt-creating flows, differ significantly, although they are driven by many of the same forces such as globalization, financial integration and improved macroeconomic conditions in recipient countries. Unlike FDI, PEI is characterized by much greater susceptibility to cyclical factors and contagion effects. Unlike FDI, PEI is traded on liquid markets, thus enabling investors to move funds quickly between markets in different countries.

Flows of PEI like those of FDI, are available to a very limited number of developing countries and economies in transition. Only 10 countries—all in either Asia or Latin America—accounted for 85 per cent of total flows of PEI in 1994 and an estimated 80 per cent in 1995. Flows are also highly concentrated in middle-income countries with access to international markets, although some low-income countries, such as Bangladesh, China, Ghana, India and Pakistan, have raised some finance through PEI.[42]

PEI flows to emerging markets have two main forms, namely international equity issues and direct purchases in local markets. In 1994 and 1995, around half of total PEI was made in the form of international equity issues. Industry usually accounts for between one third and a half of the total placements, the remainder being distributed between financial institutions and public utilities, mainly telecommunications and energy producers. In 1995, the largest issuers in the industrial sector of emerging markets included conglomerates from the Republic of Korea, such as Samsung Electronics and Pohang Iron and Steel Co., as well as Petronas of Malaysia and the Jilin Chemical Industrial Company of China.[43] Made either directly or through equity funds, direct purchases by foreigners in local stock markets accounted for

Portfolio equity investment peaked in 1993

Table 26. Portfolio equity flows to developing countries and economies in transition, 1989-1995
(Millions of dollars)

Region	*1989*	*1990*	*1991*	*1992*	*1993*	*1994*	*1995[a]*
East Asia and the Pacific	2 623	2 268	1 049	5 102	18 107	12 613	12 230
Europe and Central Asia	71	235	0	65	191	1 934	1 590
Latin America and the Caribbean	434	1 099	6 228	8 229	25 149	13 159	6 200
Middle East and North Africa	—	—	—	—	—	106	85
South Asia	168	105	23	380	2 025	6 223	1 430
Sub-Saharan Africa	—	—	—	144	144	860	465
All developing countries	3 372	3 743	7 552	14 057	45 615	34 895	22 000

Source: World Bank, *World Debt Tables 1996* (Washington, D.C., 1996), p. 102.

[a]Preliminary data.

another half of total PEI in emerging markets in 1994 and 1995. Similar to equity issues, they were highly concentrated in Asia and Latin America.

Potential problems with portfolio equity investment

If foreign investment is desirable, why do capital controls continue to be so popular in many developing countries? The main concern about PEI is that it may be destabilizing. A sudden large inflow could cause both an appreciation of the exchange rate and inflation. The desire to prevent such an appreciation in the face of substantial net capital inflows has typically led to very active intervention by the central bank and rapid increases in international reserves.[44]

Inflows may also be undesirable if the financial sector is underdeveloped, in which case it could allocate funds inefficiently, or if funds are used to finance an inefficient public sector. A large outflow could cause a depreciation of the currency and increase the perceived risk of investment; the 1994 currency crisis in Mexico is an obvious example of such a problem. Accordingly, there is a general consensus in the literature on sequencing of economic reform that the capital account should be liberalized last.[45]

The view that portfolio investors have no interest in controlling or managing companies and generally seek stakes that are small enough to sell easily is part of what worries critics of stock markets. On the other hand, professional investors of all types generally maintain a large proportion of their portfolio in long-term core holdings of large company shares, and those holdings do not suddenly change, even in a falling market.

Empirical studies have found no evidence that growth in foreign portfolio investment causes increased volatility in emerging stock markets.[46-50] Volatility did increase in a number of markets in East Asia and Latin America after internal financial liberalization, but that occurred in the 1970s or early 1980s, well before the surge in foreign portfolio investment.[51] Yet doubts remain. Foreign portfolio investment tends to be concentrated in a few shares in each market and, given such a concentration, any collective behaviour on the part of mutual funds can have a considerable effect on the prices of the shares concerned. The high degree of volatility of Hong Kong and the contagion effect of the 1994 crisis in Mexico are attributed in part to the behaviour of mutual funds.[52] It is likely, however, that the higher proportion of trading by individual domestic investors in emerging markets is the primary reason for the greater volatility of those markets.[53]

Commercial bank lending

Since the second half of the 1970s, when commercial bank lending was by far the single most important source of external funds for developing countries and the centrally planned economies of central and eastern Europe, its relative importance has been drastically reduced. As a proportion of total net capital flows into those countries and economies, bank financing reached an all-time peak of 36 per cent in 1980, but dropped sharply during the international debt crisis of the early 1980s, when debt-servicing problems associated with numerous debt restructurings reduced the access of many developing countries to bank resources. The only exceptions were some Asian countries that retained stable credit ratings, and therefore continued to have easy access to loans from the international banking community. At the end of the decade and during the early 1990s, several large debtors among developing countries and economies in transition, especially those in Latin America and eastern Europe, normalized their relationship with foreign creditors. Banks then started to express renewed interest in lending to the countries concerned.

Despite the renewed access of developing countries and economies in transition to commercial bank lending, such lending has never regained its pre-1980 importance. Net borrowing—disbursements minus principal repayments—from banks increased from an annual average of $2.1 billion for the period 1990-1991 to $13.2 billion for 1994-1995, but as a proportion of total net inflows into those economies, they accounted for only 7 per cent in 1995, a small fraction of the pre-1980 level. Marginalization of bank lending within total net capital inflows into those countries and economies has, therefore, been caused not only by the international debt crisis of the 1980s, but by several other factors of a more long-term and structural nature, such as supply and demand.

On the supply side, banks were faced during the second half of the 1980s with the requirements set by the Basel Accord on international banking supervision, adopted in 1988 by the Paris Club,* and lending to developing countries has been discouraged by stricter provisions for loss loans. On the other hand, demand for bank credits has not been very high, since many sovereign and non-sovereign borrowers have established access to other sources of financing, especially to equity financing and international bond markets. Growing interest in issuing bonds has evoked a positive response by investors, as an increasing number of

*The Paris Club consists of the following major industrialized countries: Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, United Kingdom and United States.

bonds issued by developing countries and economies in transition have obtained ratings of either investment grade or close to investment grade. As a result, those countries and economies increased their bond issues tenfold between 1990 and 1995.

In 1995, in an environment of sharply reduced confidence in the bond market in the wake of the Mexican financial crisis, developing countries and economies in transition once again turned to the syndicated loan market. High demand was met by the increased willingness of major banks to risk exposure. In 1996, however, loans declined to $77.5 billion, representing a drop of $25.4 billion from the previous year, as borrowers regained interest in bond financing (see table 27). Nearly two thirds of the total was loaned to the private sector, the remainder going to the public sector. Accounting for less than 5 per cent of the total, sovereign borrowers represented a marginal segment of the market.

Distribution of commercial bank lending

Like other forms of private flows to developing countries and economies in transition, commercial bank lending is strongly concentrated in middle-income economies, mainly in Asia, but also in central and eastern Europe and in Latin America. Among the low-income countries, only a few large, creditworthy borrowers have access to commercial bank lending. Altogether, companies, banks, public utilities and other entities in more than 50 developing countries and economies in transition tapped the international loan market in 1996. Therefore, because of the unacceptably high risks associated with individual countries, the loan market continues to be entirely or almost entirely closed to more than a half of all developing countries and economies in transition and their industrial companies.

Industrial enterprises are among major borrowers on international loan markets, with an estimated share of between one fourth and one third of total loan commitments to developing countries and economies in transition. Table 28 provides basic information on a selected number of bank credits raised by industrial companies in developing countries and economies in transition in the first half of 1996. Although the list is incomplete, two interesting features may be observed. First, industrial companies in 21 countries raised

Bond issues increased while loan issues fell in 1996

Table 27. Loan and bond issues, by types of borrower, 1994, 1995 and 1996
(Millions of dollars)

	Loan issues			*Bond issues*		
Region and type of borrower	*1994*	*1995*	*1996*	*1994*	*1995*	*1996*
All developing countries	72 780	102 911	77 547	50 129	47 749	72 977
Private	32 110	51 075	46 844	21 010	15 473	21 614
East Asia and the Pacific	20 685	28 447	26 843	8 604	6 516	7 420
Europe and central Asia	1 645	5 344	5 904	1 598	541	546
Latin America	6 434	11 621	8 135	10 097	7 746	12 567
Middle East and North Africa	468	657	477	--	50	160
South Asia	1 857	2 400	1 697	636	520	672
Sub-Saharan Africa	1 022	2 606	3 788	75	100	250
Sovereign	10 604	7 284	3 548	17 156	24 253	41 082
East Asia and the Pacific	4 074	1 727	790	2 399	569	3 459
Europe and central Asia	2 585	1 666	541	9 115	10 204	8 919
Latin America	585	2 914	352	3 572	12 105	27 345
Middle East and North Africa	3 048	205	750	400	879	428
South Asia	283	361	701	150	--	150
Sub-Saharan Africa	28	411	415	1 520	496	782
Other public	30 066	44 552	27 155	11 963	8 023	10 281
East Asia and the Pacific	14 568	18 077	7 726	6 599	3 083	4 042
Europe and central Asia	6 692	6 759	6 973	1 062	1 501	180
Latin America	4 838	5 660	7 186	4 003	2 731	5 449
Middle East and North Africa	1 246	8 067	671	--	50	250
South Asia	2 411	3 339	3 335	300	262	220
Sub-Saharan Africa	311	2 649	1 264	--	396	140

Source: *Financial Flows and the Developing Countries: A World Bank Quarterly* (Washington, D.C., World Bank, various issues).

financial resources directly on international loan markets. Nine of them were in Asia (China, India, Indonesia, Malaysia, Pakistan, Singapore, Thailand, Republic of Korea and Viet Nam), six in Latin America (Argentina, Brazil, Chile, Colombia, Mexico and Peru), three in Africa (Ghana, South Africa and Zambia), two in central Europe (Czech Republic and Slovakia) and one in western Asia (Saudi Arabia). Secondly, the size of individual loans varied from less than $5 million to more than $200 million, with smaller credits being allocated to various manufacturing branches and larger ones being concentrated in oil and mineral-extracting activities.

More Asian companies secure their credit requirements from international commercial banks

Table 28. Selected commercial bank credits to manufacturing enterprises in developing countries and economies in transition, January-June 1996
(Millions of dollars)

Country	*Company*	*Amount*
Argentina	Yacimientos Petroliferos Fiscales	130.0
Brazil	Bahia Sul Celulose SA	55.0
	Petroleo Brasileiro SA	250.0
	Petroleo Brasileiro SA	100.0
Chile	Compania Minera Carmen de Andacollo	57.0
	Empresa Nacional de Minera	75.0
China	Anyang Henan Color Picture Tube Glass Bulb Co.	71.3
	Sinochem International Oil (Hong Kong) Co. Ltd.	45.0
	Unitex Glass Co. Ltd.	10.0
Colombia	Empresa Colombiana de Petroleos	5.3
Czech Republic	Czech Refinery Company	100.0
Ghana	Ashanti Goldfields Company Ltd.	185.0
	Teberebie Goldfields Ltd.	8.4
India	Indian Oil Corporation Ltd.	45.0
	SIV Industries Ltd.	9.0
	Indian Petrochemical Corp. Ltd.	75.0
	Steel Authority of India Ltd.	45.0
Indonesia	PT International Nickel Indonesia	421.5
	PT Indo Aluminium Intikarsa Industri	8.0
	PT Keramika Indonesia Assosiasi	9.8
	PT Indah Piat Pulp and Paper Corp.	5.6
Malaysia	Tan Chong Motor Holdings Berhad	59.3
	Amsteel Mills Sendirian Berhad	180.0
	Petroliam Nasional Berhad	149.8
Mexico	Coca-Cola Femsa SA de CV	165.0
	Embotelladores Mexicanos de Pepsi Cola SA de CV	35.0
Pakistan	Oil & Gas Development Corp.	30.0
Peru	Cervecería Backus y Johnston SA	50.0
Republic of Korea	Tongyang Cement Corp.	4.5
	Korea Zinc Corporation	19.5
	Ssangyong Refining Co. Ltd.	10.0
	LG Engineering Corp. Ltd.	45.0
	Samsung Electronics Co. Ltd.	155.0
	Hyundai Precision & Industry Corp.	10.2
	Hyosung Corp.	6.2
	Orion Hanel Picture Tube Corp. Ltd.	7.5
	Samsung Electronics Co. Ltd.	125.0
	OCI Chemical Corp.	40.0
Saudi Arabia	Saudi Cable Company	30.0
	Saudi Aramco Mobile Refining	225.0
Singapore	Flextronics Singapore Pte. Ltd.	20.0
Slovakia	Slovnaft AS	50.0
South Africa	Caltex Oil	100.0

Country	Company	Amount
Thailand	Siam Motor Company Ltd.	45.0
	Bangchak Petroleum Company	120.0
	Siam Strip Mill pcl.	120.0
	Delta Electronics pcl.	75.0
	Siam Guardian Glass Co. Ltd.	48.0
	Phoenix Pulp & Paper Co. Ltd.	30.0
	Siam Cement Co. Ltd.	15.0
	Rayong Olefins Co.	150.0
Viet Nam	Poslilama Steel Structure Co. Ltd.	11.8
	Hai Van Cement Co.	7.8
Zambia	Zambia Consolidated Copper Mines Ltd.	50.0

Source: Capital DATA Loanware (database of Capital DATA Ltd.).

Portfolio debt financing

In contrast to bank lending, the issuing of bonds in international capital markets has become an increasingly important component of capital flows in recent years. While in 1986, portfolio debt flows, with a volume of less than $1 billion, accounted for less than 1 per cent of total net capital inflows into developing countries and economies in transition, in 1995, the share rose to 15 per cent of total inflows and almost two thirds of total debt-creating inflows. After slight declines in 1994 and 1995, resulting from increases in the United States interest rate in early 1994 and the Mexican crisis at the end of that year, the market quickly recovered from those setbacks. In 1996, developing countries and economies in transition raised a record amount of $73 billion, up 53 per cent compared with the level reached in the previous year (see table 27). In relation to the total bond issuance in international capital markets, the share of developing countries and economies in transition rose from 2.8 per cent in 1990 to at least 10 per cent per year since 1993.

The marked increase in bond issues during the period 1990-1996 can be attributed to two sets of factors. First, the considerable improvement in the economic fundamentals of a large number of developing countries and economies in transition led to a rise in their credit ratings, with several of them achieving a high rating as a potential investment location. Ratings assigned by one or more major specialized institutions is a *de facto* precondition for a prospective borrower, be it a company, bank or a sovereign State, to penetrate the international bond market successfully. Access to that market is even more restricted than to the international loan market. In 1995 and 1996, entities from 30 to 35 developing countries and economies in transition participated in the international bond market, and all but a few bonds were issued by entities from States with a country risk assigned to them. Secondly, there has been a significant broadening of the investor base to include more active participation by major institutional investors in providing financing not only to bond issuers from Asian countries, but also to potential borrowers from a wider range of countries. The entrance of those investors into markets for the papers of developing countries and economies in transition greatly enlarges the potential pool of resources that could be tapped by those countries, particularly those with a high rating as a potential investment location.

Profile of borrowers

There are significant differences between the profile of borrowers on the international markets for debt financing. In contrast to the international market for syndicated loans, the international bond market is strongly dominated by sovereign issuers. In 1996, more than a half of all bond issues were made by sovereign States. Therefore, the scope for issues made by private and public entities was rather limited. The most important segment of non-sovereign issuers is made up of banks and financial institutions. In 1996, they accounted for roughly a quarter of total issues, while the remaining quarter was fairly evenly distributed between issuers from the utilities sector and industrial enterprises.

The international bond market is highly selective. It provides access to only an extremely small number of large, well-established industrial companies from creditworthy developing countries. As table 29 shows, industrial enterprises from only 12 developing countries, all in Asia and Latin America, raised resources directly on the international bond market in 1996. Many of the issues were equivalent to $100 million and more. Access to the market is, therefore, not only practically denied to all industrial firms from less creditworthy developing countries and economies in transition, but also to small and medium-sized companies from countries that represent an acceptable country risk.

International bond market is highly selective, granting access primarily to large companies

Table 29. Selected bond issues made by industrial enterprises from developing countries and economies in transition in 1996

Country	*Company*	*Amount (millions of dollars or units of the specified currency)*
Argentina	Industrias Metalúrgicas Pescarmona SAIC	75.0
	Bridas Corporation	100.0
	Yacimientos Petrolíferos Fiscales	300 000.0 lire
Brazil	OPP Petroquímica	125.0
	Companhia Vale do Rio Doce	300.0
	Metalurgica Gerdau SA	130.0
	Cementos Caue	20.0
	Aracruz Celulose	80.0
	Bahia Sul Celulose SA	100.0
	Klabin Fabricadora de Papel e Celulose	70.0
	Companhia Siderurgica Nacional	160.0
	Companhia Siderurgica Nacional	150.0
	Ceval Alimentos SA	100.0
	Companhia Acos Expeciais Itabira	150.0
	Petroleo Brasileiro SA	125.0
	Petroleo Brasileiro SA	250.0
	OPP Petroquimica	100.0
	Ford Brazil Ltda.	300.0
	Alcoa Aluminio Brazil	400.0
	Petroleo Brasileiro SA	150.0
Brunei	Sinar Mas Multiartha	60.0
Chile	Industria Azucarera Nacional	40.0
	Sociedad Quimica I Mineras SA	200.0
India	ICICI Industrial Credit & Investment Corp.	150.0
	Reliance Industries Ltd.	100.0
	Reliance Industries Ltd.	100.0
	Reliance Industries Ltd.	100.0
Indonesia	Indah Kiat Pulp & Paper Corp.	100.0
	Wijaya Karya	100 000.0 rupiahs
Malaysia	Rex Industry Berhad	11.0 Swiss francs
	Petroleum Nasional Berhad	14 000.0 yen
	Hong Loeng Industries Berhad	90.0
	Petroleum Nasional Berhad	600.0
	Petroleum Nasional Berhad	800.0
	Petroleum Nasional Berhad	500.0
Mexico	Empresas La Moderna SA de CV	125.0
	Petroleos Mexicanos	300 000.0 lire
	Panamerican Beverages, Inc.	150.0
	Petroleos Mexicanos	300.0
	Bufete Industries	100.0
	Cemex SA	300.0
	Cemex SA	300.0
	Grupo Industrial Durango	250.0
	Petroleos Mexicanos	300.0
	Coca-Cola Femsa	200.0
Paraguay	Grupo Empresarial Fenix SA	100.0
Republic of Korea	Samsung Electronics	187.0
	Daewoo Corporation	150.0
	Samsung Electronics Co.	150.0
Thailand	Thai Cars	250.0
	Thai Petrochemical Industry	3 000.0 baht
	TPI Polene	6 000.0 yen

Source: *Financial Flows and the Developing Countries: A World Bank Quarterly* (Washington, D.C., World Bank, various issues).

*Official development assistance**

During the 1970s and 1980s, foreign aid came from three major sources, OECD, OPEC and CMEA countries, and grew steadily in real terms. During the 1990s, however, the level of aid declined in real terms, primarily as a result of budget restrictions in most donor countries. Apart from budgetary problems in donor countries, several other factors contributed to the decline in official development assistance (ODA). The poor economic performance of many traditional aid recipients, especially in sub-Saharan Africa, has increased scepticism about the effectiveness of aid. In addition, several donor countries have curtailed their ODA programmes in order to restrain any further growth in the debt burden of aid recipients. Finally, inflows of private capital, especially into several dynamic economies in East Asia and Latin America, has led to the misperception that less ODA is needed, since countries are increasingly able to meet their development needs by using other sources of financing.

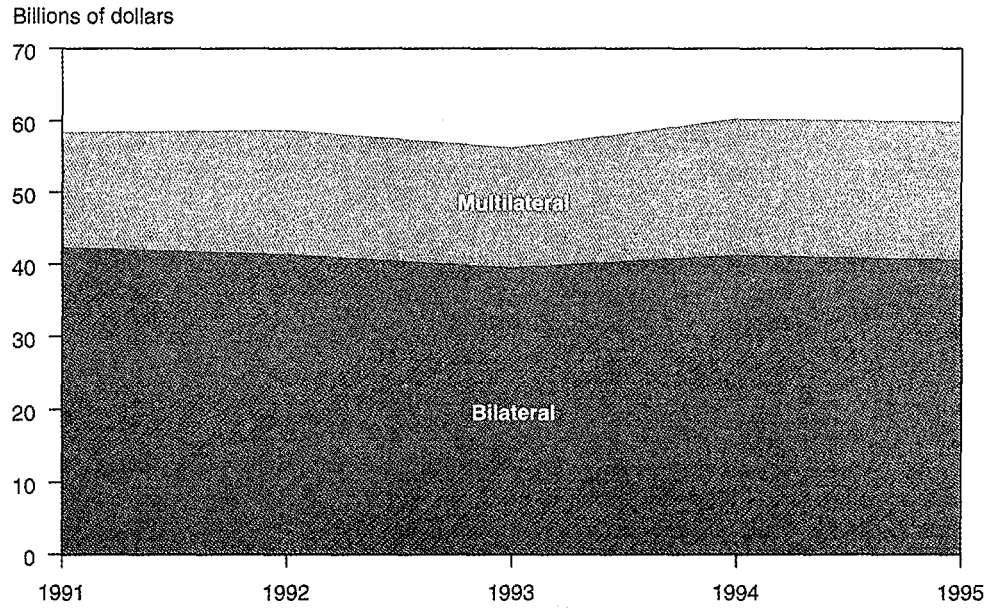
*Official development assistance includes grants and concessional loans from Governments and multilateral organizations.

In 1995, ODA disbursements to developing countries were at the level of $60.1 billion, slightly down from the 1994 nominal volume, roughly two thirds of which came from bilateral and one third from multilateral sources (see figure 15). As a consequence, ODA fell to just 0.27 per cent of the GNP of industrialized countries, the lowest level since the United Nations adopted the target of 0.7 per cent. There are, however, exceptions, such as Denmark, Norway and Netherlands, which continue to contribute more than 0.8 per cent of their GNP, while Japan has, since 1992, established itself as the largest aid donor in the world.[54]

Falling levels of foreign aid flows in real terms during the 1990s have been accompanied by a growing demand for financing from that source, as a result not only of new claimants in central and eastern Europe, but also of a number of pressing needs. The early years of the decade saw an upsurge in regional and intraregional conflicts leading to significantly higher expenditures by donors for emergency relief and refugees. Donations for those purposes, from both bilateral and multilateral sources, picked up in 1994, when they amounted to more than $6 billion. In the following year, donor expenditures on humanitarian emergencies receded to a level of about $5 billion, which was equivalent to some 8 per cent of total ODA.[55]

Bilateral sources constitute a larger share of total official development assistance

Figure 15. Net ODA flows to developing countries, 1991-1995



Source: Development Corporation: 1996 Report (Paris, OECD, 1997).

Beneficiaries of foreign aid

ODA is being increasingly spent on projects concerned with social infrastructure. Assistance to education, health, water supply and sanitation accounted for 27 per cent of bilateral and 25 per cent of multilateral ODA commitments in 1994.[56] Increased flows into such projects are due to a growing understanding on the part of donors that they will assist in removing bottlenecks to social and economic development. At the same time, the projects are in areas where domestic resources are often inadequate and where return for private capital appears to be unattractive.

The industrial sector, together with the economic infrastructure and agriculture, has been negatively affected by sectoral shifts in foreign aid. Although industry has never been a major recipient of foreign aid, it did receive more than 10 per cent of total ODA flows into developing countries during the 1970s. During the 1980s and especially the 1990s, its share fell dramatically. In 1994, for example, aid to industry accounted for less than 2 per cent of total bilateral aid and less than 6 per cent of ODA provided by multilateral institutions.[57] The difference can be explained by the fact that multilateral institutions provide aid financing almost exclusively for projects and programmes in social and economic infrastructure and productive sectors, while bilateral donors use a significant proportion of their aid resources, around one fifth in recent years, for debt relief operations as well as for natural disasters or other emergencies.

Total bilateral aid commitments for industrial sector projects in developing countries more than halved during the period 1991-1995, from $1,718 million to $820 million. Consequently, its share in total commitments declined from 3.7 to 1.9 per cent (see table 30). Major recipients of industrial aid are low-income and lower-medium-income countries. Flows to those countries account for some 90 per cent of total bilateral aid to the industrial sector, being highly concentrated in a handful of recipients. In 1995, for example, there were only 12 developing countries with industrial aid commitments of more than $10 million each. Three of them—Bangladesh, China and Indonesia—received as much as 45 per cent in total bilateral aid to that sector. In the same year, however, bilateral aid to the industrial sector of about a half of all developing countries was either nil or less than $1 million. Financial aid to industry is also of marginal importance for most of the economies in transition. As a group, they received $34.2 million in 1995, equivalent to less than 0.5 per cent of total bilateral aid flows to all economies in transition.[58]

Bilateral official development assistance to the industrial sector fell sharply

Table 30. Bilateral ODA commitments to developing countries by region, 1991 and 1995

Region	*Industry, mining and construction*		*Total*		*Percentage of total*	
	1991	*1995*	*1991*	*1995*	*1991*	*1995*
	(millions of dollars)		*(millions of dollars)*			
Africa						
North of Sahara	96.7	37.7	8 849.5	2 984.5	11.4	1.3
South of Sahara	232.5	71.5	8 626.6	8 167.5	2.7	0.9
America						
Central and North America	20.8	25.6	2 694.9	2 166.9	0.8	1.2
South America	17.5	53.2	2 406.1	2 524.3	0.7	2.1
Asia						
Central and South Asia	481.6	161.6	4 772.9	5 293.4	10.1	3.1
East Asia	757.8	405.3	8 903.3	12 539.7	8.8	3.2
Europe	27.2	10.7	2 183.1	1 290.5	1.3	0.8
Middle East	53.5	18.9	5 992.2	2 880.6	0.9	0.7
Oceania	10.8	12.0	403.5	507.0	2.7	2.4
TOTAL	1 718.2	819.9	45 904.6	42 180.3	3.7	1.9

Source: OECD, *Geographical Distribution of Financial Flows* (Paris, 1997), pp. 222-231.

What future for ODA flows?

During the era of the cold war, ODA was frequently used to support strategic interests and to promote the trade of major aid donors. The end of that era was accompanied by several other aid-related developments, including the decline in the aid budgets of donor countries and their reorientation for new uses, the disappearance of aid flows from non-OECD countries, the emergence of new claimants from central and eastern Europe, a loss of confidence in the capacity of some international organizations to deliver assistance, growing concern about the effectiveness of aid and the surge in private capital inflows. Those considerations have led major donors to reconsider the nature and purpose of their foreign assistance programmes. Among recipient countries, too, there is a growing understanding that the rationale and structure of former approaches to ODA may need certain adjustments.

Most donor countries see the current changing environment for aid as an opportunity for a redefinition and revitalization of their ODA policies. Several major components of the new policies have attracted growing support in those countries, one of them being the tendency to restrict financial assistance to traditional aid destinations, including projects in the industrial sector. Three of the new policy components focus on the following principles:[59]

(a) The rationale for aid. In contrast to previous times, when ODA was concentrated on economic growth, it should now be aimed at reaching other objectives, such as the promotion of democracy, the reduction of military spending and the strengthening of institutions;

(b) The governing framework. An approach based on partnership, with clearly defined rights and responsibilities and with mutual accountability, should be established;

(c) The guidelines for resource allocation. ODA flows should go primarily to the poorest countries, and they should have a clear focus on poverty reduction.

On the basis of the above-mentioned principles, donor countries should reduce the tying of aid as a form of protectionism, and more importantly, they should explore ways of reversing the negative trend in aid flows of recent years. As far as recipient countries are concerned, the authorities should concentrate their policy measures on increasing their capacity to use foreign assistance efficiently through sound macroeconomic policy and effective management of aid.

Official non-concessional flows

Under the heading of official non-concessional flows, two main groups of capital flows may be distinguished, consisting of multilateral and bilateral loans. The latter group is composed of the following two subgroups: export credits extended either directly by the public sector or by the private sector, if supported by an official guarantee; and other official bilateral financing, including transactions such as the rescue package for Mexico in 1995.

Rapid growth in export credits

The increase in non-concessional flows during the 1990s was almost entirely due to the strong recovery of export credits, which exporters use primarily to finance their export of capital goods and equipment. In 1994 alone, export credit agencies increased their lending to developing countries and economies in transition by more than $40 billion, from an estimated $380 billion to approximately $420 billion. The increase in export credit is partly attributable to arrangements made in the context of debt reschedulings by the Paris Club, but its most important source has been the increase in new credit commitments. That trend has been driven by the resurgence of import demand by many developing countries and economies in transition, by their improved creditworthiness and by more aggressive export promotion for capital goods in some industrialized countries. New export credit commitments to developing countries and economies in transition rose from $24 billion in 1988 to between $60 billion and $70 billion a year during the period 1991-1993, and to a level of $90 billion in the following year.[60]

The overall increase in new export credit commitments masks substantial variations between countries. Commitments to large low-income but creditworthy countries, such as China, India, Indonesia and Russian Federation, have sharply increased. Export credits became increasingly available to other developing countries and economies in transition that have recently gained access to international capital markets. However, for the vast majority of low-income developing countries, especially the heavily indebted ones, that source of financing has remained practically closed. In 1994, commitments to those countries were estimated at approximately $1 billion.

Lower credits to industry from multilateral development banks

Like export credits, non-concessional lending by multilateral financial institutions is mainly demand-

driven. The maturing loan portfolios of most multilateral development banks, together with the increasing reliance of many creditworthy countries in Asia, Latin America and central and eastern Europe on private debt and non-debt creating flows, resulted in a significant decline in non-concessional multilateral lending during the 1990s. Its total net volume was reduced from an annual average of $8.5 billion for the period 1990-1991 to an average of $4 billion annually for the period 1994-1995. In 1995, the largest net flows came from IFC, IDB and the Asian Development Bank, each of them providing between $1.1 billion and $1.6 billion. The International Bank for Reconstruction and Development (IBRD) received more money, amounting to $0.5 billion, by way of repayment of interest and principal than it advanced in new loan commitments. The contribution of IBRD to the cash flow of its borrowers was, therefore, already negative.[61]

The financing of projects in the industrial sector has always been an integral part of the multilateral lending activity of development banks. By the end of the 1980s, those projects typically accounted for more than 10 per cent of their total commitments. During the 1990s, however, the relative importance of industrial projects in the lending of multilateral development banks has been drastically reduced (see table 31). In IBRD, the largest of such institutions, industrial projects accounted for only 1.5 per cent of total new credits in 1995, whereas in 1988 their share was still 14 per cent. Similar trends can be observed in regional development banks. Even IFC, the only multilateral financial institution that provides financial resources exclusively to the private sector, has significantly reduced its relative commitments to industry during the 1990s.

There are two main reasons for the reduced importance of industry in the total commitments of multilateral development banks. First, most of those institutions have significantly reduced their project financing, as they have increasingly embarked on non-project lending. Secondly, countries with access to international capital markets have switched to private-sector financing for commercially viable industrial projects. As developing countries gain access to international capital markets, the rationale for providing non-concessional official financing diminishes. That form of financing will nevertheless continue to play an important role in countries with no access or limited access to private capital markets. There are also countries, such as China and India, where, despite their high credit rating, a majority of the population is still poor, and for which a mixture of non-concessional and concessional finance continues to be appropriate.[62]

Lending by multilateral sources to the industrial sector has also fallen sharply

Table 31. Total loan commitments and commitments to industry by various multilateral financial institutions, selected years

Institution	*Year or period*	*Industrial sector (millions of dollars)*	*Total (millions of dollars)*	*Share of industry in total (percentage)*
African Development Bank	1993	587	2 518	23.3
Asian Development Bank	1991-1993[a]	257[b]	4 621	5.6
European Bank for Reconstruction and Development	1994	254[c]	2 409	10.5
IBRD	1988	2 063	14 762	14.0
IBRD	1995	217	14 656	1.5
IDB	1961-1992[d]	6 317[e]	56 770	11.1
IDB	1995	310	7 304	4.2
IFC	1990	803	2 201	36.5
IFC	1996	2 107	8 118	26.0

Source: Annual reports of the institutions concerned.

[a]Three-year moving average.

[b]Industry and non-fuel minerals.

[c]Manufacturing and extractive industries.

[d]Cumulative loans.

[e]Industry, mining and tourism.

Notes

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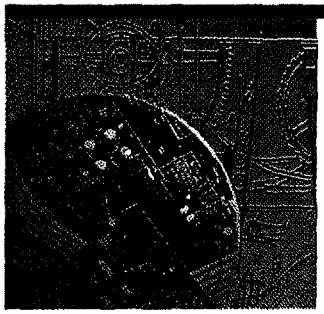


4

Raising finance for small enterprise development

MSEs are viewed increasingly as an important vehicle for meeting both the growth and equity objectives of developing economies. Small-scale industry, being labour-intensive, is believed to be able to provide more employment and earning opportunities for unskilled workers. As unskilled workers may often be underemployed or unemployed, small-scale industry, therefore, contributes towards reducing poverty and inequality. Research in six developing countries shows that, collectively, small establishments account for most industrial employment. That may be true of many countries, if not most.[1] In developing countries, particularly in LDCs, much manufacturing employment is found in rural areas (see figure 16).

MSEs also tend to be geographically more dispersed than larger enterprises and can thus contribute to the promotion of a more balanced development process. They have the ability to accelerate rural industrialization by forging linkages between the more organized industrial sector in the urban areas and the rural manufacturing enterprises that often produce a variety of inputs for industries located in urban areas. In this way, MSEs also provide employment for a large section of the rural population, especially in the off-season, thus smoothing out variations in rural incomes and consumption.

MSEs can contribute considerably to industrial growth by promoting the development of a more diversified industrial structure. In many developing countries, the share of MSEs in total MVA is relatively high. In Malaysia, for example, MSEs constitute the majority of all industrial establishments, accounting for at least one half of industrial employment and value added.[2] In Singapore, MSEs in manufacturing, commerce and the service sector constitute approximately 87 per cent of businesses, contributing 42 per cent of employment, 25 per cent of value added and 16 per cent of direct exports.[3] MSEs provide a significant proportion of the inputs of large-scale enterprises in many developing countries. Policies aimed at stimulating MSE development can also provide further stimulus for growth in agriculture, as MSEs usually have strong linkages with agriculture. By utilizing local resources, MSEs produce important backward and forward linkages, ensure employment stability and save valuable foreign exchange by providing substitutes for imports.

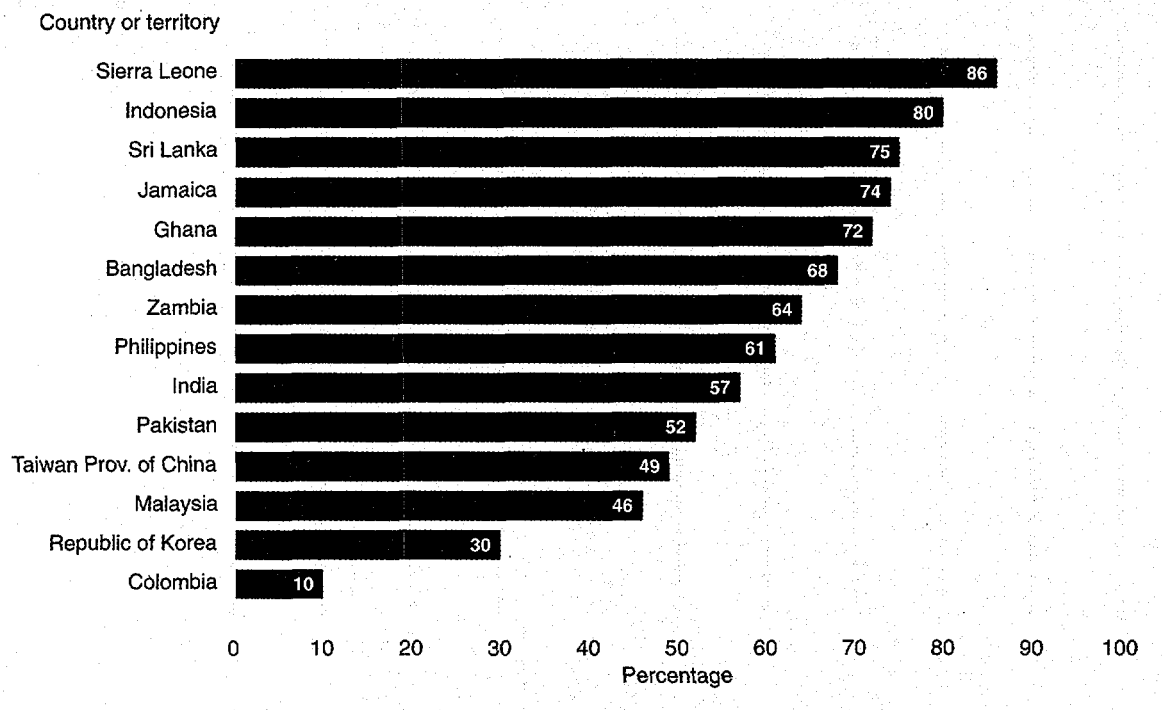
MSEs typically produce goods and services at highly competitive prices. They utilize labour and capital more efficiently than large enterprises, which tend to be monopolistic or oligopolistic and charge prices that can be significantly higher than the marginal costs of production. There is also evidence that, in general, MSEs not only are more efficient users of resources, but are more profitable compared with larger-scale enterprises.* MSEs can therefore create jobs for a relatively lower level of investment and are particularly suitable for an economy with a surplus of low-skilled labour. Increasingly, MSEs are viewed as important contributors to the export sector, directly or indirectly contributing to foreign exchange earnings in many developing countries. Rapid technological growth has added a new dimension to the role of MSEs in export markets. The contribution of MSEs to exports has been significant in an increasing number of developing countries, notably in East and South-East Asia. Technological growth has also boosted the economic viability of MSEs by increasing the importance of economies of scope, thus permitting MSEs to gain at the international level both from their flexibility and their ability to specialize (see box 15).

The increasing focus on small enterprises in discussions about development policy results from the general acceptance that the private sector is the

*I.M.D. Little, "Small manufacturing enterprises in developing countries", *World Bank Economic Review*, vol. 1, No. 2 (1987), p. 205, however, argues that whether or not small industrial establishments improve social welfare depends on whether such establishments use inputs more efficiently than larger enterprises, and if they do, whether this results in both a net increase in output and an increase in demand for unskilled labour. As far as efficiency is concerned, the author refutes the case for policy interventions in favour of small enterprises, as "small firms are not reliably more labour-intensive than their larger counterparts; nor are they consistently more technically efficient in their use of resources".

Manufacturing accounts for a large proportion of rural employment

Figure 16. Percentage of manufacturing employment in rural areas[a] of selected countries and territories



Source: Carl Liedholm and Donald Mead, "Small-scale industries in developing countries: empirical evidence and policy implications", International Development Paper No. 9 (East Lansing, Michigan, Michigan State University, 1987).

Note: Data based on studies conducted during the period 1970-1985.

[a] Rural areas are defined as localities with less than 20,000 inhabitants.

leading growth sector.[4] MSEs are a major force in the private sector, and have shown great innovative capabilities in many developing countries. They are often viewed as a seedbed for entrepreneurs.

Growth dynamics of microenterprises and small enterprises

The performance of MSEs is by no means uniform throughout the developing world. MSEs do, however, exhibit common characteristics in many developing countries (see box 16). They are located in both rural and urban areas. The majority of MSEs in rural areas are those organized as sole proprietorships, with fewer than five workers. Proprietors and family workers generally form the mainstay of the small-industry labour force. Many proprietors and employees work part-time in industrial activities, often combining this work with farming, as farming and non-farming manufacturing activities are often complementary within the agricultural production cycle. In some countries, particularly those in West Africa, apprentice labour is an important factor in MSE employment, while hired labour is in the minority. The average wages paid to hired workers in MSEs are significantly lower, usually by approximately 50 per cent, than wages paid to comparable hired workers in large-scale enterprises.

Technological growth has boosted economic viability of MSEs

Box 15. Impact of technological changes on MSEs

For a variety of reasons, the last two decades have seen the steady re-emergence of MSEs. The technological revolution of recent years has reduced the importance of economies of scale in mass production. Not only has there been a growth in demand for differentiated products and for speciality niche products, but there has also been a definite shift towards the flexible manufacturing systems that are the domain of smaller rather than large-production enterprises. That tendency has been encouraged by the expansion of computerization and networking, by the internationalization of production and trade, by management technology that emphasizes cost reduction, zero defects, minimal inventories and the rapid turnover of funds. Knowledge- and skill-intensive industrialization is replacing material- and energy-intensive industrial development.

The technological, managerial and information revolutions of the 1980s and the 1990s have given a tremendous boost to knowledge- and information-based manufacturing, marketing and servicing. Typically, the cost of manufacturing is only 25 per cent of the end-user price. New technologies emphasize external economies of scale and scope which are provided by the networking of production. As networking of production does not necessarily require large individual operations, it is well suited to MSEs. Computerization enables a quicker response to changes in smaller-lot production or batch production than is possible in mass production. Recent developments in cybernetics and communications are opening up new cost-effective possibilities for decentralized production that are designed to exploit economies of scope, rather than the traditional economies of scale.

Both scientific progress and economic efficiency have come to depend on the widespread use of microprocessors. Microprocessors have brought about a technological revolution, affecting manufacturing methods and the organization of enterprises in developed countries in such a way as to favour small-scale production. The essential elements of flexible manufacturing systems include inter-firm cooperation to establish agglomerations or clusters of related manufacturing in industrial districts, working in competition yet in cooperation, building relationships between small and large enterprises and promoting networking and collective efficiency. The development of clusters and agglomerations of enterprises in regional towns to meet regional and local consumer demand is considered important in providing potential for the growth of small industry. The development of town and village enterprises in small and medium-sized towns in China during the 1980s led to considerable industrial growth. In regional development, small enterprises operate in niches, serve small specialized or local markets, utilize local labour and resources and often make specialized and non-standard products, thereby offering opportunities for flexible manufacturing systems.

Thus, it would appear that there are both technological and social reasons for the revival of interest in MSEs. One of the technological reasons is the increasing importance of knowledge- and skill-intensive industrialization as opposed to material- and energy-intensive industrialization. The social reasons include the need to generate more employment, particularly through self-employment ventures, the growing emphasis on niche demand or individualized consumer preferences, the importance attached to the quality of life of workers and the trend towards decentralized work centres.

According to Peter Drucker:[a] "Business tomorrow will follow two new rules. One, to move work to where people are, rather than people to where the work is. Two, to farm out activities that do not offer opportunities for advancement into fairly senior management and professional positions." Drucker adds: "Many middle-sized and even small businesses will have to become active in the world economy." This will be part of the process whereby businesses become integrated into the world economy by forming alliances. "Corporate size will by the end of the coming decade (1990s) have become a strategic decision", says Drucker. "Neither 'big is better' nor 'small is beautiful' makes much sense; size follows function ...".

[a] "Peter Drucker's 1990s", *The Economist*, 21 October 1989, p. 28.

One-person firms often constitute over half the MSEs in a given area. Many operate as "job-shops", producing on demand for customers, and undertaking few marketing or management activities. This is often interpreted as an indication of the existence of a substantial amount of excess capacity in the firm. A significant number of small enterprises are engaged in the handicraft, garment and food-related industries and have female owners. The activity of much of this small-scale industry is tied to local

MSEs are found in both urban and rural areas

Box 16. Characteristics of MSEs

MSEs have the following common characteristics:

(a) The small entrepreneur usually works and produces for the local market;

(b) Most small enterprises are run solely by the owners themselves and by members of their family, though, in many cases, part-time workers are also employed;

(c) Women account for a relatively high proportion of owners or workers in the small-enterprise sector;

(d) Personal savings or family money provide the primary source of capital for the establishment of small enterprises:

(e) Access to formal channels for credit and other forms of support is either minimal or non-existent;

(f) Most microenterprises and small enterprises keep incomplete and inadequate accounts;

(g) Small businesses are usually not officially registered and seldom pay regular taxes;

(h) Employees often work excessively long hours and, in many cases, have to endure sub-standard working conditions.

Source: Ministry of Foreign Affairs of the Netherlands, *Small-scale Enterprise*, Policy document No. 3 (The Hague, undated).

markets, as a result of household demand for light consumer goods, by backward and forward production linkages with agriculture and large-scale industry, and sometimes by more systematic subcontracting arrangements.

Pattern of growth

In most developing countries, MSEs are a dynamic sector. At any given moment, not only are existing firms expanding and contracting, but many new firms are being created and others are disappearing. In absolute terms, MSEs are increasing in almost all developing countries.[1] The growth in the number of firms appears to be highest in enterprises with from 2 to 9 workers and from 10 to 49 workers and lowest in one-person enterprises. In some countries, in fact, the number of one-person firms, which are often found to be of only marginal economic viability, is declining.

Microenterprises typically start life as a one-person operation. The death or closure rates of such firms is highest in the first three years of operation. After three years, however, the chances of survival of these enterprises increase markedly. Furthermore, if firms expand, they tend to do so in spurts occurring after the third or fourth year of life. The number of firms graduating from the microenterprise seedbed to become more complex, modern, small or medium-sized enterprises, however, is not high.

As shown in table 32, in six out of seven countries, the majority of modern small and medium-sized manufacturing firms did not graduate from the microenterprise seedbed, but started out with 11 employees or more. Moreover, the graduation rates for African countries are substantially lower than those for the countries of Asia and Latin America. In Asia and Latin America, one half or more of modern small and medium-sized firms had expanded by increasing their size, while in African countries, there was not such a high proportion of graduates. The percentage of small and medium-sized firms originating as microfirms is, however, higher in western Africa than in eastern and central Africa.

The expansion and sophistication of an MSE, as far as both its level of organization and management and technological capabilities are concerned, also depend on the level of economic and industrial development of the country in which it is located.* At the early stages of development, small enterprises are predominantly craft-based and located mainly in rural areas to meet local demand. At later stages of development, such enterprises grow into or are replaced by modern small enterprises with a larger market potential and higher quality products. Many of those small modern enterprises have gained experience of exporting directly to international markets. At the most advanced level of development, as in industrialized countries, small enterprises are generally replaced by medium-sized and large enterprises to reap the benefits of economies of scale.[5] In some developed countries, there has, to some extent, been a reversal in that trend, with MSEs re-emerging as important players in a post-Fordist industrial era, characterized by flexible specialization.

*A positive correlation between the size of the enterprise and its stage of industrialization is not universal, as the experiences of Italy and Japan have shown. In those countries, small enterprises continued to play an important role in industrial development. See Ministry of Foreign Affairs of the Netherlands, *Small-Scale Enterprise*, Policy document No. 3 (The Hague, undated).

Low graduation rate for MSEs in Africa

Table 32. Origin of modern small and medium-sized private manufacturing firms[a]

Region and country	Year	Number of firms	Number of workers per firm	Percentage starting as microenterprise[b]	Percentage starting above microenterprise level[c]
Africa					
Botswana	1982	20	11-200	20.0	80.0
Nigeria	1985	64	11-200	43.7	56.3
Northern Nigeria	1989	59	11-200	42.0	58.0
Rwanda	1987	28	30-870	10.7	89.3
Sierra Leone	1975	42	11-200	30.1	69.9
Asia					
India	1979	244	11-200	65.6	34.4
Philippines	1978	47	11-200	48.9	51.1
Latin America					
Colombia[d]	1978	76	11-200	50.0	50.0

Source: C. Liedholm, "Small-microenterprise dynamics and the evolving role of finance" in *Small Enterprises and Changing Policies*, A.K.J. Helmsing and Th. Kolstee., eds. (London, Intermediate Technology Publications, 1993).

[a]With 11 employees or more.

[b]With fewer than 11 employees.

[c]With 11 employees or more.

[d]Including metalworking establishments only.

Barriers to the growth of MSEs

As mentioned, the graduation rate of MSEs in many developing countries remains very low. According to an analysis based on field surveys conducted in the leather industry of Sri Lanka and the furniture industry of the United Republic of Tanzania, some of the major factors hindering the growth or causing the actual demise of microenterprises are regulatory constraints; restrictions on physical, technical and marketing inputs; and cost and other financial pressures.[6] Such problems are often aggravated by a lack of support institutions geared to the MSE sector, as well as by a built-in bias of both policy and existing institutions towards large-scale industries.

Regulatory constraints include the burden placed on entrepreneurial activities by unfavourable tax regimes, the bureaucratic procedures encountered in dealing with government agencies, limited access to proper industrial accommodation and disadvantageous labour regulations. Because of the high demands imposed by taxation and other regulatory measures in some countries, there is no incentive for firms to expand. In countries such as the United Republic of Tanzania where regulation is very strict, the bureaucratic burden involved in the licensing and taxation of enterprises poses a substantial financial deterrent to the establishment and expansion of all enterprises.

Constraints on physical inputs include lack of availability of raw materials and other input materials, as well as lack of equipment and spare parts. The limited availability and high cost of material inputs often constitute a significant obstacle to expansion, although they do tend to be sector-specific. On the demand side, MSEs in many developing countries are often handicapped by low purchasing power. Access to markets is also made more difficult by poor roads, transportation and communications.

In surveys carried out in the field, technical, managerial and marketing constraints are usually evaluated by entrepreneurs in relation to existing markets, rather than as obstacles to future expansion, and are thus, in relation to those markets, rated as low priorities. In reality, however, the greatest curb on growth may be the difficulty of penetrating new markets. For MSEs to expand and graduate to the next stage of development, marketing and management skills are key resources, in which small enterprises are conspicuously deficient.

Most small-enterprise surveys conducted in developing countries report that lack of access to credit represents a strong restriction on the expansion of small-scale industrial establishments,[7] with the proprietors themselves typically perceiving financing as their most pressing input constraint.[1] Financial constraints reported by these surveys usually take the form of lack of access to credit and the high cost of borrowing.

Financial needs and stages of development of microenterprises and small enterprises

It is well known that different types of enterprises have significantly differing needs as far as concerns the type of financial services they require and the difficulties they face in gaining access to finance. As the firm grows, the size and composition of its financial requirements change. In particular, the relative importance of fixed and working capital and the size of each will change as the firm matures and grows. That evolution affects not only the relative importance of formal and informal sources of finance, but also the relative contribution to the development of the firm of various types of information financing arrangements.

At the same time, development of the financial sector is closely linked to real sector development; thus, as the real sector develops and there is a demand for new types of financial services, the financial sector evolves to respond to that demand.[8] The financial structure of an economy evolves as a result of the interaction between supply and demand, at the same time as its enterprises develop (see box 17).[9] The parallel evolution of the financial and real sectors, however, is nether synchronized nor in equilibrium at each stage of the development of an enterprise. Supply and demand are rarely in balance. Indeed, the gap between supply and demand is known to be most pronounced in the case of MSEs.[10]

External finance is seldom used during the start-up period

In most developing countries surveyed, the actual amount of capital required by a microenterprise or small-scale individual firm during the start-up period is usually modest. The amount of start-up capital required for a small-scale firm in relation to average per capita income, however, is by no means insignificant; in Bangladesh, for example, it amounts to six times the national per capita income. While demand is mainly for fixed capital, the complementary need for working capital tends to be underestimated by entrepreneurs at the start-up stage. Moreover, while a lack of capital is perceived by business proprietors to be the most pressing problem at start-up, a lack of business experience, together with the other constraints discussed above, may also prove detrimental.

The efficiency of the financial system is critically dependent on the use of new technologies

Box 17. Financial systems and enterprise development

Gertler and Rose[a] analyse the two key aspects of the symbiotic relationship between finance and growth that determine the relative efficiency of a financial system and its dynamic evolution: the premium paid for external finance and the net worth of the borrower. The former refers to the additional premium that must be paid by the borrower for loans and insurance policies that are not procured by collateral, because of the problems of acquiring information about borrowers and of contract enforcement. The latter is defined as the sum of the net liquid assets and the collateral value of the illiquid assets of the borrower. That amount consists not only of tangible physical assets, but any future earnings that the borrower can credibly offer as collateral. Thus, the accumulated net worth of the borrower depends both on past earnings and future prospects. The development of the real sector, therefore, leads to increasing net worth on the part of the borrower and "tends to reduce the premium attached to external finance, which in turn serves to stimulate further development".[b] The premium for external finance is thus inversely related to the net worth of the borrower, and those two factors jointly determine the level of investment that can be granted.

The two-way interactive relationship between finance and growth links the evolution of the financial structure of an economy to the changing financial needs of a firm over its life cycle. Thus, as self-financing develops into external financing, there is development of intermediation by banking institutions, development of securities markets for direct credit and transfer of funds, increased access to world capital markets and, finally, a narrowing of the spread between lending rates and deposit rates, along with a rise in the riskless rate. As part of such an evolutionary process, the development of financial intermediation is critically dependent on improvements in monitoring, evaluation and enforcement techniques, as such improvements should reduce the premium on external finance and, hence, reduce the spread between lending rates and deposit rates, which is a barometer of the efficiency of the financial system.

[a]Mark Getler and Andrew Rose, "Finance, growth and public policy", in *Financial Reforms: Theory and Experience*, Gerard Caprio Jr., Izak Atiyas and James Hanson, eds. (Cambridge, Cambridge University Press, 1994).

[b]Ibid., p. 32.

In general, almost all the fixed capital required by the microenterprise at start-up is acquired from personal savings or family sources, such as gifts from relatives or friends, the proportion varying according to the size of the enterprise. Data from a survey carried out in Ghana show that the savings of enterprise owners were used as the main source of start-up financing in 71 per cent of microenterprises, 67 per cent of small-scale enterprises and only 50 per cent of medium-sized firms.[11] The second most important source of start-up capital for MSEs, after the savings of owners, were gifts from family members. A similar pattern was found in many developing countries, where such sources of finance accounted for between 90 per cent and 95 per cent of the original capitalization of the enterprise.[12]

Credit is rarely used to start an MSE, as such enterprises generally lack a track record to convince lenders of their reliability. Of the firms surveyed in Ghana, only 1 per cent of microenterprises and 10 per cent of small enterprises had access to bank loans at start-up. A further 10 per cent, mainly small and medium-sized enterprise, utilized supplier credit in the start-up phase. Neither formal nor informal sources of external finance played a significant role in the start-up of microenterprises.

Once operations have begun and production is expanding, there will be a higher demand for working capital, both in absolute terms as well as in relation to fixed capital, because of increasing diversification in production inputs and the lengthening of production and sales cycles. At this stage, there will tend to be an increased utilization, rather than an expansion, of the fixed start-up capital.* The difficulty of obtaining adequate working capital has been more frequently cited as a problem for rapidly growing microenterprises than for rapidly growing modern small firms.[12]

The requirement for working capital is met initially from the internal cash flow resources and retained profits of the firm. As the enterprise expands, however, internal sources of finance increasingly become insufficient. There are some external financing options available to meet the growing requirement for working capital. Initially, working capital is provided as informal, short-term finance, such as advances from customers and suppliers, and from trade credits. Informal financing can be developed into a steady source of financing through subcontracting mechanisms or readily available trade credit, as in Asia. In Africa, however, where working capital is also financed from internal sources, informal financing arrangements are often used only for a one-off transaction or for a short-term contract, neither of which are usually regarded as secure foundations for a business. In both Asia and Africa, there is only rare recourse to moneylenders to raise working capital for a period of just a few days.

Overdrafts and bank loans are a popular and much safer method of raising working capital for larger enterprises with an established track record. That is not the case for MSEs. For example, bank loans, usually overdrafts granted on a roll-over basis, are used to finance working capital by as many as 25 per cent of medium-sized firms, but by only 3 per cent of microenterprises.

Access to external finance becomes critical at the expansion stage

The transformation of a microenterprise into a more complex, modern small-scale enterprise is typically accompanied by a sudden, sharp jump in demand for fixed capital in relation to working capital. While supplier credit and subcontracting arrangements are possible methods of financing fixed capital, informal financing of that kind is usually better suited to providing short-term working capital. At this stage of development, therefore, access to other sources of external finance, in particular to the formal financial markets, becomes critical if the need of the firm for both fixed and working capital is to be met.

The above analysis suggests that, in many developing countries, the scale and growth of the operations of an enterprise are, at present, largely determined by the size of available internal funds at each stage of its development. While the availability of external finance increases as the firm grows in size, internal finance is the principal source of funding for the formation, consolidation and expansion of an enterprise. Many small enterprises do manage to finance rapid growth from their own resources and from equity capital raised from relatives and friends. A lack of external finance at a critical phase of development, however, could be detrimental to the growth of microenterprises and small-scale enterprises with otherwise good potential and prospects.

The current pattern of financing also points to the need for lending institutions to provide adequate instruments and facilities to encourage savings. Furthermore, surveys conducted in developing countries, in particular sub-Saharan Africa, demonstrate that if an enterprise cannot adequately finance its own requirement for working capital, the day-to-day operation of the enterprise may be jeopardized, which may explain the high mortality rate of

*The increased utilization is by no means inevitable. Many microenterprises and small enterprises operate with a substantial amount of excess capacity. Thus, in Ghana, Steel and Webster, report that 86 per cent of enterprises operated at 50 per cent or less of total capacity. See William F. Steel and Leila Webster, *Small Enterprises under Adjustment in Ghana*, World Bank Technical Paper No. 138, Industry and Finance Series (Washington, C.D., World Bank, June 1991).

microenterprises and small-scale enterprises in that region. In such circumstances, enterprises utilize their retained profits to finance working capital in order to survive, instead of ploughing profits back into the business to expand capacity. For that reason, it is difficult for an enterprise to transform itself from a microenterprise or smaller-sized enterprise into a larger unit.

Furthermore, while informal financing arrangements have often been perceived as instruments that are both flexible and versatile, they do not form part of an integrated funding strategy and cannot adequately respond to the gaps in short-term and long-term funding that may occur at certain critical stages in the evolution of the firm. Indeed, informally organized entities, such as local communities, while able to support commerce and trade, cannot mobilize industrial capital, as this requires appropriate formal institutions to be in place.[13]

Innovative financial services programmes

It should be noted that, in recent years, several successful and innovative financial services programmes have been created to assist in microenterprise development, for instance, a scheme instituted by Badan Kredit Kecamatan (BKK) in Indonesia.[14] Such schemes have been able to reduce the inherent risk in providing credit to small borrowers by bringing peer group pressure and other social pressures to bear on the borrower, by allowing unconventional forms of collateral to be provided to encourage the timely repayment of short-term loans for working capital, and by imposing relatively high commercial interest rates sufficient to cover the cost of credit. Peer pressure and group dynamics in particular are used, not only as a way of reducing the costs of providing microfinance, but as a mechanism to ensure a high rate of repayment without the need for formal collateral.

Financial programmes of this type have resulted in a number of other successful practices. These include the establishment of savings schemes as providers of short-term liquidity and as long-term reserves of emergency liquidity; ensuring continuity in the availability of financial services through the provision of small, increasing repeat loans and the organization of borrower groups; and allowing for fungibility of money. Such practices are akin to those used to good effect in the informal financial sector to minimize credit screening, to monitor and enforce loan contracts and to reduce the risk of default.

Indeed, if the risk of lending to small borrowers were reduced using the approaches outlined above, the risk cost of default, which forms part of the costs of any transaction, could fall significantly. If such approaches are adopted and implemented by non-governmental organizations or formal banking institutions, however, the cost of another component of the transaction, namely the administrative costs, could increase. If administrative costs were to increase significantly, many commercial and development banks would find it difficult to make the adjustments necessary to accommodate such innovative approaches in the short term, without recourse either to internal cross-subsidies or externally funded subsidies.

It is not surprising that many such innovative programmes remain heavily dependent on subsidies and require a constant injection of donor funds. Programmes operating in sub-Saharan Africa, for example, have incurred particularly high costs.

Partly to address such high costs and partly to improve the financial viability of lending programmes, many innovative programmes typically adopt the minimalist approach to granting credit for small enterprises development, the alternative being the integrated approach, whereby financial services, technical assistance and training are tied to loans.

A critical shortcoming of the minimalist approach is its inability to provide loans large enough to permit an enterprise to graduate from the small to medium level. For example, in sub-Saharan Africa, the Presidential Trust Fund for Self-Reliance, which has adopted the minimalist Grameen Bank model, granted 4.3 million Tanzanian Shillings (T Sh) in loans at a cost of T Sh 5.6 million in 1991. As at June 1992, it had granted T Sh 9.6 million in loans, which yielded interest of T Sh 0.99 million against an operating cost of T Sh 7.7 million. Revenue from savings is reported to have been only T Sh 1.01 million.[15]

It should be noted, however, that the minimalist approach may be appropriate if programmes are to deal with the specific expansion phase of very small enterprises and microenterprises when their requirement is for repeat financing of working capital. Enterprises in both the formation and transformation phases often require more integrated assistance than minimalist programmes can provide to overcome other obstacles to development. Those minimalist programmes that are regarded as successful have been effective for the most part in providing small injections of working capital.[16] They are not geared to catering for the expansion and graduation needs of enterprises. In order for minimalist programmes to assist enterprise development as far as the graduation stage, they should ideally provide various financing options, such as linking microenterprise programmes to formal financial institutions, or they must themselves develop formal institutions that are capable of providing a comprehensive set of financial services, including deposit-taking and credit provision. BanCoSol in Bolivia is a well-known example of a minimalist programme that has transformed itself into a bank and upgraded its operations.

Lack of access to credit hinders growth of microenterprises and small enterprises

Although financial pressures are often cited as the most significant brake on the growth of MSEs, it is important to distinguish between the demand for working capital and the demand for fixed capital. Entrepreneurs typically perceive their requirement for capital as a requirement for working capital rather than for fixed capital. Small-scale enterprises tend to experience difficulties in meeting working capital requirements for carrying out day-to-day operations. Yet, working capital shortages are often the symptom of another problem such as an inadequate supply of other inputs or managerial inefficiencies. For example, the effects of producing the wrong product for the wrong market at the wrong price are first felt in cash-flow problems.

There is also a tendency in surveys for entrepreneurs to overstate their financial problems, while it could be other problems, such as weak demand, supply problems or poor management, which are the real cause of their liquidity problems and lack of creditworthiness. On the other hand, additional working capital loans can have a negative impact on enterprise performance if the problems of management capacity, fixed assets or technology are not also addressed.[17]

Nevertheless, there are many enterprises experiencing a growth in demand that warrants expansion beyond the limits imposed by the self-financing approach. Lack of access to credit does curtail the ability of some MSEs to explore highly profitable opportunities, and the growth of the MSE sector could be accelerated if external financing were more readily available (see box 18). Survey data from fieldwork conducted in Ghana, for example, indicate that, in Africa, there are approximately two applications for bank loans by MSEs for each one awarded, and this ratio increases to 3 to 1 for microenterprises.[11] The

MSEs face numerous barriers in accessing credits

Box 18. Why small enterprises have difficulty in obtaining credit from institutional sources

The difficulties faced by enterprises in obtaining credit from institutional sources may be attributed to the following factors:

(a) Lending to small enterprises is perceived as risky. The uncertainties of such businesses and their high mortality rate, as well as their vulnerability to market changes and economic fluctuations, make banks reluctant to lend to them. Somewhere between 20 per cent and 50 per cent of small businesses in the United States fail in the first few years of operation. A survey of small businesses in the Philippines revealed similar results. Some studies have shown, however, that small-scale entrepreneurs may take greater pains to repay their loans in anticipation of access to increased future borrowing but, in the final analysis, most small enterprises depend on a single owner-manager, and this makes them more vulnerable than larger enterprises to unforeseen events;

(b) Running parallel with the reluctance of banks to lend to small enterprises is the reluctance of those enterprises to borrow from banks. The costly administrative formalities involved in obtaining bank financing is a formidable deterrent for small enterprises. Some proprietors lack the formal education to cope with bureaucracy and for others, the difficulties of complying with the conditions set by those institutions for advancing credit are compounded by logistical problems and pressures of time. In many cases, quite apart from bearing the costs involved in numerous visits to various lending institutions, potential borrowers also have to pay for the preparation of accounts. Such transaction costs can be prohibitive for the small borrower;

(c) There is a distinct bias on the part of the banks in favour of large corporations. In many cases, there are links in directorship, ownership and various common financial dealings between banks and large financial institutions, which automatically makes directing finance to such borrowers more likely;

(d) The administrative costs of lending to small enterprises is high, which reduces the profitability of the lending institutions. According to a World Bank study conducted in the Philippines in 1978, the administrative costs of handling large loans was between 0.3 per cent and 0.5 per cent of the total of the loan, while such costs rose to between 2.6 per cent and 2.7 per cent on loans to small enterprises. Most subsequent studies have found that the administrative costs of lending to even small organized business are between 4 per cent and 5 per cent of the loan total. One institution in Latin America, the Corporación Financiera Popular of Colombia, which lent exclusively to small and medium-sized enterprises, had administrative costs of over 7 per cent, even without lending to the very smallest microenterprises;

(e) Usually small borrowers are unable to provide the collateral and other security that the lending institutions demand before approving loans.

evidence also suggests that microenterprises and small-scale enterprises received loans for much smaller amounts than they requested. The lack of credit for the purchase of capital equipment was cited as a critical brake on business expansion by 37 per cent of respondents in the sample.

The above-mentioned statistics confirm the sizeable gap between the supply of and demand for enterprise finance. The gap is at least partly due to the problems of inaccurate information or the costs of acquiring information, the high perceived risk, the transaction costs and the problems of enforcing repayment associated with lending to MSEs.

As far as banks are concerned, avoiding the provision of credit to high-risk businesses may be consistent with a prudent lending strategy. Credit is usually intended and packaged by banks for large, well-established, modern businesses with good cash flow. Banks find it easier and more profitable to deal with their segment of the market, as risk is minimal and transaction costs are lower.* Their own management structures are also most suited to doing the majority of their business with relatively large corporate entities. Consequently, potential borrowers without the right track record and unable to produce collateral have to look elsewhere for financial assistance.

When the real reason for the difficulties encountered by banks in dealing with small-scale businesses is sought, a distinction must be made between the low financial incentives involved in servicing small enterprise clients and the lack of administrative procedures available to do so.[18] While banks often comment that there are not enough bankable MSE projects, the real reason for that may lie in the cost of processing applications and the poor financial incentive involved in developing new small clients. In the banking system of many countries, competitive pressure in the banking system, whereby several banks with a widespread distribution compete for new clients at the local level, is lacking. Furthermore, bank managers are given few discretionary powers and have few incentives to make small loans.

On the other hand, a recent study reveals that MSEs in sub-Saharan Africa make very little use of what informal finance is available, apart from start-up capital lent by family and friends.[19] For example, 8 per cent of entrepreneurs responding to the survey conducted in Ghana had sought a loan from a moneylender and 3 per cent had approached a *susu* operator for a similar facility.** Considering the relatively large number of applications for bank loans by small enterprises that are rejected, those statistics indicate little spillover of unsatisfied demand into the informal segments of the financial market. That is partly due to the narrow specialization of each segment of the informal financial sector and partly attributable to the nature of the financial products and instruments that they provide, for instance the relatively high interest rates, the short repayment periods and the limited size of loans available. Informal sources of finance are thus less appropriate for regular business transactions than for consumer or emergency purposes. Many firms viewed borrowing from informal commercial sources as a last resort rather than a preferred means of obtaining regular finance.

*This perception is not valid in the case of large, unprofitable State enterprises. The low quality of bank portfolios has often been attributable to the fact that credit has been directed to parastatal organizations that have proved to be very costly clients.

**Under this method of informal financing, popular in Ghana, a loan is raised by contributions, or *susu*, from private individuals who form a type of syndicate. The *susu* operator organizes the loan by collecting contributions, and receives a small payment for his work. Repayment is based on trust.

Financial systems for microenterprises and small enterprises in high-growth and low-growth regions

There are a number of critical differences between the fast-growing economies of Asia and the stagnant economies of the sub-Saharan region with respect both to the evolution of the formal and informal financial sectors and the way in which financial systems have responded to demand for financial services by MSEs in the two regions (see box 19).[20]

Greater linkages between formal and informal finance in Asia

In some successful Asian countries, a relatively high degree of integration has taken place within the financial system and efficiency of intermediation in the system as a whole has gradually increased. An informal financial sector that is as diverse as it is dynamic continues to form part of such thriving financial systems with specialized financial services being provided by each sector.[21] While, theoretically, there will always be scope for an informal credit market if it can improve on formal sector transaction costs and if it can intermediate funds that would not otherwise have been intermediated, such financial dualism is likely to become less pronounced as the formal sector itself is progressively liberalized, as the costs of formal sector transactions decrease and as the capital markets become more sophisticated.[22]

The integrated financial system carries over into both the supply and demand sections of the economy. The two sections have a variety of interchangeable credit needs in the middle range of a whole spectrum of credit markets and credit uses.

Informal finance is based on personal relationships

Box 19. Differences between formal and informal finance

In general, informal finance consists of small, short-term transactions, based on personal relationships. Such arrangements are flexible, adapted to economic change, often innovative, involve low transaction costs for both lender and borrower and result in high loan recovery rates. Most informal loans are flanked on the basis of the creditworthiness of the borrower, and some elements of the informal system also process a substantial amount of savings. Perhaps most importantly, informal transactions usually take place close to where clients live, shop or work.

In contrast, the formal financial sector usually handles larger and longer-term transactions, often on a quite impersonal basis. Banking procedures are usually fairly inflexible, adapt slowly, involve substantial amounts of paperwork, result in sizable transaction costs to borrowers and are sometimes associated with loan recovery problems. Formal loans are often financed, in the case of government-sponsored credit programmes at least, largely on the basis of loan targets and credit needs, and deposit mobilization may be largely ignored. In most cases, formal finance is transacted in the office of the financial intermediary, and this imposes additional transaction costs on the client.

Source: D. W. Adam and D. A. Fitchett, *Informal Finance in Low-Income Countries* (Boulder, Colorado, Westview Press, 1992).

Within this range, depending on the lending and borrowing rates available, each sector encroaches on the market share of the other. At either end of the spectrum, however, each sector utilizes a number of markets that cannot be utilized by the other and that are therefore complementary.[22] The financial system as a whole has become more competitive in East Asian countries, as the range of overlapping between sections has expanded. Where overlapping demand exists, there are also spillover effects from the formal segments of the economy into the informal segments, and vice versa.

Furthermore, evidence is emerging from empirical studies that informal finance can be an important source of working capital for microenterprises and smallholders. For example, in India, the Republic of Korea and Thailand, manufacturing firms that are normally clients of the formal sector have found informal credit provision an important source of funds for working capital and, in some cases, for fixed investment.*[22] The share of the informal sector in financial transactions in such countries is estimated to be substantial, far exceeding that of the formal sector of many countries.[23] Informal credit markets provide as much as half of all rural credit and a significant part of urban credit in Asian developing countries,[22] with the share of informal credit in total credit varying from approximately one third to approximately three quarters.[24] A study, carried out by OECD, estimates that the share of informal credit in total rural credit may range from 30 per cent to more than 80 per cent.[25]

Decentralization of lending can facilitate the screening and monitoring of loans and can reduce the total intermediation costs of the economy, resulting in increased investment efficiency, notably in economies where financial markets have inadequate information systems.[26] The high opportunity cost of investment funds, determined by informal market rates, has kept the efficiency of aggregate investment high in East Asia. This has deterred entrepreneurs from making low-yield investments, even when they had access to cheap bank funds. The development of a dualistic financial system, with the formal sector servicing "full-information" borrowers* and the informal sector servicing "information-intensive" borrowers,** has helped credit intermediaries to allocate funds to "information-intensive" borrowers more efficiently and at a lower cost than if all resources for investment had been channelled through the banks of the formal sector.

Efficiency in intermediation in the segmented financial market of Taiwan Province of China appears to have been predicated on conditions that not only stimulated the growth and expansion of each segment, but also encouraged development of actual

*Peter J. Montiel, Pierre-Richard Agenor and Nadeem Ul Haque, *Informal Financial Markets in Developing Countries: A Macroeconomic Analysis* (Oxford, Blackwell, 1993), report one of the survey results, that indicates that lending among firms to ease mutual short-term cash-flow problems in India is estimated to be equivalent to between 13 per cent and 25 per cent of the total amount of bank credit extended to industry.

*If enough information exists for potential lenders to make an informed decision about lending to a certain enterprise, then that enterprise is known as a full-information borrower.

**If a great deal of information needs to be provided before the risks of lending to a certain enterprise can be evaluated, then that enterprise is known as an information-intensive borrower.

linkages between the segments. First, the Government adopted a deliberate policy to encourage the development of an active informal sector as an efficient adjunct to regulated credit institutions.[26] Secondly, informal lenders have been active in developing innovative instruments for higher-risk projects that enable them to extend loans to borrowers without demanding real assets as collateral. While segments of the financial market were clearly demarcated as far as borrowers were concerned, formal credits were available indirectly through an extensive subcontracting system, whereby larger firms acted as de facto intermediaries, offering on-lending facilities, such as trade credits, to their subcontractors and suppliers. The use of market interlinkage and credit layering has been instrumental in the success of the manufacturing industry, and hence conducive to economic growth.

In other Asian economies, the interlinking of contracts across financial, trade and production transactions and credit layering have been used by informal lenders for risk management purposes in rural areas to improve data collection and contract enforcement. Informal lending operations with two-tier credit layering, involving trader lenders for commodity-based credit and farmer lenders for land-based credit, are used extensively in rural areas of the Philippines.[27] There are also numerous mechanisms by which funds flow between the formal and informal sectors in India, Indonesia, Malaysia, Philippines, Republic of Korea and Thailand.[22] A great deal of trade credit originating in the formal sector is being on-lent informally in those countries. For example, in the Philippines and Thailand, financial wholesalers borrow from the formal sector and retail the credit on an informal basis. In Malaysia and the Philippines, experimental schemes have been established whereby input and output dealers are used to on-lend informally. Such experiences in Asia suggest that market segmentation is not necessarily a sign of market inefficiency, nor is it a cause of inefficient intermediation. It has often served as a mechanism for linking MSEs and large firms and has thus facilitated the upgrading of the former. There is no missing middle ground in the corporate structure of the successful East Asian countries.

The financial market in sub-Saharan Africa is fragmented

Conditions in sub-Saharan Africa have been quite different from those prevailing in Asia.[20] While the informal sector has a larger share of credit provision and savings mobilization than the formal sector, when links between the different segments are weak, market segmentation and fragmentation have become a problem, severely restricting the flow of price and policy information across the system.* The formal and informal sectors often form almost separate financial enclaves. This type of market segmentation is detrimental to the efficient functioning of the financial system. In such an environment, not only is it impossible to overcome the weakness of each sector, but the comparative advantages of different sectors are also not fully exploited to allow efficient specialization to take place. As a result, the potential capacity of the system, as far as the development of enterprises is concerned, remains unused.

Despite large-scale reforms of the private sectors, most banking institutions in sub-Saharan Africa have not yet developed the capacity for risk management. Instead, they continue to operate in an extremely restricted environment, with an underdeveloped infrastructure which does not support the market and a poor information base. Under such conditions, banks have either developed an overcautious policy of asset management, resulting either in a credit squeeze, as in Ghana and Malawi, or a deterioration in their own net worth through imprudent asset management, as in Nigeria and the United Republic of Tanzania. Banks continue to lend mostly to traditional, large, established customers and to avoid lending to MSEs. In spite of liberalization and the attempts to introduce greater financial competition, therefore, it is evident that formal financial instruments have not become more accessible to a wide cross-section of the real economy.

In contrast to the disappointing way in which formal institutions have responded during the period of economic reforms since the early 1980s, the informal financial sector has invariably responded in a dynamic way to the increased demand for financial services and has grown to accommodate it. Certainly, the recent growth of the informal financial sector appears to contradict the theory of parallel markets—according to which the growth of the informal sector is a result of excessive Government control. Instead, informal finance has responded to the growing financial requirements of the informal segment of the real sector, a sector that has been stimulated by the greater trading and commercial opportunities arising in a more liberal political and economic climate.

*The very nature of informal finance makes it difficult to reach a reliable estimate of the informal finance relative to formal finance. The prevalence of informal finance in countries in sub-Saharan Africa not included in the sample studied by Nissanke and Aryeetey (Machiko Nissanke and Ernst Aryeetey, *Financial Integration and Development in Sub-Saharan Africa*, report prepared for the Africa Technical Department of the World Bank (London, Routledge, forthcoming)) is supported by numerous estimates. According to the African Development Bank in Cameroon, for example, 70 per cent of the population participates in the informal financial sector, and informal sector saving is estimated to be more than 50 per cent of the total saving of the country. It is estimated that over 80 per cent of smallholders in Zimbabwe have access to informal credit, while in Zambia, an estimated 80 per cent or more of the urban population participates in the informal financial sector.

Despite the dynamism displayed by some informal financial units, their liabilities are smaller, being limited to taking deposits either from specific groups of people or in the form of surplus income earned by a lender from other activities. Savings cycles in the informal sector are typically short, with weekly and fortnightly contributions very popular in group schemes operating among traders, market women and other self-employed people. Savings facilities are used primarily to keep deposits secure, and savings are returned to the depositors as soon as possible. Savings mobilization and credit allocation are often separate undertakings in the informal sector. Thus, although the potential of informal units as mobilizers of deposits is well acknowledged, informal units have never been seen to have a key role in financial intermediation in the region. The effective lending rates charged by commercial informal lenders are often too high to allow those funds to be used as a regular source of working capital. While many informal segments have grown in response to the demand for their services, they will face difficulties if they wish to move beyond their particular sphere of specialization.

Clearly both the formal and informal segments of the financial system serve a distinct clientele and a narrow niche in the market. How the boundaries of each specification are demarcated will be determined by the way in which individual lenders address the problems of gaps in information and by the way in which they contain risks and transaction costs. The conflicting information available about lenders that has come to light during the screening of loan applications and the monitoring and enforcement of contracts has led not only to varying perceptions of the risks involved in lending to MSEs, but also to varying transaction costs.

Informal agents are generally more effective at screening small loans. They can often rely on a relatively accurate community information base. In particular, many informal lenders, in attempting to minimize the cost of administering loans, tend to attach more importance to loan screening than to loan monitoring and contract enforcement. This suggests a considerable appreciation by informal lenders of the problems of selecting unsuitable clients during the screening process. The various methods of client selection used by informal lenders effectively reduce the risk of dealing with small borrowers who are considered high-risk by formal lenders. Significantly, the current range of financial products offered by the informal sector does not meet the requirements of small business either. Informal finance is used solely for immediate consumption or, more rarely, as working capital for small owner-operated businesses with few prospects of expansion.

In many respects, informal units enjoy considerable advantages as far as access to information and the costs of transactions are concerned. Financial systems as a whole, however, have failed to capitalize effectively on those advantages and there has been an absence of functional linkages. Instead, each segment appears to struggle with its individual operational constraints.

Direct institutional linkages, both between and within different segments of financial markets, are rare. There are direct deposit links between banks and informal agents and associations. The savings of informal agents, however, are held in the form of non-interest bearing, on-demand deposits for safekeeping. They are thus seldom intermediated for investment, because of conservative asset management on the part of the banks.

There are also few direct linkages in credit allocation between banks and traditional informal operators. Indirect market links between the different segments of the financial markets are also weak, and there is an extremely narrow range of overlapping demand for financial services. Neither complementarity nor competition are generally observed in relationships between financial markets in sub-Saharan Africa. De facto financial intermediation, which involves the on-lending of formal funds by large enterprises to smaller subcontractors, has not been observed on anything like the scale found in some Asian countries. This appears to be the result of the limited scope of backward and forward linkages in real sector activities in sub-Saharan Africa. Nor has extensive credit layering in the provision of wholesale and retail services been reported. With few linkages and interactions between segments, the scope for sharing of information has been limited. A mechanism for risk pooling and risk sharing across segments is thus also absent.

As a result, financial units in sub-Saharan Africa specialize in a very narrow range of financial products. Not only, therefore, do financial markets become too fragmented to allow risk-adjusted returns to converge, but considerable gaps in financial services have also emerged. The financing gaps absorb all potential borrowers who either fail to meet the lending criteria of various existing lenders or who find their products unattractive. The group is too large to be financed by informal lenders and, at the same time, too small to interest formal lenders.

The gaps are particularly detrimental to enterprise development in manufacturing industry. If African economies are to change their orientation from trade and commerce towards directly productive investments, improved availability of term funds is desirable. Private investment in many countries suffers from a mismatch between the short-term nature of most deposits and the longer-term requirements for productive investment. There is an identifiable credit gap that particularly affects MSEs. The financial gap in question probably corresponds closely to the "missing middle" discussed extensively in the literature on enterprise development in Africa.

Government role in increasing finance for microenterprises and small enterprises

Many Governments, recognizing the importance of adequate financing to the development of MSEs, have taken steps to encourage lending institutions to provide credit to MSEs on more liberal terms. Under the most common scheme for the granting of subsidized loans to MSEs, loans are made from a special small-business fund and refinanced by the Central Bank at a very low rate of interest to compensate the lending bank for the high risk and the costs of subsidies involved in making the loan.

One of the results of that policy has been the creation of excess demand for financing. Faced with such a situation, financial institutions have been forced to ration the credit at their disposal, generally in favour of large industries. Subsidized interest rates may also produce overcapitalization and the diversion of credit, and this may contribute to the ineffective use of resources or even the failure of MSEs. Moreover, if concessionary interest rates result in lower interest rates for deposits, they may discourage savings and introduce distortions into the financial system. Governments have thus gradually accepted the need to eliminate subsidized interest rates and there has been a move towards positive, real interest rates in many developing countries. It has become generally accepted, with a few exceptions, that lending to MSEs should be at prevailing commercial rates.

Raising of interest rates, however, has neither stimulated savings nor increased investment efficiency. MSEs in liberalized financial systems continue to remain credit-starved. On the other hand, credit subsidization has had markedly positive effects for several decades in China, Japan, Republic of Korea and Taiwan Province of China. This would suggest that raising or lowering interest rates alone is not enough to stimulate investment in MSEs. What is required is the linking of credit provision to the development of an institutional mechanism to support and monitor the performance of MSEs.

Some countries have tried to overcome the reluctance of commercial banks to lend to MSEs by issuing government directives obliging commercial banks to allot a specific minimum percentage of their lending to small enterprises. In India, for instance, it was directed that 40 per cent of all bank loans should go to designated priority sectors, of which 12.5 per cent were small-scale industries. Other countries have also followed that practice. It is perhaps less well-known that the Republic of Korea required commercial banks to allocate 35 per cent of their incremental loan portfolios to MSEs every year. Other Asian countries, such as Indonesia and Malaysia, have also issued instructions to commercial banks to direct a fixed percentage of their lending to MSEs or small businesses owned by members of the indigenous population.

The use of mandatory lending quotas, as fixed percentages of the loan portfolio or as absolute amounts, does have some merit, but lending quotas should be judged in the context of the general financial environment and the extent to which the quota system can be monitored. There is always a danger that targeted lending can produce undesirable distortions in the working of the financial sector by preventing banks from obtaining adequate returns on their investments. On the other hand, targeted credit can have outstanding results, as has been the case in China, Republic of Korea and Taiwan Province of China.

There must be some equity stake on risk capital invested by entrepreneurs themselves in their enterprise together, possibly, with capital from other sources. In most lending schemes for small enterprises, loans usually cover not more than approximately 70 per cent of the cost of a project, which means that 30 per cent of the cost will have to be produced as equity by the small business owner.

Apart from the equity provided by the entrepreneur, risk capital is made available in some countries through equity financing organizations or venture capital groups. Venture capital companies have existed in industrialized countries for some time now, particularly in Australia, Canada, Japan, United Kingdom and other western European countries and the United States. Such companies, which generally have minority investments in high-technology projects with high growth potential in the developed countries, carry out very careful screening of ventures before investing.

Providing credit on liberal terms is not, in itself, an adequate form of assistance to MSEs in developing countries. It is essential that any special financing measures, introduced by the Government, be linked to provision of advice, business counselling, training and follow-up services. In that connection, a number of other measures directed towards relieving the financial burden on MSEs have been introduced by Governments, small-industry promotion agencies and major industries, including:

(a) Development of infrastructure and building of industrial estates to allow rental of workshops to small-scale industrialists;

(b) Establishment of common service facilities, such as maintenance centres, central tool rooms and training centres;

(c) Government assistance in marketing the products of MSEs, such as preferential pricing and orderly systems for products manufactured exclusively or partially in the MSE sector;

(d) Government assistance in enabling the bulk import of essential raw materials by State corporations and the distribution of such materials in smaller quantities not only to alleviate the problems associated with imports, especially of small quantities, but also to eliminate the need for stockpiling on the part of MSEs.

Another way of helping may be to encourage non-governmental organizations to act as intermediaries between smaller borrowers and the banks, in an effort to reduce the cost of transactions. Non-governmental organizations themselves, may sometimes become involved in direct lending to small enterprises. Non-financial support provided by non-governmental organizations, or possibly by small-business promotion agencies, financed out of public funds, may sometimes include assistance with the screening of borrowers and improving the supervision of loans. Non-governmental organizations can reduce transaction costs by helping borrowers to prepare business plans and complete loan application forms more fully, which will speed up the approval process of the banks.

Special schemes for financing microenterprises and small enterprises: a few examples

The foregoing sections identified the financial, physical and policy restrictions constituting critical impediments to the development of small enterprises and also outlined some government initiatives in providing financial assistance to MSEs. The section below provides a few examples of special financing schemes for MSEs.

Malaysia: credit guarantee scheme aimed at reducing risks of lending to microenterprises and small enterprises

In 1972, as part of the overall strategy of adopting a more proactive approach to development under its New Economic Policy, the Government of Malaysia established the Credit Guarantee Corporation (CGC) and followed this up by issuing specific guidelines requiring commercial banks and finance companies to channel a set proportion of their total outstanding loans to priority sectors, including MSEs (see box 20). The general business sector in Malaysia typically comprises wholesale and retail outlets, small construction firms and hawkers and petty traders.

The guarantee schemes aimed at reducing the risks of lending to MSEs, by sharing any losses with the lending banks, should a borrower default on a loan. The banks were responsible for processing and evaluating the loan application. Once approved, the application was submitted by the bank to CGC for further evaluation. Penalties were levied on individual banks for non-compliance with targets. The guidelines also incorporated an obligation to assist the indigenous Malay or bumiputra community. Since the establishment of CGC, MSEs have accounted for 55 per cent of the total number of loans granted and approximately 30 per cent of the value of loans.

Since 1972, four main facilities have been offered by CGC: the General Guarantee Scheme, which operated from 1972 to 1981; the Special Loan Scheme, which operated from 1981 to 1988; the Principal Guarantee Scheme, which operated from 1989 to 1994; and the New Principal Guarantee Scheme, which has been in operation since 1994.

The introduction of each new scheme has resulted in an increase in the number and value of loans granted, but momentum has not been sustained (see table 33). In 1989, CGC decided to phase out the semi-dominant General Guarantee Scheme and the declining Special Loan Scheme and replace them with the Principal Guarantee Scheme. Compared with previous schemes, the Principal Guarantee Scheme offered support to large firms with net assets or shareholder funds of up to 500,000 ringgt (M$), a higher limit on credit facilities of M$ 500,000 and an increased guarantee, typically 70 per cent of the value of the loans, up from 60 per cent in prior schemes.

The interest rate was fixed initially at 1.5 per cent above base lending rate, whereas until 1987, the rates of interest charged on CGC loans were fixed and very low. The new margin more accurately reflected the risks inherent in lending to small and medium-sized enterprises and allowed the banks to earn a reasonable return while meeting the quotas. It is significant that the supply of loans from the Principal Guarantee Scheme slowed down sharply when interest rates were capped at 9 per cent by Bank Negara for most of 1991 and for the first part of 1992. The guarantee premium was set at 0.5 per cent of the guaranteed portion of the facility, compared with 0.5 per cent of the value of the loan under the SLS.

Other schemes operated by CGC since 1986 include schemes aimed at hawkers and petty traders and their trade associations. Since 1986, over 13,000 guarantees to that group have been approved, involving loans with an average value of only M$ 2,600 amounting to a total of M$ 59.7 million. While the schemes have been of modest value, they appear to have played a key role in shaping the perceptions of CGC among bankers.

The role of self-financing in MSEs in Malaysia declines as the firm becomes more established

Box 20. Sources of funds for Malaysian MSEs

A majority of MSEs used their own funds to provide 50 per cent or more of the capital required to start the business. In approximately 7 per cent of firms, help in providing more than 50 per cent of capital required for start-up was received from friends or relatives. A similar level of assistance was received by only 11.3 per cent of firms from commercial banks and by 1.3 per cent of firms from non-bank financial institutions and government agencies. As MSEs became more established, however, the role of commercial banks as a funding source becomes more important.

Funding sources of MSEs in Malaysia at start-up and in 1985

Funding sources as percentage of total requirements	*Initial year of operation (percentage of firms)*	*1985 (percentage of firms)*
Own funds		
Less than 50 per cent	27.1	36.3
50 per cent or more	72.9	63.6
Parents and relatives		
Less than 50 per cent	96.0	99.4
50 per cent or more	4.0	0.6
Friends and acquaintances		
Less than 50 per cent	96.7	100.0
50 per cent or more	3.3	--
Non-bank institutions and Government agencies		
Less than 50 per cent	98.7	99.4
50 per cent or more	1.3	0.6
Commercial banks		
Less than 50 per cent	88.7	75.3
50 per cent or more	11.3	24.2

Source: Saha Dhevan Meyanathan, ed., *Industrial Structures and the Development of Small and Medium Enterprises Linkages: Examples from East Asia*, Economic Development Institute Seminar Series (Washington, D.C., World Bank, 1994).

Note: Number of firms surveyed in initial year of operation: 151; number of firms surveyed in 1985: 162.

A number of problems were associated with the implementation of the scheme, in particular the following:

(a) The partnership between the CGC and the banking system did not work well. From the perspective of the commercial banks, claims procedures under the CGC guarantee cover took several years, the rejection rate of claims was high, and thus the lending to small and medium-sized enterprises remained risky. Approximately half the banks failed to comply with set targets over the two-year period ending March 1993;

(b) The guarantee of CGC, which reduced the risk of the bank, also reduced the incentives for the banks to evaluate, supervise and collect loans in an effective manner. Consequently, banks often monitored the guaranteed loan less thoroughly than normal loans, resulting in more loan failures. Gradually, because of the high rate of default, banks became sceptical about the guarantee cover provided by CGC;

(c) Being essentially profit-motivated, banks were not, as such, concerned with meeting social objectives. As participation in the scheme was viewed by banks as a social cost, they were reluctant to push lending beyond the required minimum;

(d) The total reliance of CGC on commercial banks resulted in a failure to market the scheme effectively, with the actual clients of the banks knowing little about the CGC schemes.

The poor performance of the CGC scheme in Malaysia clearly demonstrates that both penalties for default and incentives for repayment need to be built into a system operating within a decentralized institutional set-up.

Performance of Malaysian CGC undermined by problems of implementation

Table 33. CGC number and value of approved loans, 1980-1994

Year	Types of loans							
	GGS (number)	GGS (millions of M$)	SLS (number)	SLS (millions of M$)	PGS (number)	PGS (millions of M$)	New PGS (number)	New PGS (millions of M$)
1980	6 103	124.3	–	–	–	–	–	–
1981	1 148	25.8	17 161	498.2	–	–	–	–
1982	294	9.7	16 664	519.3	–	–	–	–
1983	236	7.2	10 327	298.3	–	–	–	–
1984	150	4.0	7 841	208.2	–	–	–	–
1985	77	2.7	5 295	140.0	–	–	–	–
1986	40	1.8	4 560	122.5	–	–	–	–
1987	33	1.3	3 346	75.2	–	–	–	–
1988	20	0.7	2 450	49.8	–	–	–	–
1989	5	0.3	1 032	21.4	1 638	78.5	–	–
1990	–	–	–	–	5 641	–	–	–
1991	–	–	–	–	3 349	206.3	–	–
1992	–	–	–	–	2 180	174.7	–	–
1993	–	–	–	–	2 302	205.8	–	–
1994 (2 months)	–	–	–	–	352	32.0	–	–
1994 (10 months)	–	–	–	–	–	–	3 146	530.1

Source: Grahame Boococo and Mohammed Shariff, "Loan guarantee schemes for SMEs—the experience in Malaysia", *Small Enterprise Development*, vol. 7, No. 2 (June 1996).

Note: GGS: General Guarantee Scheme; PGS: Principal Guarantee Scheme; SLS: Special Loan Scheme.

Indonesia: credit schemes with built-in repayment incentives perform better

The Small Enterprises Development Program or the Credit for Small Investment (Kredit Investasi Kecil)/Permanent Working Capital Scheme (Kredit Modal Kerja Permanent) (KIK/KMKP), launched in Indonesia in 1973, was the major subsidized credit scheme in the country until it was converted into the unsubsidized Small Enterprises Credit Scheme (Kredit Usaha Kecil) (KUK) in January 1990. The aim of KIK/KMKP was to help small, indigenous enterprises, including small enterprises and cottage industries, to obtain subsidized credit for investment and working capital. Eligibility for credit from KIK/KMKP, and also from KUK, was restricted to small firms where at least 75 per cent of the capital was owned by pribumi or indigenous Indonesians, or where at least 50 per cent of the members of the board of management were pribumi Indonesians.

Most of the funds for the KIK/KMKP and KUK schemes came from Bank Indonesia, which also coordinated the implementation of the schemes. Additional funding was provided by the World Bank, while the European Economic Community provided support in the form of training, staff development and other technical assistance. The actual provision of credit was handled through the five State-owned commercial banks of Indonesia, the Indonesia Development Bank, all the regional development banks (Bank Pembangunan Daerah) and 14 private banks which, during the mid-1980s, had more than 1,000 branch offices throughout Indonesia. The KIK/KMKP and KUK credits were provided not only to small indigenous manufacturing enterprises, but also to small enterprises operating in other sectors, including agriculture, quarrying and mining, construction, transport and commerce.

Within the manufacturing sector, the main target of the KIK/KMKP and KUK schemes were small manufacturing enterprises. Although cottage industries also qualified for the credits, their capital requirements were often too low for them to be able to absorb the size of credits offered under the KIK/KMKP and KUK schemes. A study by the Netherlands Economic Institute indicated that, as far as investment, value added and employment were concerned, the subsidized credit scheme generally yielded favourable results for small enterprises, particularly those operating in the manufacturing sector. A major objective of the KIK/KMKP and KUK scheme, however, was not achieved, namely the generation of a sustainable alternative source of credit for small enterprises, including small manufacturing firms. Problems with arrears and collection of repayments drove the default rate up to approximately 27 per cent, thus endangering the sustainability of the schemes. It was observed that the high default rate and serious collection problems were mainly due to inadequate staff training, unofficial payments, mismanagement of funds, inadequate penalties for default and too few incentives for the bank staff to make the collections.[28]

Another scheme, the Kredit Usaha Pedesaan (KUPEDES) programme, began as a general rural savings programme aimed, like the KIK/KMKP and KUK schemes, at promoting the development of small business. Whereas, under the subsidized KIK/KMKP and KUK schemes, credits were offered at an annualized rate of interest of approximately 12 per cent, under the KUPEDES scheme, credits were offered at the much higher rate of 32 per cent. The KIK/KMKP, KUK and KUPEDES programmes were administered by one of the State-owned commercial banks, Bank Rakyat Indonesia (BRI).

While the KIK/KMKP and KUK schemes had been beset by a high default rate, under the KUPEDES scheme, which had a considerably higher interest rate, loan repayments were collected much more successfully, as indicated by the very low default rate of only 2 per cent to 3 per cent. The superior performance of the KUPEDES scheme, as far as the collection of loan repayments was concerned, can probably be attributed to the more appropriate system of incentives included in the programme. The KUPEDES credits were handled by BRI staff at the subdistrict and village levels, while the KIK/KMKP and KUK schemes were administered by BRI branches at higher local government levels. Although the BRI staff at lower-level branches were, in general, less skilled and less experienced than staff at the higher-level branches, they received a 10 per cent bonus on profits, which may have accounted, to some extent, for the greater success of the KUPEDES scheme. Similarly, the system of penalties instituted under the KUPEDES scheme, whereby the subdistrict or village branches of the BRI were required to absorb the cost of bad loans, could also have accounted for the greater success of the scheme. By way of comparison, under the KIK/KMKP and KUK schemes, 75 per cent of each loan was covered by a State-owned credit insurance company, Indonesian Credit Insurance Ltd., which was established to promote bank lending to small enterprises with insufficient collateral, a practice which led to problems of moral hazard.

Allied Bank of Pakistan: a success story is terminated

The Allied Bank of Pakistan is the fifth largest commercial bank in Pakistan with assets in excess of US$ 1 billion. Employees own 51 per cent of the shares of the Bank while 49 per cent of the shares are held by the Government. The Allied Bank of Pakistan is the only employee-owned bank in South Asia.

In 1992, on the personal initiative of the bank president, the Unorganized Sector Financing Scheme was launched. The Scheme had the following characteristics:

(a) Some 14 special credit offices were set up throughout Pakistan with special officers appointed to select small businesses for financing and to monitor and support them throughout the life of the loan;

(b) Financing was to be extended in the form of both long-term credits and working capital for manufacturers and traders that had been in business for at least two years and required finance to upgrade production or expand the business;

(c) Personal guarantees were accepted as collateral and recoveries were made on a quarterly basis;

(d) The Scheme was not subsidized;

(e) Loans, in the range of US$ 1,500 to US$ 2,000 per person were provided on a commercial basis and could be extended for from 1 to 5 years;

(f) No credit lines were sought or obtained from the Government of Pakistan, the World Bank or any other agency. The Allied Bank lent entirely from its own funds.

During the period from January 1993 to March 1995 over 1,000 loans had been made. Recovery remained at 100 per cent throughout the period and savings equivalent to 80 per cent of credit were realized under the Scheme. In March 1995, the president of the Allied Bank was dismissed for political reasons. The new management took no interest in the Scheme and it collapsed in 1996.

The Linked Guarantee Programme: an example of a bridge between large and small enterprises in the Republic of Korea

The Linked Guarantee Programme in the Republic of Korea has come to play an important role in providing capital to small and medium-sized enterprises, and in fostering cooperation between large corporations on the one hand and small and medium-sized enterprises on the other.

The Korea Credit Guarantee Fund (KCGF) was founded on 1 June 1976 in pursuance of the Credit Guarantee Fund Act. The aim of the fund was to make financing more easily available to smaller firms by underwriting the corporate obligations of competitive and well-managed enterprises that did not have sufficient tangible collateral. Capitalization of KCGF is from both Government subsidies and contributions from financial institutions. Among the functions of KCGF are a credit guarantee service and a credit information service, as well as managerial and technical assistance to small and medium-sized enterprises. The most important of those functions is a comprehensive underwriting system on a per transaction or continuous basis of the loans, bonds,

leases, notes and bills of exchange, tax liabilities and executor contracts of mainly small and medium-sized companies. As of the end of 1990, the total capital of KCGF had reached 62 billion won (W) or US$ 869 million, while the total outstanding liabilities of small and medium-sized enterprises had reached W 5,192 billion or US$ 7,252 million.

One of the most successful programmes of KCGF is the Linked Guarantee Programme devised in 1984 to develop further cooperation between major manufacturing corporations and small and medium-sized enterprises. An indication of the success of the programme, reflected in the increasing number of clients and guarantees issued between 1986 and 1990 is provided in table 34.

Rapid growth of the KCGF scheme in the Republic of Korea

Table 34. Linked Guarantee Programme of KCGF (Millions of dollars)

Year	Outstanding guaranteed obligations	Number of borrowers	Number of major manufacturers
End 1986	42	209	6
End 1988	268	1 245	34
End 1990	487	1 756	40

Source: World Association for Small and Medium Enterprises.

It is worth noting that most of the guarantees under the programme have been made without the benefit of joint guarantees on the part of the major manufacturers. Another indicator of the success of the Linked Guarantees Programme is that the default rate of borrowers participating in the programme is less than half the overall default rate of the total obligations guaranteed by KCGF. In the five-year period from 1987 to 1992, the overall default rate of all obligations guaranteed by KCGF was 3.3 per cent, while that of the obligations of the Linked Guarantee Programme was only 1.2 per cent. A similar performance has been noted for the period from 1992 to 1997.

Ecuador: financial liberalization directs credit to larger, more efficient firms[29]

Evidence from Ecuador suggests that the adjustment process, which took place after financial liberalization in 1985, was particularly severe for small firms that produced mainly for the domestic market and benefited from subsidies and protection. Microenterprises also saw their profits decrease substantially, while medium-sized and large firms fared better.

Until 1985 interest rates in Ecuador were fixed by the Government at a low level, and the real cost of credit was negative. Moreover, subsidized credit, directed to specific groups of small companies or export activities, played a very important role in the economy. Small industry, for example, had access to special subsidized credit lines, such as the Fund for Small Industry and Handicraft, backed by refinancing from the Corporación Financiera Nacional, and the Fondos Financieros, supported by rediscount lines at the Central Bank. Exporting firms had access to cheap credit through the Fund for Export Promotion. The Fund for Small Industry and Handicraft was judged to be a well-administered programme with high rates of collection. Since part of the credit given to microenterprises and small enterprises was at subsidized rates, the average nominal cost of debt to those firms, i.e. the total interest payments divided by the total stock of debt, was 7.5 per cent and 9 per cent of the respective stock of debt of microenterprises and small enterprises, while medium-sized and large firms were paying 10.9 per cent and 15.4 per cent, respectively.

The situation changed significantly after financial liberalization, when there was an overall process of adjustment of the financial structure leading to a reduction of leverage. The adjustment was particularly severe for small firms whose leverage was reduced from 1.403 to 0.883 in the period from 1986 to 1988. The degree of leverage of medium-sized and large firms also substantially decreased. Data suggest that financial resources were redistributed from small and medium-sized firms to large firms. The share of total credit of large firms increased from 57.3 per cent to 67 per cent, that of medium-sized firms fell from 32.4 per cent to 24 per cent and that of microenterprises and small firms dropped from 6.6 per cent to 5.9 per cent and from 3.6 per cent to 2.9 per cent respectively. In the final analysis, it appears that liberalization helped to direct credit to larger, more established, and more efficient firms. Moreover, since information asymmetries remain, credit continues to flow to larger, more established firms that are less likely to suffer from such asymmetries.

Conclusion

The MSE sector has an important role to play in most developing countries. The growth of the sector strengthens linkages throughout the economy, stimulates employment and improves the pattern of income and asset distribution.

The critical issue is to identify the factors that can ensure the graduation of MSEs into medium-sized enterprises. If that graduation occurs, MSEs are gradually absorbed into the industrial system, developing subcontracting links with major enterprises and benefiting from enterprise-level transfers of technology. If graduation does not occur, the industrial system remains fractured and MSEs basically become a means of averting starvation among the poorer population.

A key restriction on the graduation of MSEs is their lack of access to finance. Here, there is a marked difference between the experience of the countries of East Asia and those of sub-Saharan Africa. In East Asia, the formal and informal financial systems represent different ends of a continuum and are well integrated. Credit layering and financial subcontracting by major manufacturers are common and there is access to credit at realistic rates for the MSE sector. In sub-Saharan Africa, the formal and informal financial sectors are worlds apart. The comparative advantages of the two sectors are not efficiently exploited and MSEs remain credit-starved.

Government policy has an important role to play in stimulating the growth of investment in the MSE sector. Credit subsidization has proved effective in China, Japan, Republic of Korea and Taiwan Province of China. It has failed in many other developing countries and areas. The provision of credit should be linked to the creation of an institutional structure to support and monitor the performance of MSEs. The provision of technological and managerial support, in particular, is crucial.

Over the last two decades, Governments have encouraged the growth of special credit programmes directed at MSEs. Such programmes have been successful in Indonesia and the Republic of Korea. They have increased MSE graduation, promoted inter-enterprise linkages and proved commercially viable and self-sustaining. The case study of the Allied Bank of Pakistan, referred to above, shows, however, that managerial support at the highest level is essential for the success of such special credit programmes.

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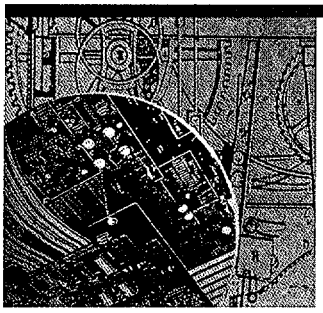

5

Government policy in promoting investment

In most developing countries and economies in transition, a dynamic manufacturing sector is essential for rapid growth in GDP. The sustained growth of the manufacturing capacity of a country depends on three processes that are interlinked. First, new investments, in the form of accumulated human and physical capital, must be directed into industry in an efficient manner. Secondly, savings must grow at a fast enough rate to allow existing capital stock to be replenished and new investments to be financed. Thirdly, dependable and efficient financial institutions must be in place to mobilize savings and put them to productive use in financing activities with an above-average rate of social return.

During the past few decades, Governments of developing countries have worked actively to stimulate investment, especially in import-substituting industries. In recent years, however, a reaction against State intervention in support of investment has been detected in political ideology and also in practical concerns expressed about the effectiveness of such involvement. That reaction partly mirrors the ending of the cold war era and the easing of some of the more repressive aspects of State power, especially in Asia, Latin America and the economies in transition. It also partly reflects a recognition of the impact of the increasing globalization of the international economy and the declining capacity of the State to limit the influence of external factors on domestic investment and economic activity in general.

A role for government

In an increasingly integrated global economy, the sustained expansion of manufacturing investment is likely to be led in most economies by the private sector. Nonetheless, the role of public policy in the growth of investment remains significant. Governments are responsible for economic coordination and for taking the lead in strengthening economic activities that bring wider benefits than those that are simply reflected in the profits of investors. In most developed countries, the markets play the dominant role in allocating resources, but there is still a role for an interventionist policy that focuses on those sectors of the economy where markets are imperfect, incomplete or absent.

Examples of such market failures are many. Perhaps one of the most important is the absence of information needed to induce private firms to make long-term financial commitments to projects that have potentially high rates of return but that require long gestation periods. Market failures are also evident in the lack of access of small businessmen to institutional credit and the fact that firms lack information about export opportunities and sources of efficient technology. Moreover, the absence of efficient systems for training and human capital development in most developing countries explains the inability of local industry to take full advantage of the services offered by universities and publicly funded training institutes. In all those areas the State has a legitimate policy role to play in support of industry.

Moreover, the market cannot replace the State, nor will a coherent policy be an automatic or spontaneous consequence of the dismantling of interventionism. The private industrial sector needs a regulatory framework and consistent policy support in a growing number of areas where the continued availability of public goods is essential to its future success. That is especially true in the least developed countries where markets are weak or non-existent, as such countries can be easily ignored or dominated by global economic forces. Increasing the capacity of the State to formulate and implement policies to accelerate industrial development should remain a matter of concern, especially as trickle-down of economic growth works only slowly and an appropriate policy intervention can both compensate for market failure and encourage unequal economies to converge. Indeed, new theories on growth suggest that policy factors are a major influence on economic performance.[1]

Successful interventionist policies have usually enhanced growth and prosperity, and have not

produced a negative, restrictive or harmful impact on development. In many economies, the interaction between government policy and industrial dynamism will remain a crucial determinant of capital accumulation. The private sector can commit itself to long-term economic development if the government has the capacity to formulate and implement credible policies and, if necessary, to take on an entrepreneurial role to expand normal production capacity.

Government as entrepreneur

During the period from 1950 to 1980, there was widespread support for government intervention to promote investment in manufacturing for two main reasons. First, there was a need to alter the internal terms of trade so that resources could be channelled to industry rather than to agriculture. Secondly, credit needed to be directed to specific sectors and subsectors of manufacturing at rates of interest that were below market rates. Such policies were pursued both by the successful East Asian economies and by the less successful economies of Latin America, South Asia and sub-Saharan Africa.

The effects of such policy interventions were usually quite varied. In Latin America, for example, intervention often resulted in excessive restrictions and controls. Such a situation proved to be counter-productive, not only because it resulted in accelerated inflation, but also because it caused worsening patterns of income distribution and falling rates of real human and physical capital accumulation. From 1960 to 1985, macroeconomic volatility is estimated to have reduced the investment rate of the region by five percentage points of GDP relative to the figure that would have been expected had Latin America experienced the same economic volatility as industrialized countries over the same period.

Similarly, in many countries of sub-Saharan Africa, the commercial viability of investment was often ignored both by donor agencies and Governments. Financial institutions failed to mobilize savings into productive use. They did not develop the capacity for risk assessment and monitoring of loan portfolios. The setting of interest rates by Governments also discouraged banks from investing in information technology, so crucial to the development of financial systems.

On the other hand, government intervention in countries of East and South-East Asia led to an impressive rate of growth, supported by high capital accumulation and rapid industrialization. In East Asia, Governments invested in industry through public enterprises, provided subsidized credit to selected enterprises and manipulated intersectoral terms of trade. The crucial difference between the role of the State in East Asia and other regions of the developing world is that East Asia has been concerned not only with the strengthening and development of the market. For example, in contrast to the macroeconomic distortions frequently prevailing elsewhere in the world, East Asian countries have consistently succeeded in sustaining stable currencies and positive real interest rates, in actively promoting exports and in maintaining a low level of inflation.

More importantly, East Asian countries succeeded in targeting a strategic set of economic activities, the development of which propelled their economies to a higher level. They specialized in activities based on their existing comparative advantage, while developing a capacity to upgrade their international competitiveness. By doing so, they were able to move from specialization in labour-intensive activities to specialization in technology-intensive activities over a relatively short period of time—typically less than one generation.

In the countries of East Asia, government policies have played a major role in the process of capital accumulation by pushing profits well beyond those that could have been attained under free market conditions.[2] Policies were designed and implemented to promote the investment-profits nexus, whereby the dynamic interaction created between profits and investment made profits simultaneously an incentive for investment, a source of investment and a result of investment. Higher investment, in turn, raised profits by enhancing rates of capital utilization and improving the pace of productivity. Thus, incentives to save and invest increased in tandem with the pace of technological progress and the accumulation of profits. In that way, the Asian NIEs were able not only to avoid the pitfalls of non-profit-based investment, practised in the former Soviet Union, but also the phenomenon of profits without investment, practised in parts of Latin America. The quest for profit and the use of profit to accelerate growth in investment is one of the hallmarks of the entrepreneurial State.

Governments in East Asia are often referred to as the ultimate entrepreneurs because of their ability to identify not only sound investment priorities, but also projects built on strategic vision. Those Governments have utilized a wide range of policy instruments to create and sustain a strategic allocation of sectoral resources over a period of time. The objective of such policies has been to create comparative advantages in the light of strategically targeted growth factors. East Asian Governments have often been ready to underwrite the risks associated with investing in new industries during an initial learning phase. The State has thus deliberately reduced investment risks by adopting a policy whereby the Government shared the risks associated with potentially high-return projects.

By applying such policies, the State has changed relative prices to create profitable investment opportunities.[3] To promote productivity, however, the distribution of scarce resources has been linked to an incentive system that is performance-related, with the performance of firms usually being measured by their contribution to the growth of exports. This has not only promoted industrialization, and enabled the economy to catch up more quickly with more advanced industrialized economies, but it has also exposed the firms in question to the free competition of international markets.

Government as manager

While the States of East Asia have proved to be successful entrepreneurs, not all States have the resources required to play such a role. A crucial factor governing State intervention is the capacity of the State to support and influence the processes of industrial development. Policy measures are not the only factors that determine success or failure. In many cases, the outcome and effectiveness of policies depend on the manner and the context in which they were implemented. The environment in which an economic policy is implemented varies enormously from country to country as far as human capital, technological capabilities, the operation of market institutions, the structure of civil and political institutions and the relationship between government and business are concerned. A realistic policy is one that can be implemented smoothly within its own specific macroeconomic environment.

The fact that very few economic policies can be applied in all conditions and in all circumstances should also be taken into account. Policies should be designed in the light of conditions prevailing at the time. In that respect, the high degree of flexibility and adaptability shown by policy makers in the more successful Asian countries is illuminating. Many countries of East and South-East Asia have switched efficiently from a policy of liberalization to reinstating substantial controls in line with changing circumstances and conditions.[4] The experiences of those countries confirm that the appropriateness of intervention depends critically on the capacity of the Government to implement policies successfully. Measures to strengthen public administration should thus be one of the highest priorities in any programme of policy reform.

Priority should be given to the building of institutional and social capacity so that economic policies can be implemented effectively. Weaknesses in capacity may often bring about the implementation of ineffective policies, a situation which always causes more difficulties, more complications and more expense than problems at the policy design stage. Such a situation results from attempts to implement economic policies amid problems such as political uncertainty, lack of information and conflicts with existing vested interests. Effective implementation, on the other hand, is the result of several factors, in particular the following: government polices backed by social consensus; transparency and fairness in the rules of the economic game; the quality of government policies; and responsiveness and accountability of those actions. Such factors show the importance of improving both the quality and the extent of the participation of the private and public sectors in the design and implementation of economic policy.

While it is relatively easy, when designing policy, to follow trends that have already proved successful, it is much more difficult to follow trends when implementing policy because the consequences of putting it into practice cannot be foreseen. State institutions, for example, may have to resolve the dilemma of how to avoid damaging interference from vested interests. Many Latin American countries, for example, have a long history of populism and extreme social inequality, while newly independent African States have come into being after a populist struggle against colonialism. The system of political patronage and the interests of factional groups have often tended to take precedence over economic rationality both in Latin America and in Africa. Incoming regimes have often been quick to distribute State patronage to supporters in the form of cheap credit, government contracts and exclusive trade licences, rather than expanding the national wealth.

As the opposite extreme, East Asian States were more socially autonomous, and their high rates of economic growth provided early legitimacy for State dominance in the elaboration of economic policy. Rapid growth generated surplus resources in the form of higher corporate savings, which eased the introduction of painful adjustment policies, such as the switch from import substitution to export promotion. In Latin America and Africa, on the other hand, the State bureaucracy rarely had sufficient capacity or legitimacy to manage a shift in its policy of industrial investment. That was achieved only after the destabilization of the macroeconomic environment in the 1980s and the severe debt crisis and inflation that ensued.[5] Even then, State intervention came only when demanded by external multilateral agencies (see box 21).

In an economy with even a moderately developed industrial structure, a series of changes in many components of the economy is required if there is to be a major transformation in the economic structure, whether that be a move away from import substitution to export orientation, or from a

Only through capital accumulation and investment can Africa boost its growth

Box 21. Macroeconomic stabilization and industrial development in Africa

Africa has lagged behind in terms of its share both of global MVA and global trade in manufactured goods. While some developing countries in other regions have experienced robust industrial growth and rising exports of manufactured goods, industrialization in Africa, in terms of the contribution of the manufacturing sector to GDP and the level of investment in industry, has generally stagnated or declined.

With the lowest ratio of capital stock to population, Africa has but limited scope for production, and its manufacturing capabilities and degree of diversification are similarly restricted. Only through capital accumulation and investment can Africa boost its capacity for growth, expand its participation in the world economy and reduce its vulnerability to external shocks.

African economies have been undergoing a radical transformation linked to adjustment measures undertaken by African Governments, with significant changes in policy, institutional parameters and resource allocation. The process of change has had a major impact on the conditions governing product markets, domestic factor markets, credit allocation and capital flows, giving rise to various crucial questions that demand attention, including the following:

(a) To what extent have the changes led to improved efficiency?

(b) What responses have the policy changes evoked from the supply side?

(c) What have been the implications for the sectoral allocation of resources and the diversification of manufacturing?

In addition to measures designed to stabilize the macroeconomic environment, several countries have adopted policies for promoting liberalization, including the restructuring of parastatals, privatization, reforms of the civil service, dismantling of State marketing boards and liberalization of the financial sector. Countries differ in the degree of success achieved in implementing those measures, delays having been experienced in connection with privatization and reform of the civil service. In trade policy, several countries have removed quantitative restrictions and reduced the level of and variation in tariffs.

In most instances, the response from the supply side has been weak, thus demonstrating that constraints on African production are also related to other factors. In the manufacturing sector, the initial result of the changes introduced has been a contraction in MVA. Import competition, the increased cost of borrowing and reduced domestic demand have led to the closure of firms and loss of manufacturing capacity.

The MVA share of GDP declined in most African countries during the period 1980-1994. The higher GDP growth recorded in 1995 and 1996 was mainly due to improved commodity prices, but it has not yet made an impact on the manufacturing sector in most countries of the region. Stabilization packages have been introduced on the assumption that allocative inefficiencies constrain output growth, but that assumption is not sustained by the evidence, at least as far as the manufacturing sector is concerned. In order to accelerate the pace of industrialization in Africa, there is a need for proactive industrial policies designed to stimulate investment and for an incentive system capable of generating and rewarding entrepreneurial talent. Such a need is clearly recognized in the programmes undertaken within the framework of the Alliance for Africa's Industrialization sponsored by UNIDO.

Source: African Development Bank, 1996.

predominantly State-owned industry to privatized industry. Changes are likely to be more effective where they are part of a coherent strategic vision. One of the major features of the fast-growing States of East Asia, compared with other regions of the developing world, at least during the 1960s and 1970s, was the type of relationship that existed between government and business. Officials charged with implementing policy not only enjoyed a degree of autonomy but were also insulated from interest-group politics, a very different state of affairs from that prevailing in much of Africa and Latin America.* Semi-autonomous institutions within Government in the Republic of Korea and Taiwan Province of

*Chalmers Johnson, *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925-1975 and Late Industrialization* (Stanford, California, Stanford University Press, 1982). Johnson drew particular attention to the autonomy granted to officials in Japan. The analysis is extended to the Republic of Korea and Taiwan Province of China in Chalmers Johnson, "Political institutions and economic development: the business-government relationship in Japan, South Korea and Taiwan" in *The Political Economy of the New Asian Industrialism*, Fred Deyo, ed. (Ithaca, New York, Cornell University Press, 1987).

China, created to coordinate and regulate the developing economic structure, have also helped to keep the implementation of policy focused on growth.

Credible policies

Good policy must be both feasible and credible. If a policy is credible it will be easier to implement. If a policy lacks credibility, especially in economies in transition, the confidence of investors will be undermined. Investors, before making firm commitments, must believe that policies will be implemented effectively and that Governments will abide by their policies. Some aspects of policy reform programmes, therefore, may need to be significantly reassessed, particularly in relation to their pace, sequence and timing. Although the maintenance of macroeconomic stability has long been recognized as important for investment and growth, there is mounting evidence to suggest that such a principle is not yet firmly entrenched in many countries with economies in transition. In Latin America and sub-Saharan Africa, for example, economies undergoing structural adjustments have experienced persistent macroeconomic instability, because of the frequent and sizeable external shocks[6, 7] to the economy that have made it so difficult to put the budget of the public sector on a sound footing.

Increasing instability in the macroeconomic environment and in socio-political conditions is evident in a large number of countries. When measures of stabilization and adjustment are sudden and drastic, there may often be a significant social backlash and even severe economic consequences, at least in the short term. When introduced within proper preparatory measures, liberalization policies, applied in strong doses and in the wrong sequence, have often destabilized economic conditions, and have sometimes proved unsustainable in the medium term. The immediate effects of adjustments that are appropriately sequenced and introduced gradually may be modest. Their objectives however are more realistic and more attainable, as such reform measures avoid the dramatic fluctuations in income and asset distribution that can precipitate political and social unrest. If policy uncertainties are reduced, and the Government also has credibility, the result will be a credible and predictable set of microeconomic incentives that can be expected to last into the near future and thus attract private investors.

Policy options: towards investment-led industrial development

A defined government policy in the economic sphere is important because it establishes the framework within which firms function. At the same time, in an increasingly competitive and globalized world economy, firms must be free to adjust flexibly and efficiently to take advantage of new opportunities. In that context, there are several areas of policy where governments in developing countries and economies in transition can help to shape and sustain an investment climate that is conducive to growth.

Macroeconomic and industry-specific policies

Macroeconomic policies. If investment and savings are to be stimulated, the macroeconomic policy of the Government must encourage growth. In particular, reductions in public investment must be avoided, and incentives both to invest and to save must be built into fiscal policies. The sustainable growth of investment also depends on achieving low domestic inflation and stabilizing real exchange rates without imposing a credit squeeze on the public or private sector.

While globalization offers limited choices as far as macroeconomic policy is concerned, there is still scope for channelling funds into activities with a high social rate of return and with the potential to increase productivity, such as subsidizing industrial research and development and financing the development of infrastructure, including the provision of temporary protection for such activities. Macroeconomic policy must be concerned with holding down the price of investment goods, for failure to do so would make it difficult to convert financial capital into physical capital, with important implications for the policy on interest rates. As happened in Argentina, Brazil, Paraguay and Uruguay during the late 1970s and early 1980s, the sudden and nearly complete deregulation of financial markets could have disastrous consequences for the industrial sector. Sustainable macroeconomic policies of expansion are also desirable, since growth in demand has a critical role in stimulating investment. Demand likewise generates domestic savings, as much by raising hopes about the state of the economy as by encouraging income growth.

The aim of macroeconomic policy must be to ensure that the level of output achieved by the economy is commensurate with its potential. Therefore, an increase in capacity utilization becomes a central concern because of the growth in revenue and private savings that such an increase would normally entail. Stimulating output and enhancing the capacity for production involves increasing the level of both foreign exchange holdings and national savings and building up the capacity for deficit financing. Wage-led growth, which is constrained by the existence of surplus labour in a typical developing

country, can be a means of stimulating output if the current level is significantly below capacity. In such cases, the achievement of productivity gains in the form of higher levels of output usually requires expanding exports, as the East Asian experience has shown.

Technological development. In the area of technological development, macroeconomic policies can help to attract investment in building up the technological capacity of companies. Policies must be designed to reduce supply-side constraints. Making technological information quickly and cheaply available and facilitating the development of managerial and organizational skills in absorbing new technologies is of considerable importance. Of even greater importance are efforts to upgrade national technological capabilities. At the country level, capabilities can be grouped in the following three strongly interlinked categories: physical investment, human capital and technological effort. If physical capital is accumulated without the skills or technology needed to operate it efficiently, it will not develop adequately; or if formal skills are created but not combined with technological effort, there will be no substantial increase in efficiency. Physical investment is a basic requirement, since, without plant and equipment, industry could not exist, but it is the efficiency with which the capital is utilized that is crucial.

In the 1970s and 1980s, it was common for Governments of developing countries to pass complex laws and regulations to control the terms under which technology transfers took place. While the screening of contractual agreements may have led to improved licensing conditions and prevented the abuse of royalty fees as a transfer pricing mechanism, such attempts at control ignored the dynamics of investor strategies. Furthermore, the policies applied rarely took into account the capacity of the workforce to assimilate new technology. At present, the emphasis of policy has become more realistic, the focus being on the effective transfer of technology through the development of highly trained manpower and advanced infrastructure with the capacity to absorb and use new technology, those assets being made available to investors, both local and foreign. The key policy issue is to ensure that technology is used as efficiently as possible, rather than controlling the flow of technology transfer. Clearly the absorption capacity of different economies varies considerably; policies must be based on a realistic assessment of that capacity and of how it can be developed at least cost.

In general terms, policy instruments that are designed to encourage technology transfer do so by creating an attractive investment environment, for which the following three essential elements are required:

(a) Educational and training institutions for developing a local workforce with the appropriate professional and technical skills;

(b) A general business environment that rewards risk-taking and innovation, including supportive financial institutions, regulatory procedures for testing new products and manufacturing facilities and strong linkages between universities and enterprises;

(c) A legal and regulatory infrastructure that protects intellectual property rights.

Government initiatives such as the provision of factory and laboratory infrastructure before start-up and the creation of specialized agencies to foster linkages between firms and educational and scientific institutions can be very successful, provided adequate resources are available. For example, during the 1970s and 1980s, the former Scottish Development Agency conducted very successful promotion campaigns in the United States and Japan, coupled with generous financial incentives, to attract investment by foreign electronics companies. Malaysia, Republic of Korea and Singapore have established science parks to attract advanced research and production facilities by providing links with public research centres as well as fostering linkages between local firms and foreign affiliates. Since not all countries have the necessary resources, government initiatives must be well focused and their feasibility carefully studied. A regional initiative based on the pooling of scarce resources could make a significant impact. The Bolivar Programme for Industrial Technological Integration, Innovation and Industrial Competitiveness, for example, is financed by the Inter-American Development Bank.

Development of human capital. High rates of growth and investment are dependent on the efficiency with which capital is deployed. As the World Bank notes with respect to the high-performing Asian economies, "between 60 and 90 per cent of their output growth derives from accumulation of physical and human capital. Productivity change has been higher than in other developing economies and is important to the East Asian success story. But it is not the dominant factor".[8] The key factor has been the efficient combination of human and physical capital that drives capital accumulation and growth. Foreign investors possess specific skills in developing that combination under the appropriate initial conditions, including the existence, in particular, of a local workforce with pre-employment education matching the needs of foreign investors.

The development of human technological capabilities requires investment both in general education, which is especially important at early levels of industrialization and for least developed countries, and in technical training, including on-the-job

training. However, rapid rates of technological change and increases in complexity and specialization mean that public education can only aim at meeting the general training needs of manufacturing industry. More specialized on-the-job training must be promoted by enterprises on the basis of a more flexible division of labour between the public and the private sector, including the opening-up of training facilities in the private sector to local enterprises, so that state-of-the-art skills can be passed on to local suppliers and consumers. By building linkages with local firms, foreign investors will be able to improve the efficiency of the local supply network, while the domestic economy will benefit from the assimilation of both modern management practices and technology. An increase in technological capabilities requires the use of financial resources that can be generated through the development of an efficient system of financial intermediation.

Financial policies

Impact of financial liberalization. During the 1980s and 1990s, Governments of developing countries have come under strong economic and political pressure to liberalize financial markets. International financial institutions have been especially active in seeking to reduce the role of government in credit allocation and to open financial markets to greater foreign participation. The agreements reached in 1994 in the Uruguay Round of multilateral trade negotiations in GATT envisaged the phasing-out of all trade-related investment measures by 2000 in developing countries.* The internationalization of financial markets in some developing countries has led to a spectacular increase in foreign portfolio investment, although that trend has not been without its attendant problems, most notably in Mexico during the period 1994-1995. In most other countries, progress has been gradual, halting and at times chaotic or inappropriate. Chile was one of the first countries to undertake sweeping experiments in liberalization, but it was nearly disastrous to initiate such a process before the Chilean economic miracle of the 1980s (see box 22).

Financial liberalization in least developed countries has usually not had a positive impact on the market for long-term loans. Interest rates have gone up without a noticeable increase in domestic savings or in the efficiency of investment allocation. The imposition of prudential regulations on the financial sector often makes long-term lending an unattractive option for commercial banks. Development finance institutions in many countries, especially poorer African countries, have all but collapsed under the weight of portfolios containing a large share of bad debts. The auctioning of government debt has driven up interest rates and reduced the amount of finance available for corporate investment.

Even in the apparently successful Asian countries, the results of financial liberalization have been disappointing. It has been argued that financial reform,

*Least developed countries have an additional two years to phase out those restrictions.

Initial stage of financial liberalization in Chile resulted in a near disaster

Box 22. Financial liberalization in Chile

The process of financial liberalization is fraught with dangers. Perhaps the best-known example of a liberalization programme that nearly resulted in economic disaster was the reform programme introduced in Chile during the period 1974-1975. The reformers failed to take steps to control the potential increase in the concentration of both industry and finance and, in particular, to prevent the formation of large conglomerates with integrated financial and manufacturing activities. Instead, the privatization of the banking sector decreed by the Government in 1975 created an opportunity for the emergence of a new set of conglomerates spanning both manufacturing and the financial services sector. When interest rates were liberalized, manufacturing concerns brought pressure to bear on affiliated banks to obtain credit, which was then used to speculate on real estate and stock prices. Portfolios of bank loans became increasingly concentrated in related companies. Transactions on capital accounts were also progressively liberalized under the government programme. When speculative investments began to fail, non-performing loans built up very rapidly, and the whole banking system verged on collapse. The Government then had to step in during the crisis of 1982 to renationalize companies and refinance insolvent banks. Unusually, and in contrast to conditions in many poorer developing countries, the Chilean authorities had the regulatory capacity to prevent the banking crisis, but chose not to do so primarily for radical, free-market ideological reasons. Despite the debt crisis and the short-term introduction of controls on external financial transactions, the authorities were subsequently able to stimulate a more broadly based export-led boom.

whether comprehensive and sweeping or measured and gradual, does not seem to have made any significant difference to savings and investment in the liberalized economies.[9] Liberalization, in the form of increased competitiveness of the banking system, has delivered no discernible benefits, neither through the availability of long-term finance and credit, nor through the reduction of intermediation costs. Furthermore, the quality of bank portfolios has uniformly deteriorated and the proportion of non-performing loans has risen because of high and volatile interest rates in relation to real returns on capital.

Indeed, it has become increasingly clear that financial liberalization will not be sufficient on its own to promote development of the financial sector and economic growth.[10] Efficient markets and financial institutions are needed, and policies to strengthen institutions and markets must be an integral part of the development of the financial sector. Moreover, much recent literature on financial systems questions the wisdom of liberalization itself. Deregulation of the financial system can be successful only in countries that have achieved a high degree of fiscal discipline, low inflation and macroeconomic stability.[11] In the case of Latin American countries, financial liberalization in the face of a poor fiscal position continues to be a major factor in accelerating inflation and instability.[12]

A consensus has emerged that macroeconomic stability and adequate financial supervision and regulation is necessary for successful liberalization.[13] In addition, liberalization programmes need realistic timetables, within which financial reform can be designed. Recent literature points to the need for careful planning of the sequence and timing of financial liberalization, as well as to the importance of its coordination with macroeconomic conditions and other stabilization and adjustment policies. Thus, it can be argued that financial reforms should encompass wide-ranging measures of institution-building in both financial and non-financial sectors, before embarking upon, or in parallel to, a shift from a policy of restriction to one of liberalization of the financial market.

Areas for government intervention. Policy intervention in financial markets remains important because liberalization measures have depressed domestic savings and failed to stimulate private investment. The key issue regarding intervention concerns the proper role of government in influencing the allocation of funds for investment. In the liberalization process, credits directed to priority projects have been drastically reduced. There are two reasons, however, one theoretical and the other empirical, why it may be inappropriate to dismiss the case for directed credit completely. On theoretical grounds, it has been pointed out that even in a liberalized financial market, banks or other financial institutions will still ration funds administratively among potential borrowers, rather than simply raise interest rates until supply and demand for credit are equal. Because of a lack of information, banks cannot know the true probability of loans being repaid; they therefore form judgements based on the security and creditworthiness of borrowers and allocate funds accordingly. Thus, there is the possibility that projects with high risks, but potentially high economic returns, will not be financed.[14] If banks are unwilling to fund relatively risky but high-return projects, then the theoretical case for intervention to direct credit to priority areas should be reconsidered.

There is strong evidence that directed credit has worked effectively in the East Asian context, primarily in Japan, Republic of Korea and Taiwan Province of China, where Governments used the financial system to restructure the manufacturing sector in favour of technologically dynamic, export-oriented activities.[8] In those economies, Governments helped to create financial markets and institutions, closely regulated them and directed credit to some industries and away from others. Scarce credits were often modestly subsidized and awarded for good export performance, for example, through fiscal incentives.[15] The establishment of financial regulations and the subsidizing of credit proved powerful stimuli for investment in manufacturing industry. Those economies achieved strong financial growth, indicating a significant real flow of domestic funds as loans for new investment. One of the consequences was that the cost of investment goods to manufacturing industry was low compared with the cost in other developing countries. Some of the distinctive features of directed credit in those economies suggest how such a system should be applied.

Another important government initiative in financial policy consists in supporting the development of the banking system and of financial intermediation, thus stimulating growth of the capital market. Successful bond and stock markets depend on a well-established banking system. The initial concern must be with the integration of formal and informal financial sectors, as well as with the achievement of a significant increase in the size of the average bank in order for large economies of scale to exist in the banking industry. The development and expansion of the banking system should not, however, be at the cost of the regulatory framework. The accumulation of uncollectible debt in several African and Latin American countries has been the principle cause of the collapse of long-term lending institutions. Financial regulations can be effective only if they are supported by an adequate legal framework for ensuring contract compliance and recovery.

A closer relationship between financiers and industrialists can sometimes be an efficient means of

self-regulation of the system of industrial financing. Such a relationship can take the form of universal banking, developed in Belgium and Germany, or the main banking system developed in Japan (see box 23). The essence of both systems is the presence of financiers on the boards of industrial companies and their participation in corporate decision-making. Such arrangements have often proved to offer a more appropriate institutional framework for industrial financing than the "arms-length" Anglo-Saxon model.[16]

While the banking sector has been facing difficulties, capital markets have experienced rapid growth in several developing countries in Africa, Asia and Latin America. For instance, there has been very rapid growth of portfolio investment in some countries, and the development of a sound public policy with respect to growth of capital markets is clearly required.[17] Meanwhile, inefficiency is typically high in emerging markets, and auditing disclosure requirements have in some cases been less than satisfactory.[18] Despite such inefficiencies, capital controls are being dismantled, making the management policies applied to reserves and interest rates more difficult. Liberalization is depressing domestic savings and increasing investment volatility in developing countries.[19] Improving the efficiency of capital markets should, therefore, be a key concern for liberalizing Governments. Measures for increasing efficiency in the operation of the capital market include the following:

(a) Increasing the information available to the corporate sector;

(b) Developing a system of incentives for increasing market liquidity, especially for shares in small companies;

(c) Improving the efficiency of settlements and registration;

(d) Improving the enforcement capacity of regulatory agencies;

(e) Protection of the interests of shareholders;

(f) Ensuring harmony and consistency of taxation policies relevant to the capital market.

While the development of capital markets is advantageous, it does not ensure that costs associated with financial liberalization can be fully offset by improving the efficiency of money and capital markets. The case for restricting and directing foreign capital flows to desired sectors and firms has been borne out by the cautious policy of the Republic of Korea towards foreign investment. This has been an important factor in enabling it to avoid investment volatility and foreign exchange crises.

Another important disjunction in financial systems, especially in developing countries, is the lack of integration between formal and informal markets. The vast majority of microenterprises remain credit-starved and fail to graduate to the level of medium-scale enterprises, since they have no access to capital markets or to financial institutions. Their development into formal, middle-sized status is critically constrained by the absence of institutional finance. Promoting the integration of the formal and informal financial sector and encouraging competitiveness among institutions operating at the lower end of financial markets should be a major aim of government policy in sub-Saharan Africa. Equally important are measures to stimulate savings at the microenterprise level and the absorption of those savings into productive manufacturing investment. A critical weakness of micro- credit schemes such as that of the Grameen Bank discussed in chapter 4 is their overdependence on subsidies. Policies can be developed to phase out subsidies and introduce a fully commercialized, self-reliant credit programme.[20]

State support of the main banking system is extensive in Japan

Box 23. Main banking system of Japan

The main banking system played a role of crucial importance to investment growth in Japan by creating mechanisms for maturity transformation and mobilization of long-term finance. State support to the main banking system was extensive, and the State closely monitored its performance. Public institutions offered technical support and information. The sharing of risk between banks, firms and public institutions was also common, playing a vital part in capital accumulation and the growth of long-term investment.[a] The growth of systems of universal banking and main banking can be particularly effective in less developed countries, such as those in sub-Saharan Africa, characterized by a mismatch between the liquidity position of banks and maturity structures required by investors. In such a situation, banks have excess liquidity, but the institutional structure for lending on a long-term basis has collapsed. In the absence of a functional inter-bank market, the risk associated with long-term loans becomes excessive.

[a]C. Mayer, "New issues in corporate finance", *European Economic Review*, vol. 32 (1988), pp. 1167-1189.

Foreign investment policies

Governments also have an important role to play in stimulating foreign investment inflows and in utilizing such investment efficiently. Political stability, a macroeconomic environment conducive to development of the private sector and a potential for economic growth are vital for attracting stable, long-term foreign investment. While effective policies in the host country are a necessary precondition for attracting foreign capital inflows, such policies may not be sufficient. The most important determinants of foreign investment appear to be individual investors, who are largely beyond the control of the host Government. Nevertheless, an improved macroeconomic framework and, consequently, the increased creditworthiness of the host country have an important influence on the decisions of investors regarding the location and size of their overseas investment.

Foreign investment comes in many forms and the needs of investors vary significantly. The priorities of a transnational corporation establishing a new manufacturing facility on a greenfield site are likely to be substantially different from those of an investor taking over an existing venture. If a local partner in a joint venture is involved, the need for assistance in negotiating with the State bureaucracy will be substantially reduced. Establishing a full-scale manufacturing plant is more complex than establishing a plant that assembles products using imported components.

While, on average, the overseas subsidiaries of transnational corporations often outperform local rivals, national agencies for the promotion of foreign investment should still scrutinize all proposals. At any given time, only a limited number of foreign investments are likely to offer good products and technology promoted by competent managers and entrepreneurs. Since the wider spillover benefits to be obtained through linkages with local suppliers, distributors and customers take time to materialize, it is important to attract investors with a strong home market position and a cash flow sufficient to support the new investment. Likewise, any benefits from improvements in the efficiency of competitor domestic firms only emerge over time. Evidence of a well-established international customer base, experience in undertaking new overseas investment and a focused management approach to international operations should all be taken into consideration in negotiating with foreign investors. Government authorities should also seek independent evidence as to the financial status and integrity of foreign investors.

Perhaps of greatest concern to policy makers in developing countries is the creation of a business environment in which the positive effects of technology transfer and the benefits of other intangibles such as modern management systems—including marketing, accounting and quality assurance systems—are efficiently transferred. Without those inputs and the resulting productivity growth, opportunities to invest in the domestic market will be reduced, with a concomitant outflow of dividends. Moreover, without a minimum threshold of human capital and efficient infrastructure, together with an economic policy conducive to growth and a regulatory framework that makes the cost of doing business internationally competitive, FDI is unlikely to be beneficial to the domestic economy.*

Host countries can introduce specific policy measures to foster FDI inflows and thus to strengthen their competitiveness. Internationalization of corporate investment, accompanied by rapid technological change, demands substantial investment by the host country in economic infrastructure, especially transport and communications. Host countries should encourage training in order to ensure a sufficient supply of qualified workers, for which there is a growing demand among companies operating internationally. In that context, a flexible labour market, based on an appropriate policy concerning the employment of expatriates, is important. Provision should also be made for the establishment of an infrastructure linking the public and the private sector in research and education, thus making the country attractive for knowledge-intensive, high-value-added industries.

Besides the macroeconomic environment, legal, foreign exchange, regulatory and institutional issues are crucial factors affecting foreign capital inflows, particularly FDI. As a general rule, FDI is aided by a legal system that provides enterprises with sufficient freedom to operate and develop activities, subject to certain well-defined and transparent regulations. The system should ensure equal treatment for foreign investors and provide for free transfer of profits and dividends as well as free repatriation of capital. Protection against expropriation is another major concern of foreign investors. They should be able to expect that expropriation would occur only in accordance with clearly defined legal procedures, without discrimination and against payment of appropriate compensation reflecting market values.

Experience shows that liberalization of the financial sector and a foreign exchange regime that affords ready access to foreign exchange tend to promote FDI inflows. FDI can also be stimulated by policy measures aimed at reducing institutional

*The composition of FDI flows to developing countries is strongly biased towards manufacturing. That is due partly to the comparative advantage of manufacturing, but it also reflects the considerable levels of protection in the service sector. Barriers remain particularly strong in banking and financial services, notably in many rapidly industrializing East Asian economies likely to benefit most from deregulated and competitive financial markets.

problems ranging from overbureaucratic operational procedures to the presence of too many uncoordinated regulatory institutions. On the other hand, special FDI incentives, such as tax concessions, investment allowances and subsidized credits have often proved to be unnecessary for attracting FDI, since they may make it more difficult for the host country to achieve other development objectives.[21]

Other policy measures that Governments of host countries can take to stimulate FDI inflow include treaties for bilateral investment protection and avoidance of double taxation, as well as improvement of programmes of investment promotion for the country as a whole. Investment incentives must also be carefully targeted.

If a country or region is to avoid a waste of resources in investment promotion (see box 24), it is essential that the responsible agency should analyse the investment decision-making processes of potential foreign investors and target promotional efforts accordingly. That is most likely to be effective where a firm is already considering making an investment in a particular region of the world.[22] The choice of region is determined by the internal decision-making processes of transnational corporations and their assessment of their strategic objectives. Investors share similar concerns with domestic enterprises and seek similar objectives, including long-term shareholder profits, increased market share, prospects for market growth, freedom to make investment decisions commensurate with business priorities and security in the local community. It is highly unlikely that a country will be able to persuade a transnational corporation to consider making an investment without prior strategic analysis. Therefore, national investment promotion agencies need to carry out careful research to identify what kinds of firms are likely candidates and what types of investment they will bring. In many cases, especially in the economies in transition, the objective may be to encourage foreign companies to participate as strategic investors in the privatization of former State-owned enterprises.

It must be stressed that a heavy dependence on foreign capital inflows entails service costs. Liberalization of the financial market at the global level means that when local banks choose to borrow heavily abroad to lend in the domestic market they are directly exposed both to foreign exchange risks and to the commercial risks associated with lending in the domestic market. If it is in a single direction, the cumulative risk may be considerable, so that a sudden shift in the domestic economy can produce potentially catastrophic consequences, as occurred in Chile in 1982. While access to foreign markets gives Governments, banks and private enterprises a greater range of instruments for investment and risk management, it also opens up potentially larger systemic risks.

It is easy enough to advise countries and individual investors, that as they become more closely integrated into global capital markets, they must learn to manage international market risks. Unfortunately, learning the hard way about the relationship between risk and investment yield can be a costly exercise if a substantial portion of the national assets of a country are involved. Governments have a responsibility to oversee capital flows where financial markets are still maturing, in order to help manage the exposure of a country to external markets and forestall the threat of systemic crises.[23]

Development of market-supporting infrastructure

Of crucial importance both for attracting foreign capital inflows and for stimulating domestic savings and investment is the development of market infrastructure. Many problems facing developing

Promoting a favourable image is an important step in investment promotion activities

Box 24. Three main types of investment promotion activities

Investment promotion activities can be divided into the following three main types:

(a) Promoting the image of a country within the investment community;

(b) Attracting investment directly;

(c) Providing supporting services to prospective and current investors.

Developing a promotion strategy for foreign investment must take into account the decision-making processes of prospective investors. First, an investor develops a generally favourable image of a particular country or region, often influenced by the activities of competitor firms. Few companies are first movers. Then, the investor begins actively to appraise the investment and, finally, is assisted by the host Government in bringing the investment to fruition.

countries and economies in transition in their attempts to attract private investment stem from weaknesses inherent in market-supporting infrastructure. For example, the inadequacy of institutions that support the financial system, such as the legal infrastructure, affects the costs and risks associated with the enforcement of contracts. In turn, the ease with which contracts can be enforced influences both the willingness of lenders to enter into financial agreements and the type of security they are willing to accept. Where the legal system is weak, it is common for formal lenders to insist on a clear title to landed property or other assets for collateral. In addition, the ability of the financial sector to offset the risk of default will be limited by the absence of a well-functioning insurance market and by the absence of markets for the sale of confiscated collateral. Thus, in low-income countries, the need for collateral may exclude many otherwise creditworthy small-scale borrowers, especially where land tenure is not legally explicit.

Problems arising from the lack of economic information are also likely to be very pronounced in low-income countries. If such information is scarce, and information-gathering costly, the information gap between would-be borrowers and potential lenders becomes severe. Paucity of information in developing countries can precipitate market segmentation by increasing the cost of acquiring reliable information on both systemic and non-systemic risks for formal institutions. Informal financial agents are forced to rely on localized and personalized information, which hinders their development into full-scale intermediaries.

Inadequate bank regulation and supervision has propagated financial mismanagement and poor portfolio performance, which may raise the perceived risk for term lending to small enterprises. In such a situation, reforms of the financial sector can influence banks to overcome management weakness and to diversify portfolios, but the response may be slow.

All the above-mentioned factors in combination have given rise to structural bottlenecks impeding the efficient functioning of financial markets in many low-income countries. Inadequate market-support infrastructure has discouraged innovation and perpetuated the internal shortcomings of financial institutions. Even when there is no ceiling on interest rates or excess demand for loans, it may not be viable to lend to certain categories of borrowers, such as microenterprises and small and medium-sized enterprises, if costs and risks exceed those for known, lower-risk clients. In such situations, information about future prospects may be highly uncertain, especially if the economic structure is vulnerable to external shocks. In the absence of credible predictions, reliable information and appropriate financial instruments, perceived risk may be abnormally high for term lending, especially to small-scale borrowers.

Therefore, a fundamental long-term institutional need is to strengthen market-supporting infrastructure. Enhancing the information capital base would reduce the cost of acquiring reliable information on risks for credit assessment. That can be achieved by the following means:

(a) Developing a general economy-wide information network;

(b) Increasing the transparency of public institutions as well as listed companies, at both national and local levels;

(c) Developing agreed accounting and auditing systems and financial markets.

Establishing and strengthening the legal infrastructure is another critical requirement for the efficient functioning of market-based economies. A sound legal infrastructure lowers the costs and risks associated with contract enforcement, thereby reducing the risk perception of lenders and the premium for external finance. That could, in the long run, encourage formal financial institutions to lend to dynamic microenterprises and small and medium-sized enterprises. Such measures would involve, for example, the legalization of property and contract rights as well as the introduction of special commercial laws and enforcement mechanisms. Commercial law should delineate the rights, responsibilities and nature of liability for firms, managers and shareholders. Enforcement institutions such as courts should be autonomous, removed from political influence, empowered to enforce the law and capable of carrying out sanctions.[24]

Finally, recent empirical studies emphasize the strong complementarity between, on the one hand, public investment in basic infrastructure such as ports, roads, telecommunications and human capital and, on the other hand, private investment and output growth (see chapter 1).[25] Stabilization policies requiring a contraction in aggregate demand should not involve deep reductions in public investment, for such reductions would jeopardize the above-mentioned complementarity and impede economic development and the industrialization process.

Conclusion

In an era in which manufacturing resources and capabilities are becoming more dispersed and the power of Governments to influence the locational decisions of enterprises is declining, it is difficult to assign a definitive role to the State in promoting investment in manufacturing. The health of the

financial system is crucial to guaranteeing efficient allocation of available resources. However, liberalizing the financial sector too early can have disastrous consequences. Inadequate banking reforms that leave banks undercapitalized, with poorly managed and weakly performing loan portfolios and staff unable to assess commercial risk, can threaten the stability of the entire financial system. A strong system of banking supervision is essential, as well as the creation of effective institutions to regulate financial markets.

The East Asian experience suggests that if the fundamentals are right and the State plays an entrepreneurial role, the prospects for growth are favourable. In particular, shifting the allocation of domestic resources from consumption to savings and investment ought to be the most important policy objective of Governments that wish to raise standards of living as well as rates of economic growth, productivity and technological innovation. Higher productivity growth and technological innovation will generate more resources for financing industrial restructuring and vocational retraining, thereby increasing political support for economic liberalization.

At the same time, it is of the utmost importance to bear in mind that there is no single optimal policy stance that is applicable to all countries at all levels of development. A simple replication of policies that have worked well in specific conditions in one country or another may not create the same results in others. Each developing country has its own circumstances, experiences, institutions and history, which should be taken into account in designing its macroeconomic and financial systems, its institutional framework and its industrial policy regimes.

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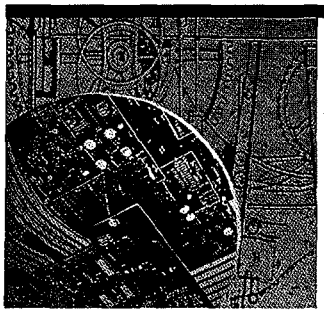


STATISTICAL ANNEX:

world industry development indicators

Technical notes

1. The sources for the country tables contained in the present annex are as follows:

(a) UNIDO consolidated database of industrial statistics;

(b) National accounts statistics from the United Nations Statistics Division (UNSD) (all entries followed by [na]) supplemented by other sources (listed in note 9 below);

(c) Population figures from United Nations demographic statistics and the United Nations *Monthly Bulletin of Statistics*;

(d) Estimates of GDP and MVA by UNIDO, Studies and Research Branch, MVA having been based on national accounts statistics for 28 industrial sectors.

2. All values are in millions of United States dollars at current prices, except where otherwise indicated. Official exchange rates have been applied in general to generate dollar values. For selected countries and periods a correction factor was calculated to compensate for temporary overvaluation of the national currency (Afghanistan, Argentina, Brazil, Chile, Dominican Republic, El Salvador, Egypt, Ghana, Guatemala, Honduras, Iran (Islamic Republic of), Mexico, Nicaragua, Nigeria, Paraguay, Peru, Sierra Leone, Sudan, Syrian Arab Republic, Trinidad and Tobago, Uganda and Uruguay). The correction was made by adapting exchange rates to the reported inflation rates.

3. Exchange rates for Hungary, Poland and Romania are average market (principal) rates as reported by the International Monetary Fund in its *International Financial Statistics*.

4. Figures followed by[c] are in 1990 constant prices.

5. There are three parts to the annex. The first part comprises world maps and graphs which show the regional economic and industrial structure, distribution of the MVA share in GDP, MVA and GDP growth and structural change. The second part consists of full-page reports on 117 countries and areas for which more complete data are available. This is a subset of the sample of 135 countries and areas used to derive the estimates of MVA for 28 industrial sectors. Each page contains graphs on the industrial structure and annual growth rates of GDP and MVA, described in notes 8 to 13 below, as well as graphs of GDP per capita, MVA shares in GDP, the industrial production index and tabular data, described in notes 14 to 23 below.

6. The third part of the annex consists of short tables for each of the remaining countries.

7. Industries are broadly classified into the following four categories based on the three-digit classification of the International Standard Industrial Classification of all Economic Activities (ISIC):

(a) Low-technology industries: ISIC 311-342, ISIC 353-354 and ISIC 361-381;

(b) Medium-technology industries: ISIC 351-352, ISIC 355-356 and ISIC 384;

(c) High-technology industries: ISIC 382-385;

(d) Other manufacturing: ISIC 390.

8. The diagram of industrial structure is based on the value added in 1990 deflated prices. In general, the GDP-deflator is used for the conversion. If no GDP deflator was available, the consumer price deflator has been used. A bar chart shows, unless otherwise stated, the five-year average sectoral share in the total value added of manufacturing, contrasted with a needle plot of the five-year average growth rates of the corresponding sector. The importance of the sector in manufacturing is thus contrasted with its growth performance.

9. GDP and MVA growth rates are mainly based on data supplied by UNSD. However, when no UNSD figure was reported, a figure was taken from one of the following sources:

(a) National statistical institute of the country concerned;

(b) United Nations regional economic commission for the country concerned;

(c) *International Financial Statistics* (Washington, D.C., International Monetary Fund);

(d) *National Accounts, Detailed Tables* (Paris, Organisation for Economic Co-operation and Development), vol. II;

(e) World Outlook and *Quarterly Economic Review* (London, Economist Intelligence Unit);

(f) World Tables (Washington, D.C., World Bank);

(g) Economic Forecast (Amsterdam, North-Holland);

(h) Asian Development Bank;

(i) African Development Bank.

10. Otherwise, the figure is estimated on the basis of statistical analysis and other ad hoc information, including various periodicals and newspapers.

11. Estimates of growth rates for each country were made using:

(a) The long-term trend in GDP;

(b) The cyclical deviations from that trend;

(c) When it proved significant, GDP in another country or a group of other countries.

12. Growth rates of aggregate MVA (from national accounts) were estimated on the basis of regression techniques establishing a relationship between MVA and GDP. Five different types of regression are tested for this purpose. The relationship producing the best *ex post* forecasting figures was finally selected.

13. Estimates of sectoral MVA for each country were based on regression equations containing GDP, aggregate MVA, lagged MVA of the sector concerned and production indices as independent variables. Regressions are performed using deflated sectoral MVA values. Results are then reconverted into current dollar figures. Again, various sources and UNIDO estimates were used to improve the coverage of the data. The estimates are based on the estimated contribution of two components: *(a)* the dependence of the sector on the overall economic situation in the country concerned, expressed in terms of GDP or MVA; and *(b)* the sector-specific time behaviour expressed in terms of a lag structure of the value added of the sector.

14. Two figures are reported for MVA. One is based on the national income accounts definition and the other on the industrial census definition. The main differences are as follows:

(a) Included in the national income accounts figure but not in the industrial census figure is the activity of establishments with less than some specified number of employees, typically 5 or 10, but the number is not fixed for all countries;

(b) In the industrial census, each establishment is considered to be either industrial or non-industrial, and all activities for the establishment are similarly classified, whereas in the national income accounting framework, output is classified as industrial depending on the nature of the product.

15. The industrial census data include the receipts for, and exclude the costs of, non-industrial activities. For further information, see *International Recommendations for Industrial Statistics*, Statistical Papers, Series M, No. 48, Rev. 1 (United Nations publication, Sales No. E.83.XVII.8).

16. The figures under the item "profitability" are defined as follows:

Intermediate input = 100 • (gross output–value added)/gross output

Wages and salaries = 100 • (wages and salaries)/gross output

Operating surplus = 100 • (value added–wages and salaries)/gross output.

17. The items "profitability" and "productivity" are averages across all industrial sectors, except that only those sectors were included for which all the required data (gross output, value added, wages and salaries and employment) were available. Whenever available, the number of persons engaged was used for the calculation, otherwise the number of employees was used.

18. For the calculation of the structural indices, value added figures in 1990 deflated prices were used.

19. The measure for structural change, *S*, is defined by:

$$S = \frac{\sum_i | s_i(t) - s_i(t-5) |}{2}$$

where $s_i(t)$ is the share of the i-th branch in total MVA in the year t. It sums up the absolute values of sectoral changes in the share of total MVA over a five-year period across all sectors and then divides the sum in half.

20. An index *S* of 100 per cent means a complete reversal of the structure, while an index of 50 per cent would mean that exactly half of the industry has relocated in terms of MVA.

21. The item "MVA growth rate per unit of structural change" is the growth rate of real value added for every percentage point of structural change during the five-year periods. It relates MVA growth to structural change.

22. The degree of specialization is defined as follows:

$$h = 100 \cdot \left(1 + \frac{\sum_i s_i \cdot ln s_i}{h_{max}} \right)$$

where s_i is defined as above, $h_{max} = ln$ (number of sectors) and *ln* is the natural logarithm.

23. If the shares of all sectors are equal, the degree of specialization equals 0. If only one sector exists, the value is 100.

24. The indicators used are as follows:

/c in 1990 constant prices

/na value originating from national accounts statistics

italic values estimated by UNIDO, Research and Publications Division, Studies and Research Branch

.. no value available

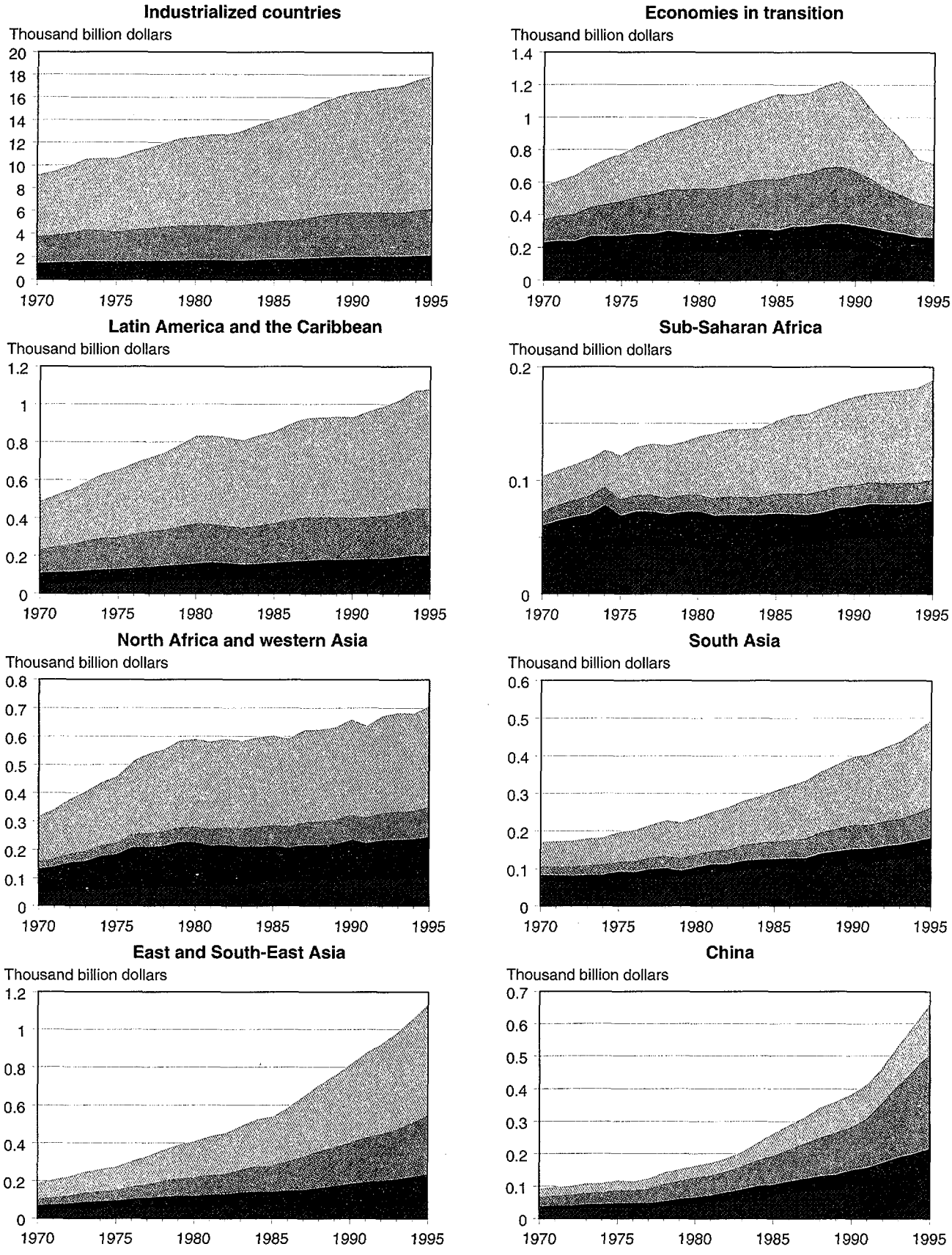
- value is less than half a unit

25. Questions concerning the preparation of data may be directed via E-mail to: gmargreiter@unido.org

Regional classification of countries and territories

[a]The official designation of Zaire was changed to Democratic Republic of the Congo in May 1997.

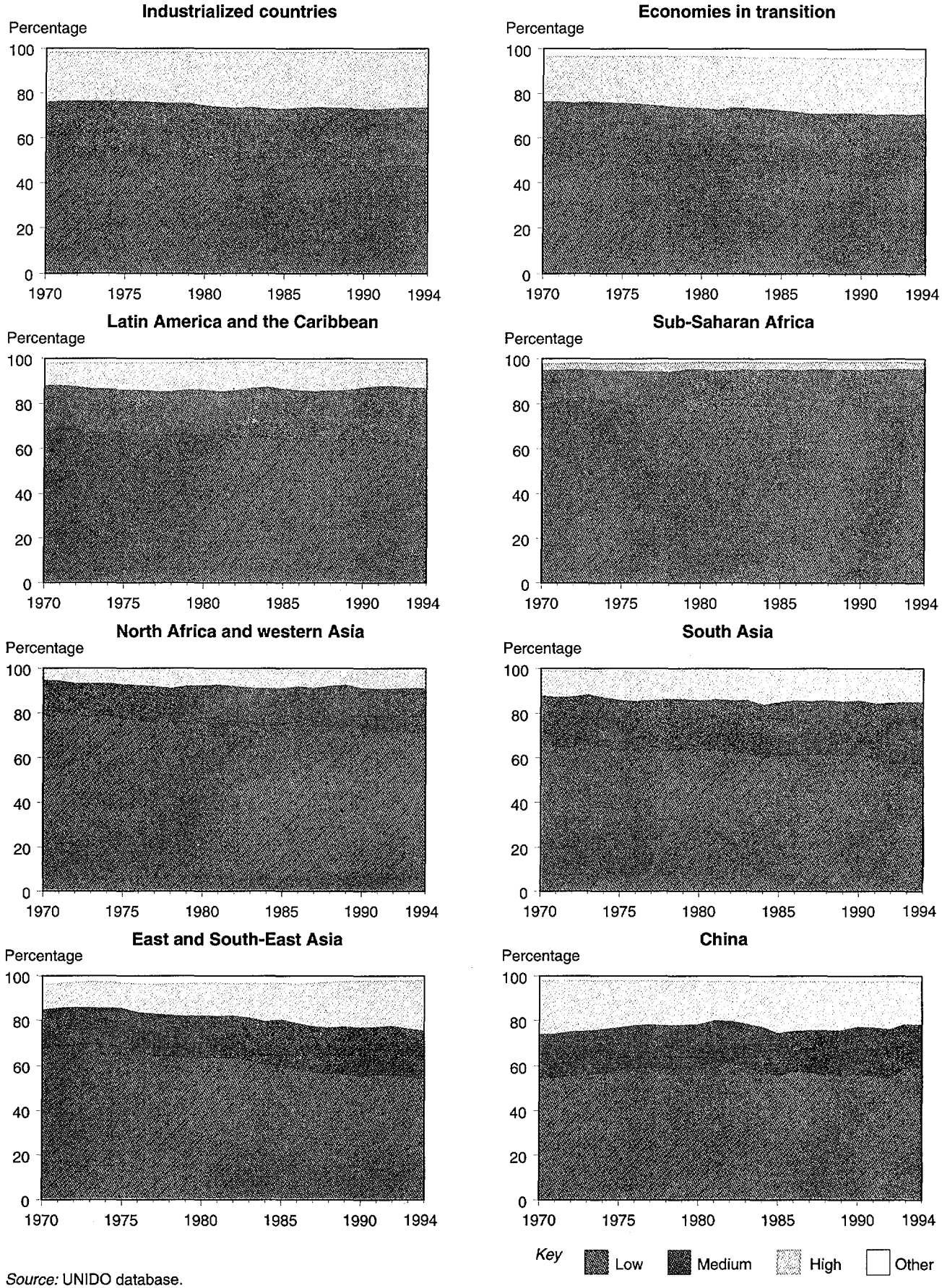
Figure A.1. Economic structure of regions and country groupings, 1970-1995



Source: UNIDO database.

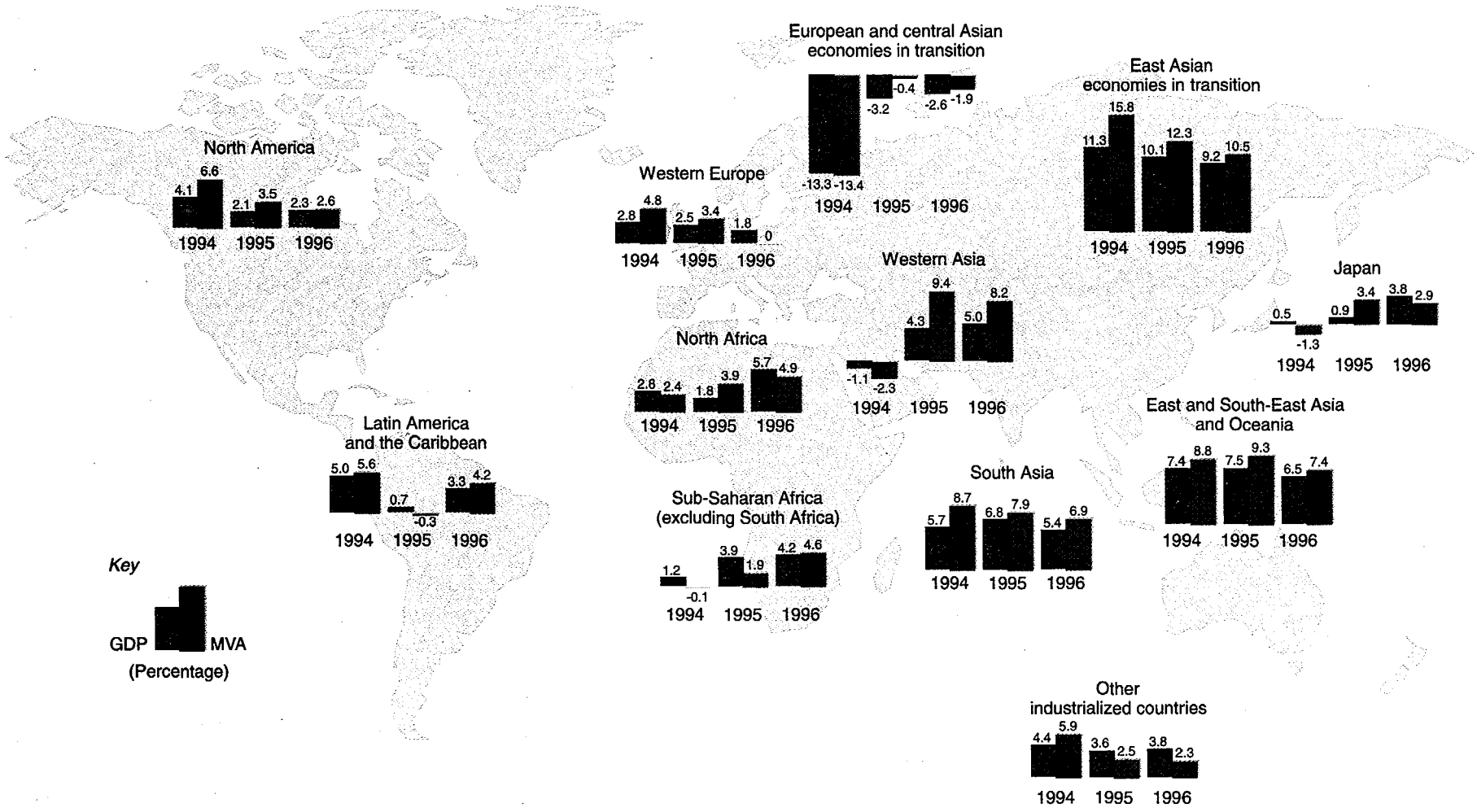
Note: All figures are in constant 1990 US dollars.

Figure A.2. Industry structure of regions and country groupings, based on technological content, 1970-1994



Source: UNIDO database.
Note: See "Technical notes" for classification method.

Figure A.3. Growth rates of GDP and MVA by region, 1994-1996



Source: UNIDO database.

Figure A.4. Average GDP growth rates, by country or territory, 1990-1996

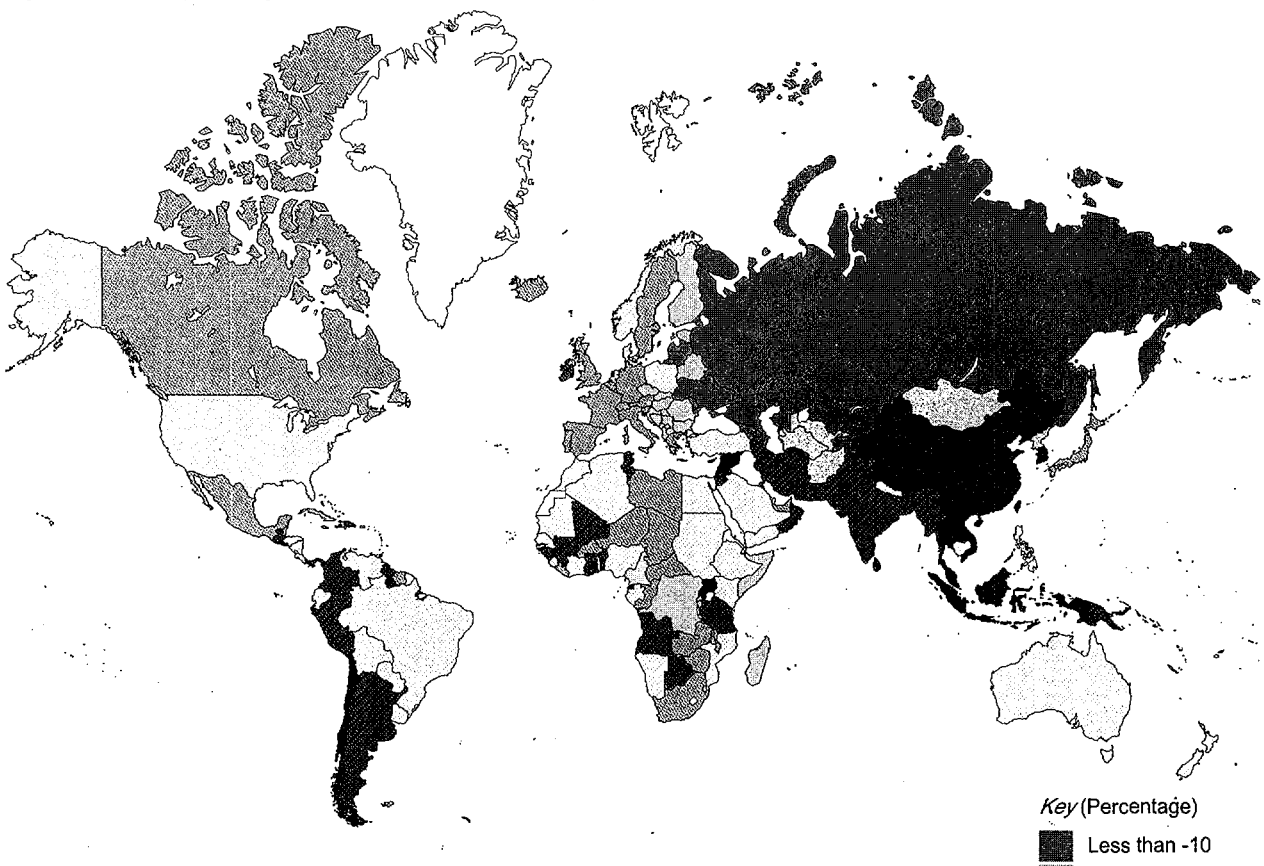
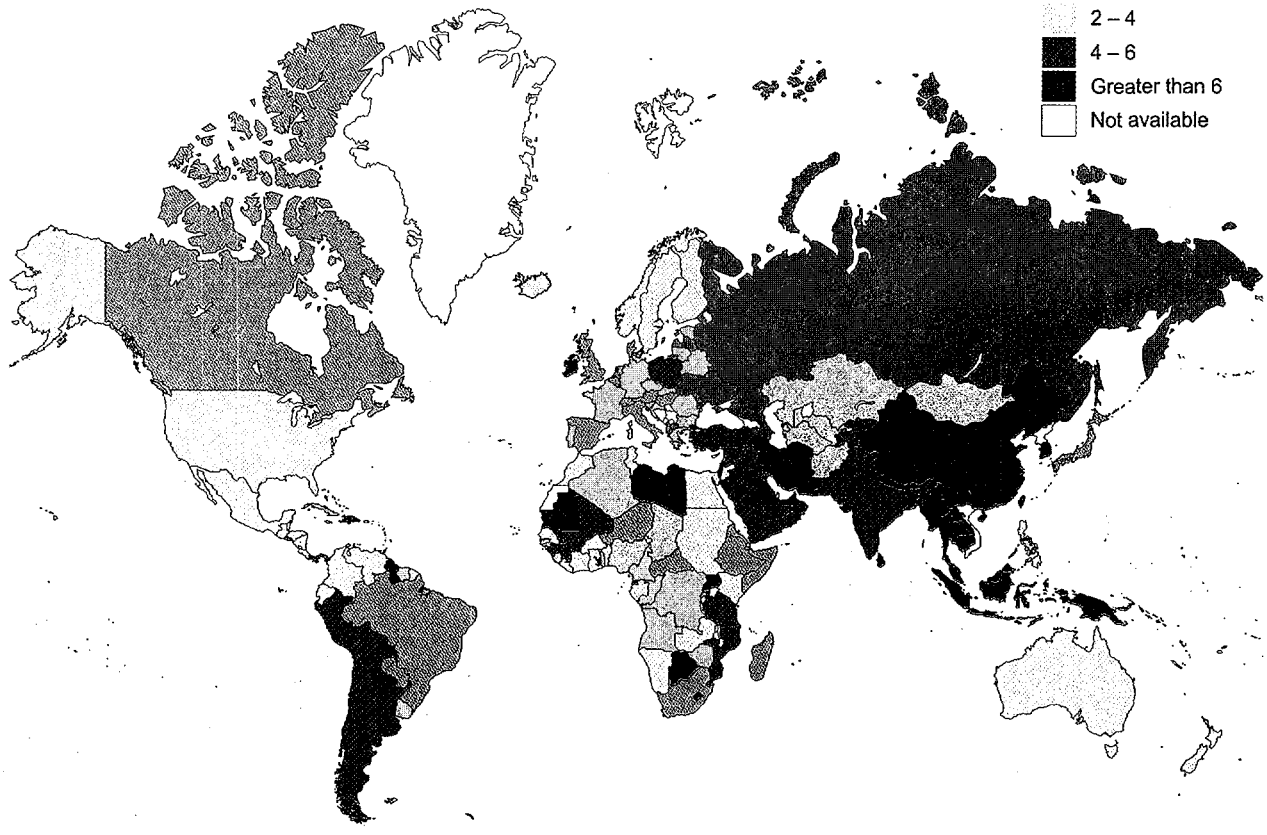


Figure A.5. Average MVA growth rates, by country or territory, 1990-1996



Source: UNIDO database.

Figure A.6. Average MVA share in GDP, by country or territory, 1990-1996

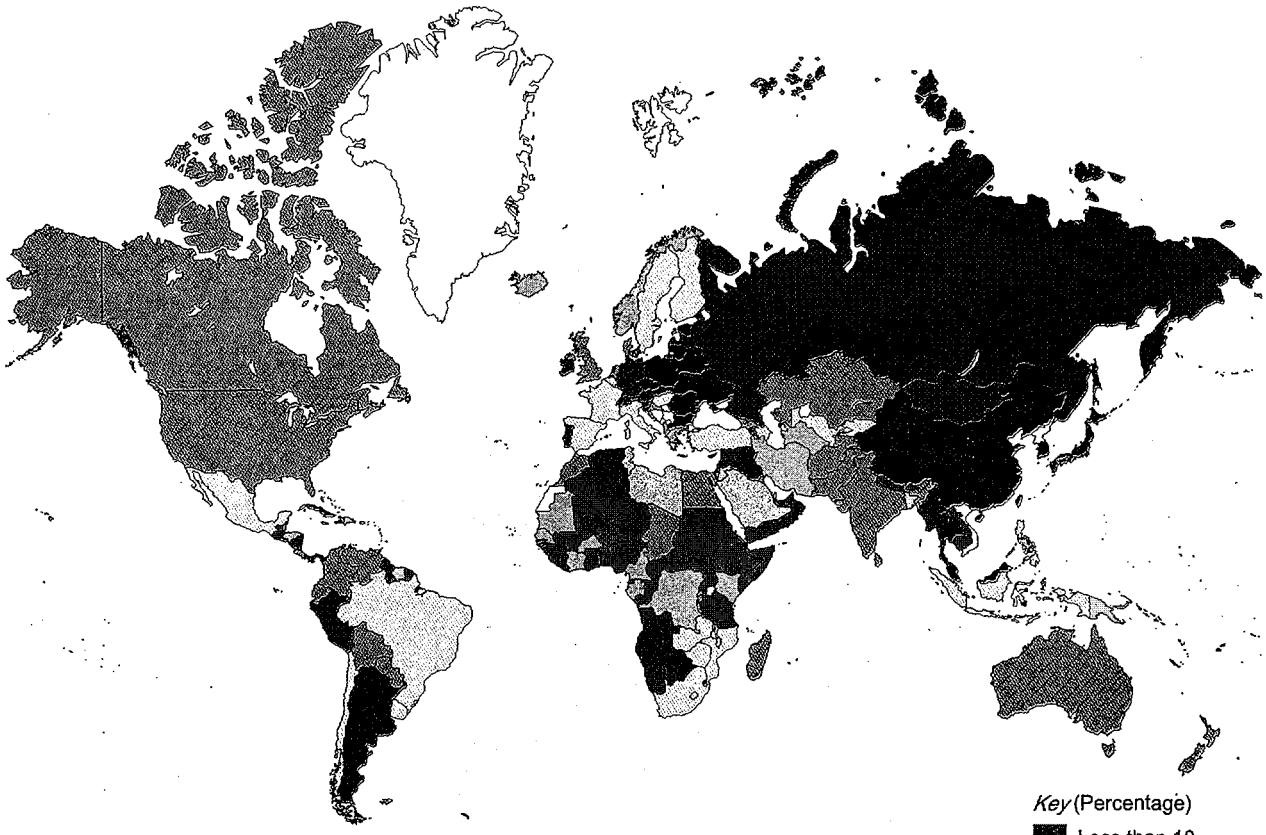
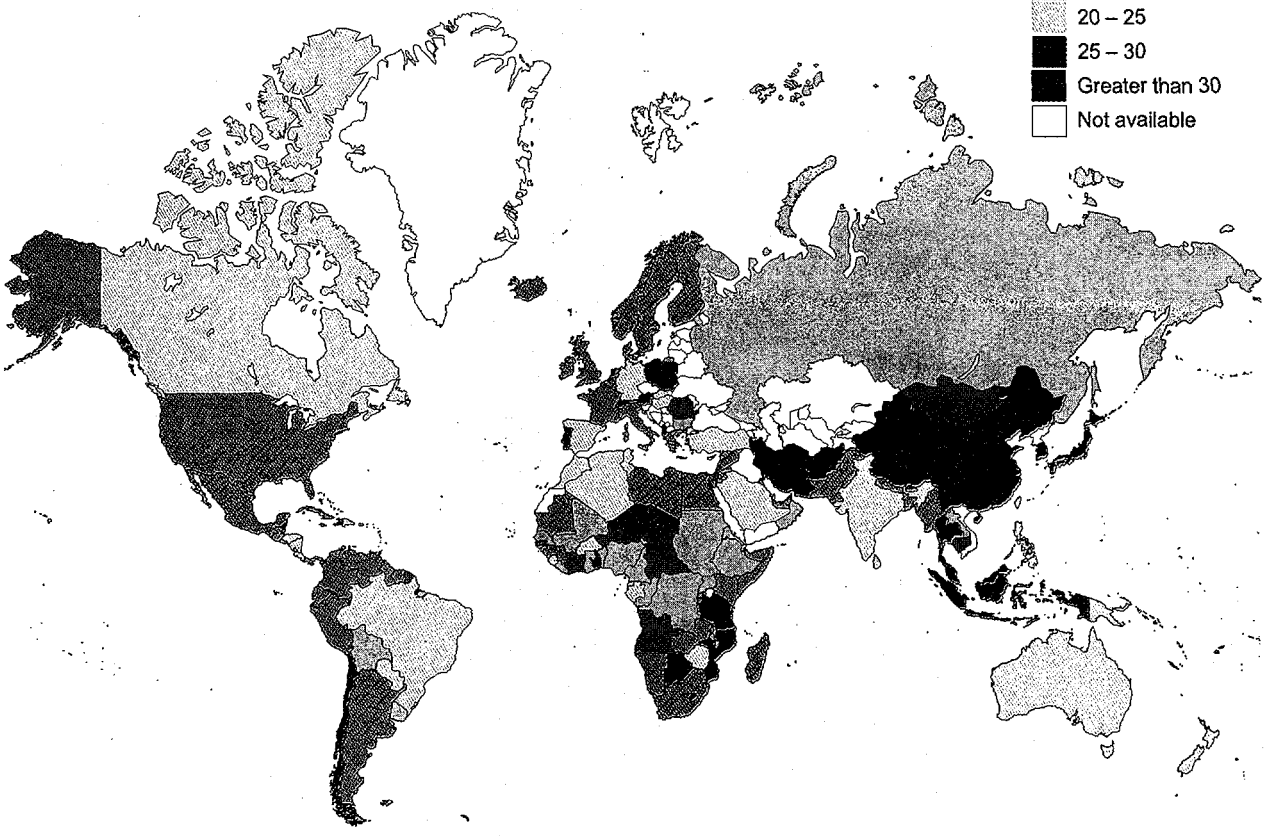
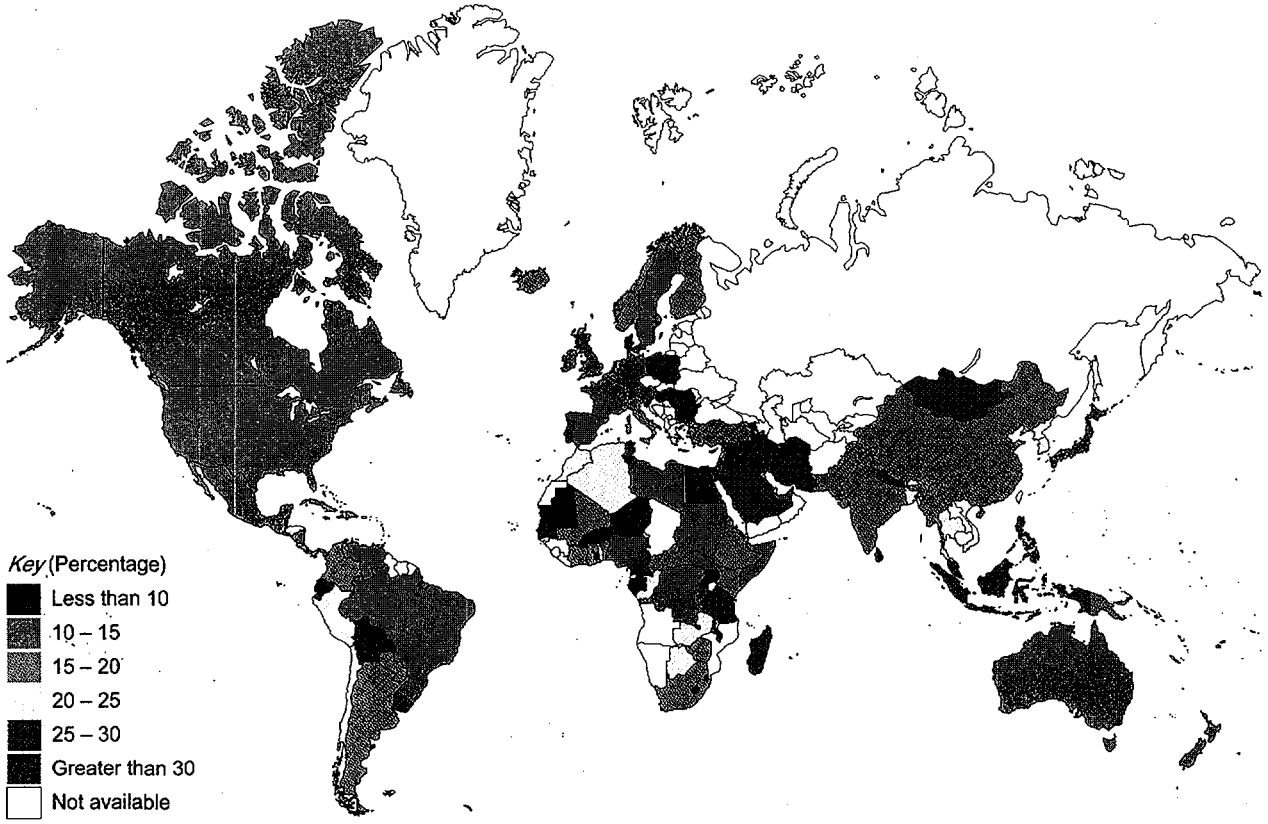


Figure A.7. Average investment rates, by country or territory, 1990-1996



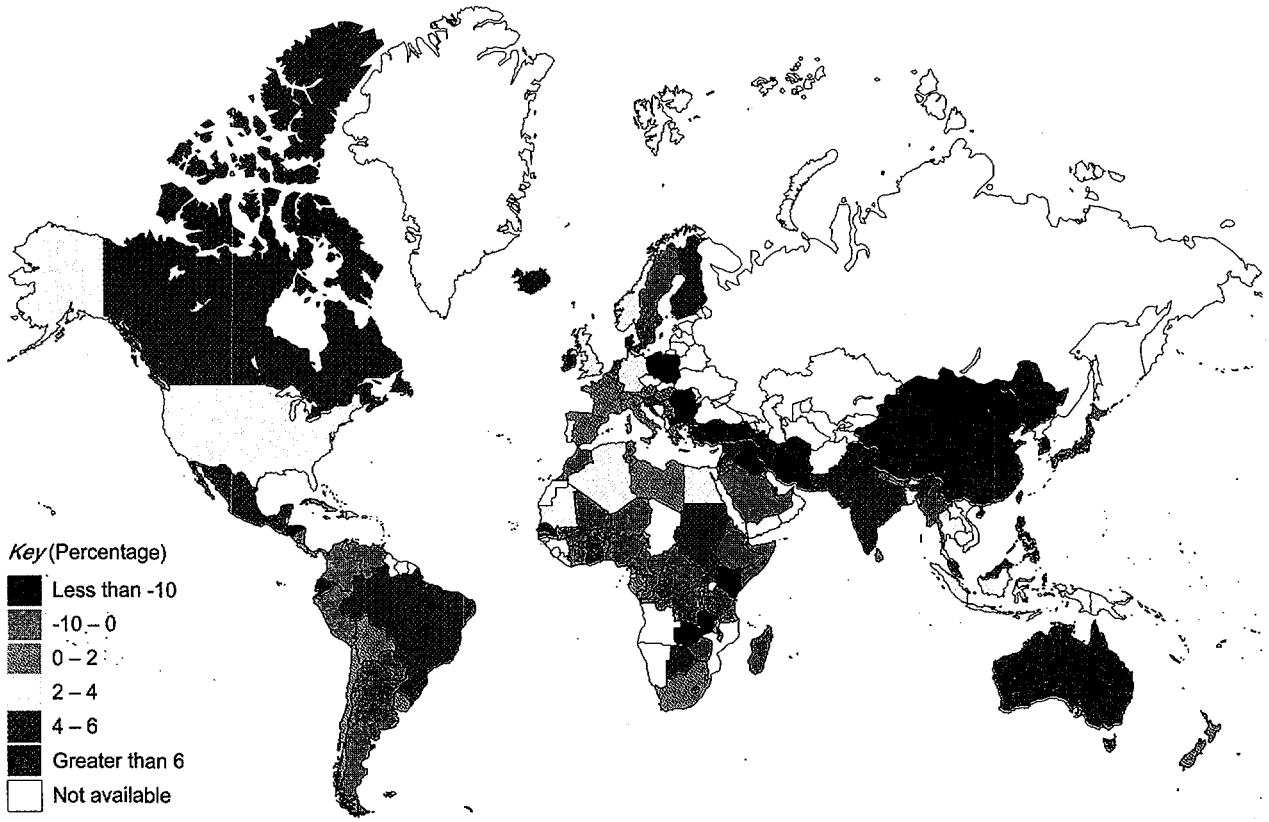
Source: UNIDO database.

Figure A.8. Structural change in industry, by country or territory, 1984-1994



Note: The structural change indicator is calculated for a period of 11 years.

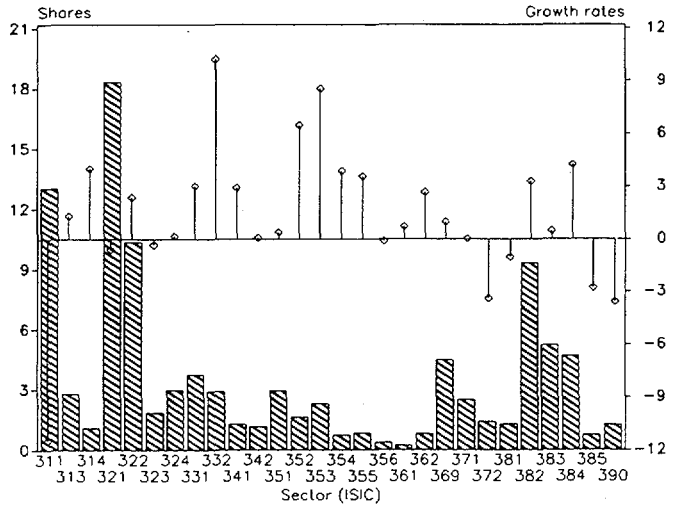
Figure A.9. Average labour productivity growth in industry, by country or territory, 1990-1994



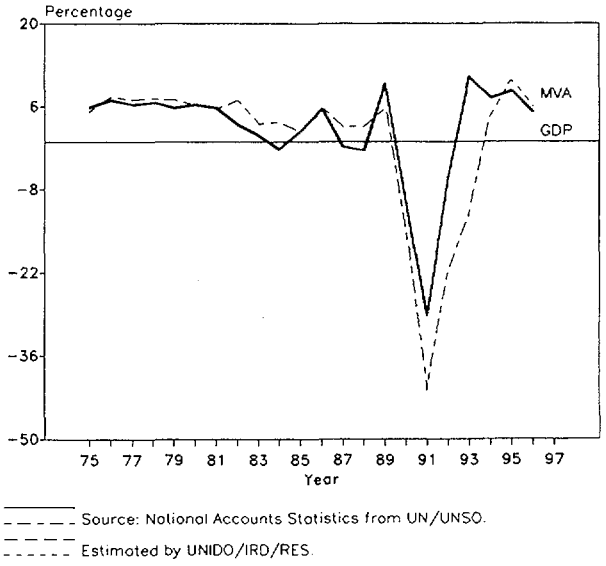
Note: Labour productivity is calculated as the ratio of total MVA to the total number of persons engaged in industry.
Source: UNIDO database.

ALBANIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)

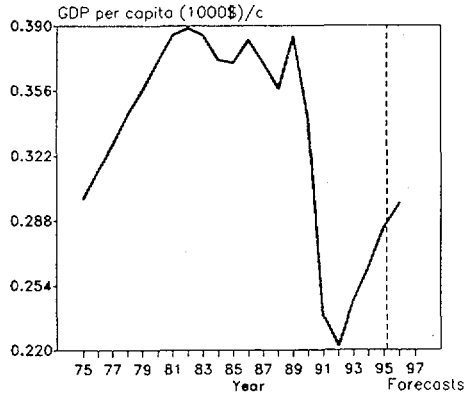


Annual growth rates of GDP and MVA (Constant 1990 prices)

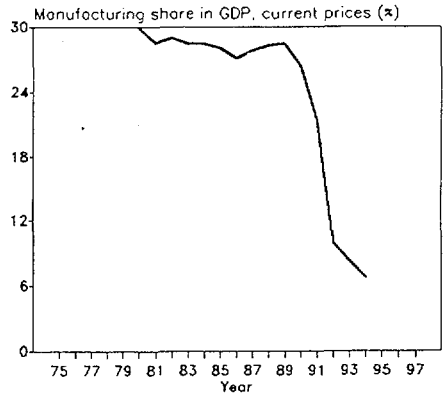


	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	992	1 098	1 121	963
Per capita [na] (1990-dollars)	371	371	341	285
Manufacturing share [na] (%) (current factor prices)	29.9	28.0	26.3	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	245	298	295	*135*
Industrial production index (1990=100)	..	..	..	..
Value added (millions of dollars)	*597*	677	305	*500*
Gross output (millions of dollars)	..	..	..	..
Employment (thousands)	*171*	*232*	252	*67*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	..	..	..	..
Wages and salaries including supplements (%)	..	..	..	..
Gross operating surplus and net taxes (%)	..	..	..	..
-PRODUCTIVITY: (dollars)				
Gross output per worker	..	..	..	..
Value added per worker	*3 205*	*2 718*	1 192	*7 188*
Average wage (including supplements)	*894*	*952*	*437*	*620*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*5.32*	*4.69*	*5.73*	*8.61*
as a percentage of 1970-1975 structural change	*100*	*88*	*108*	*162*
MVA growth rate perer unit of structural change	4.10	2.89	0.86	-0.58
Degree of specialization	16.5	18.1	17.9	14.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*116*	*156*	*60*	*46*
313 Beverages	*22*	*21*	*8*	*13*
314 Tobacco products	*10*	*8*	*3*	*5*
321 Textiles	*101*	*105*	*55*	*92*
322 Wearing apparel	*44*	*53*	*28*	*55*
323 Leather and fur products	*8*	*11*	*6*	*9*
324 Footwear	*15*	*19*	*9*	*15*
331 Wood and wood products	*21*	*22*	*10*	*20*
332 Furniture and fixtures	*13*	*14*	*6*	*17*
341 Paper and paper products	*6*	*7*	*4*	*7*
342 Printing and publishing	*7*	*7*	*3*	*6*
351 Industrial chemicals	*20*	*19*	*9*	*15*
352 Other chemical products	*9*	*9*	*4*	*9*
353 Petroleum refineries	*10*	*11*	*5*	*13*
354 Miscellaneous petroleum and coal products	*3*	*4*	*2*	*4*
355 Rubber products	*4*	*5*	*2*	*5*
356 Plastic products	*3*	*3*	*1*	*2*
361 Pottery, china and earthenware	*1*	*1*	*1*	*1*
362 Glass and glass products	*2*	*2*	*2*	*4*
369 Other non-metal mineral products	*23*	23	13	*23*
371 Iron and steel	*14*	*15*	*8*	*13*
372 Non-ferrous metals	*10*	*10*	*5*	*6*
381 Metal products	*9*	*10*	*4*	*6*
382 Non-electrical machinery	*52*	*57*	*25*	*50*
383 Electrical machinery	*29*	*35*	*15*	*27*
384 Transport equipment	*27*	*29*	*12*	*26*
385 Professional and scientific equipment	*4*	*5*	*2*	*3*
390 Other manufacturing industries	*13*	16	4	*6*

GDP per capita (1000$)/c



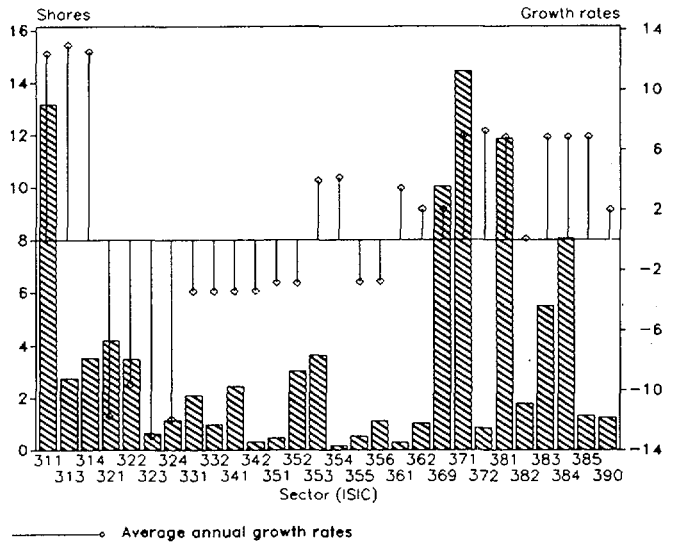
Manufacturing share in GDP, current prices (%)



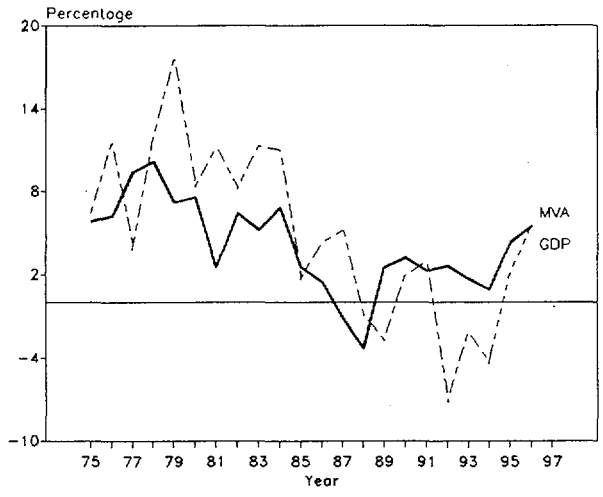
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

ALGERIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



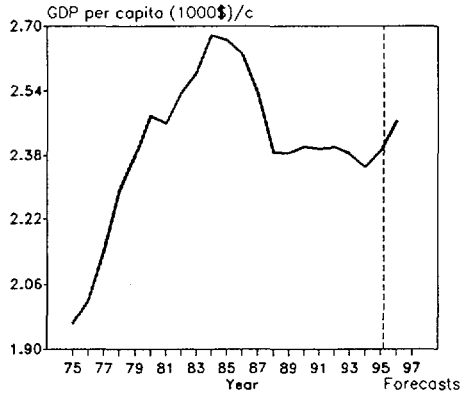
Annual growth rates of GDP and MVA (Constant 1990 prices)



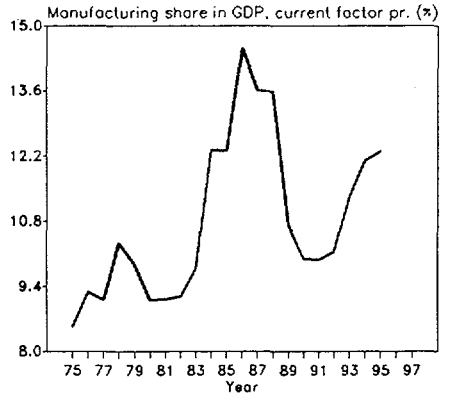
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	46 438	58 340	59 902	67 258
Per capita [na] (1990-dollars)	2 478	2 665	2 402	2 393
Manufacturing share [na] (%) (current factor prices)	9.1	12.3	10.0	*12.3*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	3 520	5 311	5 710	*5 200*
Industrial production index (1990=100)	62	100	100	75
Value added (millions of dollars)	3 644	6 515	5 556	*4 147*
Gross output (millions of dollars)	9 023	14 579	12 773	*9 365*
Employment (thousands)	312	420	435	*436*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	60	55	56	*56*
Wages and salaries including supplements (%)	22	24	19	*16*
Gross operating surplus and net taxes (%)	18	21	24	*28*
-PRODUCTIVITY: (dollars)				
Gross output per worker	28 928	34 739	29 371	*21 501*
Value added per worker	11 682	15 525	12 776	*9 524*
Average wage (including supplements)	6 380	8 175	5 581	*3 516*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	9.26	10.55	9.54	*12.67*
as a percentage of 1970-1975 structural change	100	114	103	*137*
MVA growth rate perer unit of structural change	4.04	5.16	2.32	0.37
Degree of specialization	14.4	13.7	12.8	18.0
-VALUE ADDED: (millions of dollars)				
311/2 Food products	655	811	481	*624*
313 Beverages	135	167	99	*131*
314 Tobacco products	176	218	129	*168*
321 Textiles	282	529	414	*116*
322 Wearing apparel	227	426	333	*108*
323 Leather and fur products	57	71	71	*17*
324 Footwear	100	123	124	*32*
331 Wood and wood products	109	171	159	*79*
332 Furniture and fixtures	51	80	75	*37*
341 Paper and paper products	129	199	186	*92*
342 Printing and publishing	14	25	23	*11*
351 Industrial chemicals	14	27	32	*15*
352 Other chemical products	93	184	216	*101*
353 Petroleum refineries	83	165	194	*151*
354 Miscellaneous petroleum and coal products	4	8	9	*7*
355 Rubber products	17	33	39	*18*
356 Plastic products	34	67	79	*37*
361 Pottery, china and earthenware	10	17	17	*12*
362 Glass and glass products	36	61	62	*40*
369 Other non-metal mineral products	355	595	602	*393*
371 Iron and steel	323	777	698	*633*
372 Non-ferrous metals	19	45	41	*37*
381 Metal products	265	639	574	*519*
382 Non-electrical machinery	46	112	100	*62*
383 Electrical machinery	123	297	267	*241*
384 Transport equipment	181	435	390	*353*
385 Professional and scientific equipment	30	71	64	*58*
390 Other manufacturing industries	76	164	79	*53*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

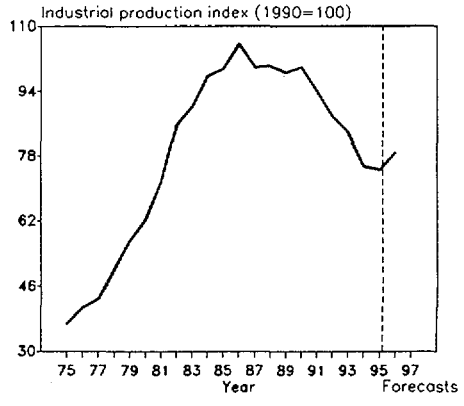
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

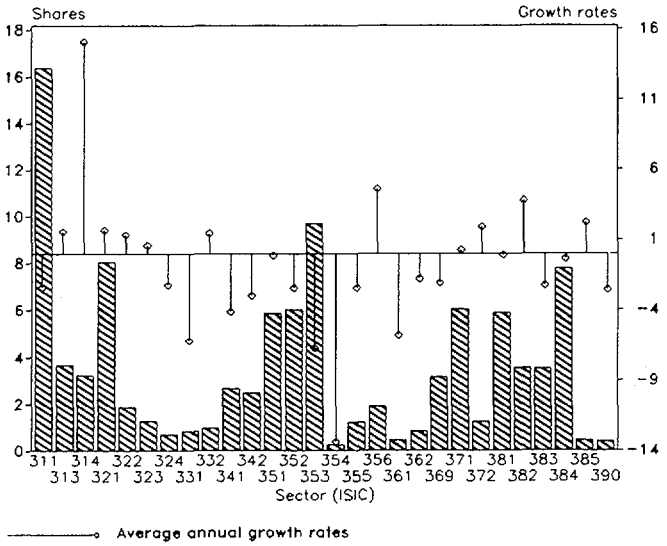


Industriol production index (1990=100)

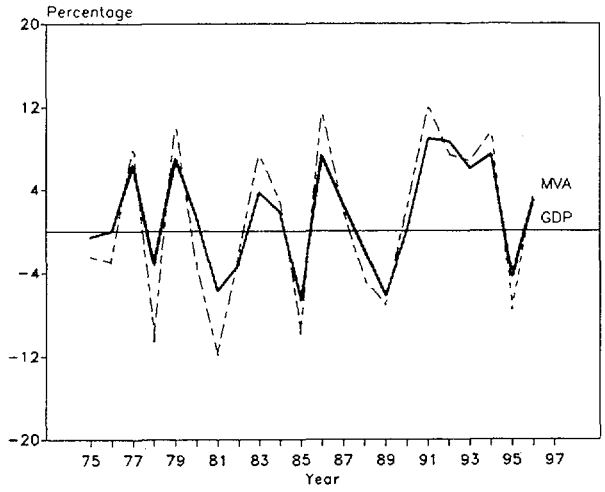


ARGENTINA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



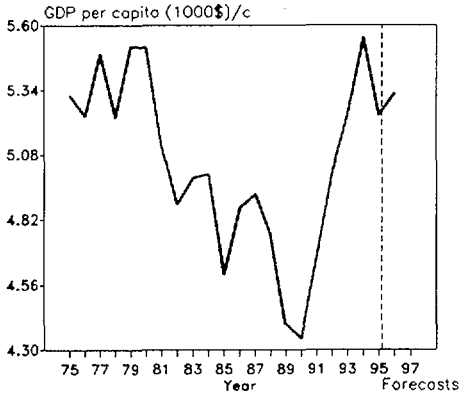
Annual growth rates of GDP and MVA (Constant 1990 prices)



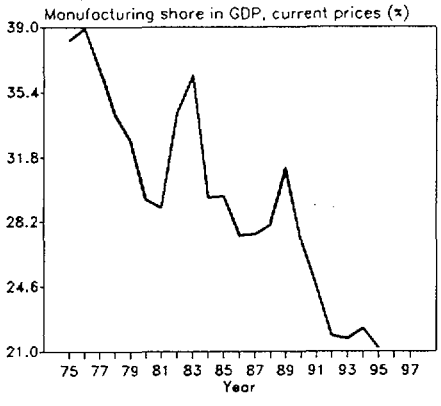
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	154 860	139 450	141 353	182 129
Per capita [na] (1990-dollars)	5 512	4 602	4 346	5 238
Manufacturing share [na] (%) (current factor prices)	29.5	29.6	27.1	*21.2*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	43 566	37 054	37 868	*49 099*
Industrial production index (1990=100)	125	104	100	*133*
Value added (millions of dollars)	24 511	28 891	28 729	*51 975*
Gross output (millions of dollars)	*55 936*	*48 084*	*74 111*	*137 594*
Employment (thousands)	*1 346*	1 174	*942*	*857*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*56*	*40*	*61*	*62*
Wages and salaries including supplements (%)	*10*	*11*	*9*	*9*
Gross operating surplus and net taxes (%)	*33*	*49*	*30*	*29*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*41 553*	*34 798*	*78 687*	*133 728*
Value added per worker	*18 208*	20 908	*30 502*	*50 515*
Average wage (including supplements)	*4 302*	*4 411*	*6 767*	*14 501*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	5.79	8.36	9.17	*7.47*
as a percentage of 1970-1975 structural change	100	144	158	*129*
MVA growth rate perer unit of structural change	2.22	-0.99	-2.41	-3.35
Degree of specialization	13.0	15.9	13.8	12.5
-VALUE ADDED: (millions of dollars)				
311/2 Food products	3 544	4 912	4 695	*8 319*
313 Beverages	703	942	932	*1 948*
314 Tobacco products	498	719	480	*2 158*
321 Textiles	1 703	1 832	2 209	*4 582*
322 Wearing apparel	919	558	492	*949*
323 Leather and fur products	284	350	336	*654*
324 Footwear	245	240	190	*348*
331 Wood and wood products	363	283	255	*383*
332 Furniture and fixtures	226	185	246	*510*
341 Paper and paper products	554	763	882	*1 265*
342 Printing and publishing	679	800	695	*1 227*
351 Industrial chemicals	914	1 367	1 844	*3 352*
352 Other chemical products	1 206	1 916	1 791	*3 107*
353 Petroleum refineries	3 647	5 120	*3 642*	*4 319*
354 Miscellaneous petroleum and coal products	86	121	122	*93*
355 Rubber products	331	327	368	*593*
356 Plastic products	424	485	436	*1 123*
361 Pottery, china and earthenware	189	130	156	*195*
362 Glass and glass products	199	153	249	*426*
369 Other non-metal mineral products	659	587	932	*1 586*
371 Iron and steel	900	1 239	1 651	*3 165*
372 Non-ferrous metals	235	257	305	*649*
381 Metal products	1 272	1 499	1 611	*2 973*
382 Non-electrical machinery	1 358	930	835	*1 868*
383 Electrical machinery	902	936	1 025	*1 822*
384 Transport equipment	2 289	2 054	2 140	*3 946*
385 Professional and scientific equipment	86	95	112	*234*
390 Other manufacturing industries	96	92	97	*183*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

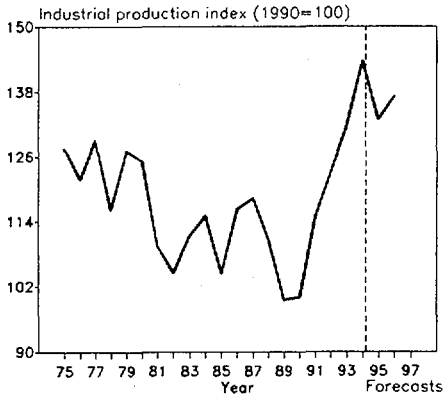
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)

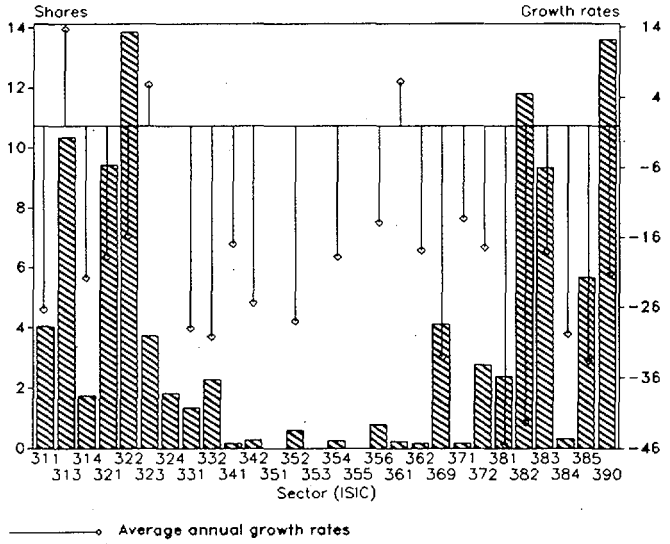


Industrial production index (1990=100)

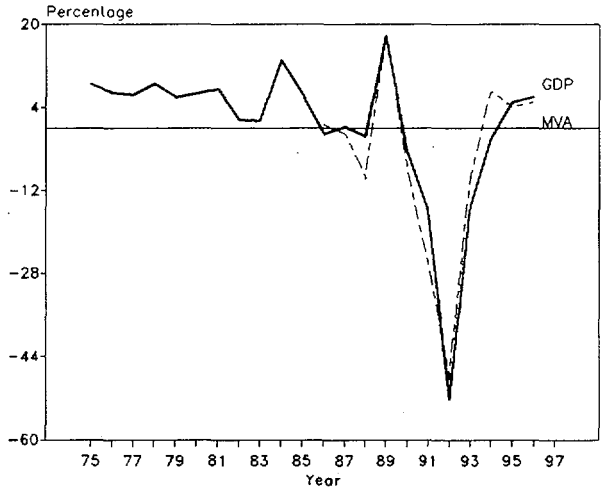


ARMENIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



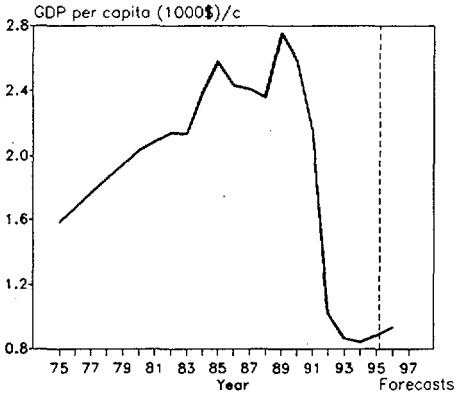
Annual growth rates of GDP and MVA (Constant 1990 prices)



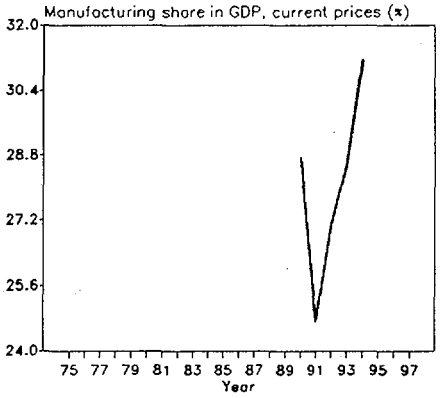
Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	6 254	8 340	9 153	3 213
Per capita [na] (1990-dollars)	2 036	2 580	2 586	885
Manufacturing share [na] (%) (current factor prices)	..	..	*28.7*	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	..	2 736	2 631	*996*
Industrial production index (1990=100)	..	..	..	..
Value added (millions of dollars)	*1 513*	*1 242*	*1 085*	*734*
Gross output (millions of dollars)	*11 319*	*9 068*	6 484	*1 888*
Employment (thousands)	*247*	*411*	354	*267*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*86*	*86*	*83*	*60*
Wages and salaries including supplements (%)	*12*	*14*	16	*28*
Gross operating surplus and net taxes (%)	*2*	*0*	*1*	*12*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*28 183*	*21 976*	18 294	*7 066*
Value added per worker	*4 170*	*3 162*	*3 061*	*3 005*
Average wage (including supplements)	*3 741*	*3 074*	2 946	*2 173*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*5.55*	*9.32*	*15.43*	*29.57*
as a percentage of 1970-1975 structural change	*100*	*168*	*278*	*533*
MVA growth rate perer unit of structural change	4.43	0.63	-0.02	-1.34
Degree of specialization	17.7	16.5	19.9	21.2
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*138*	*72*	47	*26*
313 Beverages	*16*	*38*	18	*122*
314 Tobacco products	*26*	*19*	21	*14*
321 Textiles	*102*	*99*	93	*78*
322 Wearing apparel	*147*	*131*	120	*124*
323 Leather and fur products	*27*	*46*	*7*	*32*
324 Footwear	..	..	*39*	..
331 Wood and wood products	*55*	*30*	19	*8*
332 Furniture and fixtures	*43*	*30*	*37*	*12*
341 Paper and paper products	*3*	*2*	2	*1*
342 Printing and publishing	*5*	*4*	4	*2*
351 Industrial chemicals	*37*	*27*	-55	*34*
352 Other chemical products	*12*	*8*	8	*4*
353 Petroleum refineries	-	-	-	-
354 Miscellaneous petroleum and coal products	*2*	*2*	*3*	*3*
355 Rubber products	*6*	*9*	-11	*1*
356 Plastic products	*10*	*10*	6	*7*
361 Pottery, china and earthenware	*3*	*1*	-	*2*
362 Glass and glass products	*3*	*5*	2	*2*
369 Other non-metal mineral products	*88*	*58*	*67*	*17*
371 Iron and steel	*3*	*3*	1	*2*
372 Non-ferrous metals	*69*	*52*	*27*	*24*
381 Metal products	*53*	*39*	*58*	*4*
382 Non-electrical machinery	*271*	*180*	*246*	*25*
383 Electrical machinery	*108*	*109*	90	*78*
384 Transport equipment	*10*	*9*	5	*2*
385 Professional and scientific equipment	*110*	*84*	*105*	*25*
390 Other manufacturing industries	*169*	*175*	*127*	*84*

GDP per capita (1000$)/c



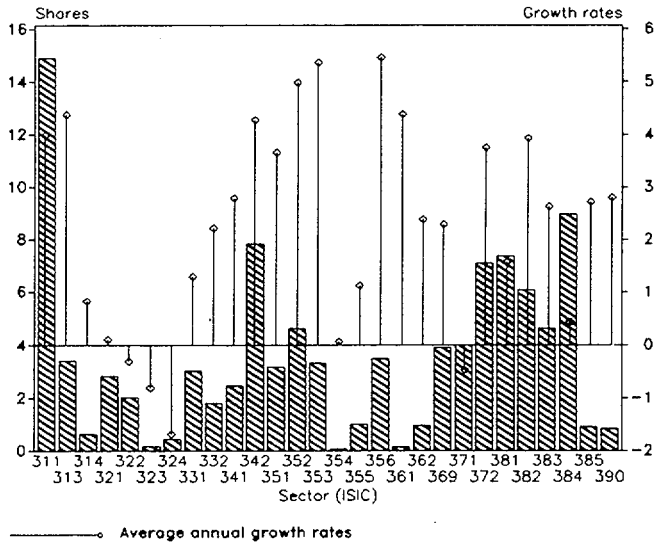
Manufacturing share in GDP, current prices (%)



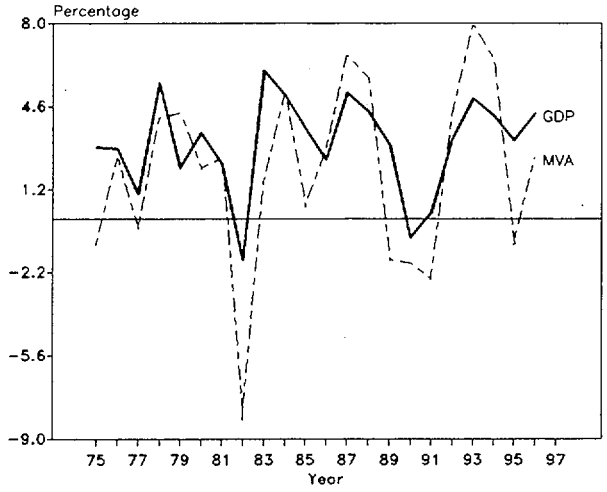
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

AUSTRALIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



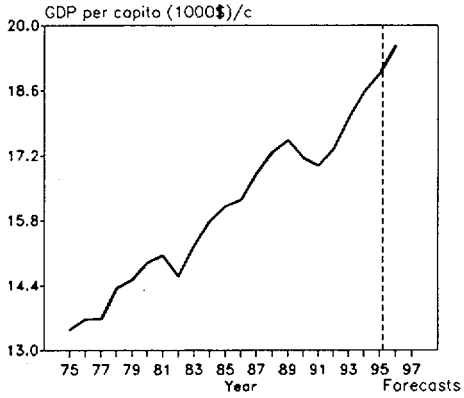
Annual growth rates of GDP and MVA (Constant 1990 prices)



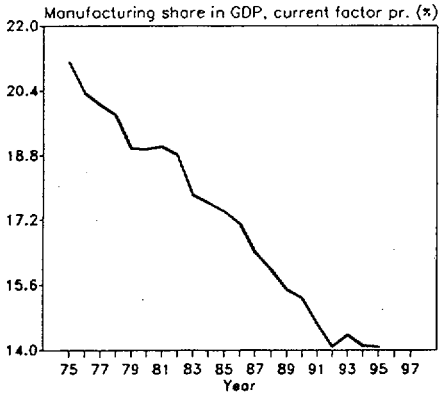
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	216 868	252 042	289 788	338 743
Per capita [na] (1990-dollars)	14 886	16 114	17 159	18 960
Manufacturing share [na] (%) (current factor prices)	19.0	17.4	15.3	*14.1*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	39 619	39 959	44 683	51 647
Industrial production index (1990=100)	90	92	100	116
Value added (millions of dollars)	29 173	26 900	54 097	*65 859*
Gross output (millions of dollars)	75 474	69 330	128 983	*142 806*
Employment (thousands)	1 139	1 014	1 017	*908*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	61	61	58	*54*
Wages and salaries including supplements (%)	20	19	16	*17*
Gross operating surplus (%)	18	20	26	*29*
-PRODUCTIVITY: (dollars)				
Gross output per worker	65 402	67 785	125 117	*157 330*
Value added per worker	25 280	26 301	52 475	*72 703*
Average wage (including supplements)	13 356	12 977	20 719	*26 180*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	3.74	4.19	4.57	*4.36*
as a percentage of 1970-1975 structural change	100	112	122	*116*
MVA growth rate perer unit of structural change	1.29	0.40	2.70	4.51
Degree of specialization	11.1	11.1	11.4	11.8
-VALUE ADDED: (millions of dollars)				
311/2 Food products	3 993	3 764	7 647	*9 981*
313 Beverages	785	847	1 723	*2 258*
314 Tobacco products	248	179	365	*406*
321 Textiles	1 050	955	1 673	*1 773*
322 Wearing apparel	821	722	1 223	*1 249*
323 Leather and fur products	93	77	105	*108*
324 Footwear	223	205	279	*266*
331 Wood and wood products	1 052	1 028	1 728	*1 938*
332 Furniture and fixtures	505	507	1 032	*1 192*
341 Paper and paper products	744	704	1 302	*1 589*
342 Printing and publishing	1 818	2 131	4 058	*5 252*
351 Industrial chemicals	969	982	1 660	*2 096*
352 Other chemical products	1 186	1 191	2 291	*3 118*
353 Petroleum refineries	323	285	1 659	*2 273*
354 Miscellaneous petroleum and coal products	30	25	34	*38*
355 Rubber products	341	264	546	*616*
356 Plastic products	831	808	1 702	*2 382*
361 Pottery, china and earthenware	46	41	76	*102*
362 Glass and glass products	246	254	528	*622*
369 Other non-metal mineral products	1 183	1 085	2 170	*2 557*
371 Iron and steel	1 920	1 391	2 431	*2 478*
372 Non-ferrous metals	1 473	1 409	3 791	*4 766*
381 Metal products	2 467	2 040	4 215	*4 840*
382 Non-electrical machinery	2 091	1 575	3 070	*4 054*
383 Electrical machinery	1 351	1 329	2 466	*3 006*
384 Transport equipment	2 830	2 579	5 379	*5 745*
385 Professional and scientific equipment	290	279	498	*598*
390 Other manufacturing industries	263	246	445	*544*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

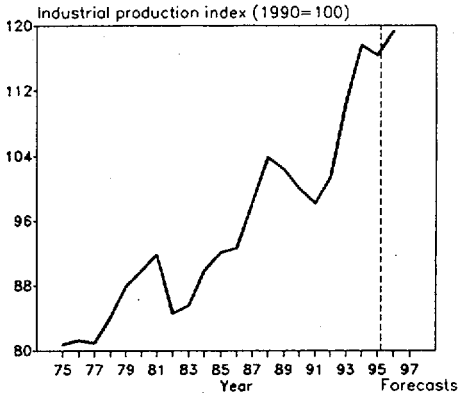
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

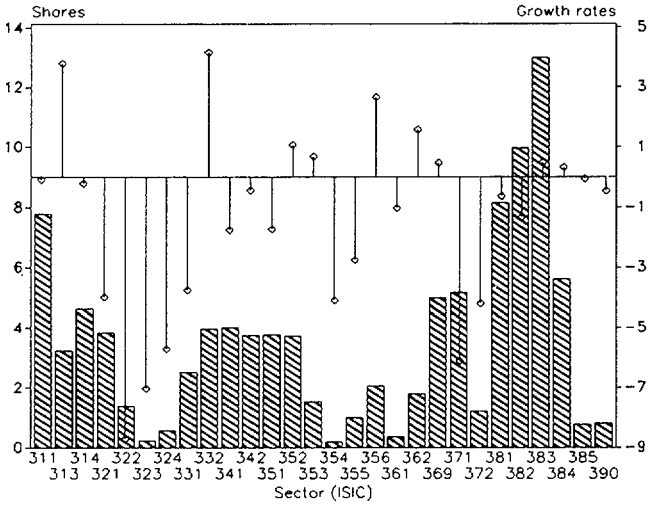


Industrial production index (1990=100)

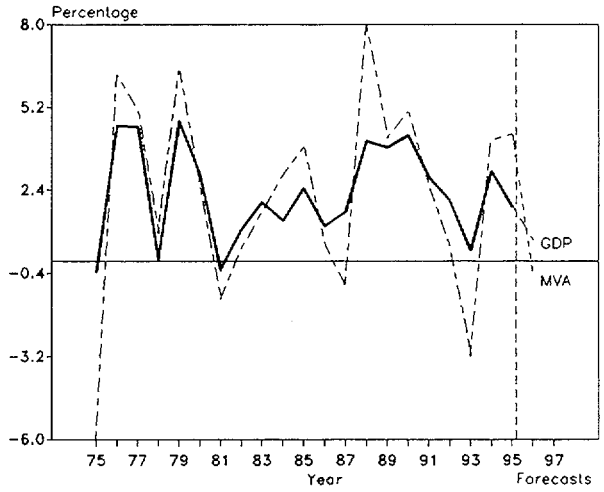


AUSTRIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

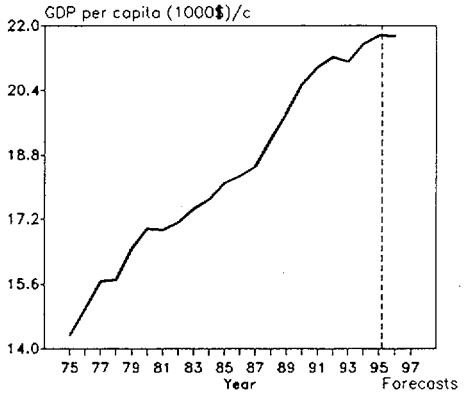


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

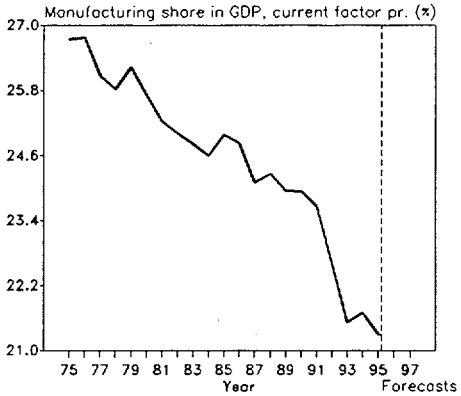
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	128 101	136 747	158 427	175 079
Per capita [na] (1990-dollars)	16 969	18 093	20 562	21 762
Manufacturing share [na] (%) (current factor prices)	25.7	25.0	23.9	21.3
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	32 233	34 669	40 785	44 116
Industrial production index (1990=100)	76	83	100	109
Value added (millions of dollars)	15 949	13 394	31 318	*40 693*
Gross output (millions of dollars)	48 872	41 230	90 474	113 684
Employment (thousands)	699	654	642	*559*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	67	68	65	*64*
Wages and salaries including supplements (%)	24	23	23	*18*
Gross operating surplus and net taxes (%)	9	10	11	*17*
-PRODUCTIVITY: (dollars)				
Gross output per worker	69 500	62 508	139 901	*200 063*
Value added per worker	22 681	20 307	48 427	*73 681*
Average wage (including supplements)	16 754	14 288	33 021	*37 567*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	7.14	5.55	5.10	*5.44*
as a percentage of 1970-1975 structural change	100	78	71	*76*
MVA growth rate perer unit of structural change	1.26	1.60	1.70	0.78
Degree of specialization	9.7	9.9	10.3	10.8
-VALUE ADDED: (millions of dollars)				
311/2 Food products	1 240	1 073	2 302	*3 079*
313 Beverages	454	368	841	*1 410*
314 Tobacco products	807	725	1 417	*1 883*
321 Textiles	852	623	1 291	*1 430*
322 Wearing apparel	447	303	547	*449*
323 Leather and fur products	51	37	82	*74*
324 Footwear	209	146	213	*207*
331 Wood and wood products	192	298	879	*962*
332 Furniture and fixtures	539	407	994	*1 710*
341 Paper and paper products	631	500	1 333	*1 650*
342 Printing and publishing	624	513	1 163	*1 525*
351 Industrial chemicals	638	555	1 277	*1 549*
352 Other chemical products	534	398	1 070	*1 532*
353 Petroleum refineries	80	72	489	*687*
354 Miscellaneous petroleum and coal products	32	24	65	*68*
355 Rubber products	230	168	311	*392*
356 Plastic products	281	215	545	*864*
361 Pottery, china and earthenware	63	42	112	*141*
362 Glass and glass products	235	229	518	*752*
369 Other non-metal mineral products	815	652	1 473	*2 055*
371 Iron and steel	1 223	1 051	2 088	*1 996*
372 Non-ferrous metals	280	241	434	*452*
381 Metal products	1 283	942	2 534	*3 350*
382 Non-electrical machinery	1 656	1 400	3 292	*4 096*
383 Electrical machinery	1 579	1 430	3 926	*5 450*
384 Transport equipment	709	743	1 652	*2 310*
385 Professional and scientific equipment	130	115	222	*297*
390 Other manufacturing industries	136	123	249	*322*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

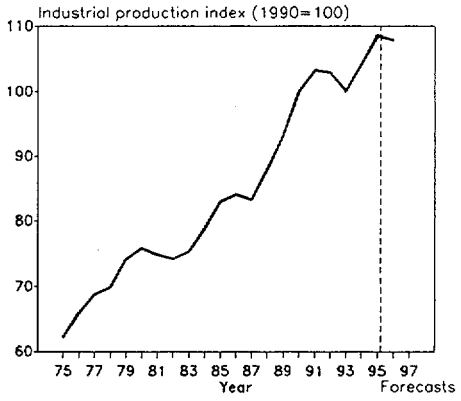
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

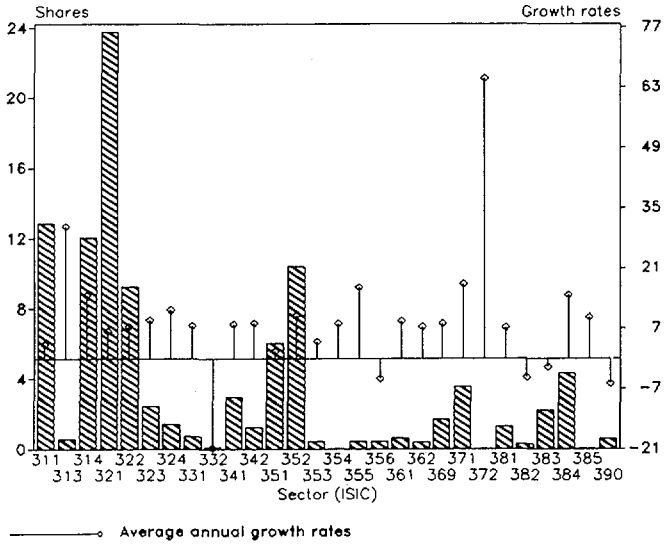


Industrial production index (1990=100)

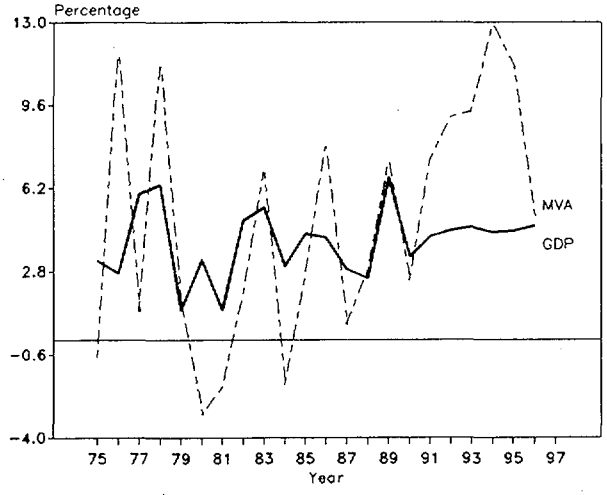


BANGLADESH

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



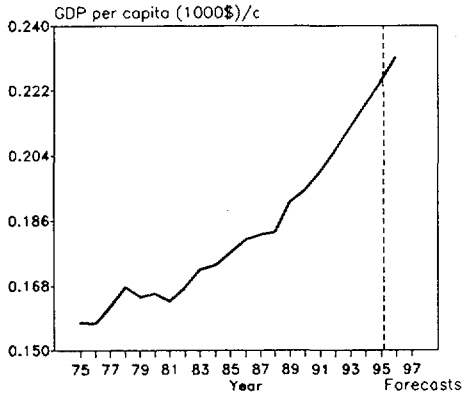
Annual growth rates of GDP and MVA (Constant 1990 prices)



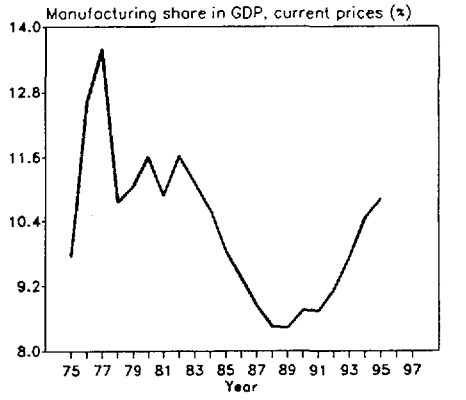
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	14 636	17 610	21 336	26 503
Per capita [na] (1990-dollars)	166	177	194	224
Manufacturing share [na] (%) (current factor prices)	11.6	9.9	8.7	*10.8*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	1 418	1 523	1 866	2 997
Industrial production index (1990=100)	87	86	100	118
Value added (millions of dollars)	834	863	1 759	*2 740*
Gross output (millions of dollars)	2 253	2 497	5 504	*7 977*
Employment (thousands)	412	469	1 028	*1 347*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	63	65	68	*66*
Wages and salaries including supplements (%)	*12*	10	*16*	*12*
Gross operating surplus and net taxes (%)	*25*	24	*16*	*23*
-PRODUCTIVITY: (dollars)				
Gross output per worker	5 466	5 191	4 418	*5 145*
Value added per worker	2 023	1 793	1 412	*1 767*
Average wage (including supplements)	*639*	557	*859*	*690*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	14.31	16.43	19.43	*14.49*
as a percentage of 1970-1975 structural change	100	115	136	*101*
MVA growth rate perer unit of structural change	3.73	4.89	1.89	3.94
Degree of specialization	36.0	25.3	24.9	24.8
-VALUE ADDED: (millions of dollars)				
311/2 Food products	78	98	265	*331*
313 Beverages	7	6	4	*19*
314 Tobacco products	111	109	153	*347*
321 Textiles	336	230	439	*651*
322 Wearing apparel	-	8	158	*242*
323 Leather and fur products	18	14	42	*71*
324 Footwear	4	10	21	*40*
331 Wood and wood products	3	10	14	*21*
332 Furniture and fixtures	1	2	6	*2*
341 Paper and paper products	23	19	53	*84*
342 Printing and publishing	6	8	23	*36*
351 Industrial chemicals	33	70	134	*144*
352 Other chemical products	97	85	166	*297*
353 Petroleum refineries	2	75	9	*11*
354 Miscellaneous petroleum and coal products	1	2	1	*1*
355 Rubber products	4	1	5	*13*
356 Plastic products	-	2	14	*10*
361 Pottery, china and earthenware	2	4	10	*17*
362 Glass and glass products	4	4	7	*11*
369 Other non-metal mineral products	14	7	31	*49*
371 Iron and steel	39	35	43	*108*
372 Non-ferrous metals	-	-	-	*2*
381 Metal products	9	13	22	*34*
382 Non-electrical machinery	4	17	7	*6*
383 Electrical machinery	19	18	60	*52*
384 Transport equipment	11	10	56	*128*
385 Professional and scientific equipment	-	-	-	*1*
390 Other manufacturing industries	8	7	18	*13*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

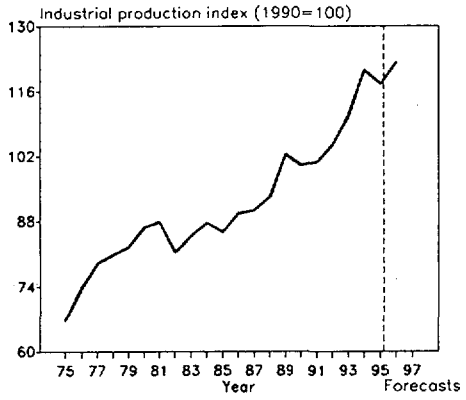
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)

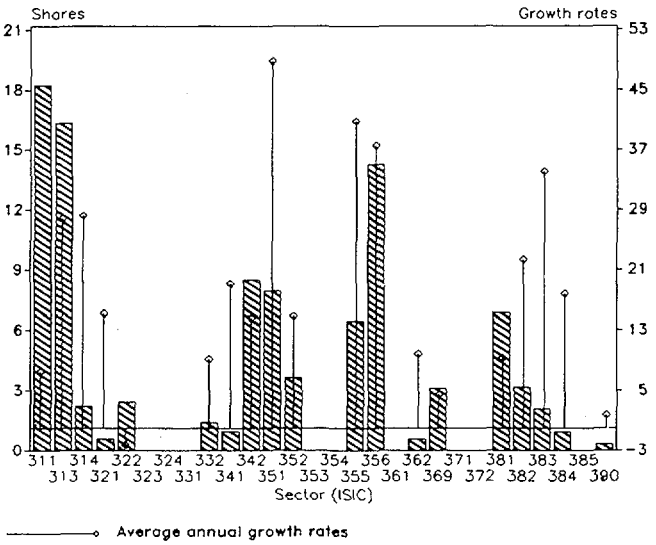


Industrial production index (1990=100)

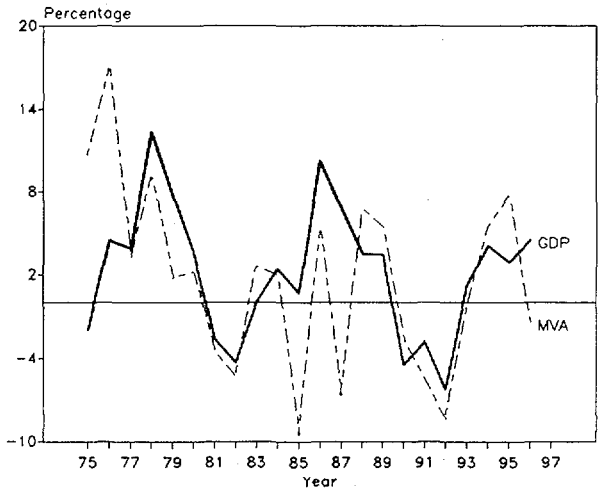


BARBADOS

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

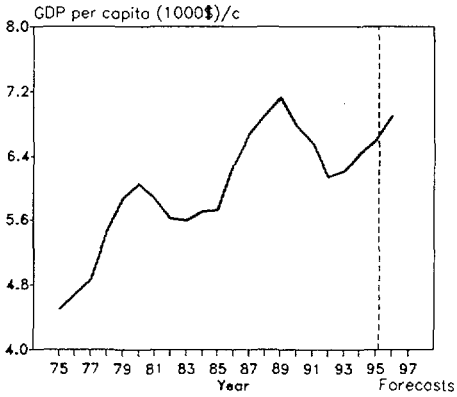


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

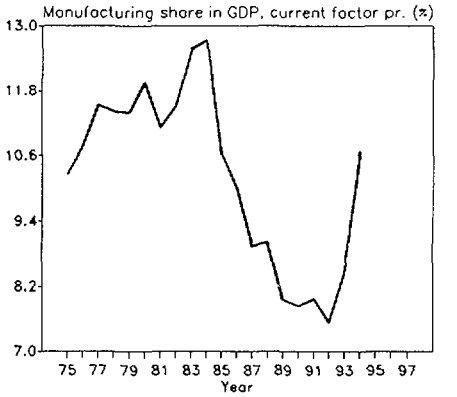
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	1 506	1 447	1 743	1 722
Per capita [na] (1990-dollars)	6 048	5 720	6 783	6 599
Manufacturing share [na] (%) (current factor prices)	11.9	10.6	7.8	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	127	110	118	116
Industrial production index (1990=100)	101	91	100	102
Value added (millions of dollars)	53	90	95	*289*
Gross output (millions of dollars)	241	383	412	*655*
Employment (thousands)	8	9	7	*8*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	79	78	79	*60*
Wages and salaries including supplements (%)	14	18	16	*17*
Gross operating surplus and net taxes (%)	7	4	5	*24*
-PRODUCTIVITY: (dollars)				
Gross output per worker	32 555	43 420	64 073	*81 967*
Value added per worker	6 853	9 724	13 984	*36 220*
Average wage (including supplements)	4 510	8 079	10 023	*12 899*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	11.45	15.66	21.91	*26.32*
as a percentage of 1970-1975 structural change	100	137	191	*230*
MVA growth rate perer unit of structural change	0.11	0.77	0.11	2.86
Degree of specialization	14.6	16.2	20.4	15.8
-VALUE ADDED: (millions of dollars)				
311/2 Food products	12	25	30	*52*
313 Beverages	6	12	10	*49*
314 Tobacco products	1	2	1	*7*
321 Textiles	-	-	1	*2*
322 Wearing apparel	6	7	5	*6*
323 Leather and fur products	-	-	-	-
324 Footwear	-	-	-	-
331 Wood and wood products	-	-	-	-
332 Furniture and fixtures	1	2	2	*4*
341 Paper and paper products	-	1	1	*3*
342 Printing and publishing	4	8	10	*24*
351 Industrial chemicals	-	-	*1*	*17*
352 Other chemical products	1	3	4	*12*
353 Petroleum refineries	-	-	-	-
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	*1*	*1*	2	*19*
356 Plastic products	*2*	*4*	*6*	*43*
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	-	-	1	*2*
369 Other non-metal mineral products	3	-3	5	*8*
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	-	-	-	-
381 Metal products	3	5	10	*20*
382 Non-electrical machinery	5	11	3	*11*
383 Electrical machinery	3	8	1	*7*
384 Transport equipment	1	2	1	*3*
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	3	1	1	*1*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

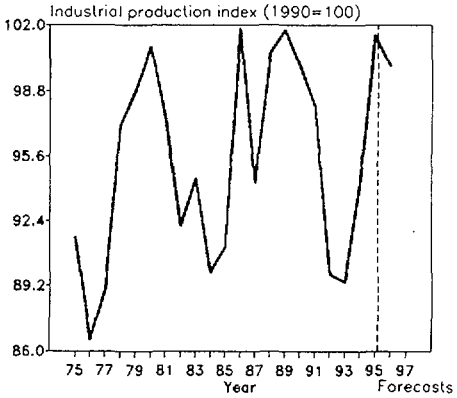
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

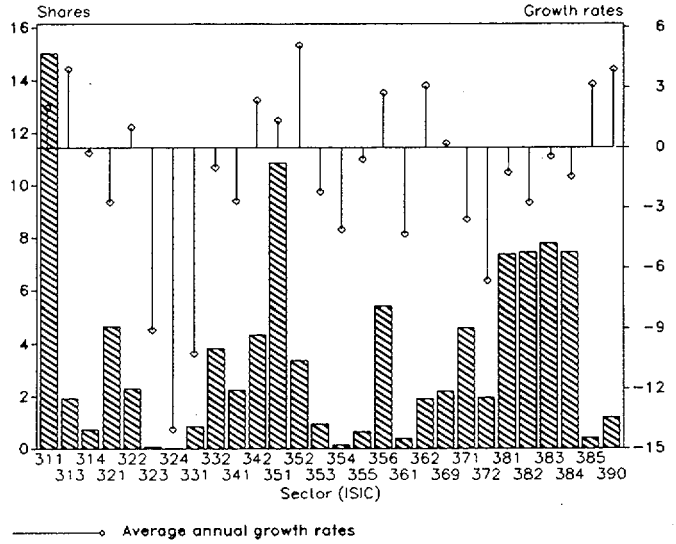


Industrial production index (1990=100)

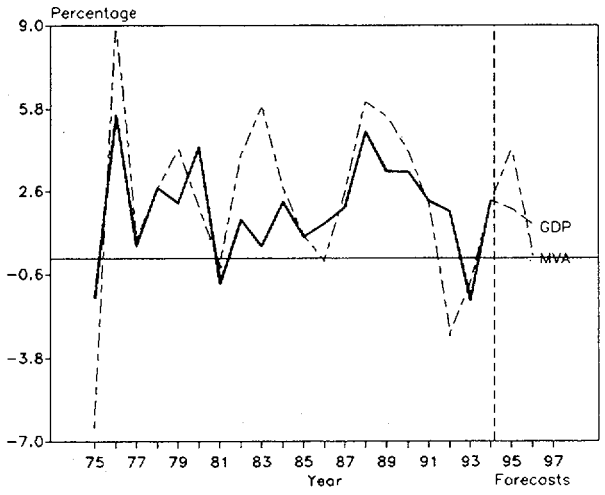


BELGIUM

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

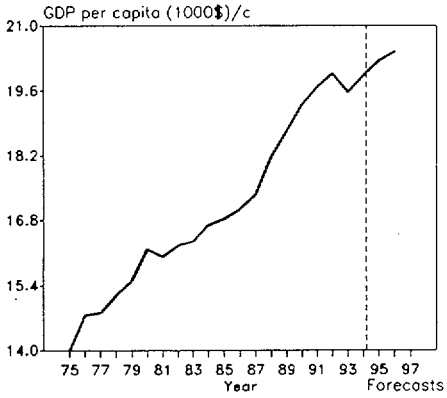


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	159 346	165 870	192 174	*204 962*
Per capita [na] (1990-dollars)	16 174	16 828	19 312	*20 239*
Manufacturing share [na] (%) (current factor prices)	25.0	23.0	23.8	*22.5*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	32 018	36 333	43 280	45 096
Industrial production index (1990=100)	81	86	100	102
Value added (millions of dollars)	28 130	18 229	42 213	53 712
Gross output (millions of dollars)	*94 373*	67 088	166 598	188 897
Employment (thousands)	872	756	737	*667*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*70*	73	75	72
Wages and salaries including supplements (%)	*15*	*12*	*10*	*11*
Gross operating surplus (%)	*15*	*15*	*15*	*18*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*102 512*	83 644	212 995	*266 054*
Value added per worker	30 556	22 728	53 969	*75 770*
Average wage (including supplements)	*16 066*	*10 604*	*22 719*	*30 430*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	6.37	*6.47*	*6.72*	*6.07*
as a percentage of 1970-1975 structural change	100	*102*	*105*	*95*
MVA growth rate perer unit of structural change	1.18	0.20	0.87	0.96
Degree of specialization	12.5	14.5	13.5	14.2
-VALUE ADDED: (millions of dollars)				
311/2 Food products	3 991	2 863	5 814	8 265
313 Beverages	549	359	678	1 078
314 Tobacco products	199	123	310	387
321 Textiles	1 445	937	2 065	2 317
322 Wearing apparel	671	392	914	1 231
323 Leather and fur products	136	*24*	*38*	*31*
324 Footwear	67	*11*	*18*	*10*
331 Wood and wood products	226	131	503	335
332 Furniture and fixtures	1 123	614	1 613	1 960
341 Paper and paper products	612	441	1 042	1 155
342 Printing and publishing	926	602	1 677	2 458
351 Industrial chemicals	2 401	2 250	4 483	6 189
352 Other chemical products	665	467	1 199	2 026
353 Petroleum refineries	*499*	*214*	*409*	*467*
354 Miscellaneous petroleum and coal products	*90*	*33*	*64*	*68*
355 Rubber products	193	130	272	341
356 Plastic products	819	*695*	*2 018*	*2 893*
361 Pottery, china and earthenware	107	*62*	*190*	*189*
362 Glass and glass products	516	*265*	*742*	*1 143*
369 Other non-metal mineral products	654	*331*	*851*	*1 111*
371 Iron and steel	2 294	985	2 305	2 519
372 Non-ferrous metals	487	417	1 140	972
381 Metal products	2 071	*1 206*	*3 190*	*3 826*
382 Non-electrical machinery	2 490	*1 605*	*3 458*	*3 812*
383 Electrical machinery	2 303	*1 430*	*3 360*	*4 210*
384 Transport equipment	1 892	*1 216*	*3 258*	*3 750*
385 Professional and scientific equipment	170	*102*	*159*	*244*
390 Other manufacturing industries	537	*325*	*444*	*721*

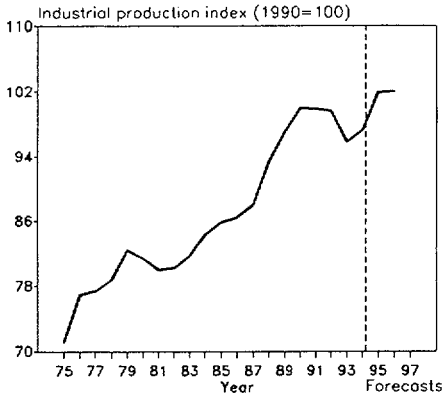
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

GDP per capita (1000$)/c



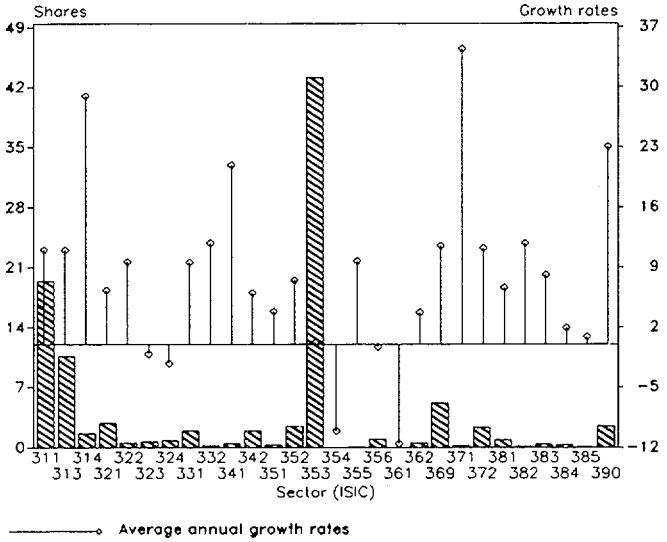
Manufacturing share in GDP, current factor pr. (%)

Industrial production index (1990=100)

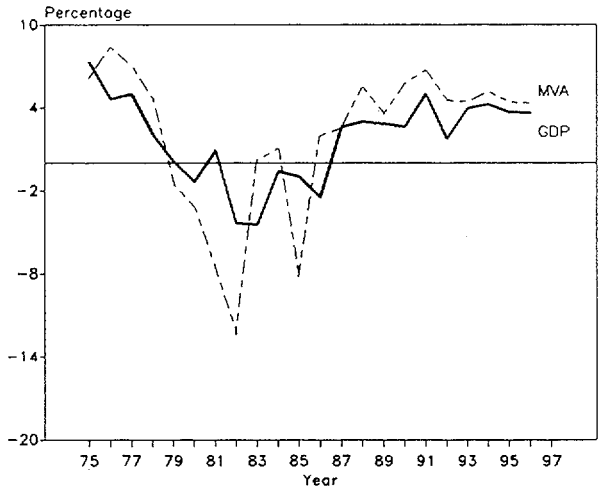


BOLIVIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



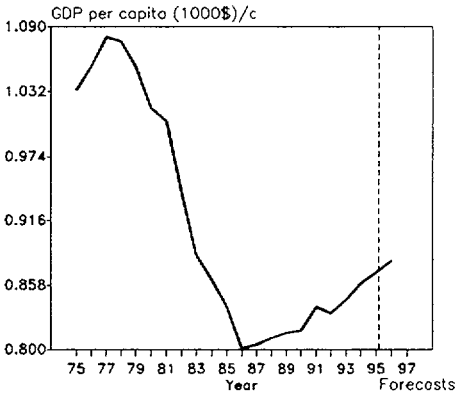
Annual growth rates of GDP and MVA (Constant 1990 prices)



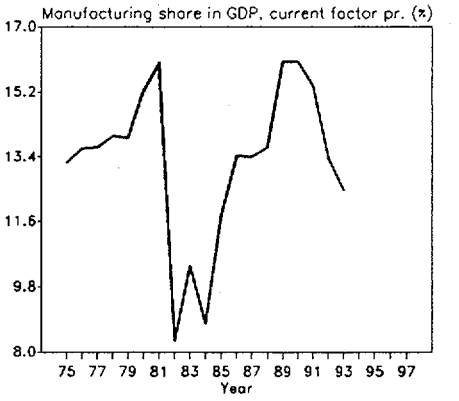
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	5 445	4 943	5 373	6 448
Per capita [na] (1990-dollars)	1 017	839	817	870
Manufacturing share [na] (%) (current factor prices)	15.2	11.8	*16.0*	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	953	715	862	*1 100*
Industrial production index (1990=100)	117	87	100	118
Value added (millions of dollars)	619	394	640	*981*
Gross output (millions of dollars)	1 698	1 078	1 417	*2 310*
Employment (thousands)	43	28	28	*36*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	64	64	55	*58*
Wages and salaries including supplements (%)	8	6	6	*6*
Gross operating surplus and net taxes (%)	28	31	39	*37*
-PRODUCTIVITY: (dollars)				
Gross output per worker	38 348	38 228	38 597	*49 820*
Value added per worker	13 977	13 947	17 407	*21 181*
Average wage (including supplements)	3 147	2 129	3 149	*3 844*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	20.53	31.15	43.96	*31.63*
as a percentage of 1970-1975 structural change	100	152	214	*154*
MVA growth rate perer unit of structural change	4.23	1.15	0.18	1.66
Degree of specialization	26.0	40.5	46.2	37.6
-VALUE ADDED: (millions of dollars)				
311/2 Food products	93	193	104	*210*
313 Beverages	57	34	51	*107*
314 Tobacco products	21	4	5	*25*
321 Textiles	34	26	18	*29*
322 Wearing apparel	6	3	3	*5*
323 Leather and fur products	5	2	5	*6*
324 Footwear	24	14	8	*7*
331 Wood and wood products	15	5	11	*21*
332 Furniture and fixtures	2	1	1	*2*
341 Paper and paper products	-	1	1	*4*
342 Printing and publishing	14	9	12	*18*
351 Industrial chemicals	3	2	2	*3*
352 Other chemical products	16	11	15	*25*
353 Petroleum refineries	159	29	336	*371*
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	1	-	-	-
356 Plastic products	11	4	7	*8*
361 Pottery, china and earthenware	*1*	-	-	-
362 Glass and glass products	6	6	3	*5*
369 Other non-metal mineral products	21	28	29	*59*
371 Iron and steel	1	1	-	*2*
372 Non-ferrous metals	89	14	10	*24*
381 Metal products	14	4	5	*8*
382 Non-electrical machinery	16	-	1	*1*
383 Electrical machinery	3	1	2	*4*
384 Transport equipment	5	-	2	*2*
385 Professional and scientific equipment	1	1	1	*1*
390 Other manufacturing industries	2	-	8	*31*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

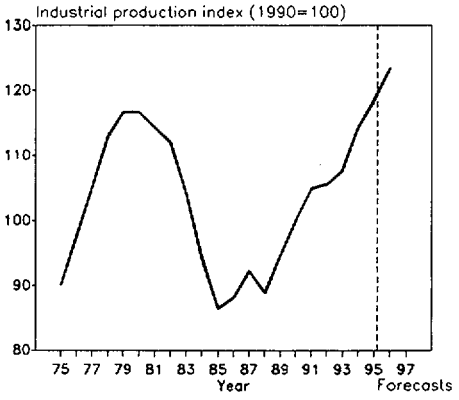
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

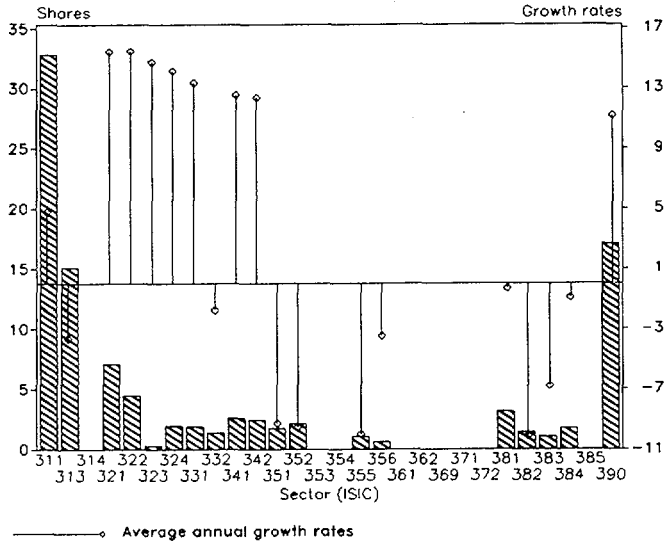


Industrial production index (1990=100)

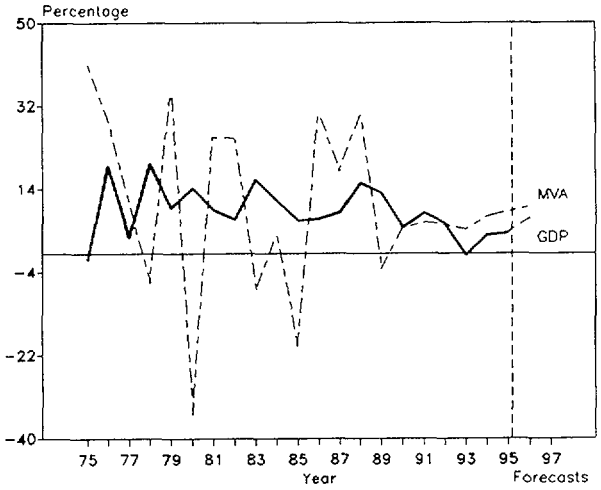


BOTSWANA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

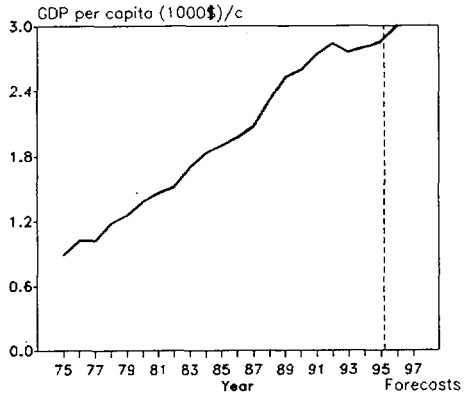


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

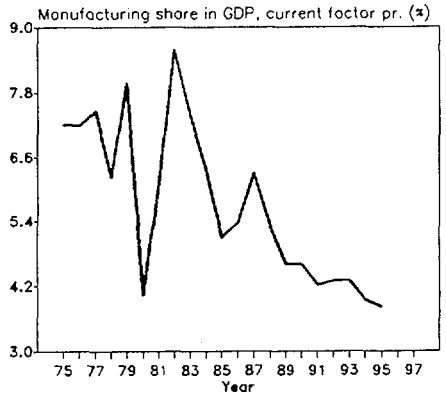
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	1 252	2 042	3 296	4 138
Per capita [na] (1990-dollars)	1 381	1 896	2 591	2 854
Manufacturing share [na] (%) (current factor prices)	4.0	5.1	4.6	*4.1*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	60	71	144	*202*
Industrial production index (1990=100)	45	*62*	100	*140*
Value added (millions of dollars)	41	46	*146*	*212*
Gross output (millions of dollars)	149	169	*565*	*894*
Employment (thousands)	5	10	24	24
-PROFITABILITY: (*in percent of gross output*)				
Intermediate input (%)	73	73	*74*	*76*
Wages and salaries including supplements (%)	*14*	*11*	*10*	*12*
Gross operating surplus (%)	*14*	*16*	*16*	*12*
-PRODUCTIVITY: (dollars)				
Gross output per worker	27 102	16 581	*23 250*	*37 028*
Value added per worker	7 445	4 518	*5 997*	*8 768*
Average wage (including supplements)	*3 664*	*1 880*	*2 337*	*4 508*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*2.93*	*13.56*	*14.14*	*11.82*
as a percentage of 1970-1975 structural change	*100*	*462*	*482*	*403*
MVA growth rate perer unit of structural change	11.65	2.56	5.48	4.69
Degree of specialization	33.5	26.7	24.4	26.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	13	14	*46*	*69*
313 Beverages	4	10	*30*	*27*
314 Tobacco products	-	-	-	-
321 Textiles	*4*	*2*	*7*	*17*
322 Wearing apparel	*2*	*1*	*4*	*11*
323 Leather and fur products	-	-	-	*1*
324 Footwear	*1*	-	*2*	*5*
331 Wood and wood products	-	-	*2*	*5*
332 Furniture and fixtures	-	-	*3*	*3*
341 Paper and paper products	-	*1*	*3*	*6*
342 Printing and publishing	-	*1*	*3*	*6*
351 *Industrial chemicals*	-	*1*	*4*	*3*
352 Other chemical products	-	*1*	*5*	*3*
353 Petroleum refineries	-	-	-	-
354 Miscellaneous petroleum and coal products	-	-	-	-
355 *Rubber products*	-	*1*	*2*	*1*
356 Plastic products	-	-	*1*	*1*
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	-	-	-	-
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	-	-	-	-
381 Metal products	*1*	*2*	*5*	*5*
382 Non-electrical machinery	*1*	*1*	*3*	*2*
383 Electrical machinery	-	*1*	*2*	*2*
384 Transport equipment	*1*	*1*	*3*	*3*
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	12	8	*20*	*42*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

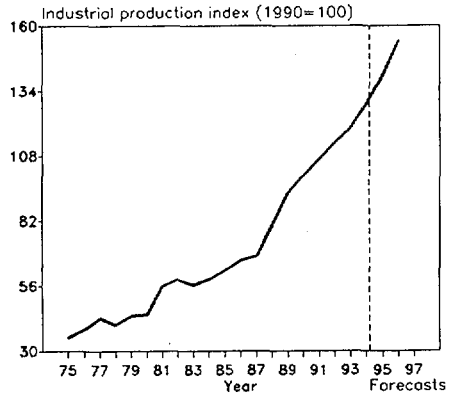
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

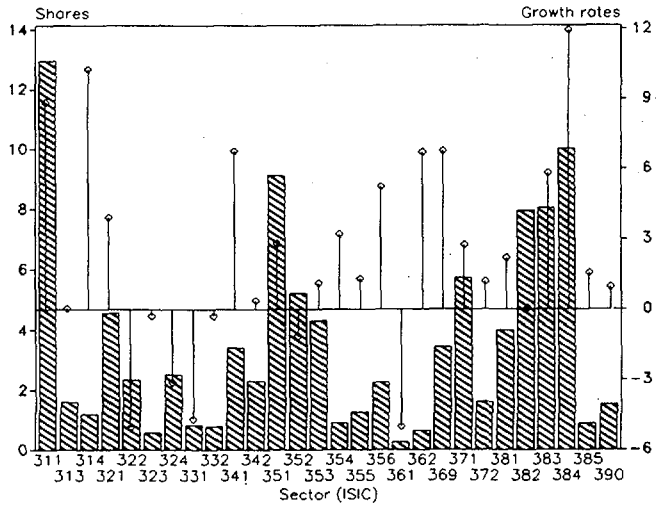


Industrial production index (1990=100)

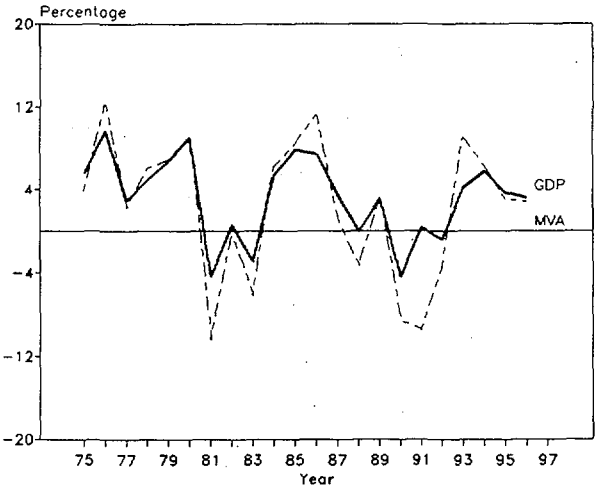


BRAZIL

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



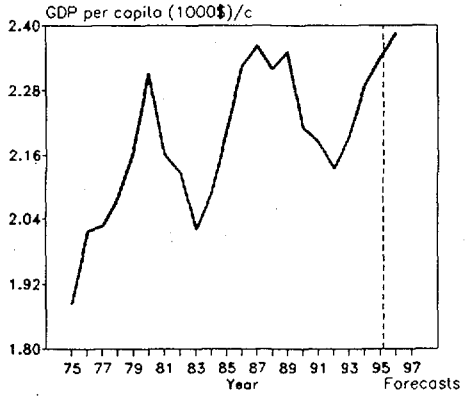
Annual growth rates of GDP and MVA (Constant 1990 prices)



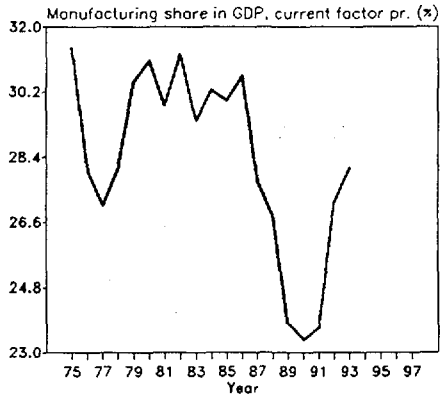
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	281 181	298 348	327 129	372 178
Per capita [na] (1990-dollars)	2 311	2 206	2 210	2 341
Manufacturing share [na] (%) (current factor prices)	31.1	30.0	23.3	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	76 534	73 707	75 289	*78 241*
Industrial production index (1990=100)	98	99	100	*111*
Value added (millions of dollars)	71 700	77 082	85 189	*277 242*
Gross output (millions of dollars)	189 076	174 341	175 803	*522 122*
Employment (thousands)	5 562	5 501	4 688	*4 816*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	62	56	52	*47*
Wages and salaries including supplements (%)	10	*9*	*11*	*12*
Gross operating surplus and net taxes (%)	28	*36*	*37*	*41*
-PRODUCTIVITY: (dollars)				
Gross output per worker	33 993	31 692	37 131	*107 588*
Value added per worker	12 891	14 012	17 992	*60 033*
Average wage (including supplements)	3 400	*2 756*	*4 230*	*12 599*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	8.01	8.81	8.68	*8.41*
as a percentage of 1970-1975 structural change	100	110	*108*	*105*
MVA growth rate perer unit of structural change	9.91	3.96	-0.04	-0.78
Degree of specialization	8.9	9.4	9.6	11.8
-VALUE ADDED: (millions of dollars)				
311/2 Food products	7 996	9 259	8 687	*38 022*
313 Beverages	1 375	957	1 388	*3 839*
314 Tobacco products	495	587	726	*3 459*
321 Textiles	4 860	4 586	3 862	*12 850*
322 Wearing apparel	2 307	2 639	*3 166*	*6 011*
323 Leather and fur products	309	464	*587*	*1 519*
324 Footwear	985	1 353	*2 604*	*5 687*
331 Wood and wood products	1 903	1 220	951	*2 025*
332 Furniture and fixtures	1 087	949	843	*2 133*
341 Paper and paper products	2 238	2 260	2 556	*9 882*
342 Printing and publishing	1 901	1 496	2 305	*6 202*
351 Industrial chemicals	3 428	*6 384*	*8 039*	*24 753*
352 Other chemical products	3 544	*4 517*	*5 319*	*13 093*
353 Petroleum refineries	3 075	*3 726*	*4 081*	*11 454*
354 Miscellaneous petroleum and coal products	1 216	*718*	*792*	*2 476*
355 Rubber products	941	1 420	1 059	*3 118*
356 Plastic products	1 994	1 742	1 847	*6 578*
361 Pottery, china and earthenware	200	844	*249*	*509*
362 Glass and glass products	558	525	*466*	*1 813*
369 Other non-metal mineral products	3 447	1 941	*2 553*	*9 950*
371 Iron and steel	4 128	4 927	*5 198*	*15 845*
372 Non-ferrous metals	1 115	1 564	*1 496*	*4 106*
381 Metal products	3 599	3 063	*3 711*	*11 108*
382 Non-electrical machinery	7 171	7 092	8 355	*21 713*
383 Electrical machinery	4 536	5 831	6 341	*23 167*
384 Transport equipment	5 625	4 954	5 652	*29 405*
385 Professional and scientific equipment	453	910	*861*	*2 424*
390 Other manufacturing industries	1 216	1 154	*1 497*	*4 131*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

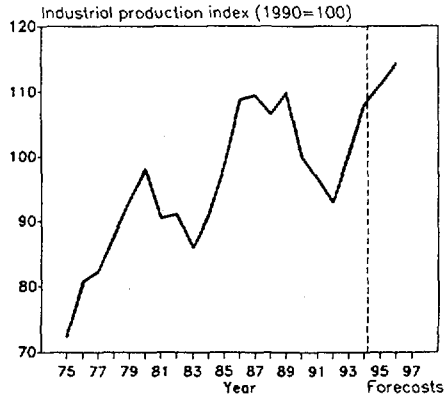
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

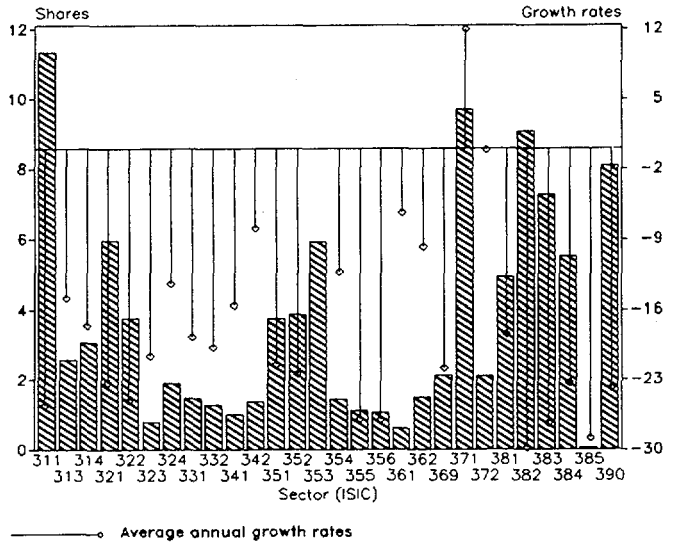


Industrial production index (1990=100)

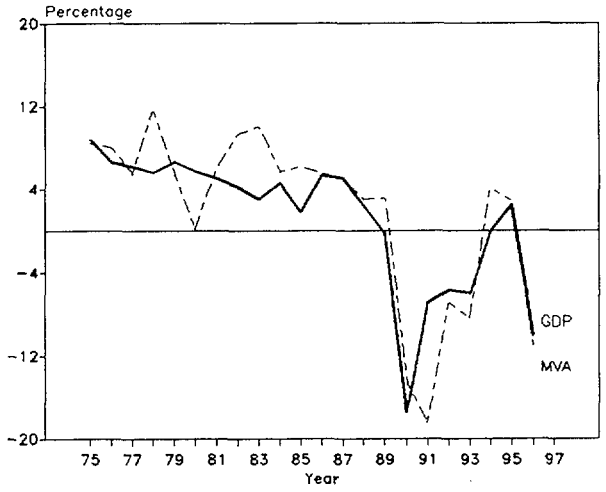


BULGARIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



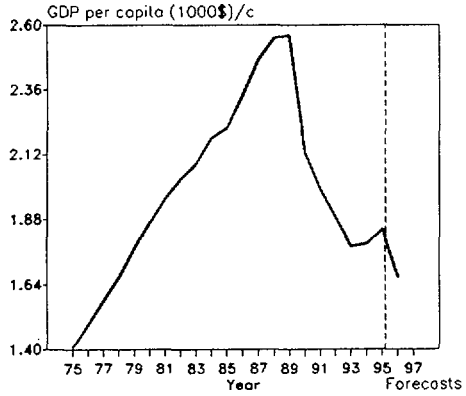
Annual growth rates of GDP and MVA (Constant 1990 prices)



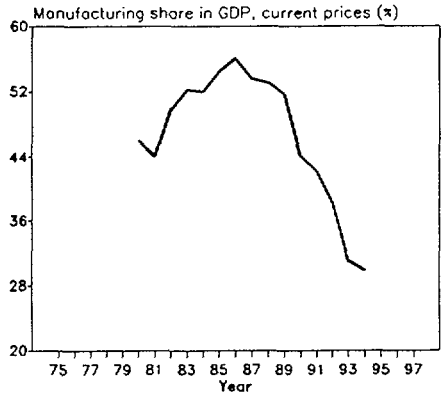
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	16 571	19 885	18 543	15 685
Per capita [na] (1990-dollars)	1 870	2 219	2 127	1 843
Manufacturing share [na] (%) (current factor prices)	46.0	54.4	44.0	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	5 715	8 153	8 166	*6 049*
Industrial production index (1990=100)	86	114	100	*74*
Value added (millions of dollars)	11 771	20 759	10 227	*5 498*
Gross output (millions of dollars)	*25 818*	*44 413*	21 453	*10 843*
Employment (thousands)	1 217	1 256	1 320	*694*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*54*	*53*	52	*49*
Wages and salaries including supplements (%)	*8*	*7*	*9*	*9*
Gross operating surplus and net taxes (%)	*38*	*40*	*38*	*41*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*21 221*	*35 355*	16 252	*15 613*
Value added per worker	9 675	16 525	7 748	*7 916*
Average wage (including supplements)	*1 635*	*2 451*	*1 527*	*1 458*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*15.59*	14.79	5.46	*15.86*
as a percentage of 1970-1975 structural change	*100*	95	35	*102*
MVA growth rate perer unit of structural change	5.98	5.19	2.29	-2.59
Degree of specialization	12.9	13.3	14.3	11.7
-VALUE ADDED: (millions of dollars)				
311/2 Food products	1 870	3 093	1 429	*511*
313 Beverages	308	504	230	*184*
314 Tobacco products	426	627	260	*171*
321 Textiles	904	1 421	760	*324*
322 Wearing apparel	517	967	518	*192*
323 Leather and fur products	84	179	91	*48*
324 Footwear	156	332	169	*149*
331 Wood and wood products	248	384	142	*86*
332 Furniture and fixtures	233	365	137	*77*
341 Paper and paper products	119	186	84	*64*
342 Printing and publishing	83	146	86	*109*
351 Industrial chemicals	404	671	264	*104*
352 Other chemical products	291	585	292	*107*
353 Petroleum refineries	..	..	..	..
354 Miscellaneous petroleum and coal products	126	179	93	*89*
355 Rubber products	227	350	134	*39*
356 Plastic products	110	234	123	*31*
361 Pottery, china and earthenware	45	63	38	*52*
362 Glass and glass products	121	178	109	*123*
369 Other non-metal mineral products	469	685	242	*116*
371 Iron and steel	447	636	285	*1 020*
372 Non-ferrous metals	189	342	105	*217*
381 Metal products	484	946	529	*326*
382 Non-electrical machinery	*1 656*	*2 924*	*1 443*	*361*
383 Electrical machinery	743	1 585	968	*297*
384 Transport equipment	567	1 194	714	*304*
385 Professional and scientific equipment	*6*	*14*	*8*	*2*
390 Other manufacturing industries	937	1 967	974	*396*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

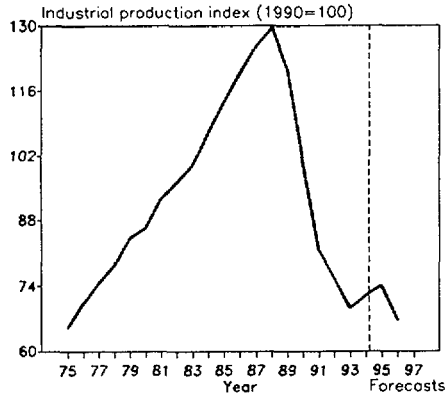
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)

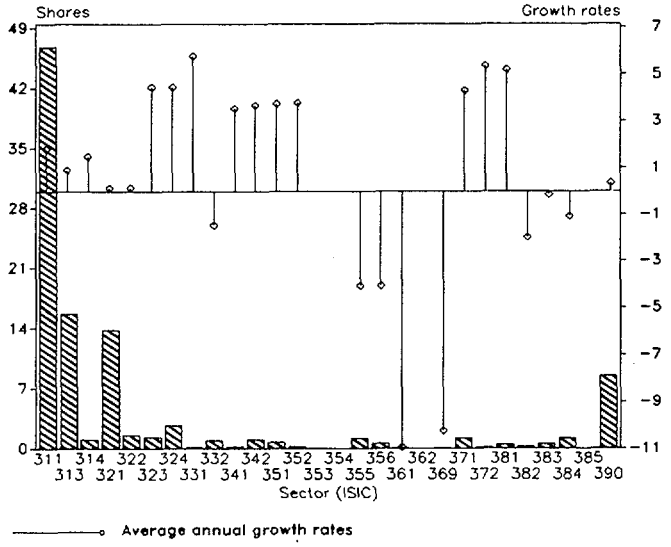


Industrial production index (1990=100)

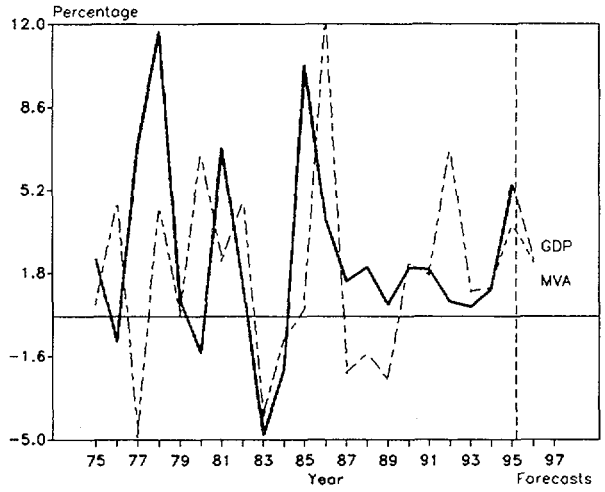


BURKINA FASO

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

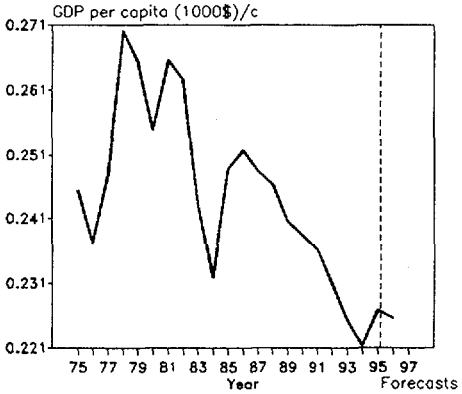


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

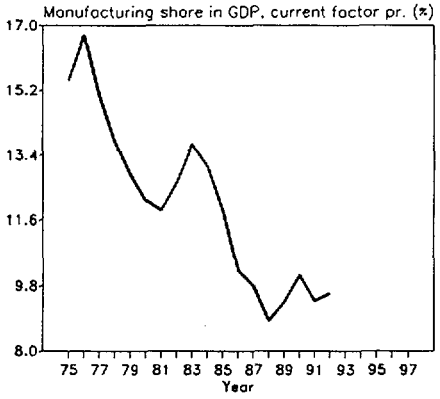
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	1 760	1 962	2 165	2 376
Per capita [na] (1990-dollars)	255	249	238	227
Manufacturing share [na] (%) (current factor prices)	12.2	11.9	10.1	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	236	241	258	*298*
Industrial production index (1990=100)	85	92	100	*102*
Value added (millions of dollars)	144	*123*	*206*	*162*
Gross output (millions of dollars)	391	*323*	*609*	*530*
Employment (thousands)	8	9	9	*10*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	63	*62*	*66*	*69*
Wages and salaries including supplements (%)	8	*7*	*8*	*8*
Gross operating surplus (%)	28	*31*	*26*	*23*
-PRODUCTIVITY: (dollars)				
Gross output per worker	47 326	*36 551*	*64 282*	*51 817*
Value added per worker	17 465	*13 949*	*21 768*	*15 869*
Average wage (including supplements)	4 021	*2 664*	*4 920*	*4 050*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	8.07	*7.51*	*4.81*	*2.23*
as a percentage of 1970-1975 structural change	100	*93*	*60*	*28*
MVA growth rate perer unit of structural change	1.73	1.75	2.90	2.30
Degree of specialization	36.8	42.1	42.0	42.6
-VALUE ADDED: (millions of dollars)				
311/2 Food products	55	*56*	*94*	*76*
313 Beverages	29	*20*	*32*	*25*
314 Tobacco products	1	*1*	2	2
321 Textiles	20	*18*	*31*	*22*
322 Wearing apparel	2	2	3	2
323 Leather and fur products	2	*1*	2	2
324 Footwear	3	*3*	5	5
331 Wood and wood products	-	-	-	-
332 Furniture and fixtures	2	2	2	2
341 Paper and paper products	-	-	-	-
342 Printing and publishing	1	*1*	2	2
351 Industrial chemicals	1	*1*	*1*	*1*
352 Other chemical products	-	-	-	-
353 Petroleum refineries	-	-	-	-
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	4	2	3	2
356 Plastic products	2	*1*	*1*	*1*
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	-	-	-	-
371 Iron and steel	*1*	*1*	2	2
372 Non-ferrous metals	-	-	-	-
381 Metal products	1	-	*1*	*1*
382 Non-electrical machinery	1	-	*1*	-
383 Electrical machinery	1	*1*	*1*	*1*
384 Transport equipment	3	*1*	3	2
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	12	*11*	*18*	*13*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

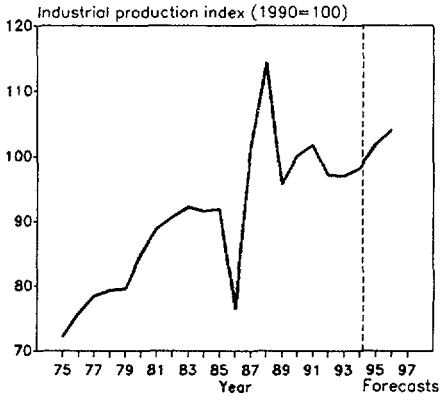
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

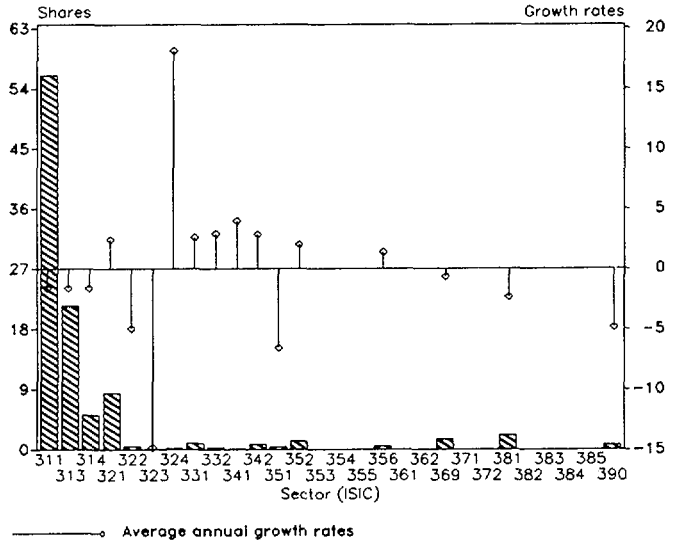


Industrial production index (1990=100)

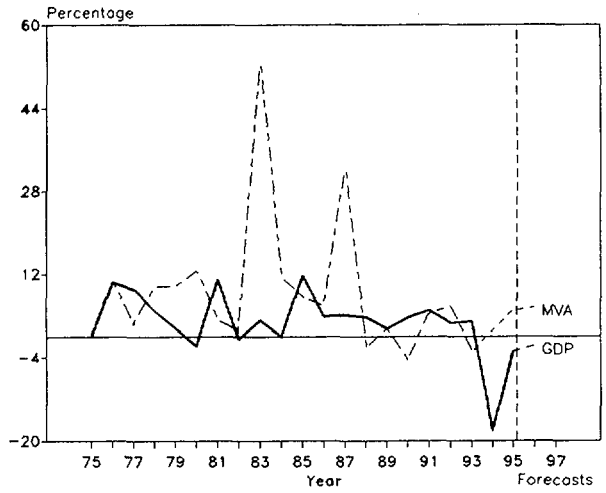


BURUNDI

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

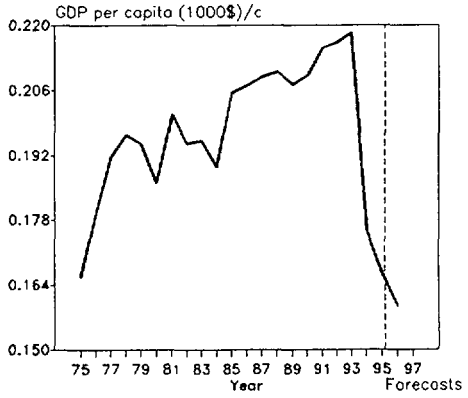


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

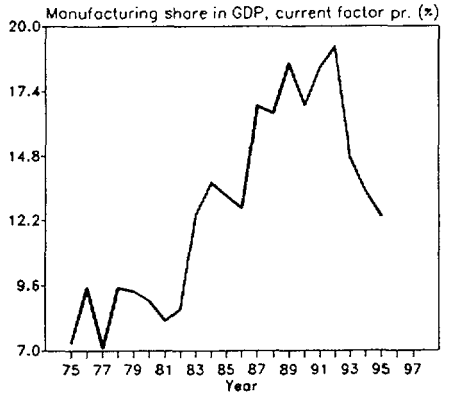
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	768	976	1 148	1 010
Per capita [na] (1990-dollars)	186	206	209	167
Manufacturing share [na] (%) (current factor prices)	9.0	13.2	16.8	*12.6*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	76	143	189	*213*
Industrial production index (1990=100)	91	93	100	*86*
Value added (millions of dollars)	56	*97*	105	*117*
Gross output (millions of dollars)	95	*191*	*209*	*221*
Employment (thousands)	3	*5*	7	*8*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	41	*49*	*50*	*47*
Wages and salaries including supplements (%)	9	*8*	*10*	*12*
Gross operating surplus and net taxes (%)	51	*43*	*40*	*41*
-PRODUCTIVITY: (dollars)				
Gross output per worker	27 640	*38 750*	*31 824*	*27 074*
Value added per worker	16 370	*19 987*	16 048	*14 582*
Average wage (including supplements)	2 357	*3 188*	3 303	*3 143*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	19.31	*16.94*	*6.89*	*3.08*
as a percentage of 1970-1975 structural change	100	*88*	*36*	*16*
MVA growth rate perer unit of structural change	1.43	2.95	4.64	1.23
Degree of specialization	41.2	48.7	49.3	49.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	30	*53*	59	*64*
313 Beverages	11	*20*	23	*25*
314 Tobacco products	3	*5*	5	*6*
321 Textiles	2	*9*	9	*11*
322 Wearing apparel	3	*1*	1	-
323 Leather and fur products	1	-	-	-
324 Footwear	-	-	-	-
331 Wood and wood products	-	-	*1*	*1*
332 Furniture and fixtures	-	-	-	-
341 Paper and paper products	-	-	-	-
342 Printing and publishing	1	*1*	1	*1*
351 Industrial chemicals	1	*1*	-	-
352 Other chemical products	-	*1*	1	*2*
353 Petroleum refineries	-	-	-	-
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	-	-	-	-
356 Plastic products	-	*1*	-	*1*
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	1	2	2	2
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	-	-	-	-
381 Metal products	2	*3*	2	*3*
382 Non-electrical machinery	-	-	-	-
383 Electrical machinery	-	-	-	-
384 Transport equipment	-	-	-	-
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	-	-	*1*	*1*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

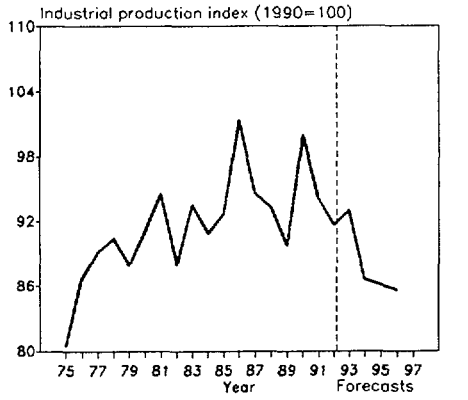
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

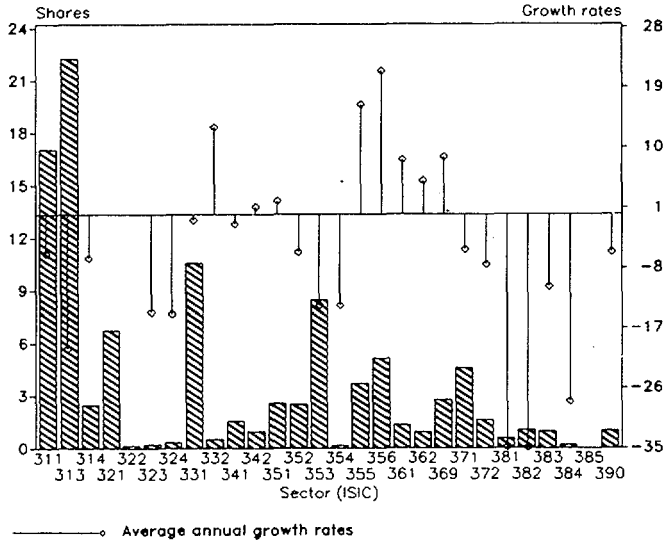


Industrial production index (1990=100)

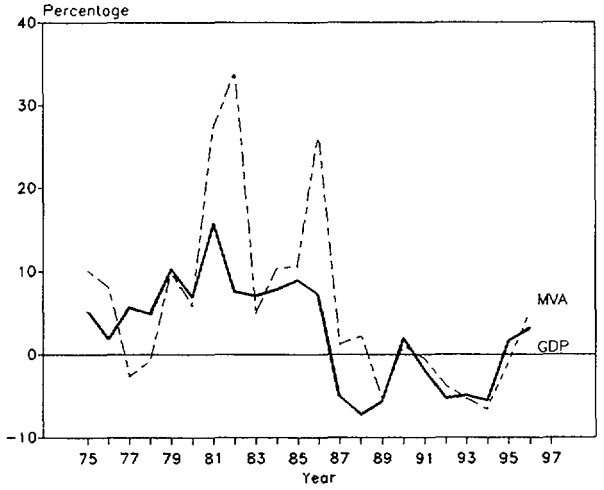


CAMEROON

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

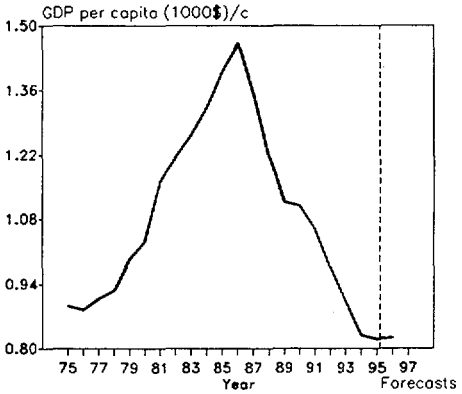


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

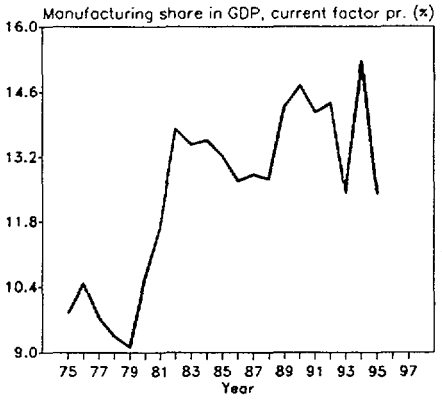
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	8 936	13 991	12 735	10 826
Per capita [na] (1990-dollars)	1 032	1 402	1 109	821
Manufacturing share [na] (%) (current factor prices)	10.6	13.2	14.7	*12.4*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	660	1 432	1 781	*1 488*
Industrial production index (1990=100)	87	108	100	*80*
Value added (millions of dollars)	*692*	*665*	826	539
Gross output (millions of dollars)	*1 708*	*1 450*	2 530	1 796
Employment (thousands)	*51*	*66*	50	51
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*60*	*55*	67	70
Wages and salaries including supplements (%)	*14*	*15*	*15*	*10*
Gross operating surplus and net taxes (%)	*26*	*30*	*18*	*20*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*33 434*	*21 925*	50 106	35 032
Value added per worker	*13 583*	*9 906*	16 324	10 505
Average wage (including supplements)	*4 794*	*3 295*	*7 281*	*3 471*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*25.22*	*19.77*	*22.65*	*37.15*
as a percentage of 1970-1975 structural change	*100*	*78*	*90*	*147*
MVA growth rate perer unit of structural change	2.17	2.32	-0.06	-0.58
Degree of specialization	24.3	23.5	23.6	21.4
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*187*	*129*	185	103
313 Beverages	*183*	*177*	294	56
314 Tobacco products	*24*	*21*	23	13
321 Textiles	*36*	*51*	- 104	90
322 Wearing apparel	*10*	*8*	-9	2
323 Leather and fur products	*7*	*3*	*3*	*1*
324 Footwear	*10*	*4*	*5*	*2*
331 Wood and wood products	*30*	*63*	84	62
332 Furniture and fixtures	*13*	*16*	3	5
341 Paper and paper products	*17*	*7*	11	7
342 Printing and publishing	*20*	*7*	6	5
351 Industrial chemicals	*10*	*19*	17	*15*
352 Other chemical products	*12*	*20*	21	*11*
353 Petroleum refineries	-	*10*	*112*	*35*
354 Miscellaneous petroleum and coal products	-	-	*2*	*1*
355 Rubber products	*2*	*5*	*12*	*23*
356 Plastic products	*16*	*16*	*14*	*34*
361 Pottery, china and earthenware	*6*	*5*	8	*10*
362 Glass and glass products	*4*	*4*	6	*6*
369 Other non-metal mineral products	*12*	*11*	16	*21*
371 Iron and steel	*24*	*29*	38	22
372 Non-ferrous metals	*19*	*24*	15	*7*
381 Metal products	*13*	*9*	*17*	*1*
382 Non-electrical machinery	*18*	*13*	*32*	*2*
383 Electrical machinery	*4*	*3*	9	4
384 Transport equipment	*3*	*6*	3	-
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	*11*	*5*	6	4

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

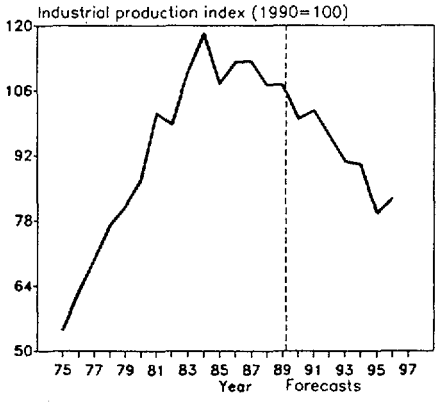
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

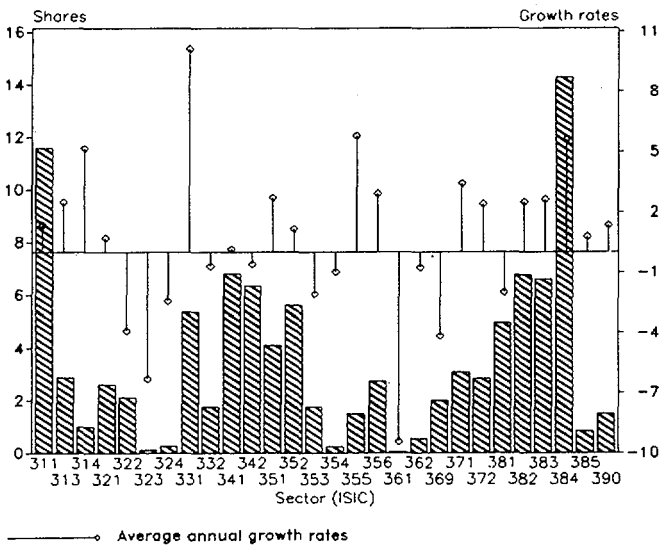


Industrial production index (1990=100)

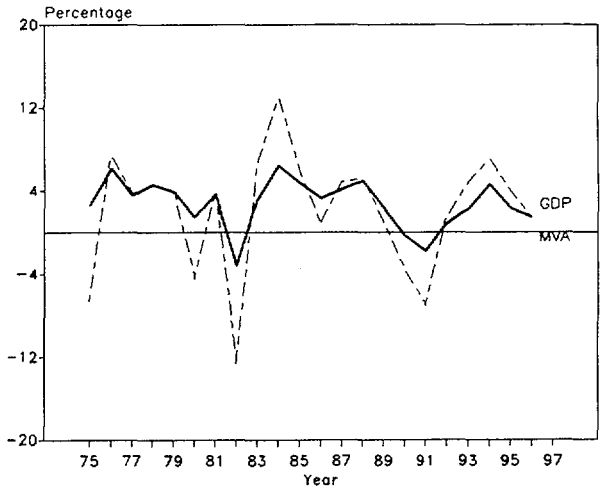


CANADA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



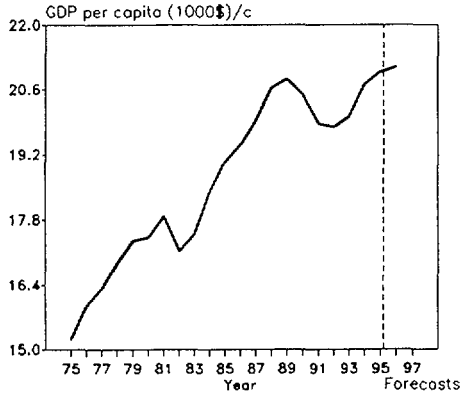
Annual growth rates of GDP and MVA (Constant 1990 prices)



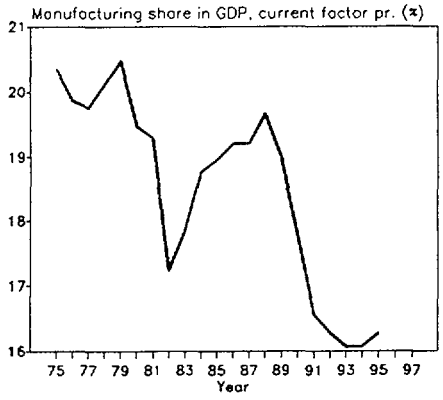
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	428 362	494 240	569 433	616 867
Per capita [na] (1990-dollars)	17 418	19 052	20 490	20 980
Manufacturing share [na] (%) (current factor prices)	19.5	19.0	17.8	*16.3*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	73 145	83 870	90 399	99 070
Industrial production index (1990=100)	83	92	100	111
Value added (millions of dollars)	59 803	74 209	112 195	*119 348*
Gross output (millions of dollars)	167 211	211 017	295 448	315 684
Employment (thousands)	1 853	1 765	1 867	*1 681*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	64	65	62	*62*
Wages and salaries including supplements (%)	17	16	17	*15*
Gross operating surplus and net taxes (%)	19	19	21	*23*
-PRODUCTIVITY: (dollars)				
Gross output per worker	89 995	119 306	158 104	*180 485*
Value added per worker	32 187	41 957	60 039	*68 552*
Average wage (including supplements)	15 296	19 168	27 543	*28 001*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	4.03	5.96	6.09	*5.58*
as a percentage of 1970-1975 structural change	100	148	151	*139*
MVA growth rate perer unit of structural change	5.66	2.28	1.08	1.52
Degree of specialization	10.3	11.0	11.5	12.7
-VALUE ADDED: (millions of dollars)				
311/2 Food products	6 142	8 001	12 701	*12 939*
313 Beverages	1 660	2 189	2 948	*3 222*
314 Tobacco products	479	608	977	*1 247*
321 Textiles	2 130	2 152	2 974	*2 964*
322 Wearing apparel	1 694	1 933	2 828	*2 190*
323 Leather and fur products	154	154	163	*113*
324 Footwear	299	344	334	*288*
331 Wood and wood products	2 968	3 236	4 465	*7 503*
332 Furniture and fixtures	1 044	1 332	2 245	*2 020*
341 Paper and paper products	5 714	5 410	8 750	*8 341*
342 Printing and publishing	3 054	4 517	7 671	*6 930*
351 Industrial chemicals	2 164	2 570	4 808	*5 237*
352 Other chemical products	2 421	3 755	6 256	*6 275*
353 Petroleum refineries	1 531	1 867	2 271	*1 958*
354 Miscellaneous petroleum and coal products	111	132	291	*259*
355 Rubber products	873	1 069	1 397	*1 831*
356 Plastic products	873	1 654	2 897	*3 253*
361 Pottery, china and earthenware	43	29	69	*38*
362 Glass and glass products	385	578	643	*577*
369 Other non-metal mineral products	1 497	1 713	2 803	*2 115*
371 Iron and steel	2 652	2 906	3 231	*3 807*
372 Non-ferrous metals	2 190	2 284	3 222	*3 523*
381 Metal products	4 414	4 363	6 454	*5 492*
382 Non-electrical machinery	3 952	4 912	7 576	*8 248*
383 Electrical machinery	3 849	4 531	7 465	*7 939*
384 Transport equipment	5 911	10 088	14 124	*18 376*
385 Professional and scientific equipment	667	659	926	*929*
390 Other manufacturing industries	932	1 223	1 706	*1 735*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

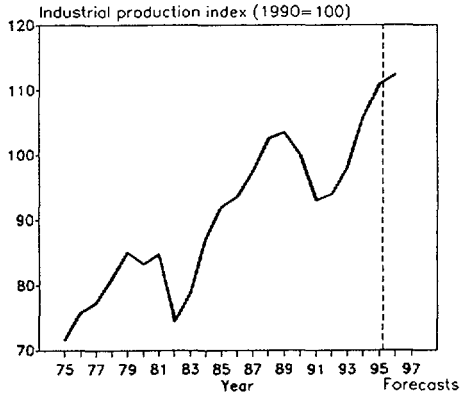
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

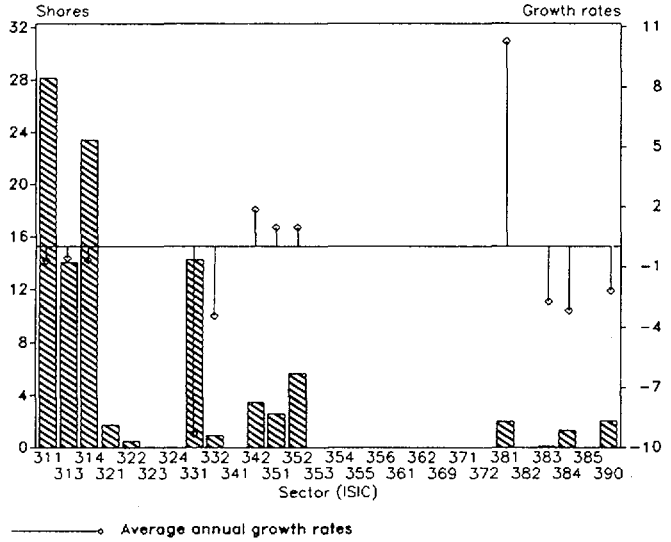


Industrial production index (1990=100)

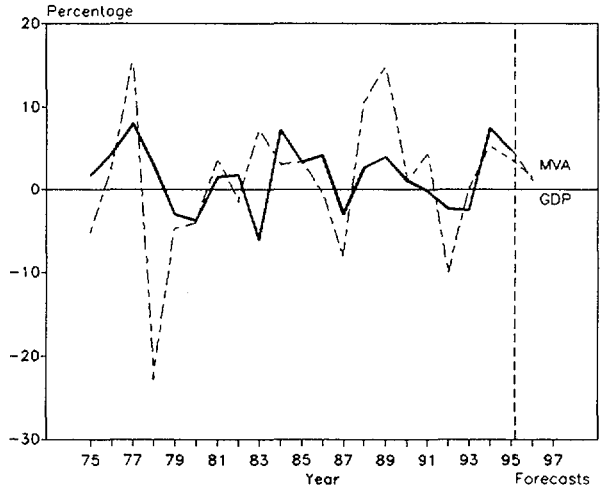


CENTRAL AFRICAN REPUBLIC

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

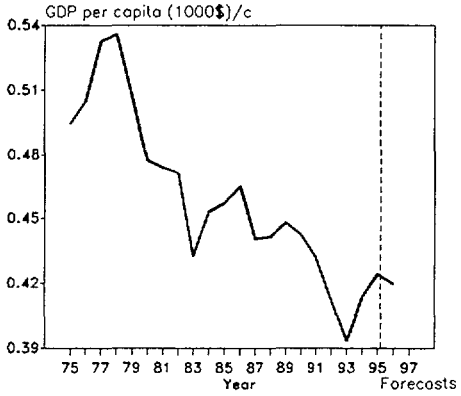


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

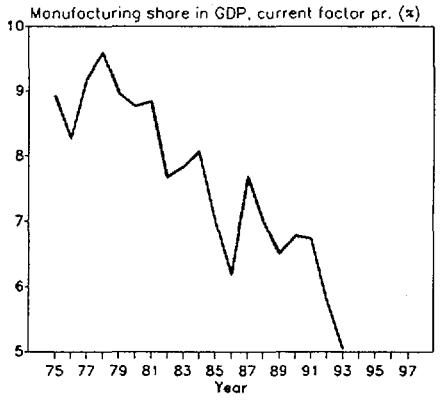
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	1 104	1 187	1 296	1 388
Per capita [na] (1990-dollars)	477	457	442	424
Manufacturing share [na] (%) (current factor prices)	8.8	7.0	6.8	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	65	76	89	*90*
Industrial production index (1990=100)	104	109	100	*102*
Value added (millions of dollars)	*35*	33	62	*36*
Gross output (millions of dollars)	*98*	108	165	*104*
Employment (thousands)	*6*	8	5	*4*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*64*	70	62	*65*
Wages and salaries including supplements (%)	*16*	*18*	*15*	*18*
Gross operating surplus and net taxes (%)	*19*	*12*	*22*	*17*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*16 613*	13 858	30 521	*22 122*
Value added per worker	*5 933*	4 157	11 454	*7 782*
Average wage (including supplements)	*2 703*	*2 428*	*4 654*	*4 640*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*16.37*	*22.74*	17.13	*10.90*
as a percentage of 1970-1975 structural change	*100*	*139*	105	*67*
MVA growth rate perer unit of structural change	-1.17	0.03	1.41	-0.47
Degree of specialization	23.2	27.1	26.0	20.9
-VALUE ADDED: (millions of dollars)				
311/2 Food products	5	8	15	*10*
313 Beverages	3	4	8	*5*
314 Tobacco products	4	6	13	*8*
321 Textiles	*4*	-	3	-
322 Wearing apparel	*1*	-	*1*	-
323 Leather and fur products	-	-	-	-
324 Footwear	-	-	-	-
331 Wood and wood products	*11*	8	12	*5*
332 Furniture and fixtures	-	1	1	*1*
341 Paper and paper products	-	-	-	..
342 Printing and publishing	1	2	3	*2*
351 Industrial chemicals	1	1	1	*1*
352 Other chemical products	2	1	3	*2*
353 Petroleum refineries	-	-	-	-
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	-	-	-	-
356 Plastic products	-	-	-	-
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	-	-	-	-
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	-	-	-	-
381 Metal products	1	-	-	*1*
382 Non-electrical machinery	-	-	-	..
383 Electrical machinery	-	-	-	-
384 Transport equipment	2	1	1	*1*
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	-	1	1	*1*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

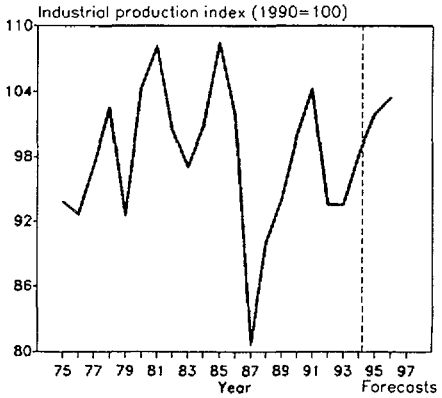
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

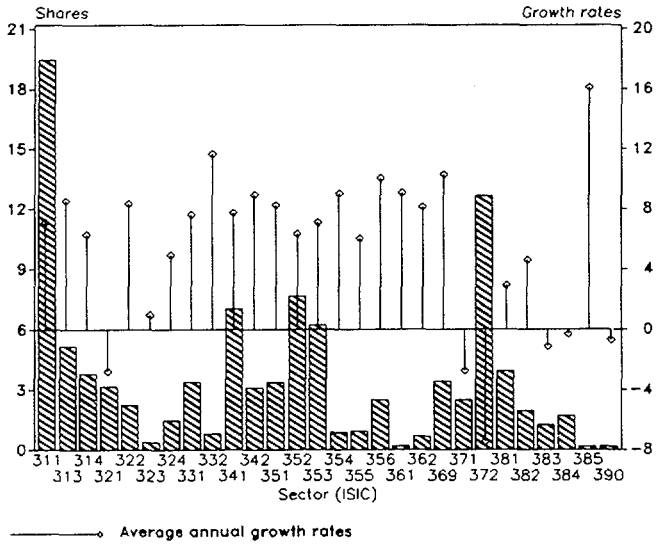


Industrial production index (1990=100)

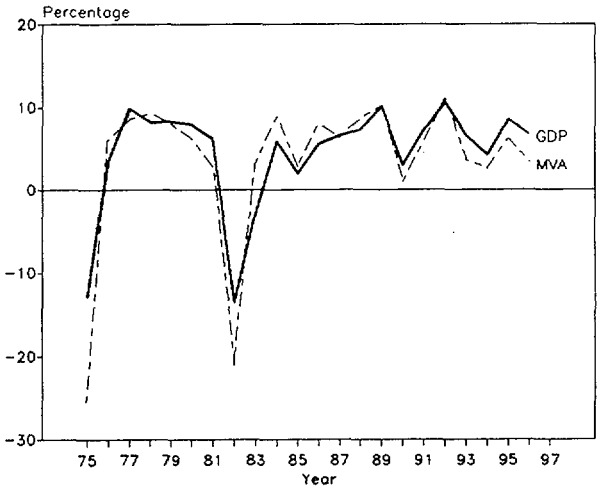


CHILE

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

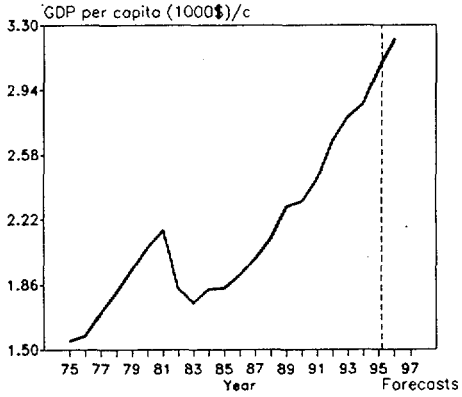


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

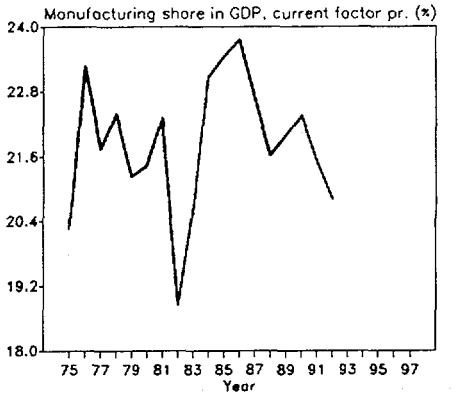
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	23 029	22 181	30 387	43 522
Per capita [na] (1990-dollars)	2 066	1 841	2 320	3 063
Manufacturing share [na] (%) (current factor prices)	21.4	23.4	*22.4*	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	4 987	4 661	6 456	8 545
Industrial production index (1990=100)	81	79	100	131
Value added (millions of dollars)	4 991	4 713	8 757	*15 929*
Gross output (millions of dollars)	10 790	10 477	21 215	*37 013*
Employment (thousands)	206	185	298	*344*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	54	55	59	*57*
Wages and salaries including supplements (%)	*9*	6	7	*9*
Gross operating surplus and net taxes (%)	*38*	39	34	*34*
-PRODUCTIVITY: (dollars)				
Gross output per worker	51 994	56 380	70 919	*107 243*
Value added per worker	24 050	25 363	29 274	*46 259*
Average wage (including supplements)	*4 444*	3 499	4 861	*9 322*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	17.60	13.61	10.02	*10.76*
as a percentage of 1970-1975 structural change	100	77	57	*61*
MVA growth rate perer unit of structural change	0.16	0.30	3.58	3.21
Degree of specialization	16.0	20.4	17.0	14.5
-VALUE ADDED: (millions of dollars)				
311/2 Food products	827	805	1 543	*3 253*
313 Beverages	289	177	374	*854*
314 Tobacco products	214	205	303	*612*
321 Textiles	234	162	333	*430*
322 Wearing apparel	111	83	163	*383*
323 Leather and fur products	22	18	37	*61*
324 Footwear	77	51	121	*235*
331 Wood and wood products	153	143	270	*584*
332 Furniture and fixtures	37	14	53	*141*
341 Paper and paper products	281	278	561	*1 238*
342 Printing and publishing	182	104	224	*529*
351 Industrial chemicals	55	94	247	*555*
352 Other chemical products	324	289	617	*1 242*
353 Petroleum refineries	184	277	480	*1 000*
354 Miscellaneous petroleum and coal products	27	47	69	*161*
355 Rubber products	60	49	72	*153*
356 Plastic products	50	63	178	*459*
361 Pottery, china and earthenware	14	9	9	*22*
362 Glass and glass products	38	27	51	*118*
369 Other non-metal mineral products	146	115	218	*578*
371 Iron and steel	188	226	284	*359*
372 Non-ferrous metals	965	1 175	1 716	*1 555*
381 Metal products	181	130	366	*635*
382 Non-electrical machinery	96	50	168	*324*
383 Electrical machinery	90	61	125	*171*
384 Transport equipment	127	50	153	*227*
385 Professional and scientific equipment	5	4	9	*30*
390 Other manufacturing industries	13	7	14	*21*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

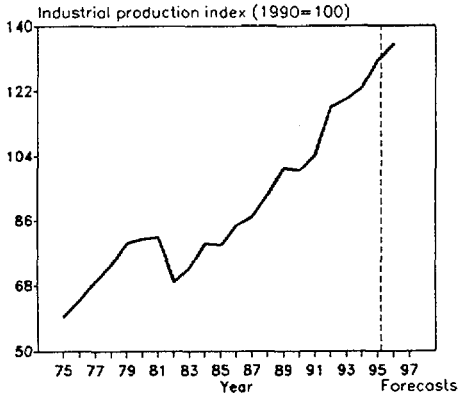
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

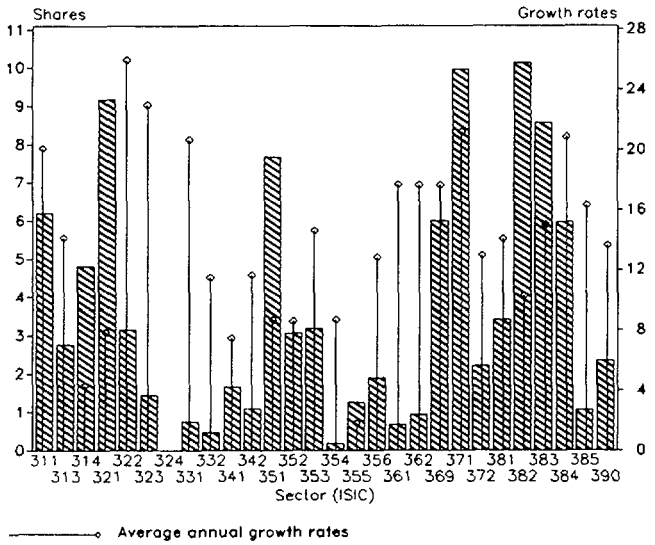


Industrial production index (1990=100)

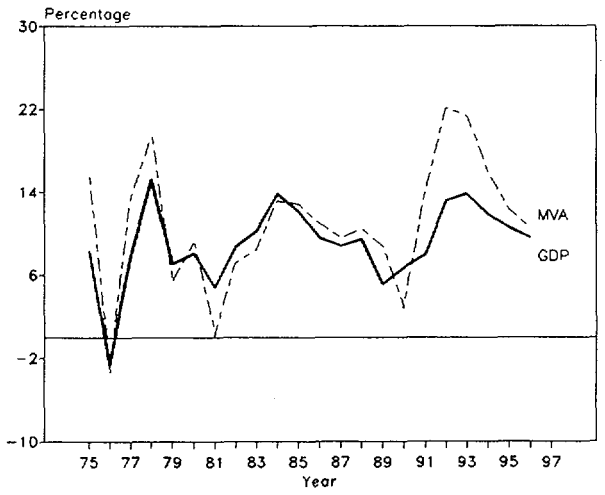


CHINA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)

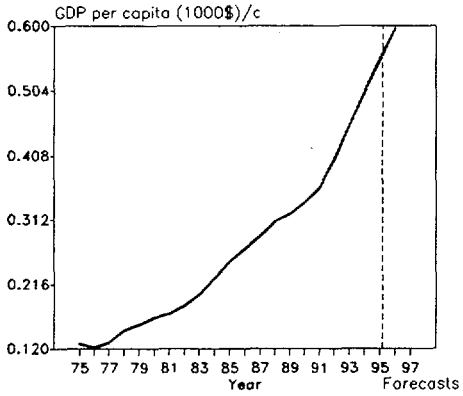


Annual growth rates of GDP and MVA (Constant 1990 prices)

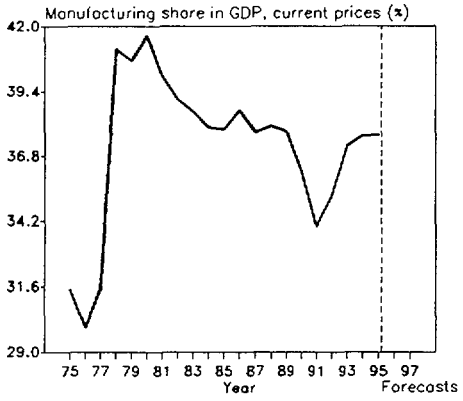


	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	163 088	261 693	382 748	658 625
Per capita [na] (1990-dollars)	166	249	337	549
Manufacturing share [na] (%) (current factor prices)	41.6	37.9	36.2	37.6
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	*58 705*	*87 104*	*130 329*	*285 700*
Industrial production index (1990=100)	..	..	..	..
Value added (millions of dollars)	*88 577*	78 380	90 259	*186 952*
Gross output (millions of dollars)	*232 460*	246 331	349 604	*676 752*
Employment (thousands)	24 390	39 957	53 165	*55 994*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*62*	68	74	*73*
Wages and salaries including supplements (%)	*6*	*5*	*5*	*4*
Gross operating surplus and net taxes (%)	*32*	27	*21*	*23*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*9 531*	6 017	6 574	*12 444*
Value added per worker	*3 632*	1 946	1 697	*3 358*
Average wage (including supplements)	548	286	*319*	*504*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*5.24*	*7.85*	8.61	*9.61*
as a percentage of 1970-1975 structural change	*100*	*150*	164	*183*
MVA growth rate perer unit of structural change	3.68	4.04	3.15	5.73
Degree of specialization	12.6	10.8	10.8	10.2
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*3 764*	3 433	4 489	*12 849*
313 Beverages	*1 587*	1 696	2 414	*5 090*
314 Tobacco products	3 545	3 999	6 220	*8 017*
321 Textiles	13 409	8 587	10 299	*16 441*
322 Wearing apparel	1 866 [a]	1 716 [a]	2 109 [a]	*6 586* [a]
323 Leather and fur products	911	747	944	*3 116*
324 Footwear	- [a]	- [a]	- [a]	- [a]
331 Wood and wood products	*751*	591	502	*1 533*
332 Furniture and fixtures	*653*	514	455	*877*
341 Paper and paper products	*1 929*	1 532	1 949	*2 918*
342 Printing and publishing	1 042	960	1 036	*1 916*
351 Industrial chemicals	7 125	5 584	8 459	*13 387*
352 Other chemical products	2 924	2 292	3 372	*5 331*
353 Petroleum refineries	4 223	3 676	2 714	*6 121*
354 Miscellaneous petroleum and coal products	*154*	183	208	*332*
355 Rubber products	2 175	1 593	1 603	*1 837*
356 Plastic products	1 256	1 317	1 736	*3 415*
361 Pottery, china and earthenware	439	431	504	*1 277*
362 Glass and glass products	838	822	705	*1 785*
369 Other non-metal mineral products	4 425	4 340	4 524	*11 450*
371 Iron and steel	*6 538*	5 810	6 571	*19 880*
372 Non-ferrous metals	*1 868*	1 730	2 050	*4 058*
381 Metal products	4 861	2 582	2 946	*6 544*
382 Non-electrical machinery	13 418	10 941	10 116	*17 779*
383 Electrical machinery	3 216	6 458	7 445	*16 422*
384 Transport equipment	3 013	4 134	3 918	*11 639*
385 Professional and scientific equipment	810	1 021	843	*1 990*
390 Other manufacturing industries	*1 838*	1 691	2 125	*4 363*

GDP per capita (1000$)/c



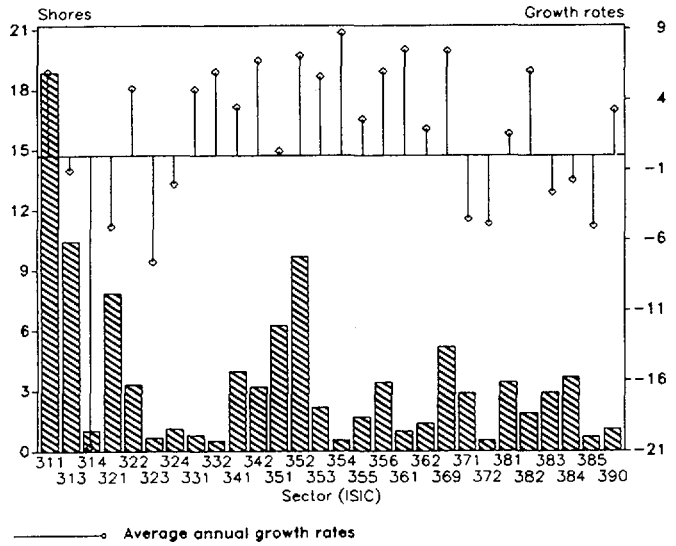
Manufacturing share in GDP, current prices (%)



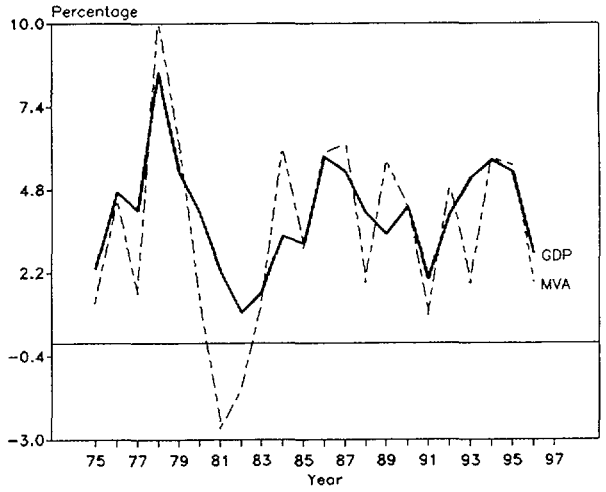
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

COLOMBIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

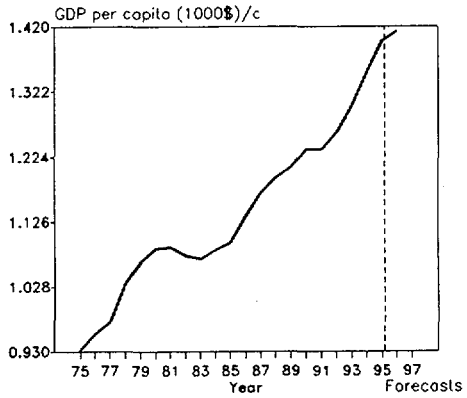


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	28 799	32 184	40 274	50 074
Per capita [na] (1990-dollars)	1 086	1 094	1 236	1 398
Manufacturing share [na] (%) (current factor prices)	23.3	21.4	19.9	*19.0*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	6 010	6 365	8 034	*9 662*
Industrial production index (1990=100)	79	83	100	117
Value added (millions of dollars)	7 131	6 711	7 882	*14 601*
Gross output (millions of dollars)	16 453	16 823	20 601	*34 156*
Employment (thousands)	508	440	489	*602*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	57	60	62	*57*
Wages and salaries including supplements (%)	8	7	6	*8*
Gross operating surplus and net taxes (%)	35	33	33	*35*
-PRODUCTIVITY: (dollars)				
Gross output per worker	31 860	37 635	41 526	*50 929*
Value added per worker	13 809	15 012	15 887	*21 766*
Average wage (including supplements)	2 583	2 709	2 359	*4 356*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	9.62	11.67	9.69	*9.44*
as a percentage of 1970-1975 structural change	100	121	101	*98*
MVA growth rate perer unit of structural change	4.13	1.91	2.02	2.46
Degree of specialization	14.6	14.7	13.0	14.7
-VALUE ADDED: (millions of dollars)				
311/2 Food products	951	1 166	1 306	*3 006*
313 Beverages	1 021	1 032	928	*1 433*
314 Tobacco products	160	224	173	*71*
321 Textiles	803	619	816	*1 008*
322 Wearing apparel	241	206	221	*484*
323 Leather and fur products	59	47	66	*68*
324 Footwear	50	54	100	*142*
331 Wood and wood products	50	46	54	*117*
332 Furniture and fixtures	34	29	38	*88*
341 Paper and paper products	227	274	301	*605*
342 Printing and publishing	185	180	213	*515*
351 Industrial chemicals	303	405	522	*865*
352 Other chemical products	419	457	597	*1 448*
353 Petroleum refineries	773	90	151	*371*
354 Miscellaneous petroleum and coal products	17	28	34	*91*
355 Rubber products	117	138	131	*253*
356 Plastic products	141	169	223	*512*
361 Pottery, china and earthenware	44	46	60	*154*
362 Glass and glass products	76	92	113	*207*
369 Other non-metal mineral products	232	264	338	*849*
371 Iron and steel	217	205	281	*343*
372 Non-ferrous metals	34	36	56	*67*
381 Metal products	260	242	279	*503*
382 Non-electrical machinery	120	114	124	*289*
383 Electrical machinery	244	211	271	*372*
384 Transport equipment	256	221	332	*491*
385 Professional and scientific equipment	26	38	70	*80*
390 Other manufacturing industries	72	78	84	*166*

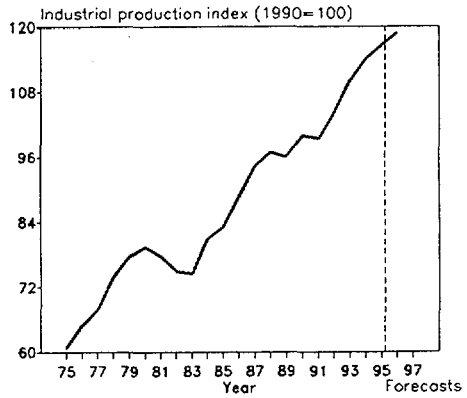
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

GDP per capita (1000$)/c



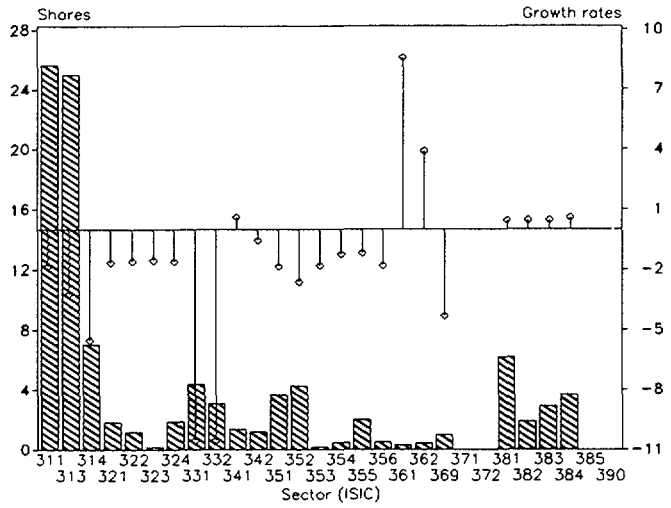
Manufacturing share in GDP, current factor pr. (%)

Industrial production index (1990=100)

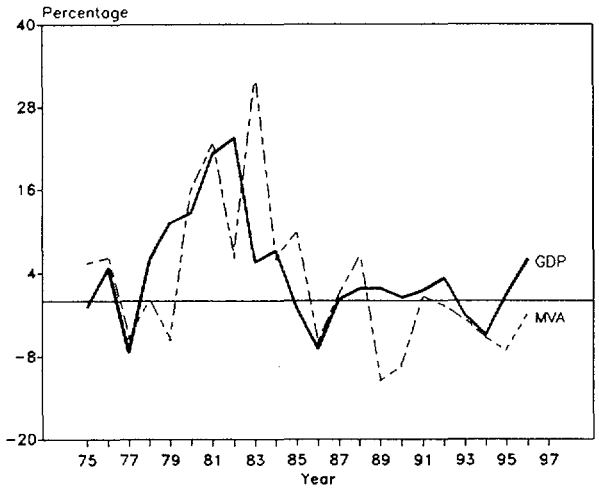


CONGO

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

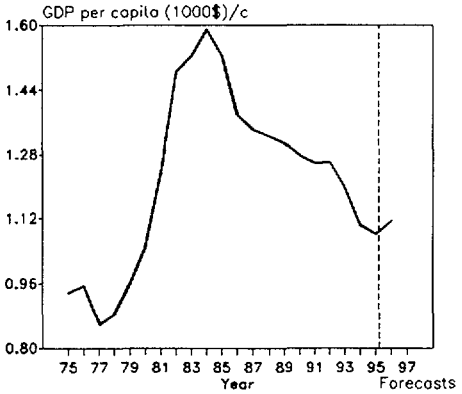


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

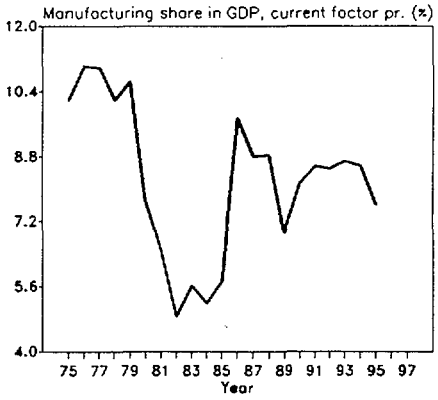
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	1 751	2 936	2 851	2 805
Per capita [na] (1990-dollars)	1 049	1 526	1 277	1 082
Manufacturing share [na] (%) (current factor prices)	7.7	5.7	8.2	7.6
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	142	282	227	193
Industrial production index (1990=100)	100	141	100	85
Value added (millions of dollars)	61	54	90	86
Gross output (millions of dollars)	161	154	258	284
Employment (thousands)	6	9	7	8
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	62	65	65	70
Wages and salaries including supplements (%)	13	17	15	14
Gross operating surplus and net taxes (%)	24	18	20	16
-PRODUCTIVITY: (dollars)				
Gross output per worker	13 279	17 546	34 345	36 910
Value added per worker	4 994	6 209	11 976	11 158
Average wage (including supplements)	3 398	3 032	5 234	5 302
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	14.21	12.03	13.30	11.92
as a percentage of 1970-1975 structural change	100	85	94	84
MVA growth rate perer unit of structural change	-1.16	-0.48	0.20	-0.93
Degree of specialization	16.2	17.9	25.1	24.7
-VALUE ADDED: (millions of dollars)				
311/2 Food products	11	10	22	23
313 Beverages	11	11	23	21
314 Tobacco products	3	3	7	6
321 Textiles	3	2	2	2
322 Wearing apparel	2	1	1	1
323 Leather and fur products	-	-	-	-
324 Footwear	3	2	2	2
331 Wood and wood products	5	5	5	3
332 Furniture and fixtures	3	3	3	2
341 Paper and paper products	1	-	1	1
342 Printing and publishing	1	-	1	1
351 Industrial chemicals	2	1	3	3
352 Other chemical products	3	2	4	4
353 Petroleum refineries	-	-	-	-
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	1	1	2	2
356 Plastic products	-	-	-	-
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	1	2	1	1
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	-	-	-	-
381 Metal products	4	4	5	6
382 Non-electrical machinery	1	1	2	2
383 Electrical machinery	2	2	2	3
384 Transport equipment	2	2	3	3
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	-	-	-	-

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

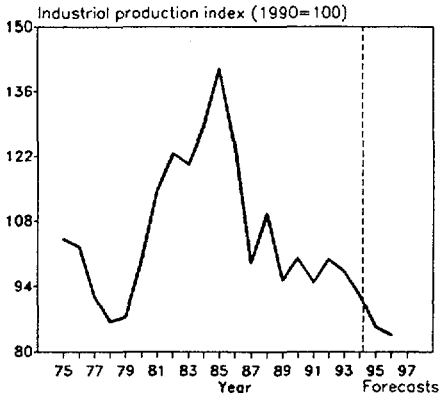
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

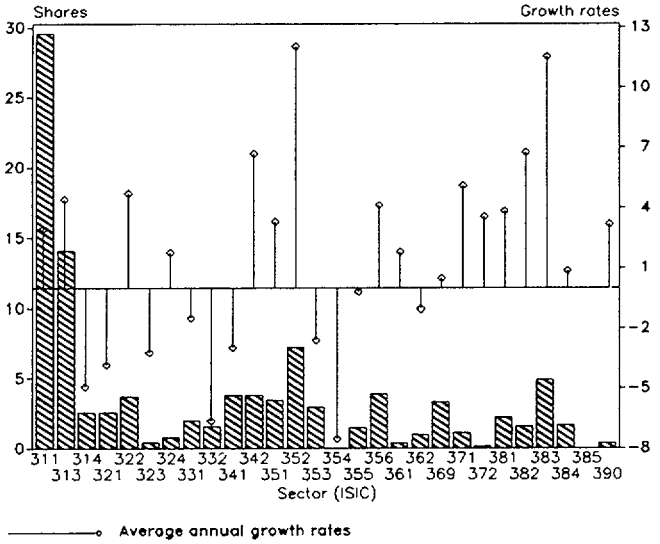


Industrial production index (1990=100)

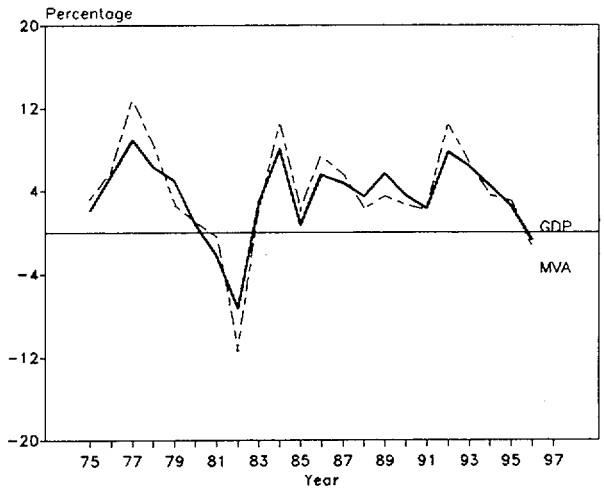


COSTA RICA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

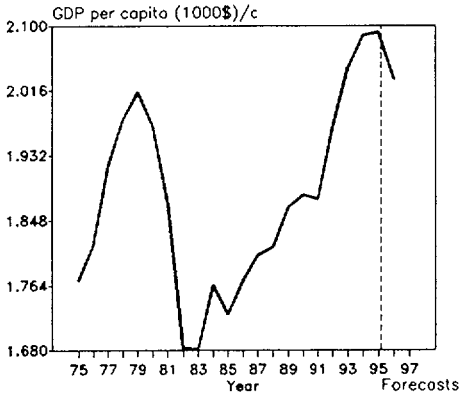


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

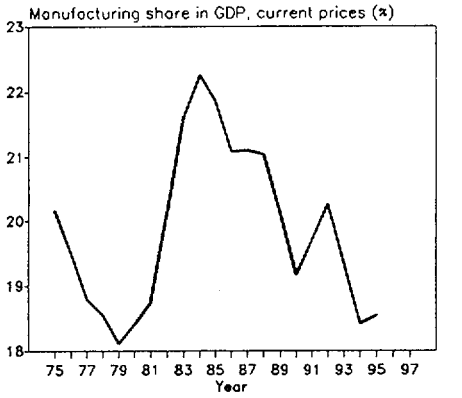
		1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)		4 499	4 563	5 710	7 162
Per capita [na] (1990-dollars)		1 970	1 727	1 881	2 092
Manufacturing share [na] (%) (current factor prices)		18.4	21.9	19.2	*18.5*
MANUFACTURING:					
Value added [na] (millions of 1990-dollars)		882	892	1 095	1 400
Industrial production index (1990=100)		87	85	100	129
Value added (millions of dollars)		788	761	968	*1 444*
Gross output (millions of dollars)		2 743	2 466	3 197	*4 897*
Employment (thousands)		*77*	104	134	*163*
-PROFITABILITY: (in percent of gross output)					
Intermediate input (%)		71	69	70	*71*
Wages and salaries including supplements (%)		12	9	12	*13*
Gross operating surplus and net taxes (%)		17	22	19	*17*
-PRODUCTIVITY: (dollars)					
Gross output per worker		*35 690*	23 786	23 834	*30 032*
Value added per worker		*13 803*	7 341	7 217	*8 872*
Average wage (including supplements)		*4 120*	2 201	2 781	*3 808*
-STRUCTURAL INDICES:					
Structural change indicator (5-year period, %)		9.27	8.08	8.39	*8.30*
as a percentage of 1970-1975 structural change		100	87	91	*90*
MVA growth rate perer unit of structural change		3.15	2.67	1.98	1.63
Degree of specialization		20.4	20.7	20.1	21.5
-VALUE ADDED: (millions of dollars)					
311/2	Food products	241	247	292	*424*
313	Beverages	96	94	128	*205*
314	Tobacco products	24	28	31	*29*
321	Textiles	33	23	32	*32*
322	Wearing apparel	31	34	32	*52*
323	Leather and fur products	7	5	5	*5*
324	Footwear	10	9	8	*11*
331	Wood and wood products	30	25	22	*26*
332	Furniture and fixtures	26	14	21	*18*
341	Paper and paper products	20	22	45	*47*
342	Printing and publishing	18	21	34	*57*
351	Industrial chemicals	19	26	33	*50*
352	Other chemical products	40	42	50	*124*
353	Petroleum refineries	40	45	35	*39*
354	Miscellaneous petroleum and coal products	-	-	-	-
355	Rubber products	14	15	17	*21*
356	Plastic products	19	26	36	*57*
361	Pottery, china and earthenware	1	2	3	*5*
362	Glass and glass products	3	7	11	*13*
369	Other non-metal mineral products	25	19	36	*47*
371	Iron and steel	4	-	*10*	*16*
372	Non-ferrous metals	*1*	-	1	2
381	Metal products	18	12	20	*33*
382	Non-electrical machinery	8	10	13	*24*
383	Electrical machinery	25	21	33	*79*
384	Transport equipment	31	10	16	*23*
385	Professional and scientific equipment	-	-	-	-
390	Other manufacturing industries	2	3	4	*6*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

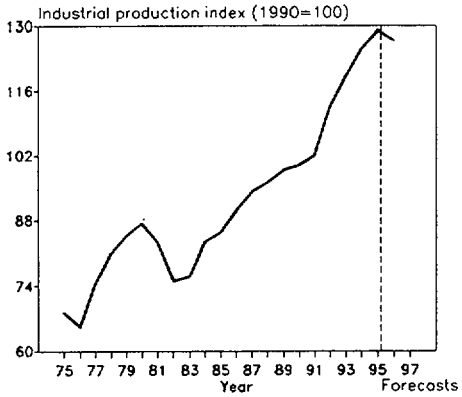
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)

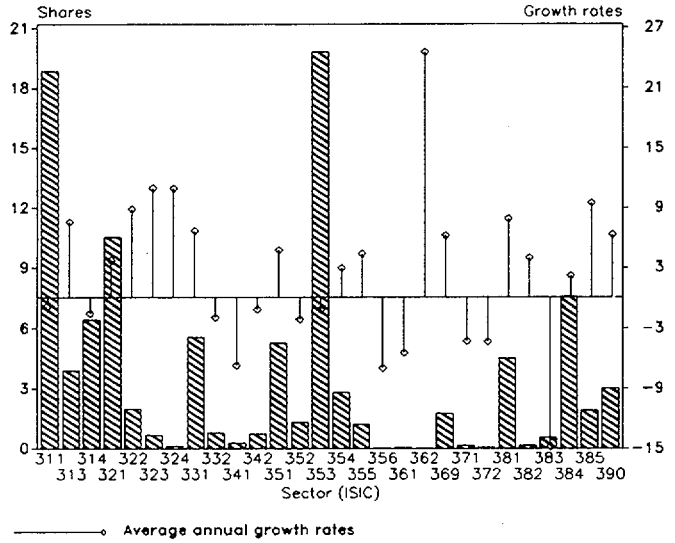


Industrial production index (1990=100)

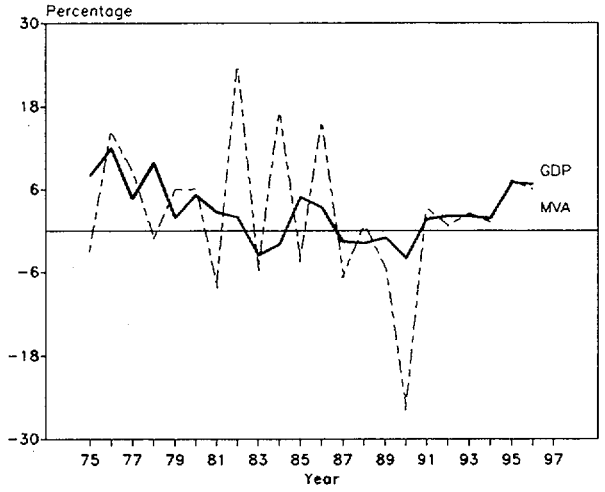


CÔTE D'IVOIRE

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



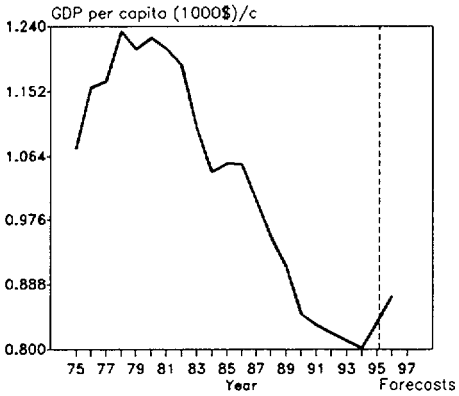
Annual growth rates of GDP and MVA (Constant 1990 prices)



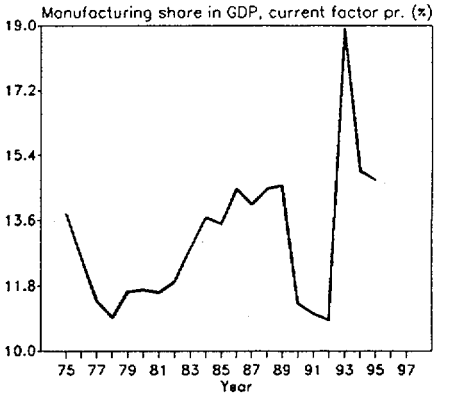
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	10 033	10 425	9 899	11 437
Per capita [na] (1990-dollars)	1 224	1 055	847	835
Manufacturing share [na] (%) (current factor prices)	11.7	13.5	11.3	*14.7*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	1 254	1 484	1 120	*1 290*
Industrial production index (1990=100)	182	120	100	108
Value added (millions of dollars)	1 273	*924*	*2 065*	*1 395*
Gross output (millions of dollars)	4 102	*2 632*	*5 081*	*3 342*
Employment (thousands)	67	*55*	*53*	*60*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	69	*65*	*60*	*59*
Wages and salaries including supplements (%)	9	*10*	*8*	*9*
Gross operating surplus and net taxes (%)	22	*25*	*32*	*32*
-PRODUCTIVITY: (dollars)				
Gross output per worker	61 068	*47 530*	*92 586*	*52 064*
Value added per worker	18 950	*16 569*	*37 320*	*21 286*
Average wage (including supplements)	5 904	*4 719*	*7 494*	*4 926*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*8.90*	*13.18*	*12.03*	*8.92*
as a percentage of 1970-1975 structural change	*100*	*148*	*135*	*100*
MVA growth rate perer unit of structural change	3.89	1.93	1.05	0.91
Degree of specialization	22.5	25.4	25.2	22.5
-VALUE ADDED: (millions of dollars)				
311/2 Food products	303	*191*	*433*	*246*
313 Beverages	75	*38*	66	*60*
314 Tobacco products	66	*58*	*149*	*84*
321 Textiles	169	*113*	*206*	*152*
322 Wearing apparel	8	*13*	*33*	*31*
323 Leather and fur products	*6*	*8*	*9*	*10*
324 Footwear	*4*	*2*	*2*	*2*
331 Wood and wood products	67	*21*	*89*	*82*
332 Furniture and fixtures	21	*14*	*21*	*11*
341 Paper and paper products	*15*	*7*	*7*	*3*
342 Printing and publishing	*21*	*8*	*14*	*8*
351 Industrial chemicals	*38*	*34*	*100*	*77*
352 Other chemical products	*35*	*16*	*31*	*17*
353 Petroleum refineries	*166*	*193*	459	*267*
354 Miscellaneous petroleum and coal products	*15*	*21*	51	*40*
355 Rubber products	4	*4*	22	*18*
356 Plastic products	*2*	*1*	*1*	-
361 Pottery, china and earthenware	*11*	*1*	*2*	*1*
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	*18*	*10*	*30*	*26*
371 Iron and steel	*5*	*2*	*5*	*2*
372 Non-ferrous metals	*3*	*1*	*2*	*1*
381 Metal products	70	*36*	*75*	*69*
382 Non-electrical machinery	3	*3*	*3*	*2*
383 Electrical machinery	20	*5*	*21*	*5*
384 Transport equipment	106	*88*	151	*106*
385 Professional and scientific equipment	-	*6*	29	*31*
390 Other manufacturing industries	20	*29*	51	*44*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

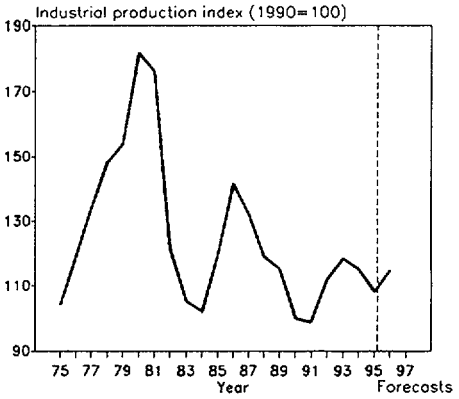
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

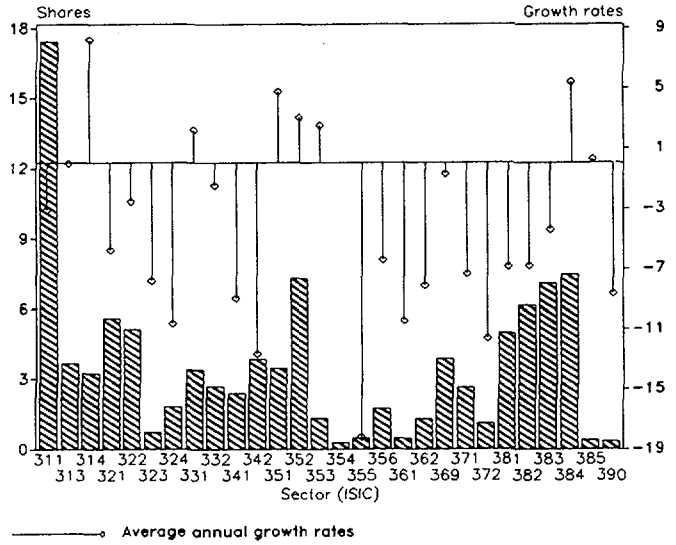


Industrial production index (1990=100)

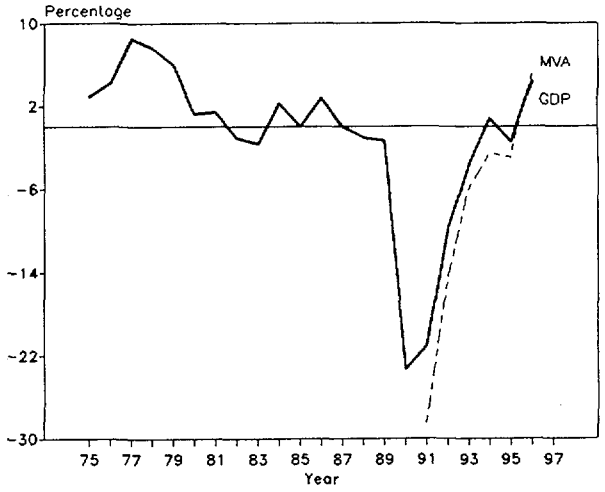


CROATIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)

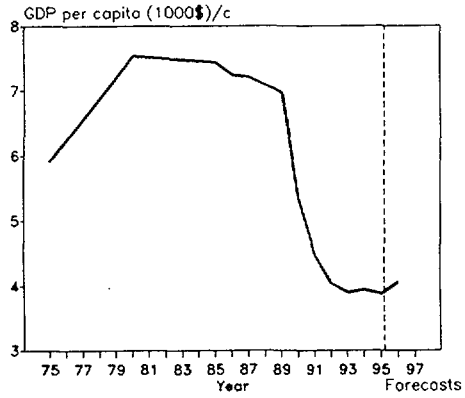


Annual growth rates of GDP and MVA (Constant 1990 prices)

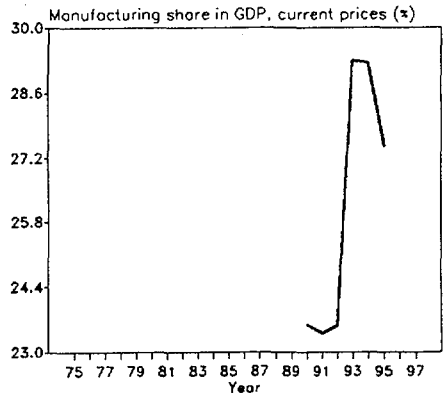


	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	32 981	33 259	25 569	17 477
Per capita [na] (1990-dollars)	7 535	7 439	5 349	3 879
Manufacturing share [na] (%) (current factor prices)	..	..	23.6	*27.4*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	..	..	5 321	*2 888*
Industrial production index (1990=100)	..	..	..	..
Value added (millions of dollars)	*6 024*	*3 470*	6 839	*6 539*
Gross output (millions of dollars)	*23 620*	*12 059*	17 207	*15 085*
Employment (thousands)	*347*	*383*	546	338
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*74*	*71*	60	*57*
Wages and salaries including supplements (%)	*11*	*13*	19	*9*
Gross operating surplus and net taxes (%)	*15*	*16*	21	*35*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*49 281*	*22 797*	31 488	*44 580*
Value added per worker	*12 726*	*6 614*	12 515	*19 323*
Average wage (including supplements)	*5 161*	*2 916*	5 882	3 812
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*8.58*	*8.59*	*11.08*	*13.15*
as a percentage of 1970-1975 structural change	*100*	*100*	*129*	*153*
MVA growth rate perer unit of structural change	6.21	4.01	-0.62	-1.81
Degree of specialization	9.8	9.9	9.8	11.8
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*831*	*398*	1 153	*1 132*
313 Beverages	*104*	*75*	222	*253*
314 Tobacco products	*62*	*40*	124	*234*
321 Textiles	*346*	*248*	417	*342*
322 Wearing apparel	*356*	*171*	339	*334*
323 Leather and fur products	*104*	*50*	58	*40*
324 Footwear	*173*	*122*	181	*100*
331 Wood and wood products	*142*	*111*	186	*242*
332 Furniture and fixtures	*196*	*96*	171	*179*
341 Paper and paper products	*177*	*86*	203	*134*
342 Printing and publishing	*296*	*142*	394	*194*
351 Industrial chemicals	*206*	*118*	152	*218*
352 Other chemical products	*247*	*118*	380	*524*
353 Petroleum refineries	*167*	*76*	123	*185*
354 Miscellaneous petroleum and coal products	*43*	*21*	-2	*22*
355 Rubber products	*87*	*43*	63	*21*
356 Plastic products	*131*	*65*	135	*104*
361 Pottery, china and earthenware	*26*	*18*	45	*26*
362 Glass and glass products	*69*	*33*	105	*73*
369 Other non-metal mineral products	*173*	*109*	243	*263*
371 Iron and steel	*142*	*113*	229	*169*
372 Non-ferrous metals	*58*	*38*	106	*57*
381 Metal products	*415*	*270*	411	*296*
382 Non-electrical machinery	*580*	*408*	517	*370*
383 Electrical machinery	*385*	*255*	499	*449*
384 Transport equipment	*465*	*224*	339	*537*
385 Professional and scientific equipment	*22*	*11*	20	*24*
390 Other manufacturing industries	*22*	*11*	28	*18*

GDP per capita (1000$)/c



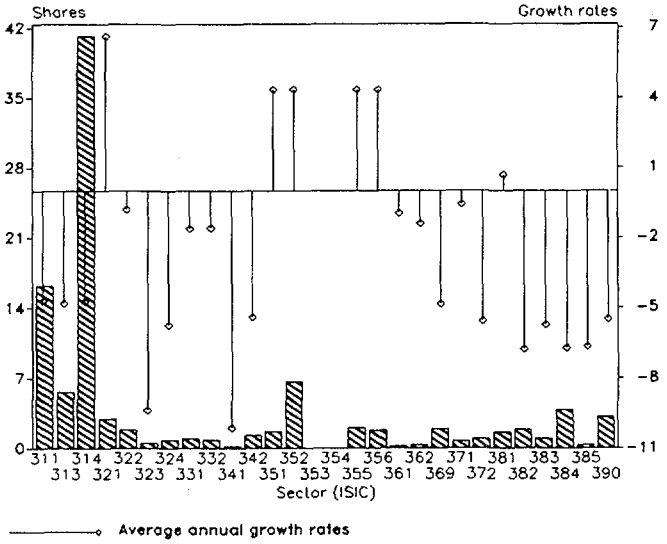
Manufacturing share in GDP, current prices (%)



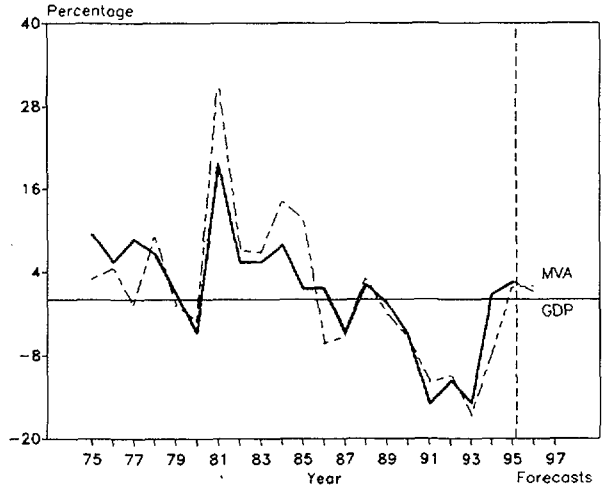
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

CUBA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

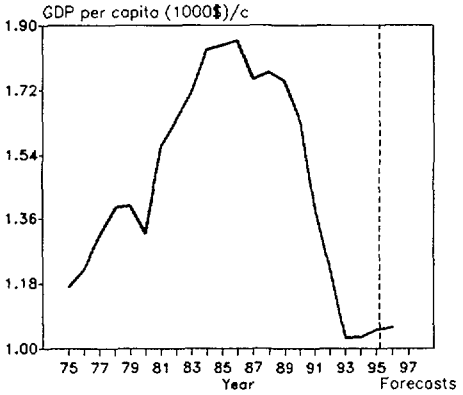


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

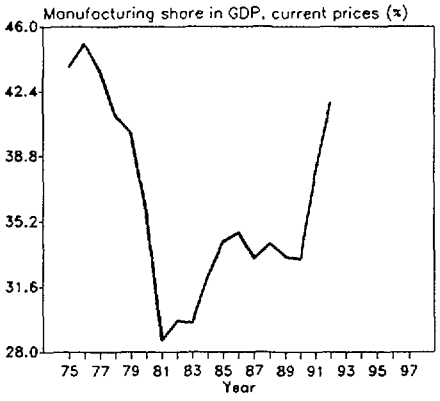
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	12 800	18 664	17 453	11 520
Per capita [na] (1990-dollars)	1 318	1 845	1 642	1 051
Manufacturing share [na] (%) (current factor prices)	35.8	34.1	*33.1*	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	3 609	6 863	5 782	*3 528*
Industrial production index (1990=100)	79	110	100	*68*
Value added (millions of dollars)	4 909	5 148	*5 935*	*4 077*
Gross output (millions of dollars)	9 779	12 098	*17 542*	*12 561*
Employment (thousands)	501	654	*701*	*668*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	50	57	*66*	*68*
Wages and salaries including supplements (%)	*13*	*14*	*13*	*14*
Gross operating surplus and net taxes (%)	*37*	*29*	*21*	*19*
-PRODUCTIVITY: (dollars)				
Gross output per worker	19 527	18 488	*25 031*	*18 805*
Value added per worker	9 802	7 867	*8 505*	*6 224*
Average wage (including supplements)	*2 620*	*2 528*	*3 193*	*2 618*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*7.51*	*9.84*	*9.16*	*7.73*
as a percentage of 1970-1975 structural change	*100*	*131*	*122*	*103*
MVA growth rate perer unit of structural change	0.09	1.82	1.48	-1.94
Degree of specialization	25.8	31.3	34.1	30.5
-VALUE ADDED: (millions of dollars)				
311/2 Food products	658	962	*1 014*	*640*
313 Beverages	247	275	*352*	*221*
314 Tobacco products	1 815	2 015	*2 580*	*1 625*
321 Textiles	51	41	*119*	*145*
322 Wearing apparel	147	98	*94*	*76*
323 Leather and fur products	53	32	*33*	*17*
324 Footwear	79	49	*51*	*32*
331 Wood and wood products	58	53	*52*	*41*
332 Furniture and fixtures	48	44	*43*	*34*
341 Paper and paper products	47	45	*14*	*7*
342 Printing and publishing	97	59	*80*	*49*
351 Industrial chemicals	*81*	*55*	*71*	*78*
352 Other chemical products	*326*	*221*	*287*	*318*
353 Petroleum refineries	..	..	..	..
354 Miscellaneous petroleum and coal products	..	..	..	..
355 Rubber products	*100*	*68*	*87*	*97*
356 Plastic products	*87*	*59*	*76*	*84*
361 Pottery, china and earthenware	*8*	*6*	*8*	*7*
362 Glass and glass products	*17*	*13*	*19*	*14*
369 Other non-metal mineral products	189	105	*115*	*76*
371 Iron and steel	*27*	*44*	*37*	*29*
372 Non-ferrous metals	*41*	*48*	*61*	*37*
381 Metal products	108	92	*81*	*71*
382 Non-electrical machinery	*111*	*160*	*123*	*68*
383 Electrical machinery	60	58	*58*	*36*
384 Transport equipment	*235*	*334*	*257*	*142*
385 Professional and scientific equipment	*18*	*25*	*19*	*11*
390 Other manufacturing industries	202	189	*203*	*123*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

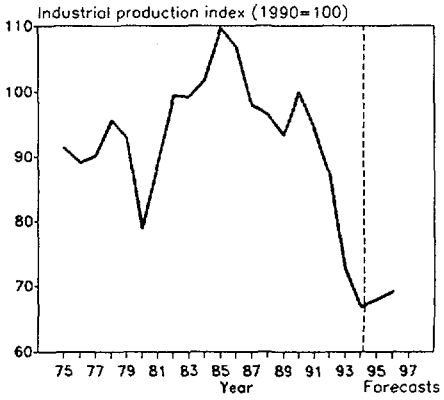
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)

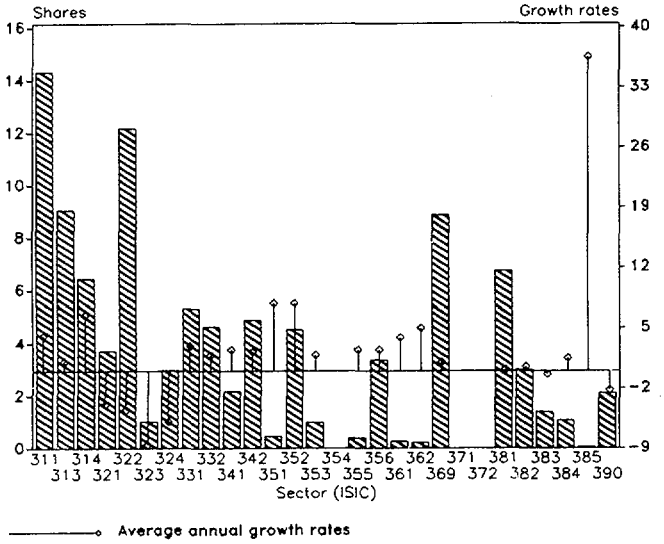


Industrial production index (1990=100)

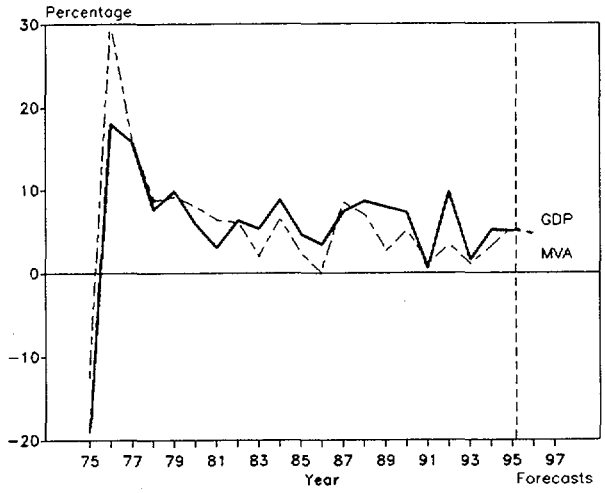


CYPRUS

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

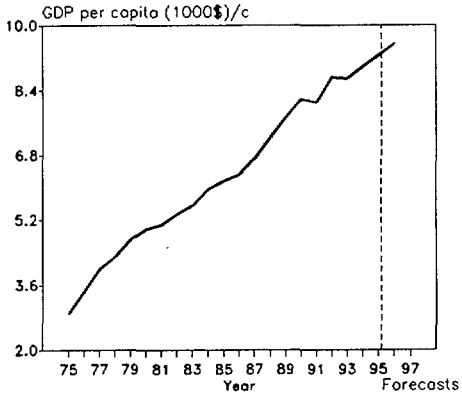


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

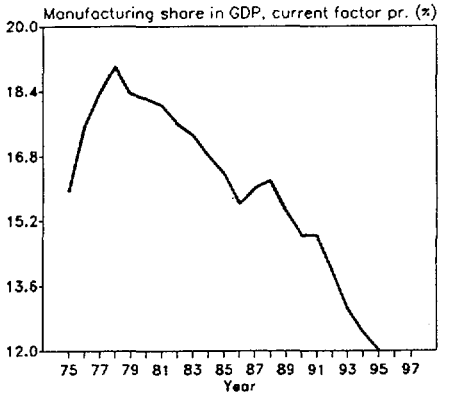
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	3 035	3 989	5 574	6 896
Per capita [na] (1990-dollars)	4 967	6 166	8 184	9 256
Manufacturing share [na] (%) (current factor prices)	18.2	16.4	14.8	*11.9*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	510	638	796	*910*
Industrial production index (1990=100)	71	82	100	96
Value added (millions of dollars)	406	378	792	*1 018*
Gross output (millions of dollars)	1 134	1 122	2 196	*2 632*
Employment (thousands)	34	39	43	*40*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	64	66	64	*61*
Wages and salaries including supplements (%)	*15*	18	19	*19*
Gross operating surplus and net taxes (%)	*21*	16	17	*19*
-PRODUCTIVITY: (dollars)				
Gross output per worker	29 417	25 804	46 057	*59 850*
Value added per worker	10 525	8 697	16 606	*23 628*
Average wage (including supplements)	*5 062*	5 143	9 738	*12 733*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	13.84	13.72	8.69	*7.51*
as a percentage of 1970-1975 structural change	100	99	63	*54*
MVA growth rate perer unit of structural change	5.98	6.63	2.95	2.36
Degree of specialization	11.3	11.7	13.3	13.2
-VALUE ADDED: (millions of dollars)				
311/2 Food products	42	49	101	*155*
313 Beverages	37	29	73	*95*
314 Tobacco products	36	26	41	*72*
321 Textiles	16	14	32	*31*
322 Wearing apparel	53	54	118	*107*
323 Leather and fur products	5	6	11	*7*
324 Footwear	21	19	30	*25*
331 Wood and wood products	19	23	39	*56*
332 Furniture and fixtures	17	22	36	*49*
341 Paper and paper products	11	8	17	*24*
342 Printing and publishing	15	18	37	*51*
351 Industrial chemicals	3	2	3	*6*
352 Other chemical products	12	12	28	*52*
353 Petroleum refineries	6	5	7	*10*
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	3	2	3	*4*
356 Plastic products	11	11	25	*35*
361 Pottery, china and earthenware	-	1	2	*3*
362 Glass and glass products	-	-	1	*2*
369 Other non-metal mineral products	44	24	69	*90*
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	-	-	-	-
381 Metal products	23	26	55	*67*
382 Non-electrical machinery	11	12	24	*30*
383 Electrical machinery	5	6	12	*14*
384 Transport equipment	8	4	9	*12*
385 Professional and scientific equipment	-	-	-	*1*
390 Other manufacturing industries	7	7	19	*20*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

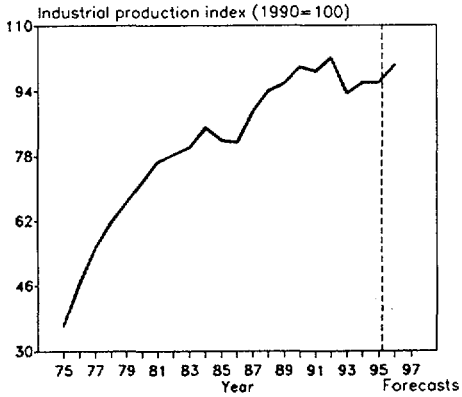
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

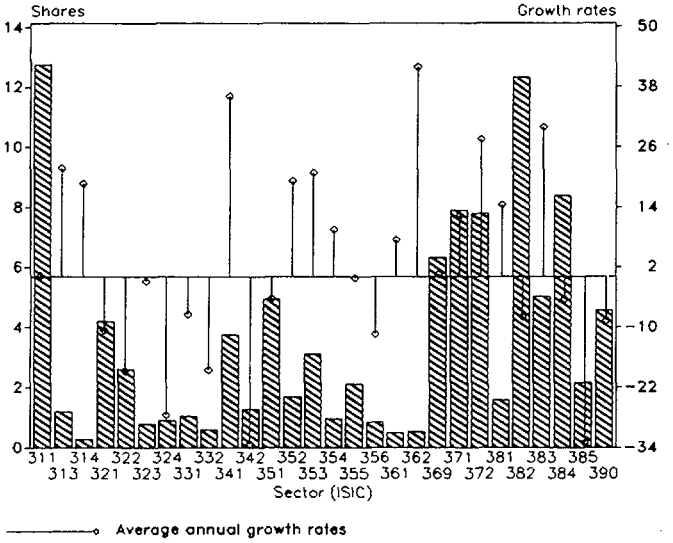


Industrial production index (1990=100)

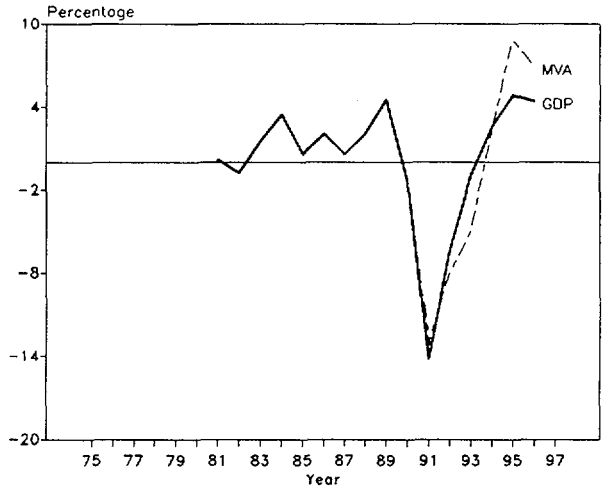


CZECH REPUBLIC

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1994–1995 (Percentage)



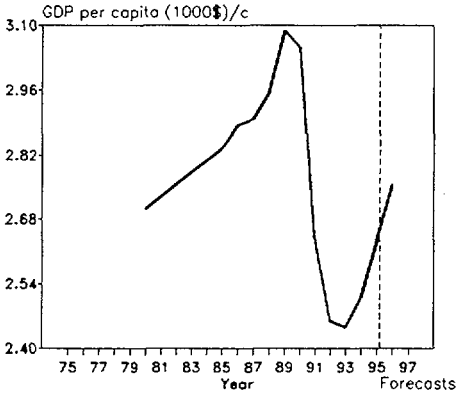
Annual growth rates of GDP and MVA (Constant 1990 prices)



Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	27 790	29 214	31 604	27 050
Per capita [na] (1990-dollars)	2 703	2 835	3 051	2 636
Manufacturing share [na] (%) (current factor prices)	..	..	..	26.7
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	..	..	9 900	8 332
Industrial production index (1990=100)	..	..	..	..
Value added (millions of dollars)	..	..	..	9 849
Gross output (millions of dollars)	30 577	28 725	*35 967*	*51 187*
Employment (thousands)	*1 274*	*1 124*	1 577	*1 237*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	..	..	..	*81*
Wages and salaries including supplements (%)	..	..	..	*8*
Gross operating surplus and net taxes (%)	..	..	..	*11*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*16 176*	*17 265*	*22 807*	*41 383*
Value added per worker	..	..	..	*7 969*
Average wage (including supplements)	*2 499*	*2 178*	2 223	*3 217*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	..	..	..	..
as a percentage of 1970-1975 structural change	..	..	..	..
MVA growth rate perer unit of structural change	..	..	..	..
Degree of specialization	..	..	..	..
-VALUE ADDED: (millions of dollars)				
311/2 Food products	..	..	..	*1 244*
313 Beverages	..	..	..	*127*
314 Tobacco products	..	..	..	*30*
321 Textiles	..	..	..	*386*
322 Wearing apparel	..	..	..	*227*
323 Leather and fur products	..	..	..	*77*
324 Footwear	..	..	..	*73*
331 Wood and wood products	..	..	..	*97*
332 Furniture and fixtures	..	..	..	*53*
341 Paper and paper products	..	..	..	*421*
342 Printing and publishing	..	..	..	*100*
351 Industrial chemicals	..	..	..	*469*
352 Other chemical products	..	..	..	*179*
353 Petroleum refineries	..	..	..	*333*
354 Miscellaneous petroleum and coal products	..	..	..	*98*
355 Rubber products	..	..	..	*205*
356 Plastic products	..	..	..	*77*
361 Pottery, china and earthenware	..	..	..	*49*
362 Glass and glass products	..	..	..	*61*
369 Other non-metal mineral products	..	..	..	*618*
371 Iron and steel	..	..	..	*813*
372 Non-ferrous metals	..	..	..	*851*
381 Metal products	..	..	..	*164*
382 Non-electrical machinery	..	..	..	1 152
383 Electrical machinery	..	..	..	*551*
384 Transport equipment	..	..	..	800
385 Professional and scientific equipment	..	..	..	*169*
390 Other manufacturing industries	..	..	..	426

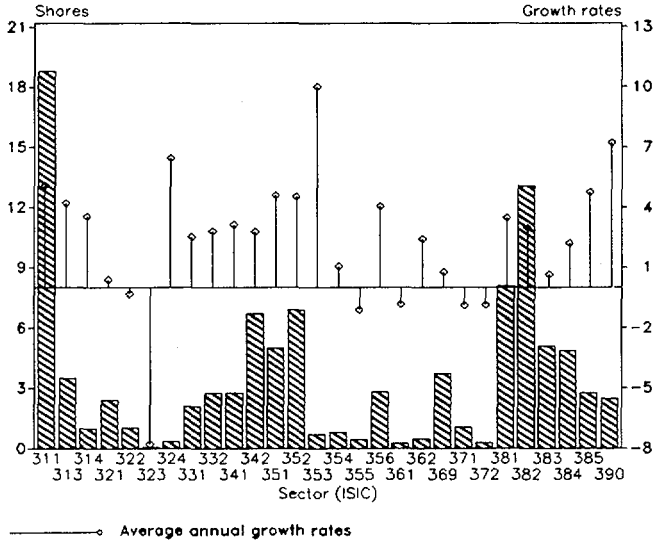
GDP per capita (1000$)/c



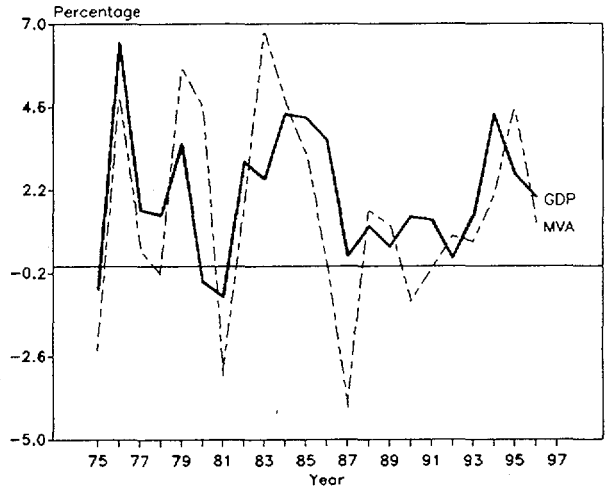
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

DENMARK

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

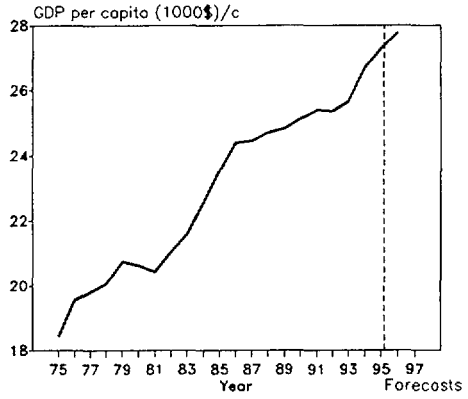


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

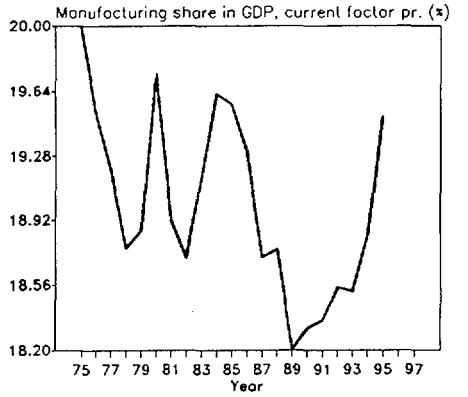
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	105 634	120 375	129 116	142 616
Per capita [na] (1990-dollars)	20 619	23 538	25 120	27 305
Manufacturing share [na] (%) (current factor prices)	19.7	19.6	18.3	*19.5*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	18 979	21 520	20 992	22 716
Industrial production index (1990=100)	77	93	100	108
Value added (millions of dollars)	11 944	10 451	22 988	*33 560*
Gross output (millions of dollars)	29 347	25 713	52 700	73 318
Employment (thousands)	381	405	511	*508*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	59	59	56	*54*
Wages and salaries including supplements (%)	26	24	28	*27*
Gross operating surplus (%)	15	17	15	*19*
-PRODUCTIVITY: (dollars)				
Gross output per worker	76 623	63 316	99 957	*142 760*
Value added per worker	31 187	25 734	43 602	*66 544*
Average wage (including supplements)	19 697	15 021	29 242	*38 611*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	7.43	4.77	3.59	*3.51*
as a percentage of 1970-1975 structural change	100	64	48	*47*
MVA growth rate perer unit of structural change	0.64	3.04	2.66	3.66
Degree of specialization	14.8	15.1	15.1	15.9
-VALUE ADDED: (millions of dollars)				
311/2 Food products	2 232	1 925	4 072	*6 471*
313 Beverages	484	381	757	*1 177*
314 Tobacco products	108	95	203	*304*
321 Textiles	366	324	610	*769*
322 Wearing apparel	204	176	259	*319*
323 Leather and fur products	27	18	25	*20*
324 Footwear	55	38	65	*118*
331 Wood and wood products	252	193	486	*682*
332 Furniture and fixtures	271	305	642	*910*
341 Paper and paper products	300	262	628	*911*
342 Printing and publishing	845	675	1 592	*2 242*
351 Industrial chemicals	534	482	1 107	*1 703*
352 Other chemical products	604	599	1 537	*2 359*
353 Petroleum refineries	53	51	118	*249*
354 Miscellaneous petroleum and coal products	64	59	207	*263*
355 Rubber products	75	56	122	*140*
356 Plastic products	238	264	635	*958*
361 Pottery, china and earthenware	83	40	71	*83*
362 Glass and glass products	94	58	114	*160*
369 Other non-metal mineral products	568	432	941	*1 208*
371 Iron and steel	167	118	281	*323*
372 Non-ferrous metals	67	42	73	*85*
381 Metal products	825	798	1 837	*2 703*
382 Non-electrical machinery	1 616	1 387	3 050	*4 338*
383 Electrical machinery	703	622	1 319	*1 654*
384 Transport equipment	644	572	1 128	*1 571*
385 Professional and scientific equipment	275	294	622	*959*
390 Other manufacturing industries	192	185	489	*880*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

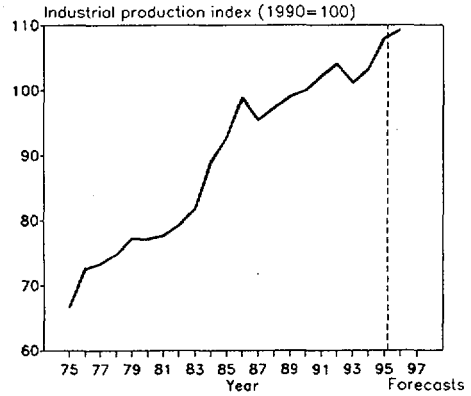
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

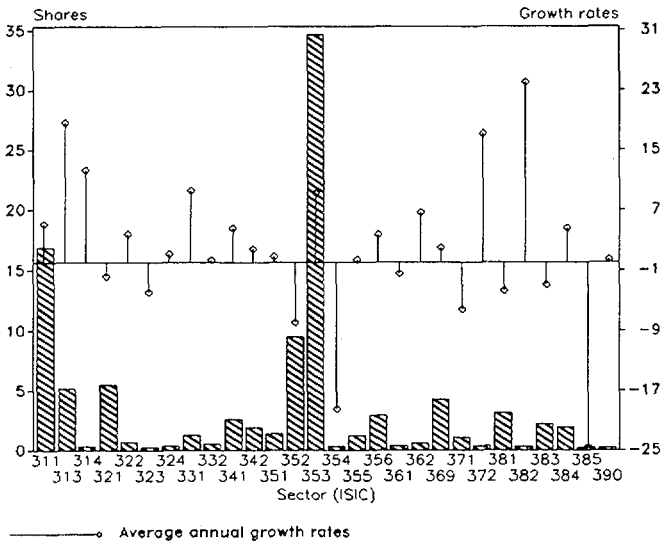


Industrial production index (1990=100)

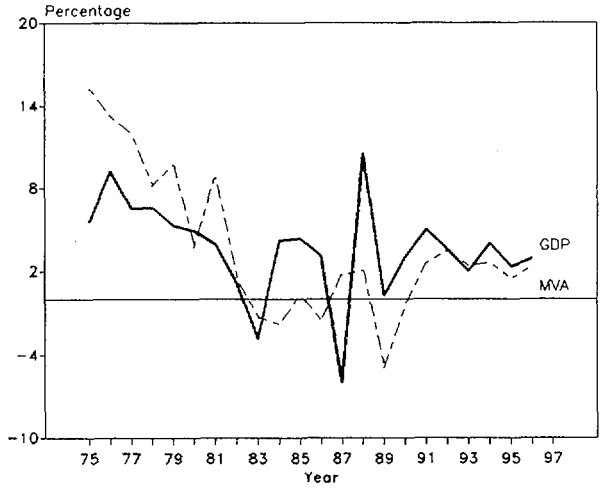


ECUADOR

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

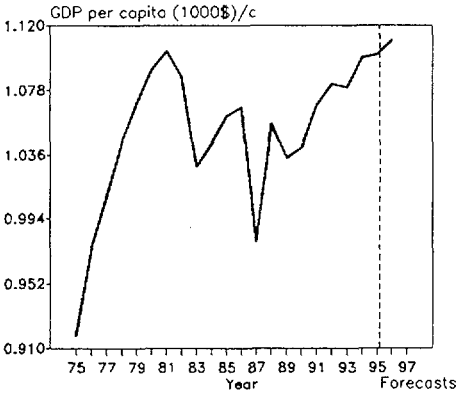


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

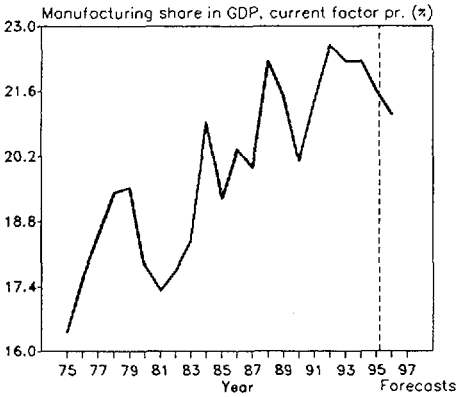
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	8 690	9 657	10 686	12 622
Per capita [na] (1990-dollars)	1 092	1 061	1 041	1 101
Manufacturing share [na] (%) (current factor prices)	17.8	19.3	20.1	21.6
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	2 002	2 144	2 068	2 335
Industrial production index (1990=100)	74	84	100	139
Value added (millions of dollars)	1 289	1 322	1 196	2 447
Gross output (millions of dollars)	3 571	4 379	3 934	7 335
Employment (thousands)	112	97	112	117
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	64	70	70	67
Wages and salaries including supplements (%)	16	13	9	4
Gross operating surplus and net taxes (%)	21	18	21	29
-PRODUCTIVITY: (dollars)				
Gross output per worker	31 623	45 072	35 083	62 269
Value added per worker	11 414	13 606	10 667	20 771
Average wage (including supplements)	4 976	5 677	3 137	2 774
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	11.22	11.99	20.04	20.87
as a percentage of 1970-1975 structural change	100	107	179	186
MVA growth rate perer unit of structural change	5.13	1.67	0.73	1.83
Degree of specialization	17.2	16.7	27.5	33.6
-VALUE ADDED: (millions of dollars)				
311/2 Food products	294	328	228	486
313 Beverages	96	65	33	146
314 Tobacco products	46	17	1	5
321 Textiles	134	146	95	134
322 Wearing apparel	20	15	10	20
323 Leather and fur products	7	6	4	4
324 Footwear	6	7	6	9
331 Wood and wood products	35	18	16	42
332 Furniture and fixtures	28	23	9	14
341 Paper and paper products	42	41	34	68
342 Printing and publishing	40	35	27	46
351 Industrial chemicals	25	32	17	27
352 Other chemical products	90	76	75	75
353 Petroleum refineries	29	38	374	949
354 Miscellaneous petroleum and coal products	4	14	4	1
355 Rubber products	25	29	17	27
356 Plastic products	34	57	42	79
361 Pottery, china and earthenware	7	15	7	10
362 Glass and glass products	9	15	8	18
369 Other non-metal mineral products	100	101	60	102
371 Iron and steel	25	56	19	19
372 Non-ferrous metals	5	10	2	9
381 Metal products	93	78	44	52
382 Non-electrical machinery	4	7	3	16
383 Electrical machinery	59	58	32	40
384 Transport equipment	23	23	22	43
385 Professional and scientific equipment	2	9	3	1
390 Other manufacturing industries	7	5	3	5

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

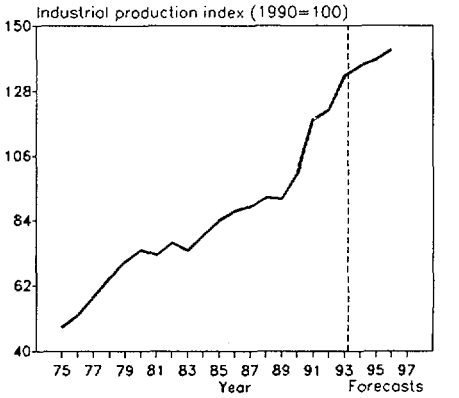
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

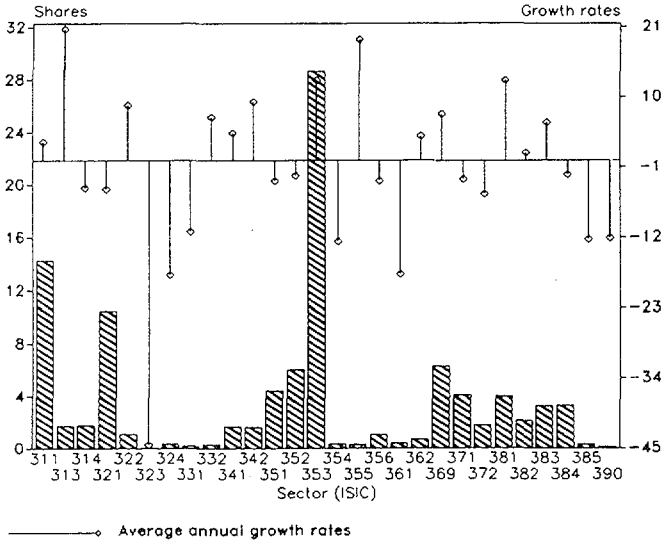


Industrial production index (1990=100)

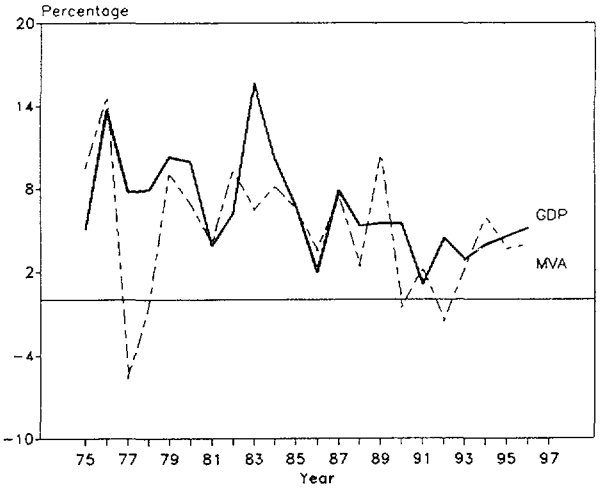


EGYPT

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

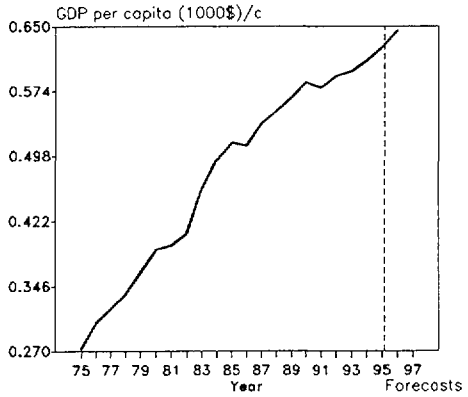


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

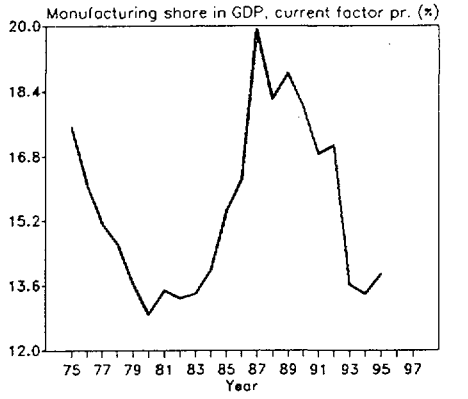
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	17 008	25 536	32 907	38 842
Per capita [na] (1990-dollars)	389	513	584	626
Manufacturing share [na] (%) (current factor prices)	12.9	15.4	18.0	*13.8*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	3 178	4 419	5 502	*6 187*
Industrial production index (1990=100)	77	113	100	110
Value added (millions of dollars)	1 769	2 938	4 498	*7 864*
Gross output (millions of dollars)	6 986	10 260	15 664	*25 041*
Employment (thousands)	868	907	1 077	*1 117*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	75	71	71	*69*
Wages and salaries including supplements (%)	*17*	*18*	*12*	*9*
Gross operating surplus and net taxes (%)	*8*	*10*	*17*	*23*
-PRODUCTIVITY: (dollars)				
Gross output per worker	7 984	11 232	14 550	*22 416*
Value added per worker	2 023	3 216	4 178	*7 047*
Average wage (including supplements)	*1 360*	*2 058*	*1 756*	*1 971*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	11.36	17.07	23.50	*21.58*
as a percentage of 1970-1975 structural change	100	150	207	*190*
MVA growth rate perer unit of structural change	3.23	1.42	1.13	0.98
Degree of specialization	22.6	15.0	21.3	26.6
-VALUE ADDED: (millions of dollars)				
311/2 Food products	308	421	712	*1 217*
313 Beverages	14	71	35	*155*
314 Tobacco products	21	131	100	*117*
321 Textiles	506	509	635	*719*
322 Wearing apparel	6	15	40	*92*
323 Leather and fur products	3	7	5	-
324 Footwear	22	9	17	*8*
331 Wood and wood products	9	24	13	*8*
332 Furniture and fixtures	7	19	10	*21*
341 Paper and paper products	42	76	63	*118*
342 Printing and publishing	39	101	57	*141*
351 Industrial chemicals	69	145	254	*300*
352 Other chemical products	87	205	365	*459*
353 Petroleum refineries	40	59	867	*2 408*
354 Miscellaneous petroleum and coal products	61	78	27	*17*
355 Rubber products	12	28	6	*24*
356 Plastic products	33	-21	54	*63*
361 Pottery, china and earthenware	6	12	47	*20*
362 Glass and glass products	17	22	31	*57*
369 Other non-metal mineral products	78	167	248	*542*
371 Iron and steel	88	98	235	*280*
372 Non-ferrous metals	64	279	132	*128*
381 Metal products	42	95	108	*317*
382 Non-electrical machinery	54	83	107	*164*
383 Electrical machinery	69	181	120	*247*
384 Transport equipment	65	106	178	*221*
385 Professional and scientific equipment	4	13	28	*17*
390 Other manufacturing industries	1	6	6	*4*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

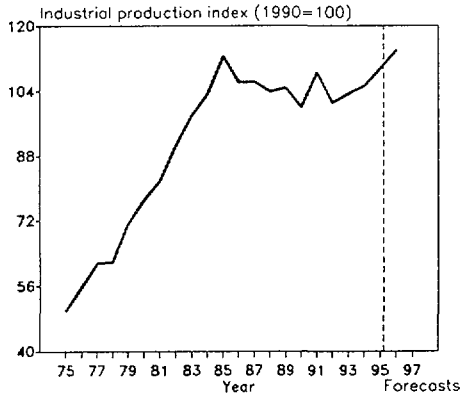
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

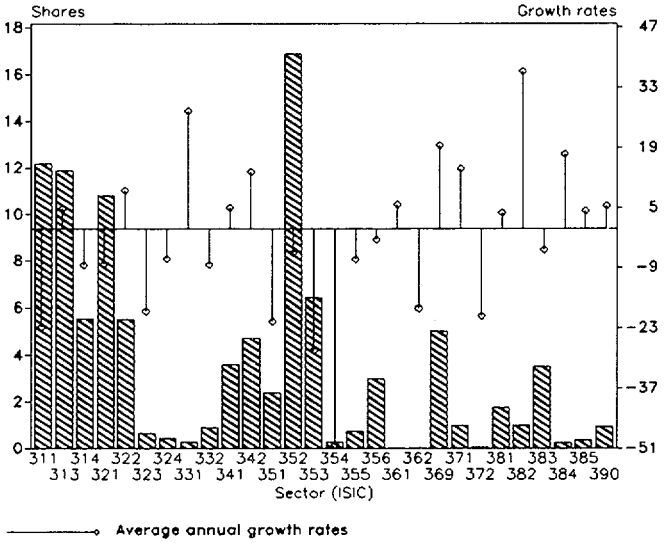


Industrial production index (1990=100)

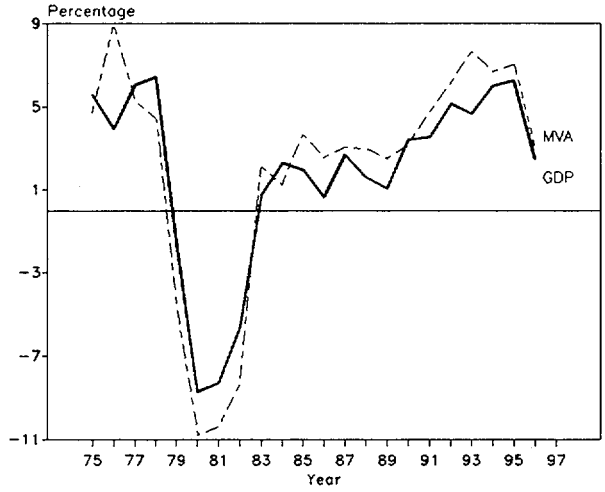


EL SALVADOR

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



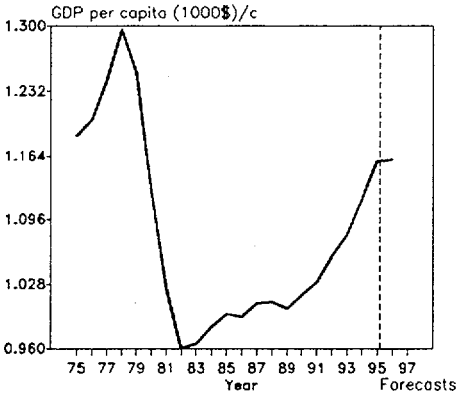
Annual growth rates of GDP and MVA (Constant 1990 prices)



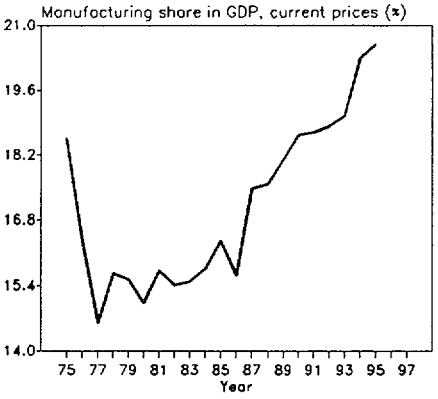
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	5 119	4 660	5 113	6 561
Per capita [na] (1990-dollars)	1 126	997	1 016	1 159
Manufacturing share [na] (%) (current factor prices)	15.0	16.4	18.6	*20.6*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	943	828	952	1 300
Industrial production index (1990=100)	123	90	100	137
Value added (millions of dollars)	448	393	*544*	*687*
Gross output (millions of dollars)	1 130	860	*1 223*	*1 698*
Employment (thousands)	39	25	*26*	*54*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	60	54	*56*	*60*
Wages and salaries including supplements (%)	*15*	*12*	*10*	*15*
Gross operating surplus and net taxes (%)	*24*	*34*	*34*	*26*
-PRODUCTIVITY: (dollars)				
Gross output per worker	28 857	34 129	*46 433*	*31 673*
Value added per worker	11 426	15 593	*20 802*	*12 837*
Average wage (including supplements)	*4 376*	*3 991*	*4 968*	*4 646*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	19.26	21.78	*14.56*	*21.17*
as a percentage of 1970-1975 structural change	100	113	*76*	*110*
MVA growth rate perer unit of structural change	1.05	-1.28	-1.02	-0.46
Degree of specialization	19.1	18.0	23.0	20.9
-VALUE ADDED: (millions of dollars)				
311/2 Food products	78	55	*86*	*33*
313 Beverages	63	59	*63*	*124*
314 Tobacco products	26	29	*38*	*35*
321 Textiles	62	40	*72*	*71*
322 Wearing apparel	16	10	*18*	*50*
323 Leather and fur products	5	5	*5*	*2*
324 Footwear	13	1	*2*	*2*
331 Wood and wood products	1	-	*1*	*4*
332 Furniture and fixtures	3	4	*5*	*5*
341 Paper and paper products	40	24	*15*	*31*
342 Printing and publishing	8	8	*13*	*47*
351 Industrial chemicals	4	7	*19*	*7*
352 Other chemical products	46	57	*92*	*104*
353 Petroleum refineries	14	20	*42*	*9*
354 Miscellaneous petroleum and coal products	2	-	*2*	-
355 Rubber products	4	3	*4*	*4*
356 Plastic products	13	15	*16*	*21*
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	11	13	*13*	*62*
371 Iron and steel	9	7	*3*	*12*
372 Non-ferrous metals	1	1	-	-
381 Metal products	10	12	*8*	*15*
382 Non-electrical machinery	6	7	*1*	*15*
383 Electrical machinery	9	12	*20*	*23*
384 Transport equipment	1	-	*1*	*2*
385 Professional and scientific equipment	-	1	*1*	*2*
390 Other manufacturing industries	4	2	*3*	*8*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

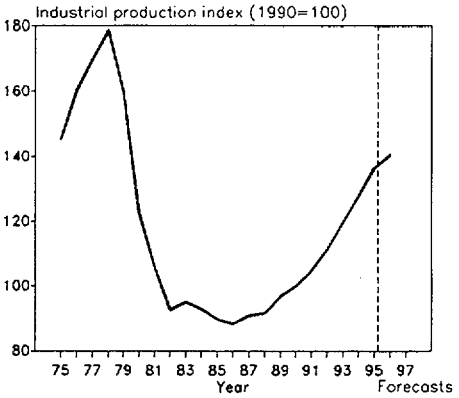
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)

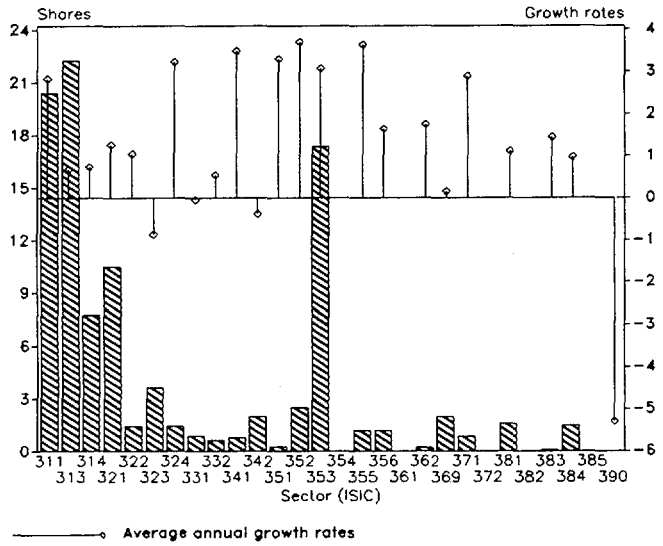


Industrial production index (1990=100)



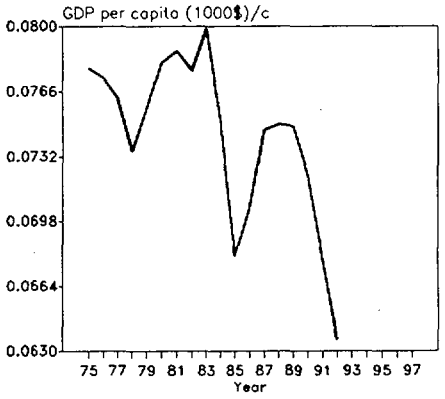
ETHIOPIA (INCL. ERITREA)

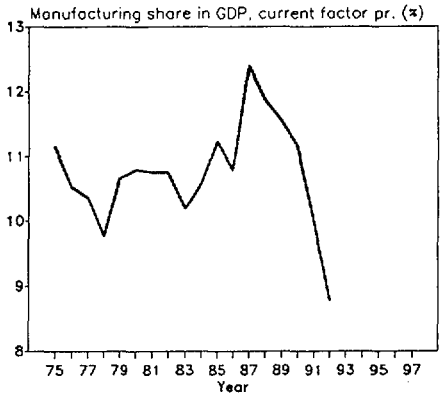
Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)

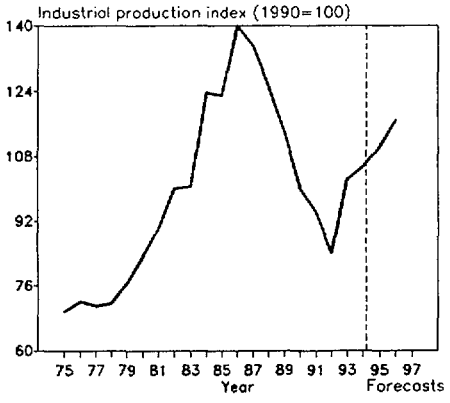


	1980	1985	1990	1992
GDP: [na] (millions of 1990-dollars)	3 028	2 983	3 681	3 449
Per capita [na] (1990-dollars)	78	68	72	64
Manufacturing share [na] (%) (current factor prices)	10.8	11.2	11.2	8.8
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	270	323	375	274
Industrial production index (1990=100)	83	123	100	84
Value added (millions of dollars)	273	*311*	*516*	*485*
Gross output (millions of dollars)	604	741	*1 105*	*1 129*
Employment (thousands)	77	*88*	*103*	*95*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	55	*58*	*53*	*57*
Wages and salaries including supplements (%)	*8*	*9*	*9*	*8*
Gross operating surplus and net taxes (%)	*37*	*33*	*38*	*35*
-PRODUCTIVITY: (dollars)				
Gross output per worker	7 859	8 385	*10 748*	*11 696*
Value added per worker	3 551	*3 519*	*5 015*	*5 030*
Average wage (including supplements)	*642*	*718*	*974*	*971*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	11.57	*15.90*	*14.93*	*11.41*
as a percentage of 1970-1975 structural change	100	*137*	*129*	*99*
MVA growth rate perer unit of structural change	3.44	1.06	1.44	1.05
Degree of specialization	25.8	21.7	26.4	27.0
-VALUE ADDED: (millions of dollars)				
311/2 Food products	66	*61*	*101*	*98*
313 Beverages	50	76	*123*	*103*
314 Tobacco products	18	19	*43*	*36*
321 Textiles	63	37	*52*	*56*
322 Wearing apparel	2	6	*8*	*6*
323 Leather and fur products	9	7	*21*	*17*
324 Footwear	6	5	*7*	*7*
331 Wood and wood products	5	3	*5*	*5*
332 Furniture and fixtures	1	2	*3*	*3*
341 Paper and paper products	5	5	*4*	*3*
342 Printing and publishing	6	9	*11*	*9*
351 Industrial chemicals	1	1	*1*	*1*
352 Other chemical products	8	11	*12*	*12*
353 Petroleum refineries	12	29	*81*	*89*
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	4	7	*6*	*5*
356 Plastic products	2	6	*6*	*5*
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	1	2	*1*	*1*
369 Other non-metal mineral products	5	10	*11*	*10*
371 Iron and steel	5	4	*4*	*4*
372 Non-ferrous metals	-	-	-	-
381 Metal products	4	7	*9*	*7*
382 Non-electrical machinery	-	-	-	-
383 Electrical machinery	-	-	-	-
384 Transport equipment	-	4	*8*	*7*
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	-	-	-	-

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

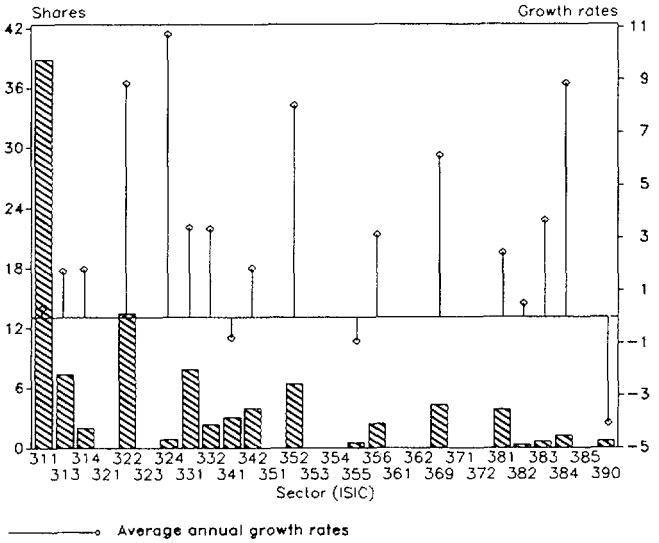




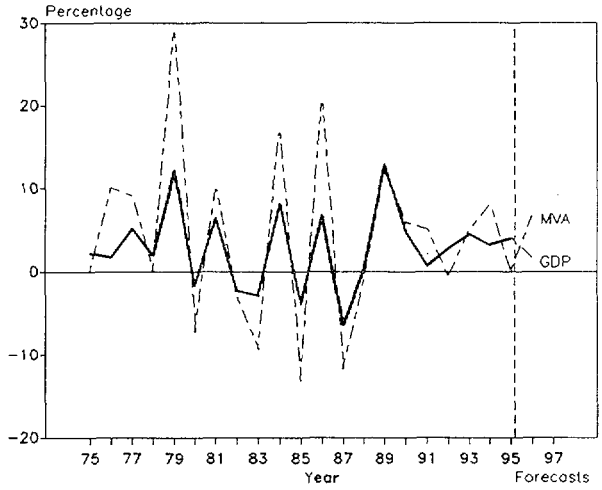


FIJI

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



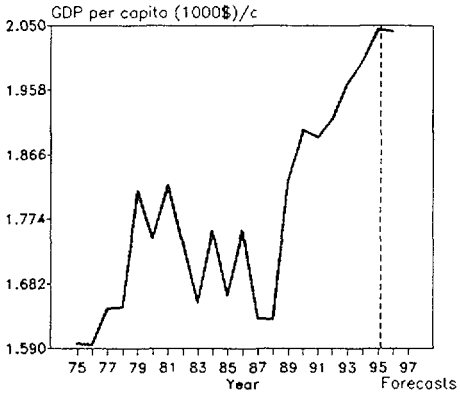
Annual growth rates of GDP and MVA (Constant 1990 prices)



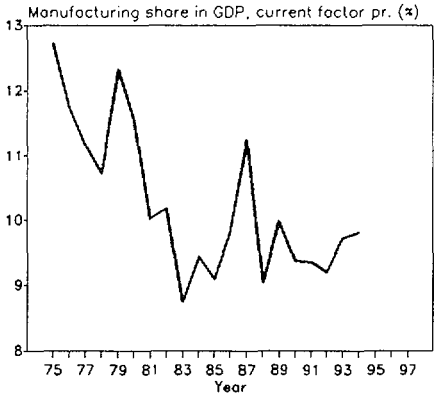
Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	1 107	1 164	1 381	1 603
Per capita [na] (1990-dollars)	1 747	1 665	1 902	2 045
Manufacturing share [na] (%) (current factor prices)	11.5	9.1	9.4	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	100	98	122	143
Industrial production index (1990=100)	*90*	*88*	100	108
Value added (millions of dollars)	121	90	142	*204*
Gross output (millions of dollars)	489	395	642	*827*
Employment (thousands)	13	13	21	*16*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	75	78	80	*75*
Wages and salaries including supplements (%)	11	13	11	*10*
Gross operating surplus and net taxes (%)	14	8	9	*15*
-PRODUCTIVITY: (dollars)				
Gross output per worker	37 145	28 850	30 433	*45 092*
Value added per worker	9 230	7 197	9 240	*11 353*
Average wage (including supplements)	4 114	3 992	3 253	*5 274*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	9.91	13.07	*14.43*	*9.54*
as a percentage of 1970-1975 structural change	100	132	*146*	*96*
MVA growth rate perer unit of structural change	3.58	-0.08	0.75	3.11
Degree of specialization	40.4	24.3	27.3	23.9
-VALUE ADDED: (millions of dollars)				
311/2 Food products	71	37	60	*73*
313 Beverages	6	*7*	*11*	*15*
314 Tobacco products	2	*2*	*3*	*4*
321 Textiles	-	-	-	-
322 Wearing apparel	2	*4*	*16*	*31*
323 Leather and fur products	-	-	-	-
324 Footwear	-	-	*1*	*2*
331 Wood and wood products	7	6	11	*17*
332 Furniture and fixtures	3	3	3	*5*
341 Paper and paper products	2	2	5	*6*
342 Printing and publishing	4	5	6	*8*
351 Industrial chemicals	-	-	-	-
352 Other chemical products	4	5	7	*14*
353 Petroleum refineries	-	-	-	-
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	1	1	1	*1*
356 Plastic products	2	2	3	*5*
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	6	7 [d]	5 [d]	*9*
371 Iron and steel	-	- [d]	- [d]	..
372 Non-ferrous metals	-	-	-	-
381 Metal products	6	4	5	*8*
382 Non-electrical machinery	1	-	-	*1*
383 Electrical machinery	-	*1*	*1*	*1*
384 Transport equipment	4	3	1	*3*
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	-	1	1	*1*

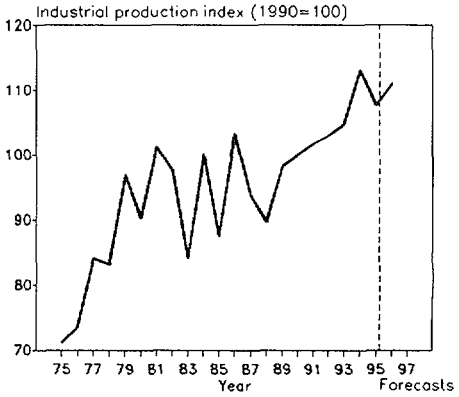
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)



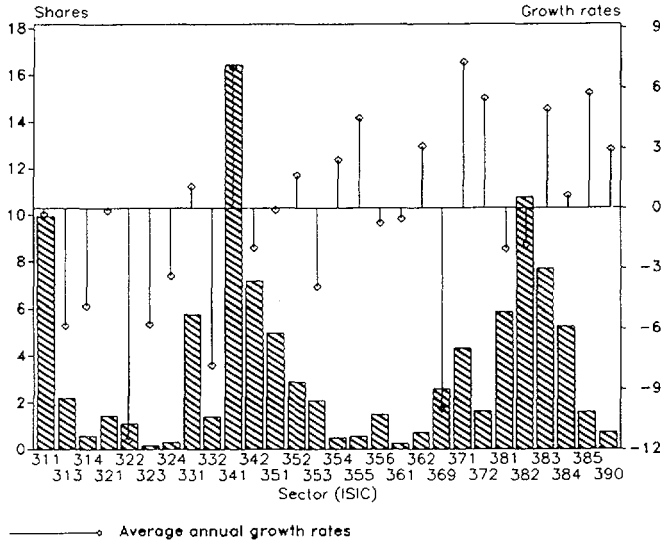
Industrial production index (1990=100)



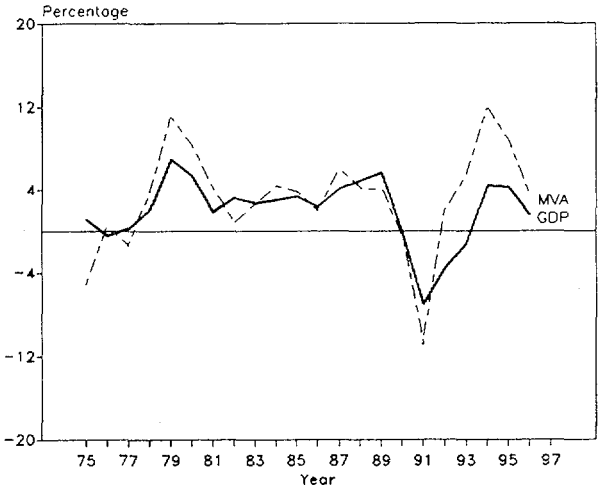
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

FINLAND

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

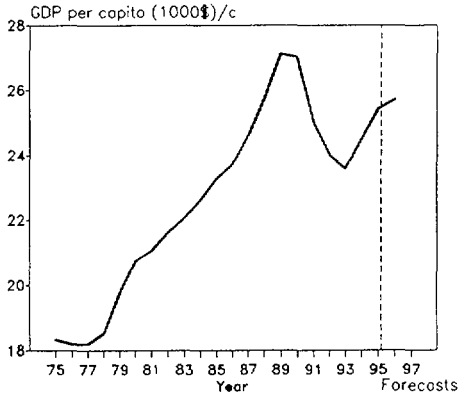


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

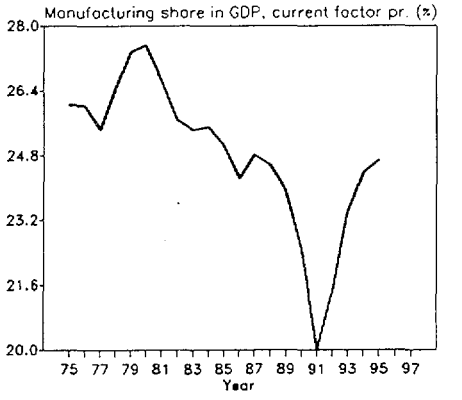
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	99 188	114 084	134 788	129 925
Per capita [na] (1990-dollars)	20 751	23 273	27 033	25 441
Manufacturing share [na] (%) (current factor prices)	27.5	25.1	22.5	*24.7*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	20 365	23 728	27 558	32 088
Industrial production index (1990=100)	77	89	100	116
Value added (millions of dollars)	14 343	13 594	26 981	*27 206*
Gross output (millions of dollars)	40 839	36 967	74 496	77 875
Employment (thousands)	531	496	432	*349*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	65	63	64	*65*
Wages and salaries including supplements (%)	19	20	21	*14*
Gross operating surplus and net taxes (%)	16	17	15	*21*
-PRODUCTIVITY: (dollars)				
Gross output per worker	76 435	74 030	171 493	*209 180*
Value added per worker	26 845	27 223	62 110	*73 952*
Average wage (including supplements)	14 694	14 599	36 724	*31 331*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	9.30	8.04	7.62	*9.15*
as a percentage of 1970-1975 structural change	100	86	82	*98*
MVA growth rate perer unit of structural change	3.00	1.45	0.04	-0.02
Degree of specialization	13.3	13.8	13.8	16.2
-VALUE ADDED: (millions of dollars)				
311/2 Food products	1 402	1 413	2 576	*2 442*
313 Beverages	225	227	666	*443*
314 Tobacco products	46	57	177	*127*
321 Textiles	469	309	386	*383*
322 Wearing apparel	499	435	428	*226*
323 Leather and fur products	54	38	48	*33*
324 Footwear	134	106	93	*75*
331 Wood and wood products	1 196	652	1 578	*1 744*
332 Furniture and fixtures	257	215	515	*315*
341 Paper and paper products	2 088	1 845	3 603	*5 166*
342 Printing and publishing	1 080	1 222	2 113	*1 797*
351 Industrial chemicals	555	561	1 371	*1 309*
352 Other chemical products	349	371	707	*745*
353 Petroleum refineries	445	384	674	*493*
354 Miscellaneous petroleum and coal products	46	47	121	*132*
355 Rubber products	105	84	133	*169*
356 Plastic products	164	168	425	*391*
361 Pottery, china and earthenware	46	40	73	*70*
362 Glass and glass products	105	78	163	*187*
369 Other non-metal mineral products	434	434	1 053	*556*
371 Iron and steel	544	463	850	*1 245*
372 Non-ferrous metals	142	103	363	*473*
381 Metal products	756	768	1 759	*1 491*
382 Non-electrical machinery	1 469	1 618	3 355	*2 843*
383 Electrical machinery	694	764	1 832	*2 313*
384 Transport equipment	823	915	1 405	*1 404*
385 Professional and scientific equipment	110	166	344	*448*
390 Other manufacturing industries	107	112	168	*188*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

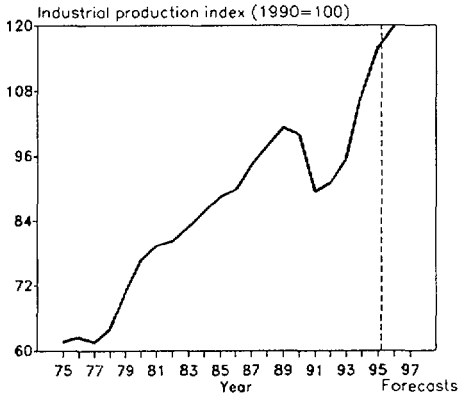
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

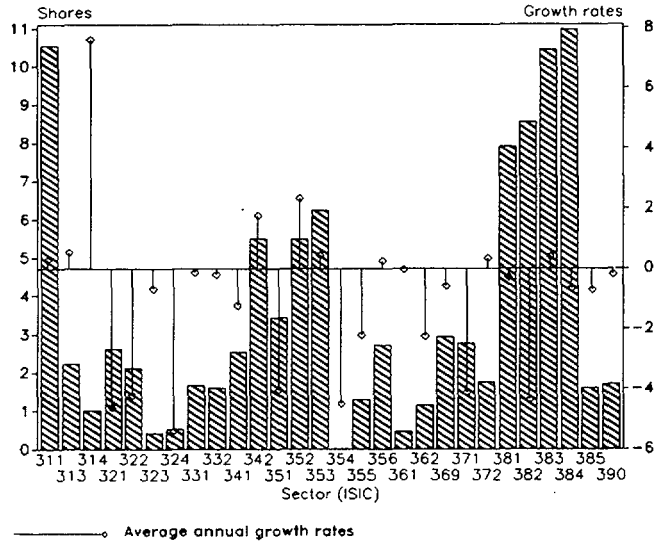


Industrial production index (1990=100)

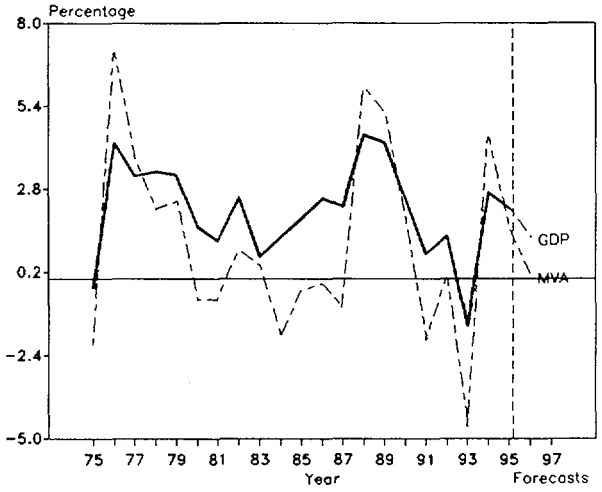


FRANCE

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

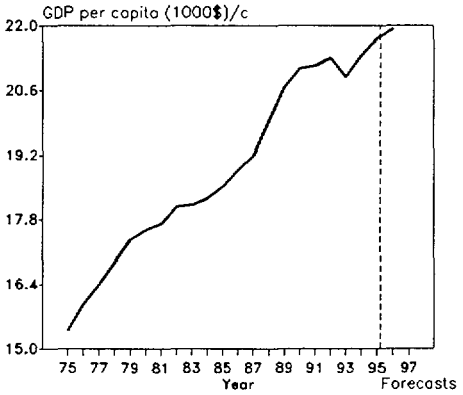


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

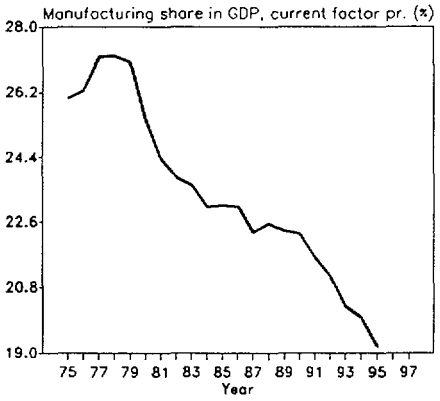
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	947 029	1 021 247	1 195 498	1 262 755
Per capita [na] (1990-dollars)	17 577	18 511	21 078	21 733
Manufacturing share [na] (%) (current factor prices)	25.5	23.1	22.3	*19.2*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	231 916	228 130	256 107	254 160
Industrial production index (1990=100)	94	88	100	99
Value added (millions of dollars)	161 513	115 506	257 307	297 536
Gross output (millions of dollars)	453 599	326 362	681 318	789 715
Employment (thousands)	5 197	4 583	4 390	3 874
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	64	65	62	62
Wages and salaries including supplements (%)	*24*	23	22	*22*
Gross operating surplus and net taxes (%)	*11*	12	16	*16*
-PRODUCTIVITY: (dollars)				
Gross output per worker	83 243	67 775	148 196	194 935
Value added per worker	29 647	23 987	55 968	73 444
Average wage (including supplements)	*21 336*	16 797	34 529	*44 682*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*4.74*	4.61	5.23	4.74
as a percentage of 1970-1975 structural change	*100*	97	110	100
MVA growth rate perer unit of structural change	2.19	0.72	1.08	0.89
Degree of specialization	10.4	11.1	11.1	11.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	15 952	12 825	25 556	31 371
313 Beverages	3 486	2 268	5 382	6 711
314 Tobacco products	1 497	948	1 919	3 602
321 Textiles	6 130	4 239	7 666	7 263
322 Wearing apparel	4 742	3 104	5 807	5 491
323 Leather and fur products	757	527	1 130	1 341
324 Footwear	1 411	929	1 420	1 258
331 Wood and wood products	2 888	1 704	4 183	5 057
332 Furniture and fixtures	2 846	1 632	3 973	4 739
341 Paper and paper products	3 592	2 817	6 823	7 730
342 Printing and publishing	6 660	5 069	12 500	16 645
351 Industrial chemicals	6 462	4 669	10 873	10 247
352 Other chemical products	6 302	4 996	12 427	16 726
353 Petroleum refineries	9 973	8 127	15 129	18 876
354 Miscellaneous petroleum and coal products	*69*	*31*	*56*	*53*
355 Rubber products	2 483	1 544	3 341	3 526
356 Plastic products	3 083	2 415	6 663	8 045
361 Pottery, china and earthenware	*650*	*490*	*1 145*	*1 379*
362 Glass and glass products	2 170	1 365	3 090	3 333
369 Other non-metal mineral products	5 653	3 153	7 523	8 765
371 Iron and steel	6 741	3 788	8 434	8 373
372 Non-ferrous metals	2 479	2 340	4 534	5 586
381 Metal products	12 119	7 792	20 097	23 826
382 Non-electrical machinery	16 245	11 998	24 821	23 266
383 Electrical machinery	14 411	11 491	25 771	31 423
384 Transport equipment	17 733	11 316	28 618	33 076
385 Professional and scientific equipment	2 206	1 752	4 109	4 676
390 Other manufacturing industries	2 772	2 178	4 319	5 153

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

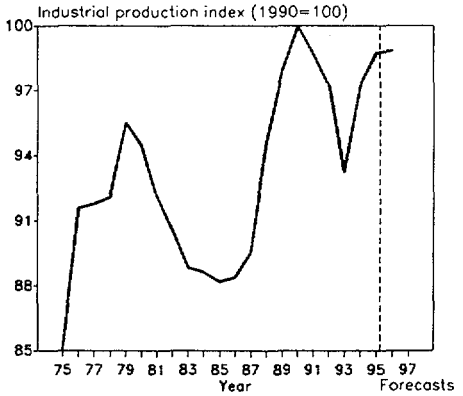
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

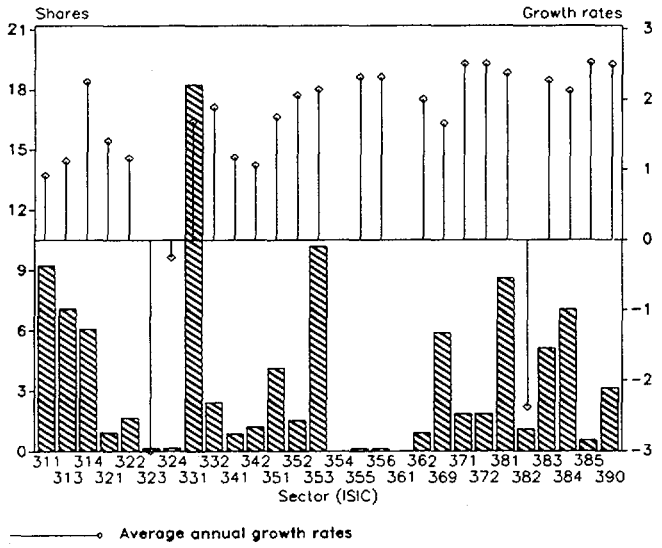


Industrial production index (1990=100)

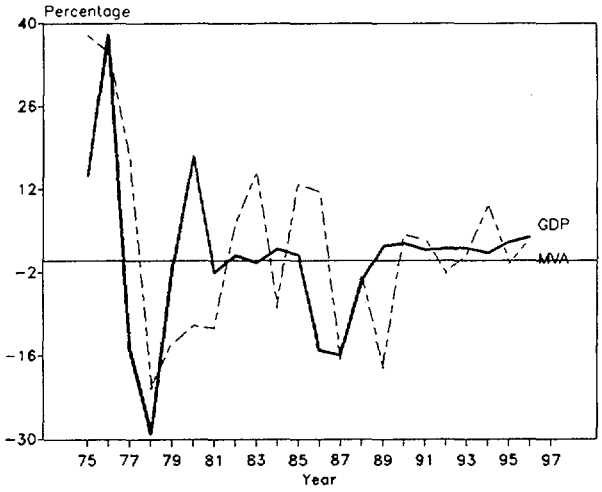


GABON

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

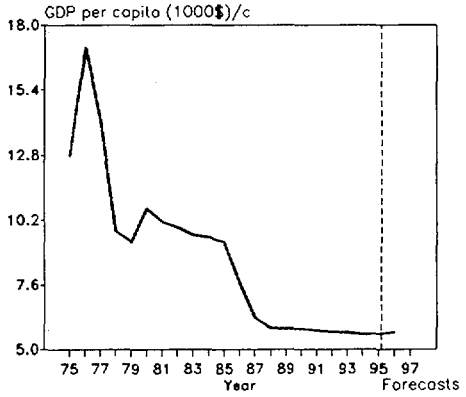


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

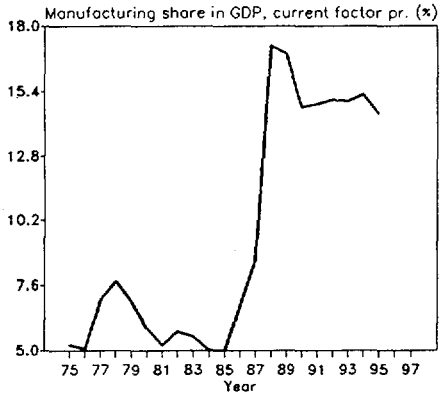
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	7 369	7 484	5 456	6 058
Per capita [na] (1990-dollars)	10 664	9 320	5 835	5 630
Manufacturing share [na] (%) (current factor prices)	*5.9*	*5.0*	14.8	*14.1*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	893	996	763	*847*
Industrial production index (1990=100)	82	108	100	*111*
Value added (millions of dollars)	224	*189*	*282*	*243*
Gross output (millions of dollars)	690	*632*	*938*	*844*
Employment (thousands)	*18*	*18*	*16*	*17*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*68*	*70*	*70*	*71*
Wages and salaries including supplements (%)	*16*	*17*	*19*	*20*
Gross operating surplus and net taxes (%)	*16*	*13*	*11*	*9*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*38 481*	*35 533*	*59 523*	*49 899*
Value added per worker	*12 470*	*10 882*	*18 184*	*14 588*
Average wage (including supplements)	*6 283*	*6 094*	*11 567*	*10 059*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	20.11	*15.06*	*9.42*	*2.04*
as a percentage of 1970-1975 structural change	100	*75*	*47*	*10*
MVA growth rate perer unit of structural change	2.04	0.56	-0.24	-2.27
Degree of specialization	21.0	16.1	15.8	16.0
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*18*	*17*	*27*	*22*
313 Beverages	19	*13*	*20*	*17*
314 Tobacco products	17	*12*	*17*	*15*
321 Textiles	3	*2*	*3*	*2*
322 Wearing apparel	5	*3*	*5*	*4*
323 Leather and fur products	1	-	*1*	-
324 Footwear	1	-	-	-
331 Wood and wood products	64	*36*	*51*	*44*
332 Furniture and fixtures	9	*5*	*7*	*6*
341 Paper and paper products	2	*1*	*2*	*2*
342 Printing and publishing	3	*3*	*3*	*3*
351 Industrial chemicals	6	*7*	*12*	*10*
352 Other chemical products	3	*3*	*4*	*4*
353 Petroleum refineries	18	*18*	*28*	*25*
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	-	-	-	-
356 Plastic products	-	-	-	-
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	1	*2*	*2*	*2*
369 Other non-metal mineral products	8	*14*	*17*	*14*
371 Iron and steel	3	*3*	*5*	*5*
372 Non-ferrous metals	3	*3*	*5*	*5*
381 Metal products	13	*15*	*24*	*21*
382 Non-electrical machinery	2	*2*	*4*	*2*
383 Electrical machinery	8	*9*	*14*	*13*
384 Transport equipment	11	*13*	*20*	*17*
385 Professional and scientific equipment	1	*1*	*1*	*1*
390 Other manufacturing industries	5	*6*	*9*	*8*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

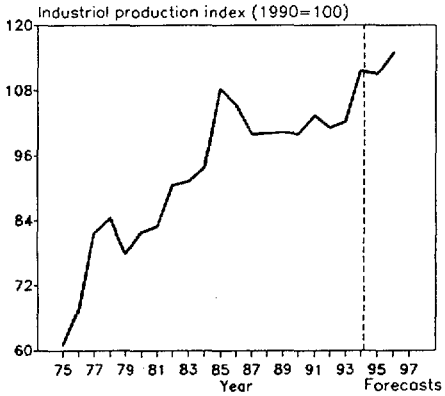
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

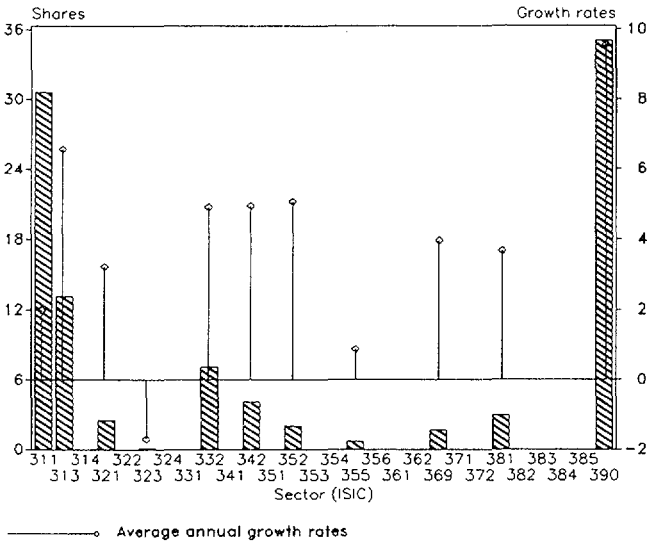


Industriol production index (1990=100)

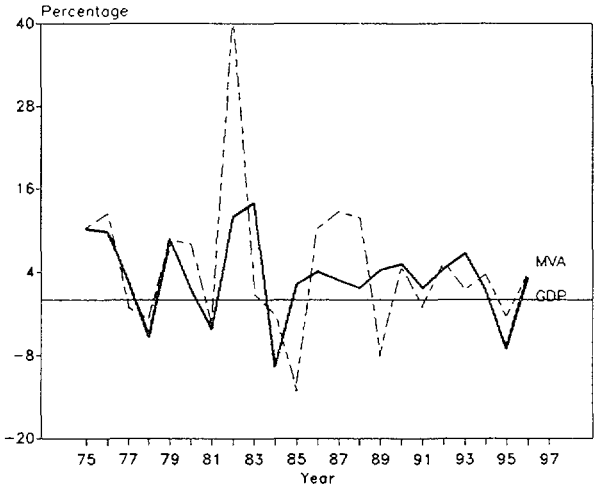


GAMBIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



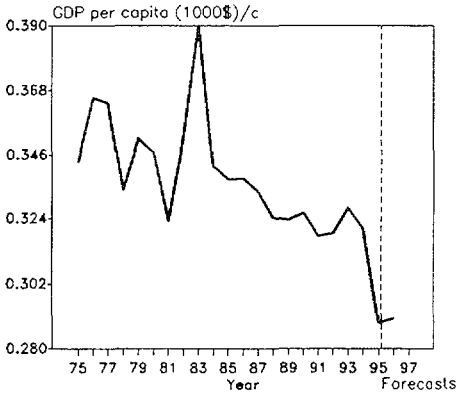
Annual growth rates of GDP and MVA (Constant 1990 prices)



	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	222	251	300	321
Per capita [na] (1990-dollars)	347	337	326	289
Manufacturing share [na] (%) (current factor prices)	3.6	8.9	5.4	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	11	13	17	*18*
Industrial production index (1990=100)	62	*75*	100	*106*
Value added (millions of dollars)	11	*9*	*17*	*25*
Gross output (millions of dollars)	30	*41*	*59*	*82*
Employment (thousands)	2	*3*	*4*	*5*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	62	*78*	*71*	*70*
Wages and salaries including supplements (%)	10	*7*	*8*	*8*
Gross operating surplus and net taxes (%)	28	*15*	*21*	*22*
-PRODUCTIVITY: (dollars)				
Gross output per worker	16 115	*14 182*	*17 338*	*19 828*
Value added per worker	6 094	*3 242*	*5 474*	*9 414*
Average wage (including supplements)	1 566	*1 014*	*1 353*	*1 546*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	33.57	*45.70*	*21.01*	*10.10*
as a percentage of 1970-1975 structural change	100	*136*	*63*	*30*
MVA growth rate perer unit of structural change	2.06	1.36	1.00	3.63
Degree of specialization	36.7	32.5	29.1	30.7
-VALUE ADDED: (millions of dollars)				
311/2 Food products	3	*4*	*6*	*7*
313 Beverages	1	*1*	*2*	*3*
314 Tobacco products	-	-	-	-
321 Textiles	-	-	-	*1*
322 Wearing apparel	-	-	-	-
323 Leather and fur products	-	-	-	-
324 Footwear	-	-	-	-
331 Wood and wood products	-	-	-	-
332 Furniture and fixtures	1	*1*	*1*	*2*
341 Paper and paper products	-	-	-	-
342 Printing and publishing	-	-	*1*	*1*
351 Industrial chemicals	-	-	-	-
352 Other chemical products	-	-	-	-
353 Petroleum refineries	-	-	-	-
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	-	-	-	-
356 Plastic products	-	-	-	-
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	-	-	-	-
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	-	-	-	-
381 Metal products	-	-	*1*	*1*
382 Non-electrical machinery	-	-	-	-
383 Electrical machinery	-	-	-	-
384 Transport equipment	-	-	-	-
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	6	*2*	*6*	*9*

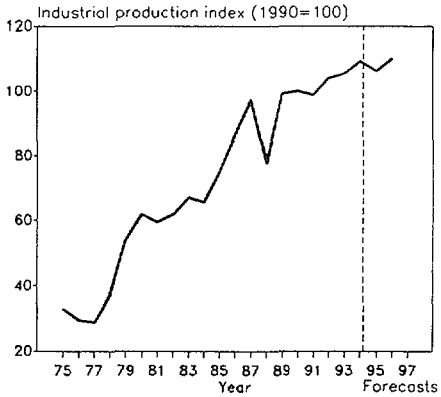
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

GDP per capita (1000$)/c



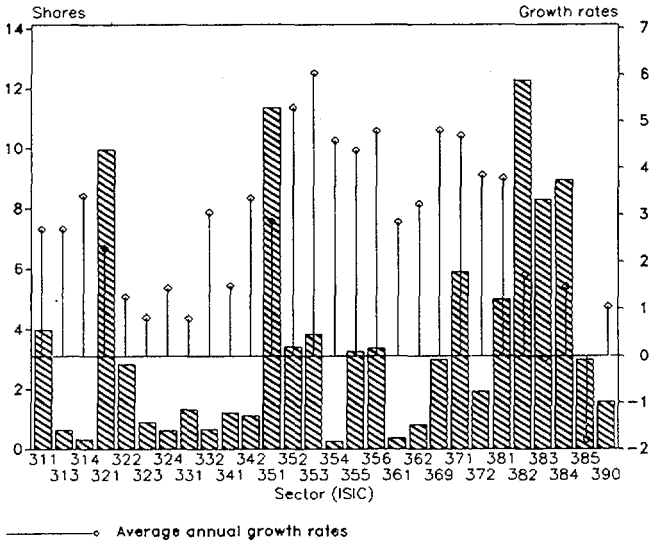
Manufacturing share in GDP, current factor pr. (%)

Industrial production index (1990=100)

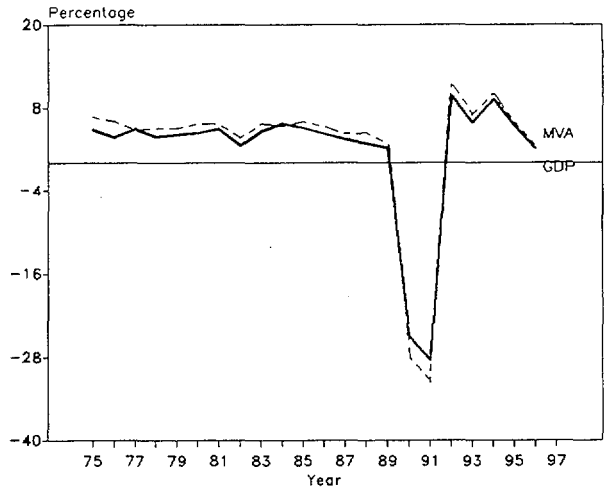


GERMAN DEMOCRATIC REPUBLIC, FORMER

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

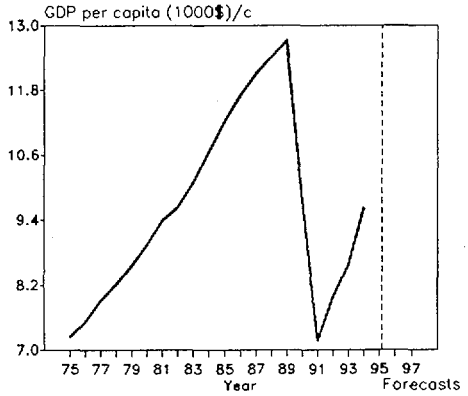


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

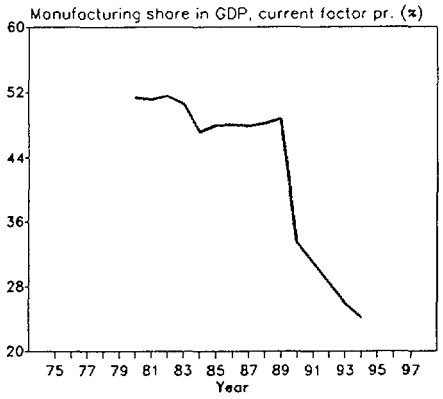
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	149 748	186 903	158 586	151 494
Per capita [na] (1990-dollars)	8 947	11 229	9 759	..
Manufacturing share [na] (%) (current factor prices)	51.3	48.0	*33.4*	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	67 541	86 770	73 170	*69 260*
Industrial production index (1990=100)	144	169	100	*95*
Value added (millions of dollars)	70 096	*85 842*	*82 081*	*122 909*
Gross output (millions of dollars)	132 645	159 661	*248 433*	*311 574*
Employment (thousands)	2 895	2 988	*3 018*	*1 007*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	47	*46*	*67*	*63*
Wages and salaries including supplements (%)	*15*	*9*	*10*	*11*
Gross operating surplus and net taxes (%)	*38*	*45*	*23*	*26*
-PRODUCTIVITY: (dollars)				
Gross output per worker	45 819	53 434	*77 467*	*128 597*
Value added per worker	24 213	*28 729*	*28 713*	*48 184*
Average wage (including supplements)	*6 771*	*4 836*	*8 473*	*36 140*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*3.36*	*7.64*	*10.01*	*6.21*
as a percentage of 1970-1975 structural change	*100*	*227*	*298*	*185*
MVA growth rate perer unit of structural change	9.98	7.57	2.09	-2.78
Degree of specialization	13.3	11.6	13.2	12.6
-VALUE ADDED: (millions of dollars)				
311/2 Food products	6 043	*5 958*	*3 194*	*4 971*
313 Beverages	1 040	*1 025*	*503*	*785*
314 Tobacco products	254	*250*	*248*	*389*
321 Textiles	6 276	8 477	*8 355*	*12 303*
322 Wearing apparel	2 199	*2 626*	*2 476*	*3 463*
323 Leather and fur products	839	*988*	*805*	*1 103*
324 Footwear	631	*775*	*526*	*753*
331 Wood and wood products	1 178	*1 418*	*1 176*	*1 612*
332 Furniture and fixtures	1 081	*1 284*	*522*	*832*
341 Paper and paper products	931	*1 103*	*1 052*	*1 491*
342 Printing and publishing	726	*874*	*866*	*1 363*
351 Industrial chemicals	4 899	*8 840*	*9 284*	*14 116*
352 Other chemical products	1 220	*2 202*	*2 414*	*4 254*
353 Petroleum refineries	2 853	*5 149*	*2 785*	*4 924*
354 Miscellaneous petroleum and coal products	141	*253*	*187*	*310*
355 Rubber products	1 430	*2 579*	*2 476*	*4 113*
356 Plastic products	1 528	*2 755*	*2 507*	*4 257*
361 Pottery, china and earthenware	232	*288*	*279*	*429*
362 Glass and glass products	473	*559*	*637*	*997*
369 Other non-metal mineral products	1 768	2 403	*2 166*	*3 713*
371 Iron and steel	2 651	4 704	*4 332*	*7 365*
372 Non-ferrous metals	884	1 570	*1 485*	*2 399*
381 Metal products	3 171	*3 059*	*3 775*	*6 113*
382 Non-electrical machinery	9 950	*9 597*	*10 522*	*15 025*
383 Electrical machinery	7 480	*7 132*	*7 427*	*9 628*
384 Transport equipment	6 898	*6 651*	*7 736*	*10 907*
385 Professional and scientific equipment	2 714	*2 590*	*3 033*	*3 464*
390 Other manufacturing industries	608	*735*	*1 314*	*1 829*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

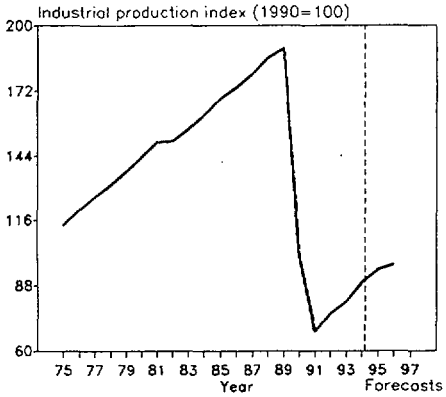
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

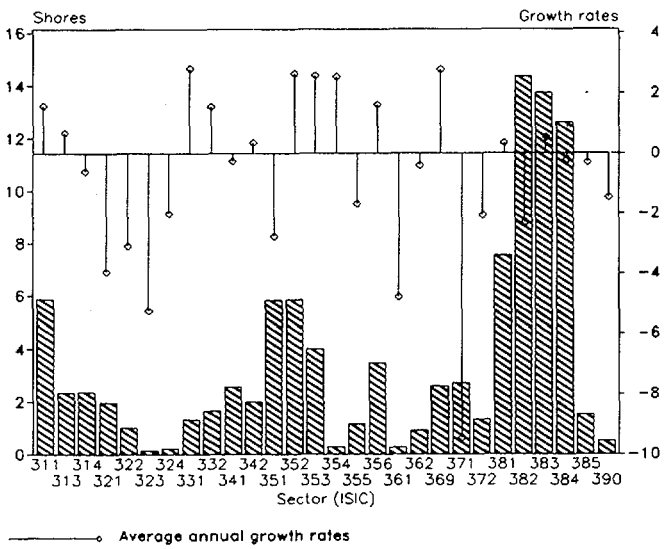


Industrial production index (1990=100)

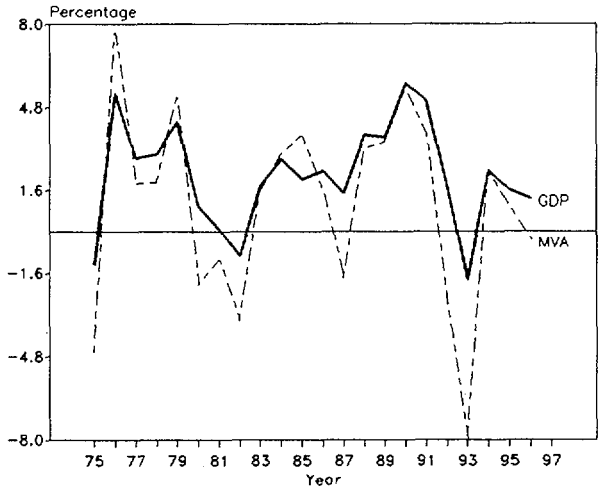


GERMANY, FEDERAL REPUBLIC OF, FORMER

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



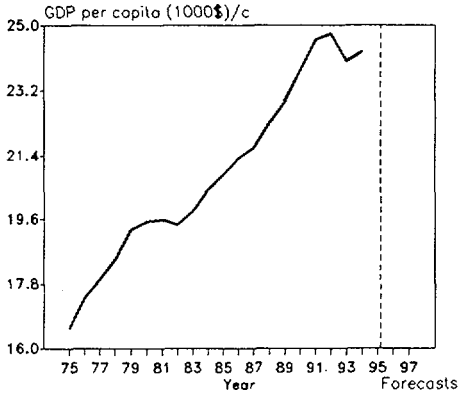
Annual growth rates of GDP and MVA (Constant 1990 prices)



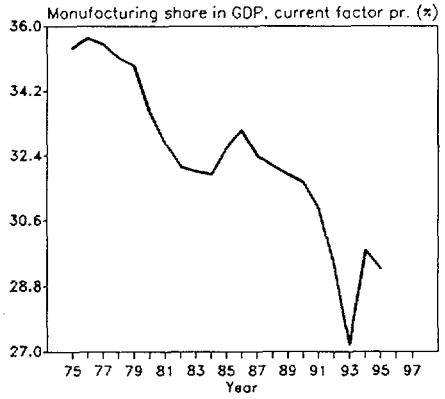
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	1 202 214	1 272 512	1 501 516	1 638 364
Per capita [na] (1990-dollars)	19 527	20 852	23 747	..
Manufacturing share [na] (%) (current factor prices)	33.6	32.6	31.7	*29.3*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	394 998	408 930	458 965	439 742
Industrial production index (1990=100)	82	85	100	*98*
Value added (millions of dollars)	265 588	223 253	535 541	*685 411*
Gross output (millions of dollars)	632 161	489 414	1 097 981	1 403 546
Employment (thousands)	7 229	6 616	7 120	*6 679*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	58	54	51	*51*
Wages and salaries including supplements (%)	26	24	25	*21*
Gross operating surplus and net taxes (%)	16	22	24	*28*
-PRODUCTIVITY: (dollars)				
Gross output per worker	87 448	73 973	154 211	*208 286*
Value added per worker	36 739	33 744	75 216	*108 107*
Average wage (including supplements)	22 606	17 563	38 487	*43 166*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	4.23	7.86	7.55	*4.33*
as a percentage of 1970-1975 structural change	100	186	179	*102*
MVA growth rate perer unit of structural change	1.30	1.79	2.19	1.60
Degree of specialization	12.1	14.7	15.2	15.0
-VALUE ADDED: (millions of dollars)				
311/2 Food products	18 570	10 830	28 590	*41 172*
313 Beverages	6 452	5 047	11 911	*16 307*
314 Tobacco products	6 909	5 720	12 633	*16 025*
321 Textiles	6 964	5 526	11 849	*12 527*
322 Wearing apparel	4 934	2 803	5 887	*6 524*
323 Leather and fur products	935	501	944	*942*
324 Footwear	1 205	726	1 152	*1 383*
331 Wood and wood products	4 485	2 431	6 179	*9 697*
332 Furniture and fixtures	5 548	3 084	7 885	*11 521*
341 Paper and paper products	5 099	5 221	13 490	*17 286*
342 Printing and publishing	6 150	4 139	10 255	*13 691*
351 Industrial chemicals	13 944	16 570	35 537	*39 657*
352 Other chemical products	8 003	11 597	27 942	*42 317*
353 Petroleum refineries	14 637	*9 425*	*18 335*	*28 357*
354 Miscellaneous petroleum and coal products	990	*701*	*1 323*	*2 027*
355 Rubber products	3 201	2 880	6 414	*7 652*
356 Plastic products	6 095	5 638	17 313	*24 637*
361 Pottery, china and earthenware	1 304	671	1 555	*1 610*
362 Glass and glass products	2 492	1 917	4 791	*6 088*
369 Other non-metal mineral products	7 937	4 876	12 031	*18 773*
371 Iron and steel	18 872	9 538	19 205	*14 966*
372 Non-ferrous metals	2 508	3 412	7 733	*8 874*
381 Metal products	14 455	14 162	39 181	*51 888*
382 Non-electrical machinery	34 263	33 812	82 544	*94 332*
383 Electrical machinery	30 501	28 329	72 567	*96 971*
384 Transport equipment	31 232	29 078	67 434	*86 219*
385 Professional and scientific equipment	6 205	3 446	8 011	*10 397*
390 Other manufacturing industries	1 700	1 175	2 849	*3 442*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

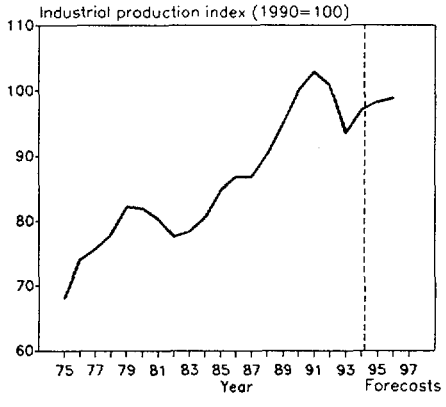
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

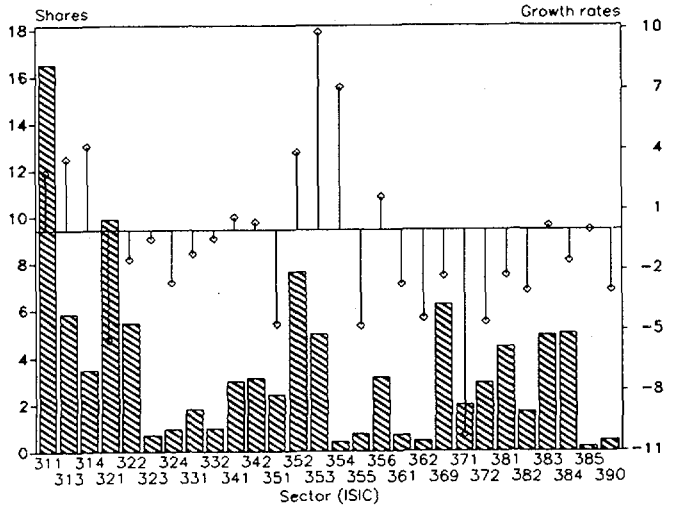


Industrial production index (1990=100)

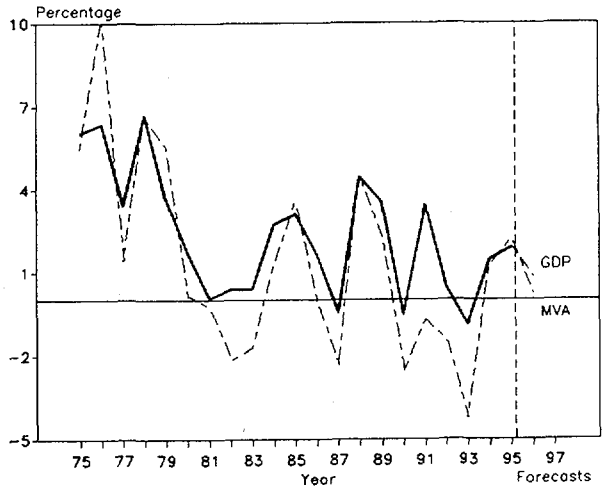


GREECE

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

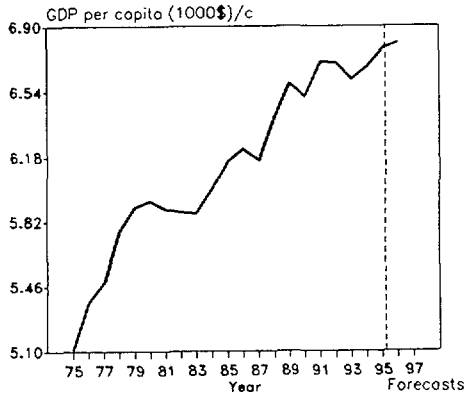


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

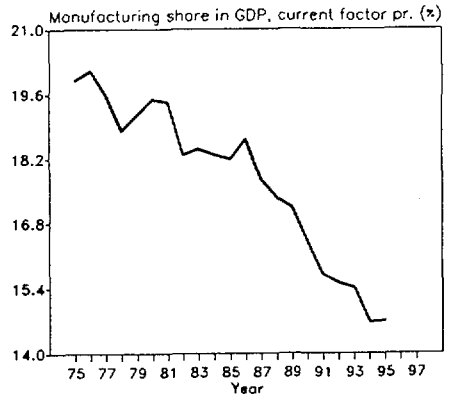
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	57 233	61 161	66 532	70 820
Per capita [na] (1990-dollars)	5 935	6 157	6 510	6 774
Manufacturing share [na] (%) (current factor prices)	19.5	18.2	16.4	*14.7*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	9 362	9 405	9 534	9 226
Industrial production index (1990=100)	101	100	100	98
Value added (millions of dollars)	6 129	4 644	9 371	*12 114*
Gross output (millions of dollars)	20 906	16 937	29 727	34 893
Employment (thousands)	378	352	346	*313*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	71	73	68	*65*
Wages and salaries including supplements (%)	14	15	17	*13*
Gross operating surplus (%)	15	12	15	*21*
-PRODUCTIVITY: (dollars)				
Gross output per worker	55 275	48 084	85 846	*111 416*
Value added per worker	16 204	13 185	27 062	*38 765*
Average wage (including supplements)	7 964	7 281	14 319	*14 964*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	7.27	5.82	7.35	*9.15*
as a percentage of 1970-1975 structural change	*100*	80	101	*126*
MVA growth rate perer unit of structural change	5.13	2.77	0.57	0.52
Degree of specialization	11.8	12.5	11.1	12.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	731	631	1 349	*2 071*
313 Beverages	233	217	474	*747*
314 Tobacco products	138	114	280	*456*
321 Textiles	987	762	1 109	*1 064*
322 Wearing apparel	283	235	552	*652*
323 Leather and fur products	46	38	68	86
324 Footwear	76	61	100	*112*
331 Wood and wood products	138	65	176	*213*
332 Furniture and fixtures	54	34	93	*118*
341 Paper and paper products	118	94	272	*365*
342 Printing and publishing	155	99	289	*383*
351 Industrial chemicals	180	192	290	*282*
352 Other chemical products	314	223	628	*1 004*
353 Petroleum refineries	152	140	295	*672*
354 Miscellaneous petroleum and coal products	31	19	27	*53*
355 Rubber products	58	44	84	*81*
356 Plastic products	186	109	276	*397*
361 Pottery, china and earthenware	61	43	73	*82*
362 Glass and glass products	49	23	49	*50*
369 Other non-metal mineral products	414	276	641	*728*
371 Iron and steel	200	153	280	*205*
372 Non-ferrous metals	245	184	347	*341*
381 Metal products	365	276	449	*518*
382 Non-electrical machinery	125	81	178	*193*
383 Electrical machinery	295	219	441	589
384 Transport equipment	453	268	488	*579*
385 Professional and scientific equipment	8	5	16	*21*
390 Other manufacturing industries	31	39	47	*51*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

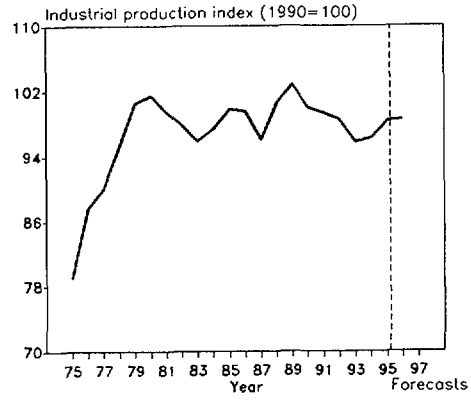
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

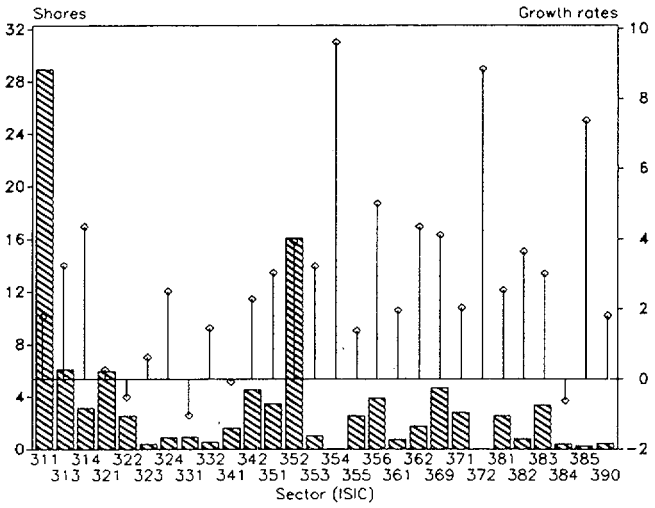


Industrial production index (1990=100)

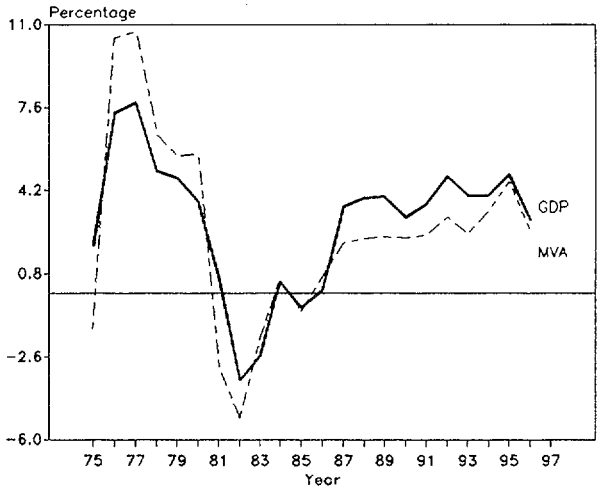


GUATEMALA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

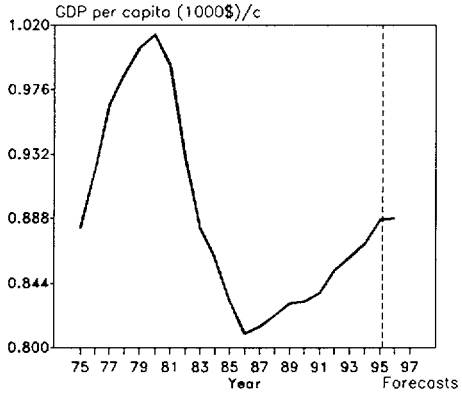


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

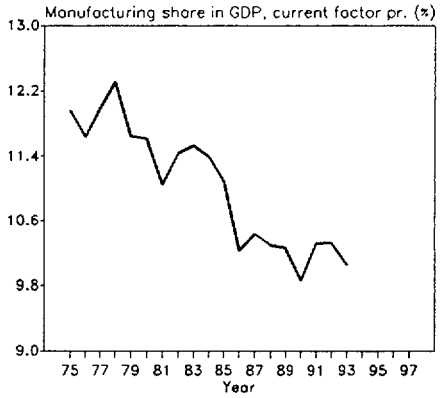
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	7 012	6 627	7 650	9 423
Per capita [na] (1990-dollars)	1 014	832	832	887
Manufacturing share [na] (%) (current factor prices)	11.6	11.1	9.9	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	772	694	761	*888*
Industrial production index (1990=100)	108	91	100	*117*
Value added (millions of dollars)	794	907	*848*	*1 468*
Gross output (millions of dollars)	1 968	2 195	*2 099*	*4 561*
Employment (thousands)	82	73	*95*	*97*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	60	59	*60*	*68*
Wages and salaries including supplements (%)	*10*	*10*	*8*	*5*
Gross operating surplus and net taxes (%)	*30*	*31*	*32*	*28*
-PRODUCTIVITY: (dollars)				
Gross output per worker	23 189	28 305	*20 321*	*47 234*
Value added per worker	9 359	11 690	*8 248*	*19 709*
Average wage (including supplements)	*2 477*	*3 079*	*1 816*	*2 141*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	11.46	11.76	*9.23*	*5.87*
as a percentage of 1970-1975 structural change	100	103	*81*	*51*
MVA growth rate perer unit of structural change	3.26	0.45	1.50	4.26
Degree of specialization	20.4	24.5	23.2	22.9
-VALUE ADDED: (millions of dollars)				
311/2 Food products	204	276	*254*	*421*
313 Beverages	91	89	*50*	*91*
314 Tobacco products	14	15	*24*	*46*
321 Textiles	45	71	*54*	*83*
322 Wearing apparel	19	13	*24*	*36*
323 Leather and fur products	3	3	*3*	*5*
324 Footwear	15	13	*7*	*12*
331 Wood and wood products	10	7	*8*	*12*
332 Furniture and fixtures	4	3	*4*	*7*
341 Paper and paper products	19	21	*15*	*22*
342 Printing and publishing	34	34	*38*	*66*
351 Industrial chemicals	28	28	*29*	*51*
352 Other chemical products	110	121	*130*	*241*
353 Petroleum refineries	14	8	*8*	*15*
354 Miscellaneous petroleum and coal products	2	-	-	*1*
355 Rubber products	21	24	*22*	*36*
356 Plastic products	19	37	*30*	*59*
361 Pottery, china and earthenware	2	8	*6*	*11*
362 Glass and glass products	22	17	*14*	*26*
369 Other non-metal mineral products	34	41	*38*	*71*
371 Iron and steel	16	21	*24*	*40*
372 Non-ferrous metals	1	-	-	*1*
381 Metal products	23	23	*21*	*37*
382 Non-electrical machinery	6	4	*6*	*12*
383 Electrical machinery	25	19	*28*	*50*
384 Transport equipment	8	5	*3*	*5*
385 Professional and scientific equipment	1	1	*2*	*3*
390 Other manufacturing industries	4	3	*4*	*6*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

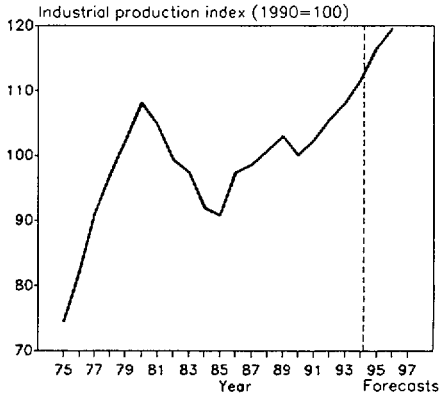
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

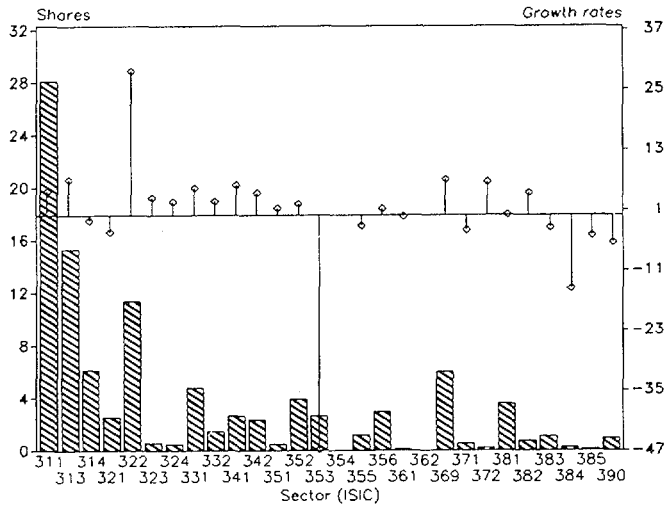


Industrial production index (1990=100)

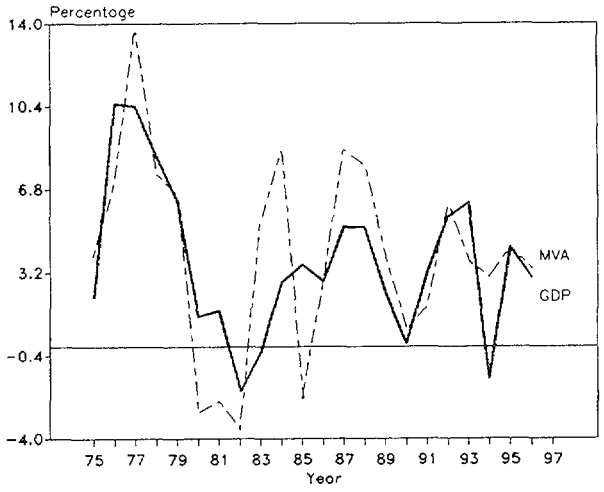


HONDURAS

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

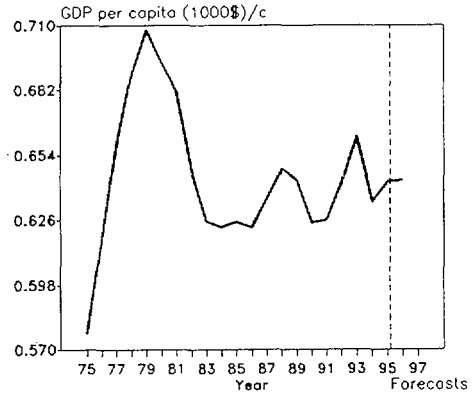


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

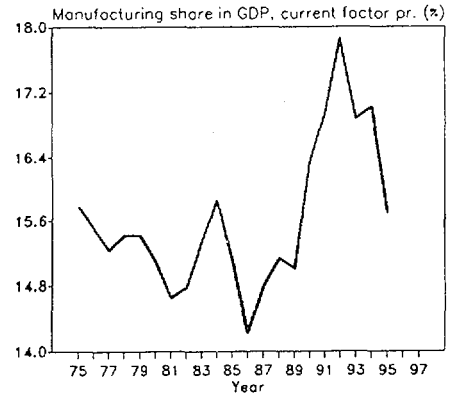
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	2 476	2 617	3 049	3 632
Per capita [na] (1990-dollars)	694	625	625	642
Manufacturing share [na] (%) (current factor prices)	15.1	15.1	16.3	*15.2*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	336	353	443	*532*
Industrial production index (1990=100)	50	64	100	258
Value added (millions of dollars)	*289*	498	466	*577*
Gross output (millions of dollars)	*1 025*	1 618	1 651	*2 092*
Employment (thousands)	58	64	79	*140*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*72*	69	72	*72*
Wages and salaries including supplements (%)	*11*	13	11	*12*
Gross operating surplus and net taxes (%)	*17*	18	18	*16*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*16 916*	25 279	20 996	*11 947*
Value added per worker	*4 840*	7 785	5 926	*3 328*
Average wage (including supplements)	*2 015*	3 219	2 239	*1 747*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*8.16*	*8.81*	7.26	*11.08*
as a percentage of 1970-1975 structural change	*100*	*108*	89	*136*
MVA growth rate perer unit of structural change	4.01	3.20	3.46	2.23
Degree of specialization	22.9	22.0	20.7	26.4
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*75*	130	128	*166*
313 Beverages	*53*	78	59	*87*
314 Tobacco products	*20*	42	34	*32*
321 Textiles	*13*	14	16	*13*
322 Wearing apparel	*9*	17	20	*82*
323 Leather and fur products	*3*	2	3	*3*
324 Footwear	*3*	2	2	*3*
331 Wood and wood products	22	30	20	*27*
332 Furniture and fixtures	*5*	8	8	*9*
341 Paper and paper products	*5*	9	12	*16*
342 Printing and publishing	*7*	13	10	*13*
351 Industrial chemicals	*1*	2	2	*3*
352 Other chemical products	*12*	20	20	*22*
353 Petroleum refineries	*13*	38	39	*1*
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	*5*	*8*	*7*	*6*
356 Plastic products	*9*	18	16	*16*
361 Pottery, china and earthenware	-	-	1	-
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	*15*	24	26	*38*
371 Iron and steel	*1*	2	4	*3*
372 Non-ferrous metals	*1*	1	1	*1*
381 Metal products	*12*	21	21	*20*
382 Non-electrical machinery	*1*	3	4	*4*
383 Electrical machinery	*4*	8	7	*6*
384 Transport equipment	-	2	2	*1*
385 Professional and scientific equipment	-	1	1	*1*
390 Other manufacturing industries	*2*	5	6	*4*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

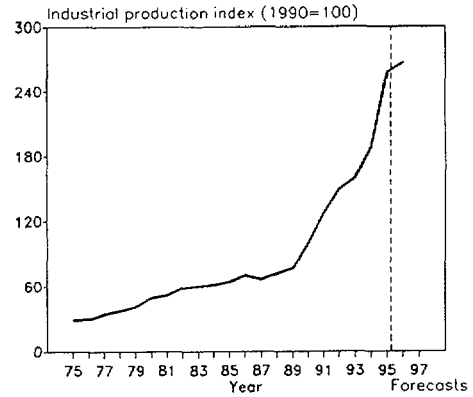
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

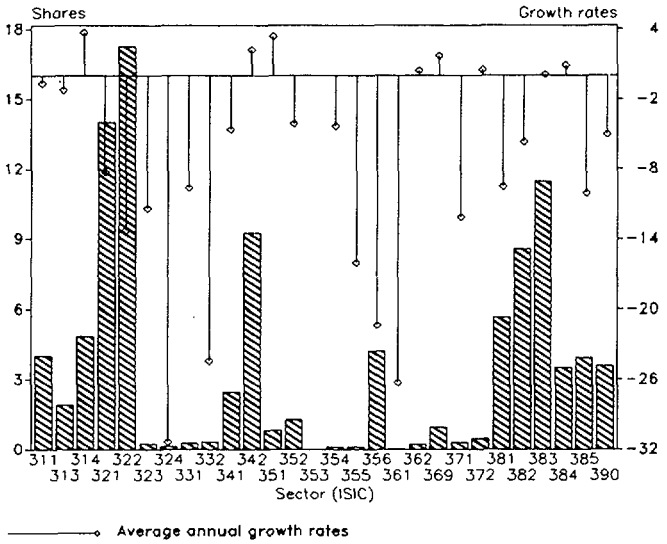


Industrial production index (1990=100)

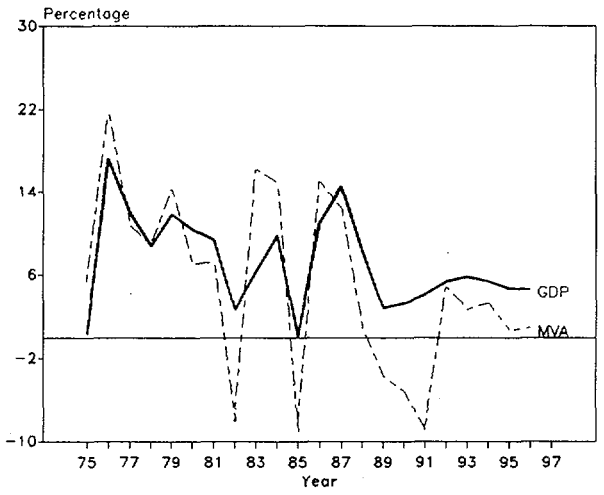


HONG KONG

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

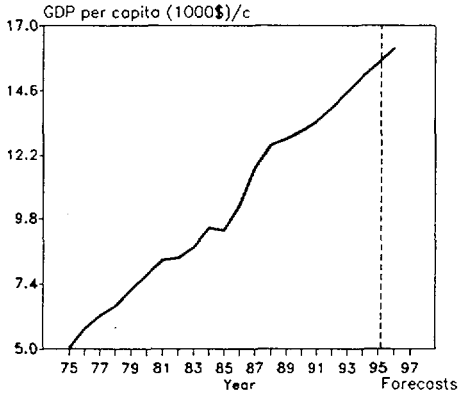


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

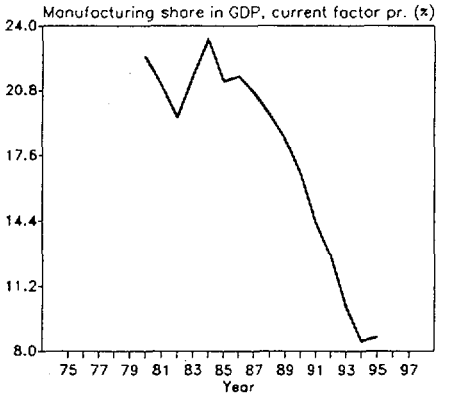
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	38 887	51 057	74 686	95 619
Per capita [na] (1990-dollars)	7 717	9 358	13 091	15 616
Manufacturing share [na] (%) (current factor prices)	22.5	21.3	16.7	*8.7*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	8 896	10 631	12 609	*12 814*
Industrial production index (1990=100)	56	73	100	100
Value added (millions of dollars)	7 343	6 582	12 034	*12 759*
Gross output (millions of dollars)	22 187	22 835	41 513	*42 829*
Employment (thousands)	937	908	763	*425*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	67	71	71	*70*
Wages and salaries including supplements (%)	*18*	19	17	*15*
Gross operating surplus and net taxes (%)	*15*	10	12	*15*
-PRODUCTIVITY: (dollars)				
Gross output per worker	23 686	25 140	54 430	*100 778*
Value added per worker	7 840	7 246	15 779	*30 056*
Average wage (including supplements)	*4 238*	4 808	9 161	*15 314*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	11.24	8.75	9.40	*13.72*
as a percentage of 1970-1975 structural change	100	78	84	*122*
MVA growth rate perer unit of structural change	5.88	4.69	0.84	-0.22
Degree of specialization	24.2	22.6	21.3	19.8
-VALUE ADDED: (millions of dollars)				
311/2 Food products	161	171	397	*601*
313 Beverages	99	125	200	*291*
314 Tobacco products	81	127	394	*749*
321 Textiles	1 027	964	1 801	*1 643*
322 Wearing apparel	1 920	1 594	2 455	*1 724*
323 Leather and fur products	43	26	38	*30*
324 Footwear	59	62	35	*6*
331 Wood and wood products	45	32	38	*34*
332 Furniture and fixtures	62	54	66	*22*
341 Paper and paper products	110	90	275	*299*
342 Printing and publishing	290	350	877	*1 471*
351 Industrial chemicals	40	36	64	*119*
352 Other chemical products	77	71	153	*181*
353 Petroleum refineries	-	-	-	-
354 Miscellaneous petroleum and coal products	-	-	13	*16*
355 Rubber products	29	17	16	*10*
356 Plastic products	563	612	759	*313*
361 Pottery, china and earthenware	5	3	6	*2*
362 Glass and glass products	10	17	19	*31*
369 Other non-metal mineral products	55	47	95	*162*
371 Iron and steel	31	17	44	*33*
372 Non-ferrous metals	35	20	40	*62*
381 Metal products	638	460	716	*632*
382 Non-electrical machinery	188	236	1 077	*1 094*
383 Electrical machinery	987	752	1 153	*1 749*
384 Transport equipment	176	157	333	*523*
385 Professional and scientific equipment	362	289	536	*479*
390 Other manufacturing industries	250	253	432	*484*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

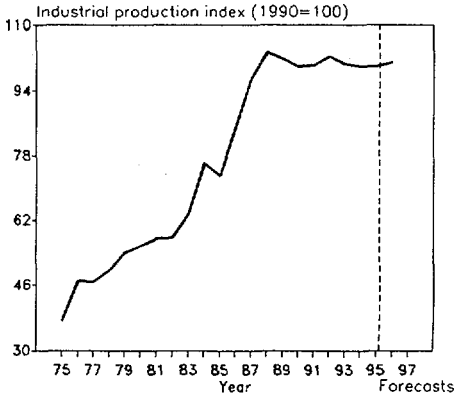
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

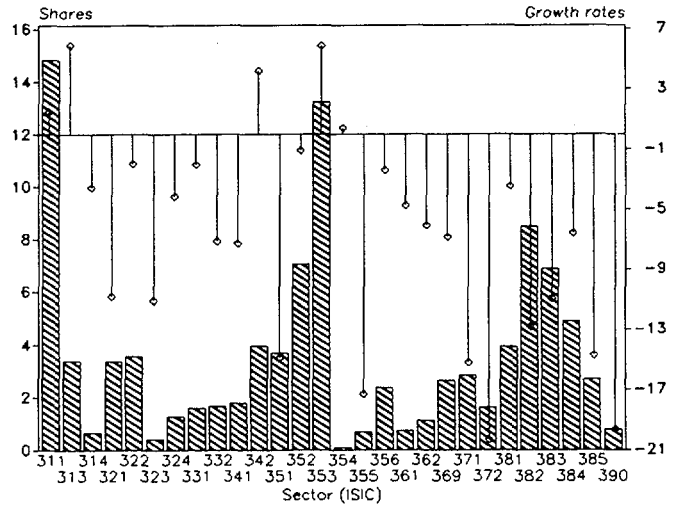


Industrial production index (1990=100)

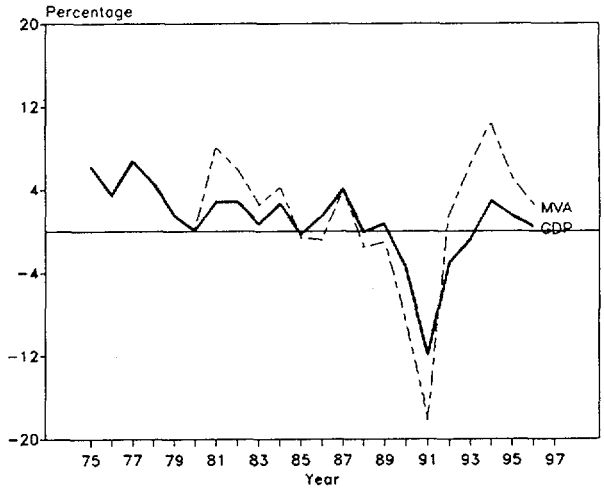


HUNGARY

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

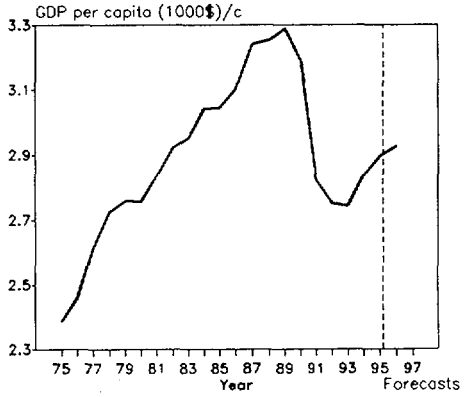


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

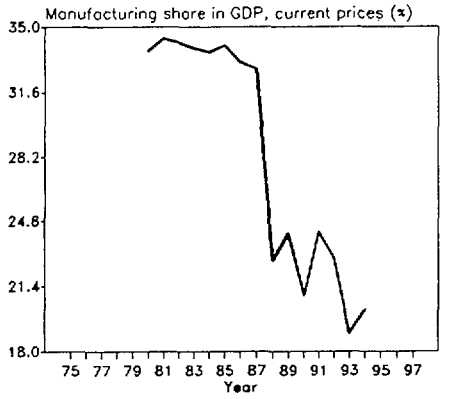
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	29 517	32 206	33 055	29 270
Per capita [na] (1990-dollars)	2 757	3 044	3 189	2 896
Manufacturing share [na] (%) (current factor prices)	33.8	34.0	20.9	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	6 236	7 562	6 906	7 049
Industrial production index (1990=100)	98	108	100	86
Value added (millions of dollars)	5 907	5 356	*7 744*	*8 487*
Gross output (millions of dollars)	24 898	21 690	25 081	*25 006*
Employment (thousands)	1 384	1 278	1 117	*741*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	76	75	*69*	*66*
Wages and salaries including supplements (%)	8	8	11	*12*
Gross operating surplus and net taxes (%)	16	16	*20*	*22*
-PRODUCTIVITY: (dollars)				
Gross output per worker	17 990	16 972	22 454	*33 713*
Value added per worker	4 268	4 191	*6 933*	*11 484*
Average wage (including supplements)	1 437	1 403	2 495	*4 065*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	6.12	9.85	*14.35*	*17.44*
as a percentage of 1970-1975 structural change	100	161	*234*	*285*
MVA growth rate perer unit of structural change	1.05	-1.59	-0.27	-1.09
Degree of specialization	9.9	10.9	9.5	13.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	555	281	*812*	*1 320*
313 Beverages	83	107	*170*	*353*
314 Tobacco products	27	28	*44*	*53*
321 Textiles	353	325	*320*	*259*
322 Wearing apparel	194	158	*233*	*299*
323 Leather and fur products	48	39	*40*	*32*
324 Footwear	79	85	*92*	*109*
331 Wood and wood products	81	42	*102*	*133*
332 Furniture and fixtures	101	92	*133*	*130*
341 Paper and paper products	94	106	*141*	*138*
342 Printing and publishing	83	94	*204*	*380*
351 Industrial chemicals	417	320	*441*	*266*
352 Other chemical products	242	303	*478*	*651*
353 Petroleum refineries	*153*	*193*	*590*	*1 242*
354 Miscellaneous petroleum and coal products	2	2	*5*	*8*
355 Rubber products	55	71	*92*	*41*
356 Plastic products	61	80	*165*	*213*
361 Pottery, china and earthenware	57	46	*59*	*67*
362 Glass and glass products	70	71	*89*	*94*
369 Other non-metal mineral products	204	161	*216*	*219*
371 Iron and steel	370	200	*368*	*202*
372 Non-ferrous metals	215	54	*274*	*97*
381 Metal products	214	215	*297*	*361*
382 Non-electrical machinery	497	569	*819*	*572*
383 Electrical machinery	655	758	*711*	*563*
384 Transport equipment	486	507	*420*	*445*
385 Professional and scientific equipment	272	287	*316*	*192*
390 *Other manufacturing industries*	237	164	*112*	*50*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

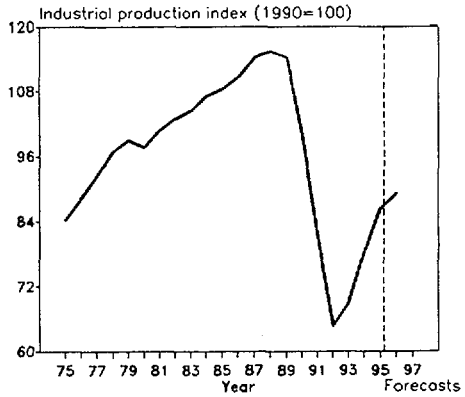
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)

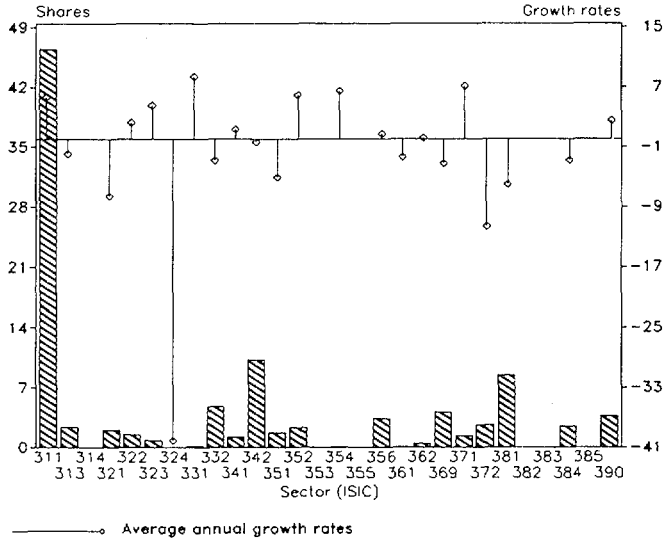


Industrial production index (1990=100)

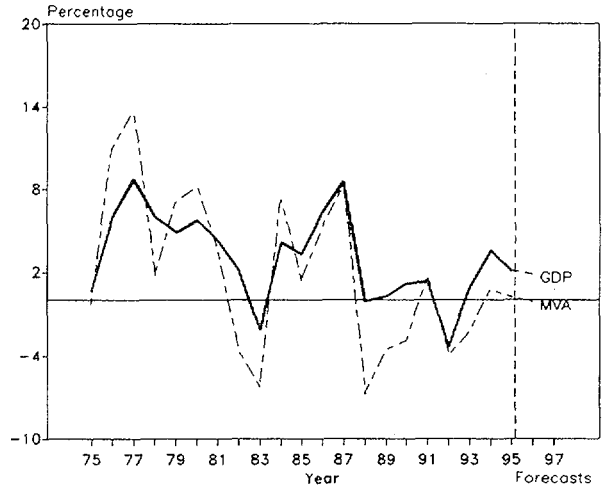


ICELAND

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

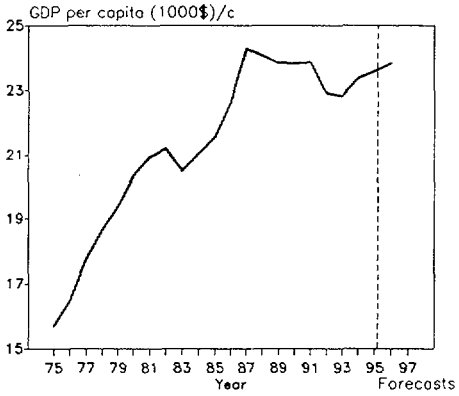


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

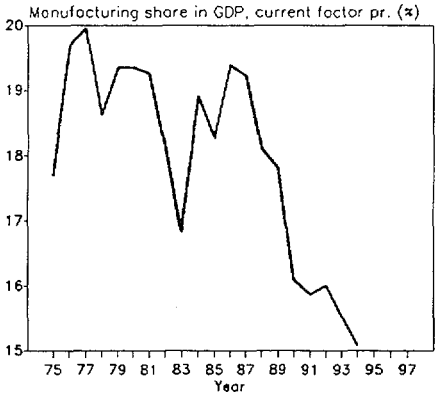
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	4 640	5 201	6 080	6 347
Per capita [na] (1990-dollars)	20 349	21 581	23 844	23 595
Manufacturing share [na] (%) (current factor prices)	19.3	18.3	16.1	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	816	825	819	*787*
Industrial production index (1990=100)	107	108	100	*96*
Value added (millions of dollars)	518	429	755	*869*
Gross output (millions of dollars)	1 676	1 471	2 602	*2 708*
Employment (thousands)	28	30	22	*21*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	69	71	71	*68*
Wages and salaries including supplements (%)	25	22	22	*21*
Gross operating surplus and net taxes (%)	6	7	7	*11*
-PRODUCTIVITY: (dollars)				
Gross output per worker	61 052	51 071	111 991	*128 743*
Value added per worker	18 864	14 907	32 498	*41 835*
Average wage (including supplements)	15 021	11 345	25 775	*29 327*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	11.30	13.57	9.74	*11.12*
as a percentage of 1970-1975 structural change	100	120	86	*98*
MVA growth rate perer unit of structural change	2.18	0.30	-0.07	0.23
Degree of specialization	26.5	27.9	27.1	34.8
-VALUE ADDED: (millions of dollars)				
311/2 Food products	188	175	285	*427*
313 Beverages	11	10	21	*19*
314 Tobacco products	-	-	-	-
321 Textiles	23	17	21	*15*
322 Wearing apparel	15	10	10	*13*
323 Leather and fur products	6	6	5	*7*
324 Footwear	1	1	1	-
331 Wood and wood products	-	-	1	2
332 Furniture and fixtures	45	29	40	*37*
341 Paper and paper products	4	4	9	*11*
342 Printing and publishing	35	36	84	*86*
351 Industrial chemicals	8	7	17	*13*
352 Other chemical products	7	8	15	*22*
353 Petroleum refineries	-	-	-	-
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	-	-	-	-
356 Plastic products	11	11	27	*30*
361 Pottery, china and earthenware	1	-	1	*1*
362 Glass and glass products	3	3	4	*4*
369 Other non-metal mineral products	23	21	37	*33*
371 Iron and steel	6	11	9	*15*
372 Non-ferrous metals	39	13	36	*18*
381 Metal products	62	44	85	*64*
382 Non-electrical machinery	-	-	-	-
383 Electrical machinery	-	-	-	-
384 Transport equipment	21	13	20	*19*
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	10	11	27	*33*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

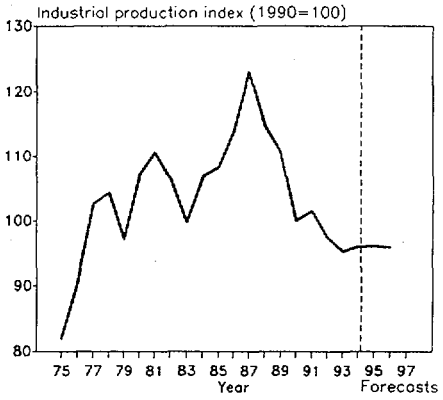
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

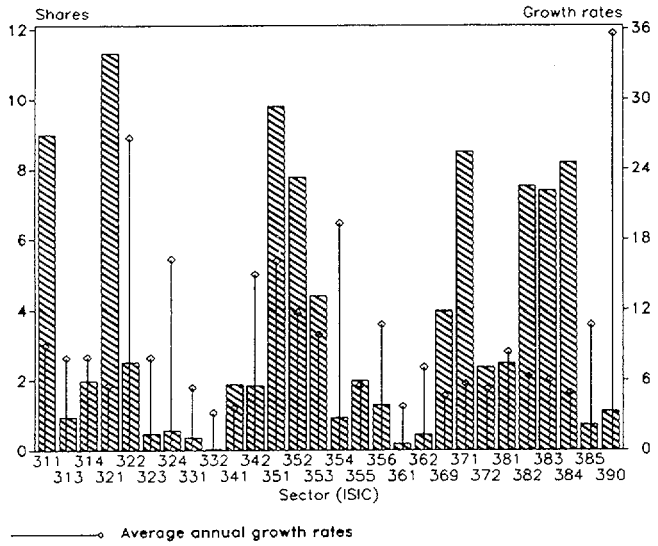


Industrial production index (1990=100)

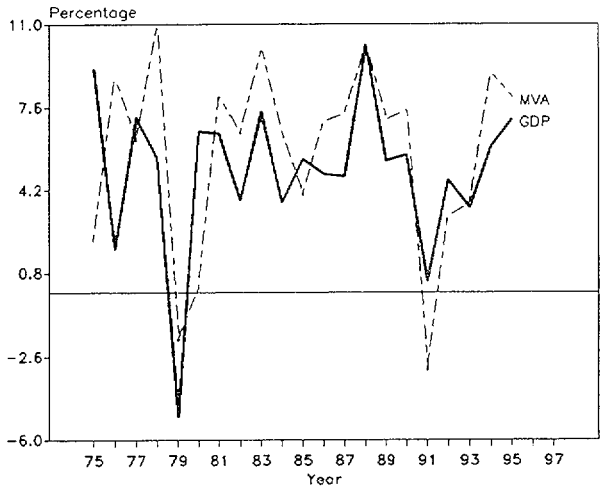


INDIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

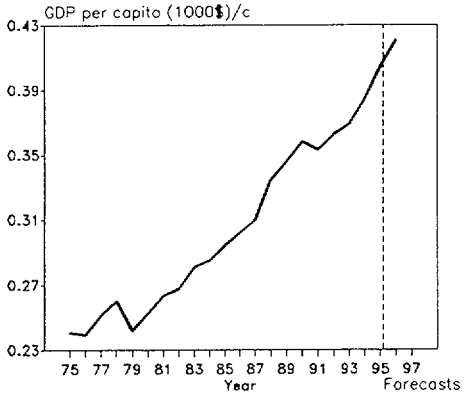


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

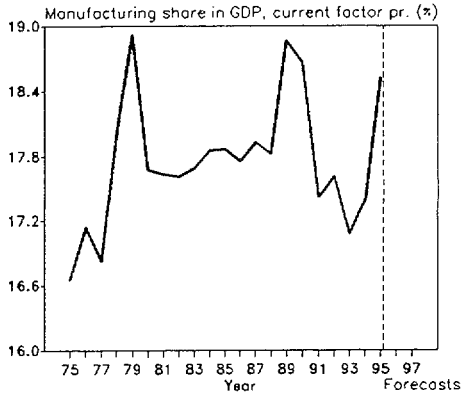
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	174 018	226 008	304 687	376 218
Per capita [na] (1990-dollars)	253	294	358	405
Manufacturing share [na] (%) (current factor prices)	17.7	17.9	18.7	18.5
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	24 608	34 472	50 174	61 111
Industrial production index (1990=100)	55	73	100	125
Value added (millions of dollars)	13 086	15 526	25 097	*34 381*
Gross output (millions of dollars)	71 387	88 304	140 511	*165 406*
Employment (thousands)	6 992	6 578	7 299	*8 412*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	82	82	82	*79*
Wages and salaries including supplements (%)	*11*	10	*8*	*6*
Gross operating surplus (%)	*8*	8	*10*	*14*
-PRODUCTIVITY: (dollars)				
Gross output per worker	10 210	13 423	19 250	*19 664*
Value added per worker	1 872	2 360	3 438	*4 096*
Average wage (including supplements)	*1 083*	1 298	*1 592*	*1 264*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	6.47	7.96	9.01	*8.83*
as a percentage of 1970-1975 structural change	100	123	139	*137*
MVA growth rate perer unit of structural change	2.51	2.39	4.72	6.30
Degree of specialization	19.3	16.9	15.3	13.7
-VALUE ADDED: (millions of dollars)				
311/2 Food products	899	1 436	2 212	*3 127*
313 Beverages	99	135	246	*314*
314 Tobacco products	196	230	489	*656*
321 Textiles	2 642	2 135	3 264	*3 877*
322 Wearing apparel	62	87	316	*1 042*
323 Leather and fur products	48	52	123	*158*
324 Footwear	37	52	104	*217*
331 Wood and wood products	74	73	102	*120*
332 Furniture and fixtures	8	7	8	*8*
341 Paper and paper products	296	233	574	*601*
342 Printing and publishing	256	280	340	*674*
351 Industrial chemicals	778	1 200	1 833	*3 649*
352 Other chemical products	1 062	1 146	1 647	*2 698*
353 Petroleum refineries	203	344	1 072	*1 576*
354 Miscellaneous petroleum and coal products	151	152	146	*355*
355 Rubber products	234	363	566	*657*
356 Plastic products	93	166	297	*454*
361 Pottery, china and earthenware	47	27	53	*57*
362 Glass and glass products	67	101	111	*142*
369 Other non-metal mineral products	399	775	1 122	*1 225*
371 Iron and steel	1 489	1 790	2 551	*3 017*
372 Non-ferrous metals	81	115	654	*726*
381 Metal products	421	425	614	*850*
382 Non-electrical machinery	1 130	1 506	2 011	*2 416*
383 Electrical machinery	1 061	1 201	2 009	*2 375*
384 Transport equipment	1 088	1 231	2 374	*2 664*
385 Professional and scientific equipment	92	118	165	*256*
390 Other manufacturing industries	72	146	92	*472*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

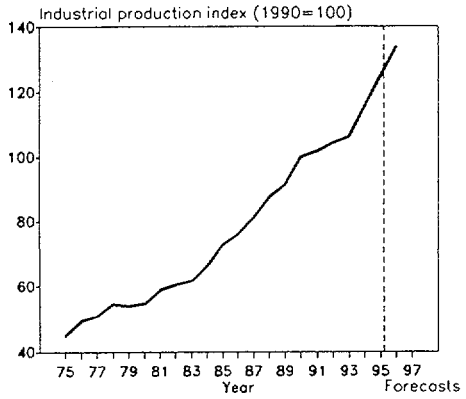
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

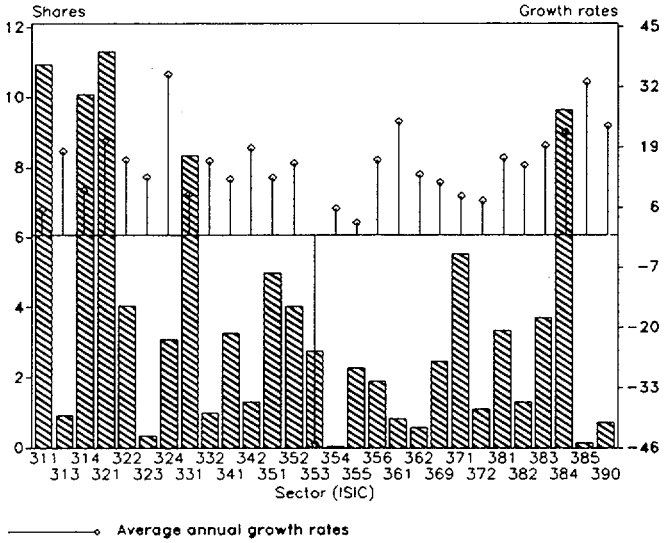


Industrial production index (1990=100)

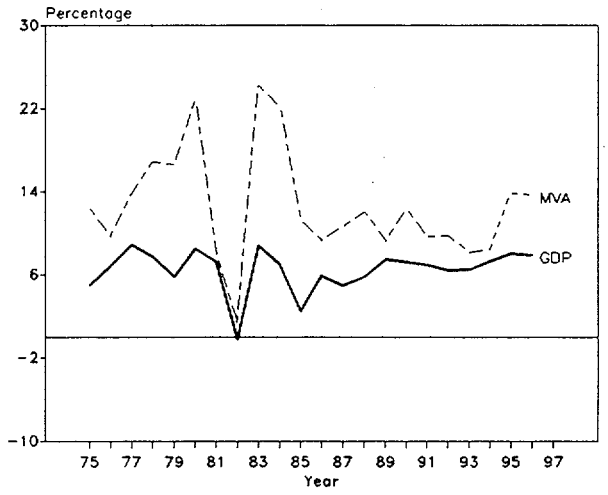


INDONESIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



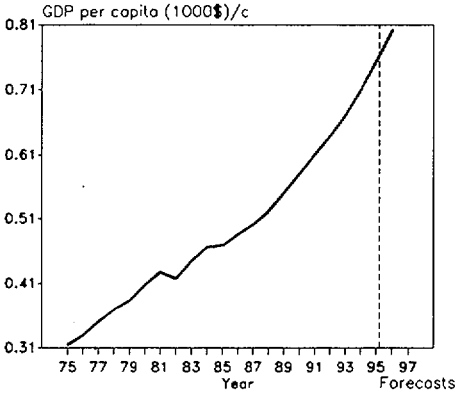
Annual growth rates of GDP and MVA (Constant 1990 prices)



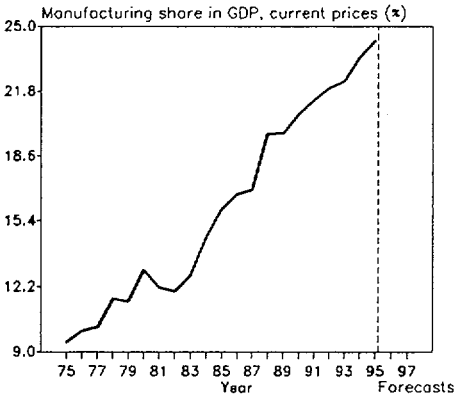
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	61 467	78 380	106 141	149 015
Per capita [na] (1990-dollars)	407	468	581	755
Manufacturing share [na] (%) (current factor prices)	13.0	16.0	20.7	24.3
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	6 916	12 718	21 115	*33 861*
Industrial production index (1990=100)	55	62	100	*159*
Value added (millions of dollars)	4 372	*8 104*	14 832	*32 698*
Gross output (millions of dollars)	11 519	21 191	38 520	*83 533*
Employment (thousands)	963	1 673	2 649	*4 078*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	62	*62*	61	*61*
Wages and salaries including supplements (%)	*7*	*8*	*5*	*5*
Gross operating surplus and net taxes (%)	*31*	*30*	34	*34*
-PRODUCTIVITY: (dollars)				
Gross output per worker	11 880	12 574	14 458	*20 472*
Value added per worker	4 509	*4 809*	5 567	*8 067*
Average wage (including supplements)	*838*	*1 011*	715	*1 021*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	22.08	*16.55*	*15.79*	*17.84*
as a percentage of 1970-1975 structural change	100	*75*	*72*	*81*
MVA growth rate perer unit of structural change	3.55	5.67	6.72	5.21
Degree of specialization	21.2	17.7	14.4	14.1
-VALUE ADDED: (millions of dollars)				
311/2 Food products	376	870	1 910	*2 906*
313 Beverages	51	77	112	*339*
314 Tobacco products	649	741	1 732	*3 372*
321 Textiles	420	687	1 306	*4 398*
322 Wearing apparel	15	105	458	*1 251*
323 Leather and fur products	5	14	43	*96*
324 Footwear	26	31	189	*1 245*
331 Wood and wood products	239	612	1 382	*2 551*
332 Furniture and fixtures	6	18	117	*319*
341 Paper and paper products	43	110	477	*1 053*
342 Printing and publishing	51	92	150	*467*
351 Industrial chemicals	145	385	687	*1 544*
352 Other chemical products	241	430	535	*1 417*
353 Petroleum refineries	978	*1 611*	*1 174*	*34*
354 Miscellaneous petroleum and coal products	*4*	*6*	8	*12*
355 Rubber products	164	328	494	*643*
356 Plastic products	25	175	228	*619*
361 Pottery, china and earthenware	8	24	77	*322*
362 Glass and glass products	36	98	64	*151*
369 Other non-metal mineral products	200	262	374	*797*
371 Iron and steel	107	*420*	1 045	*1 889*
372 Non-ferrous metals	-	*49*	188	*319*
381 Metal products	118	278	402	*1 135*
382 Non-electrical machinery	53	76	171	*437*
383 Electrical machinery	180	246	403	*1 303*
384 Transport equipment	217	331	1 036	*3 774*
385 Professional and scientific equipment	2	4	10	*62*
390 Other manufacturing industries	13	24	61	*242*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

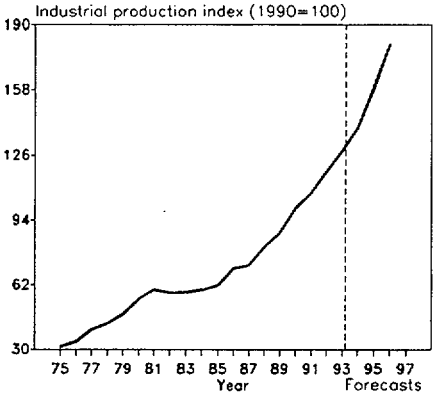
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)

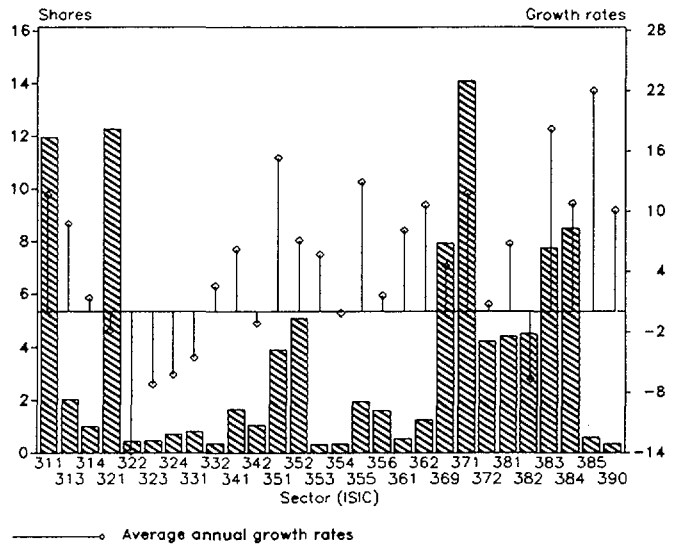


Industrial production index (1990=100)

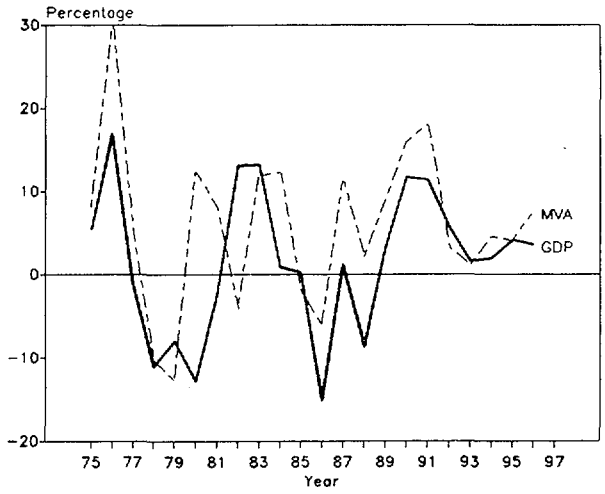


IRAN (ISLAMIC REPUBLIC OF)

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

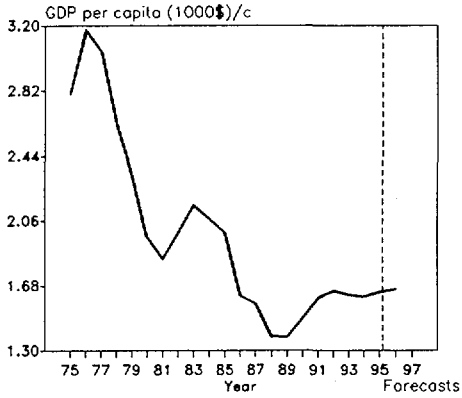


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

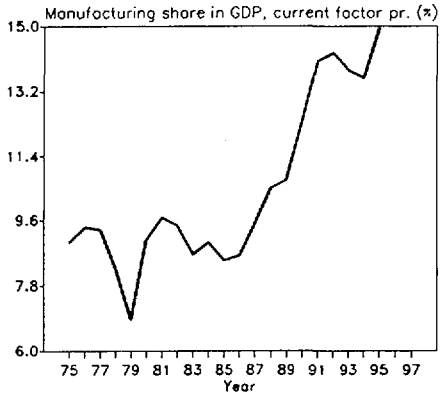
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	77 089	97 385	88 173	112 095
Per capita [na] (1990-dollars)	1 964	1 991	1 489	1 640
Manufacturing share [na] (%) (current factor prices)	9.1	8.5	12.3	*15.0*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	6 234	7 920	10 621	*14 196*
Industrial production index (1990=100)	79	116	100	*148*
Value added (millions of dollars)	8 186	5 374	7 994	*9 147*
Gross output (millions of dollars)	15 870	10 994	17 373	*20 725*
Employment (thousands)	470	611	653	*647*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	48	52	54	*56*
Wages and salaries including supplements (%)	29	28	15	*16*
Gross operating surplus and net taxes (%)	23	19	31	*28*
-PRODUCTIVITY: (dollars)				
Gross output per worker	33 756	17 161	26 007	*31 040*
Value added per worker	17 411	8 790	11 966	*14 102*
Average wage (including supplements)	9 668	4 893	3 925	*5 278*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	20.59	20.08	16.52	*16.93*
as a percentage of 1970-1975 structural change	100	98	80	*82*
MVA growth rate perer unit of structural change	1.38	0.83	1.08	1.75
Degree of specialization	20.3	15.9	15.9	17.1
-VALUE ADDED: (millions of dollars)				
311/2 Food products	930	553	737	*1 170*
313 Beverages	145	133	152	*199*
314 Tobacco products	*190*	46	82	*77*
321 Textiles	1 329	931	1 355	*989*
322 Wearing apparel	78	33	85	*27*
323 Leather and fur products	36	30	69	*34*
324 Footwear	100	71	85	*50*
331 Wood and wood products	68	52	108	*64*
332 Furniture and fixtures	33	21	32	*30*
341 Paper and paper products	135	115	130	*152*
342 Printing and publishing	80	42	114	*86*
351 Industrial chemicals	93	102	227	*434*
352 Other chemical products	278	266	412	*490*
353 Petroleum refineries	1 652	*386*	*31*	*32*
354 Miscellaneous petroleum and coal products	2	14	38	*29*
355 Rubber products	93	79	116	*191*
356 Plastic products	198	103	164	*147*
361 Pottery, china and earthenware	45	33	41	*52*
362 Glass and glass products	115	73	73	*108*
369 Other non-metal mineral products	819	601	688	*703*
371 Iron and steel	367	313	893	*1 393*
372 Non-ferrous metals	48	84	413	*332*
381 Metal products	319	244	338	*411*
382 Non-electrical machinery	208	277	724	*368*
383 Electrical machinery	391	329	332	*716*
384 Transport equipment	399	407	504	*763*
385 Professional and scientific equipment	24	24	23	*60*
390 Other manufacturing industries	11	12	28	*40*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

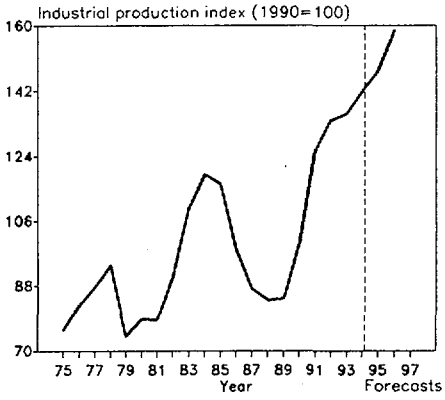
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

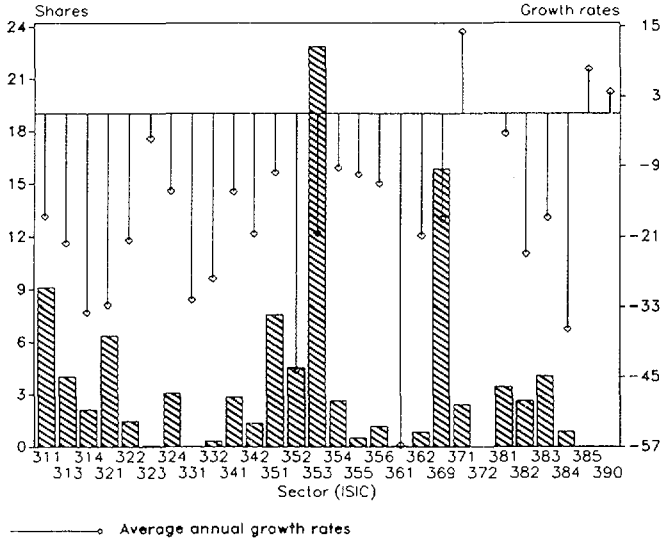


Industrial production index (1990=100)

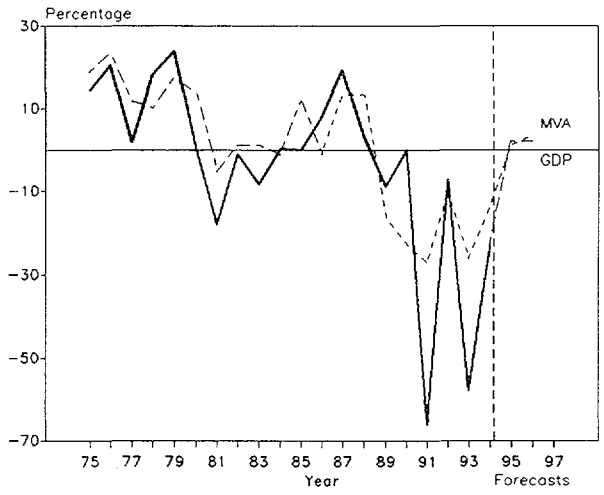


IRAQ

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

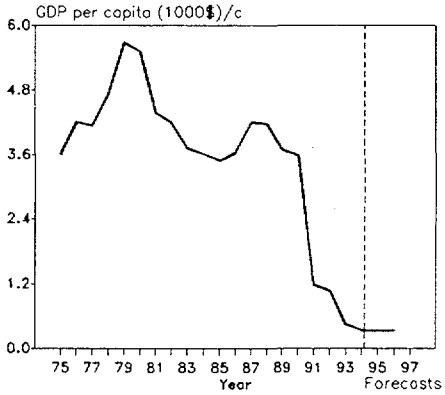


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

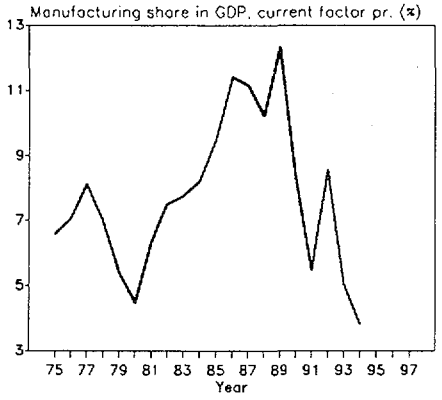
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	71 810	53 524	64 898	*6 761*
Per capita [na] (1990-dollars)	5 521	3 494	3 590	*336*
Manufacturing share [na] (%) (current factor prices)	4.5	9.5	8.4	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	6 604	7 041	5 735	*2 378*
Industrial production index (1990=100)	78	81	100	*56*
Value added (millions of dollars)	*2 095*	3 676	*3 623*	*567*
Gross output (millions of dollars)	*5 182*	7 162	*7 560*	*1 394*
Employment (thousands)	177	174	*133*	*118*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*60*	49	*36*	*59*
Wages and salaries including supplements (%)	*13*	13	*64*	*15*
Gross operating surplus (%)	*28*	39	*-1*	*25*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*29 252*	41 091	*6 611*	*11 640*
Value added per worker	*11 827*	21 089	*27 262*	*4 807*
Average wage (including supplements)	3 700	5 242	*3 552*	*1 808*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*23.40*	*17.57*	*11.47*	*14.14*
as a percentage of 1970-1975 structural change	*100*	*75*	*49*	*60*
MVA growth rate perer unit of structural change	1.43	3.54	1.56	-2.85
Degree of specialization	19.7	24.2	23.2	22.6
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*183*	396	*306*	*56*
313 Beverages	*90*	125	*139*	*19*
314 Tobacco products	*107*	140	*125*	*7*
321 Textiles	*245*	248	*362*	*20*
322 Wearing apparel	*42*	53	*47*	*7*
323 Leather and fur products	*21*	1	*1*	-
324 Footwear	*18*	81	*70*	*20*
331 Wood and wood products	*1*	1	*1*	-
332 Furniture and fixtures	*10*	13	*14*	*1*
341 Paper and paper products	*49*	52	*78*	*20*
342 Printing and publishing	*29*	33	*50*	*8*
351 Industrial chemicals	*79*	151	*167*	*52*
352 Other chemical products	*200*	389	*362*	*6*
353 Petroleum refineries	*403*	868	*836*	*125*
354 Miscellaneous petroleum and coal products	*27*	40	*56*	*18*
355 Rubber products	*6*	10	*11*	*3*
356 Plastic products	*14*	33	*28*	*8*
361 Pottery, china and earthenware	*1*	1	*1*	-
362 Glass and glass products	*21*	35	*31*	*4*
369 Other non-metal mineral products	*190*	565	*557*	*103*
371 Iron and steel	*7*	*20*	*17*	*23*
372 Non-ferrous metals	-	-	-	-
381 Metal products	*53*	47	*56*	*27*
382 Non-electrical machinery	*162*	149	*111*	*13*
383 Electrical machinery	*121*	185	*139*	*25*
384 Transport equipment	*15*	40	*56*	*2*
385 Professional and scientific equipment	*1*	-	-	-
390 Other manufacturing industries	*1*	-	-	-

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

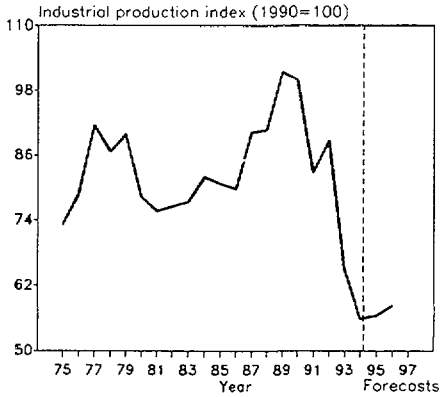
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

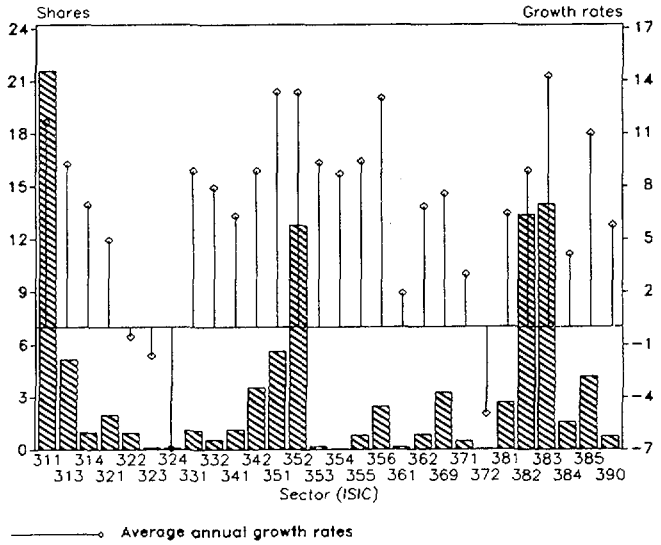


Industrial production index (1990=100)

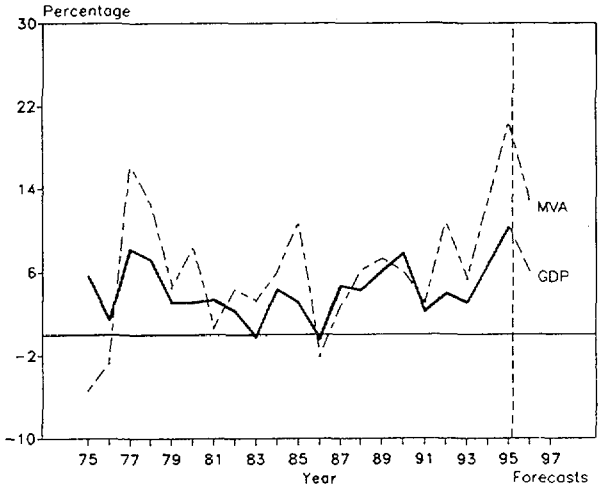


IRELAND

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

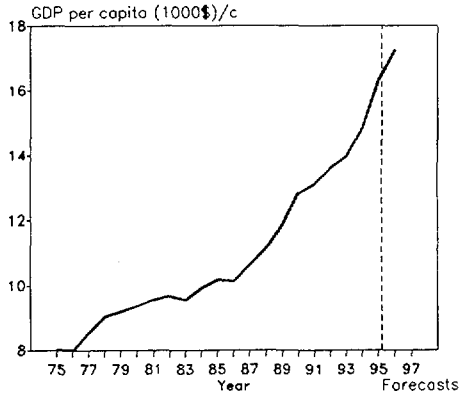


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

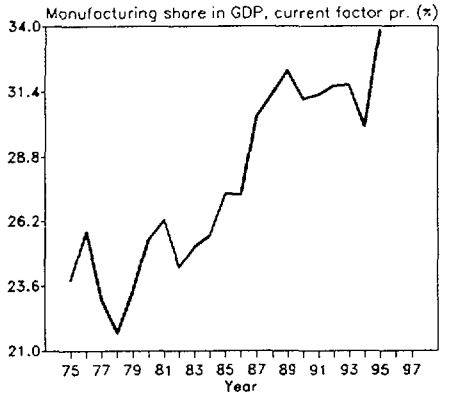
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	31 870	36 144	44 930	57 942
Per capita [na] (1990-dollars)	9 371	10 176	12 826	16 340
Manufacturing share [na] (%) (current factor prices)	25.5	27.3	31.1	*33.8*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	7 464	9 465	11 445	18 568
Industrial production index (1990=100)	56	69	100	161
Value added (millions of dollars)	5 700	5 995	15 013	*26 493*
Gross output (millions of dollars)	15 905	15 394	33 527	55 126
Employment (thousands)	*225*	*186*	*194*	*213*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	64	61	55	*52*
Wages and salaries including supplements (%)	*17*	*14*	*14*	*11*
Gross operating surplus (%)	*19*	*25*	*31*	*38*
-PRODUCTIVITY: (dollars)				
Gross output per worker	70 068	82 191	172 553	*253 308*
Value added per worker	25 112	32 008	77 266	*126 335*
Average wage (including supplements)	*11 906*	*11 604*	*23 770*	*27 250*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	13.80	14.18	9.87	*5.98*
as a percentage of 1970-1975 structural change	100	103	72	*43*
MVA growth rate perer unit of structural change	2.70	2.01	2.80	8.11
Degree of specialization	15.8	19.6	21.9	24.8
-VALUE ADDED: (millions of dollars)				
311/2 Food products	1 264	1 194	3 068	*5 736*
313 Beverages	325	331	792	*1 312*
314 Tobacco products	83	83	166	*249*
321 Textiles	266	181	349	*465*
322 Wearing apparel	147	118	207	*210*
323 Leather and fur products	28	12	21	*20*
324 Footwear	42	22	19	*14*
331 Wood and wood products	93	66	170	*280*
332 Furniture and fixtures	59	40	86	*138*
341 Paper and paper products	*105*	*75*	190	*273*
342 Printing and publishing	265	219	561	*921*
351 Industrial chemicals	236	315	757	*1 537*
352 Other chemical products	536	715	1 718	*3 480*
353 Petroleum refineries	*21*	*14*	*28*	*46*
354 Miscellaneous petroleum and coal products	*2*	*1*	*2*	*4*
355 Rubber products	52	*58*	118	*196*
356 Plastic products	113	*125*	332	*662*
361 Pottery, china and earthenware	28	13	28	*32*
362 Glass and glass products	109	113	144	*207*
369 Other non-metal mineral products	322	260	560	*835*
371 Iron and steel	31	37	92	*106*
372 Non-ferrous metals	15	8	10	*8*
381 Metal products	335	216	469	*663*
382 Non-electrical machinery	449	854	2 235	*3 544*
383 Electrical machinery	337	512	1 840	*3 884*
384 Transport equipment	190	116	309	*386*
385 Professional and scientific equipment	168	261	611	*1 107*
390 Other manufacturing industries	79	39	132	*177*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

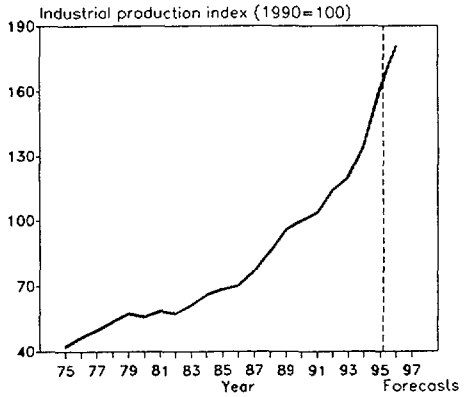
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

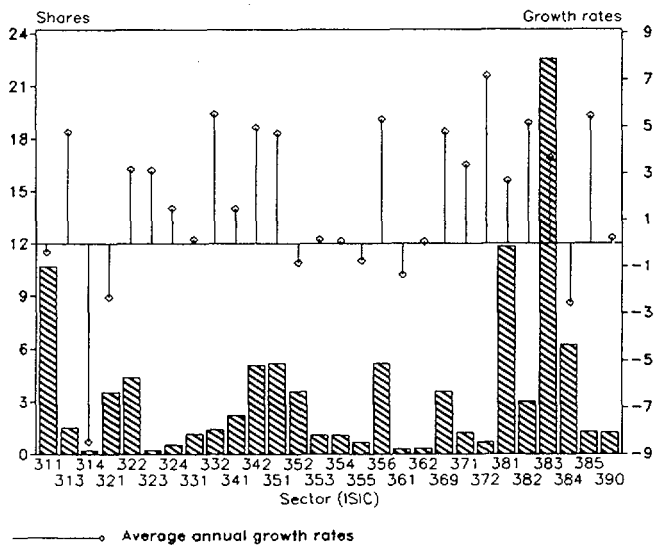


Industrial production index (1990=100)

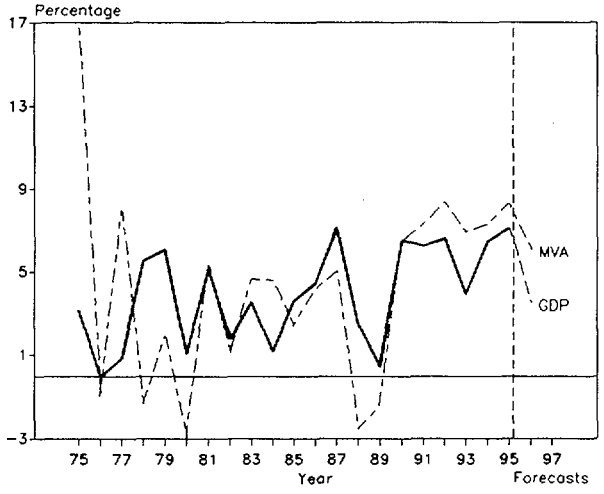


ISRAEL

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

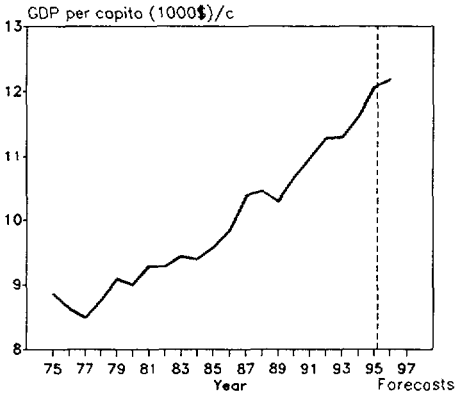


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

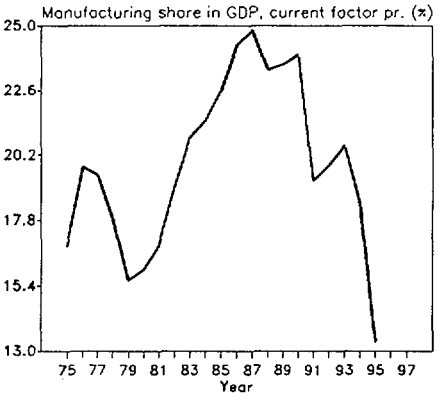
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	34 904	40 516	49 692	66 678
Per capita [na] (1990-dollars)	8 998	9 571	10 663	12 068
Manufacturing share [na] (%) (current factor prices)	16.0	22.6	23.9	*13.3*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	6 303	7 513	8 394	12 110
Industrial production index (1990=100)	76	92	100	142
Value added (millions of dollars)	6 490	6 655	10 193	*13 521*
Gross output (millions of dollars)	14 332	16 351	24 574	*38 974*
Employment (thousands)	259	292	292	*358*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	55	59	59	*65*
Wages and salaries including supplements (%)	*30*	*30*	*32*	*24*
Gross operating surplus and net taxes (%)	*15*	*11*	*10*	*11*
-PRODUCTIVITY: (dollars)				
Gross output per worker	54 619	55 297	83 074	*107 166*
Value added per worker	24 733	22 506	34 461	*37 180*
Average wage (including supplements)	*16 734*	*16 765*	*26 622*	*25 780*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	10.22	12.57	9.51	*6.16*
as a percentage of 1970-1975 structural change	100	123	93	*60*
MVA growth rate perer unit of structural change	4.49	2.06	-0.35	-0.22
Degree of specialization	14.8	18.3	18.0	17.8
-VALUE ADDED: (millions of dollars)				
311/2 Food products	706	748	1 221	*1 394*
313 Beverages	66	56	146	*232*
314 Tobacco products	24	10	33	*24*
321 Textiles	422	243	404	*444*
322 Wearing apparel	293	229	427	*608*
323 Leather and fur products	18	13	19	*27*
324 Footwear	38	42	55	*68*
331 Wood and wood products	112	78	116	*147*
332 Furniture and fixtures	90	81	131	*211*
341 Paper and paper products	150	135	241	*302*
342 Printing and publishing	184	227	470	*740*
351 Industrial chemicals	256	317	498	*752*
352 Other chemical products	250	241	420	*450*
353 Petroleum refineries	93	106	115	*144*
354 Miscellaneous petroleum and coal products	93	106	115	*144*
355 Rubber products	104	64	76	*87*
356 Plastic products	212	290	468	*724*
361 Pottery, china and earthenware	26	25	30	*32*
362 Glass and glass products	30	23	37	*45*
369 Other non-metal mineral products	239	143	306	*483*
371 Iron and steel	148	118	113	*157*
372 Non-ferrous metals	61	36	61	*114*
381 Metal products	1 060	967	1 228	*1 623*
382 Non-electrical machinery	245	224	279	*448*
383 Electrical machinery	831	1 415	2 200	*3 061*
384 Transport equipment	610	522	742	*705*
385 Professional and scientific equipment	66	129	125	*195*
390 Other manufacturing industries	63	67	120	*158*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

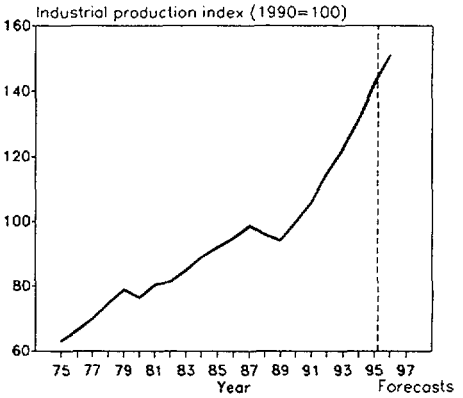
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

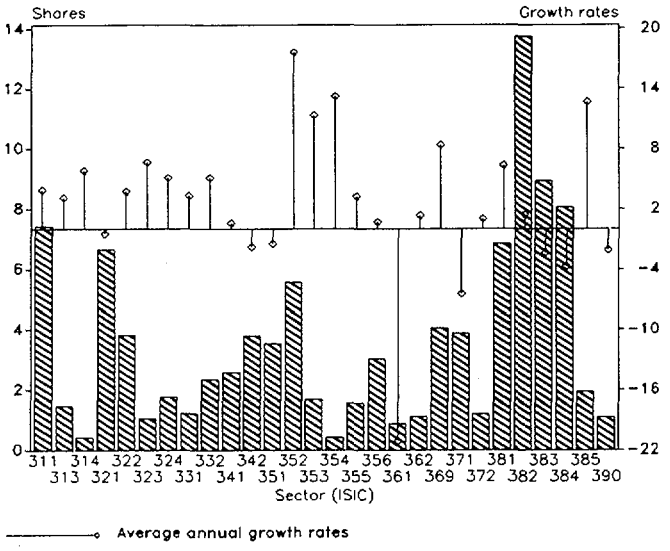


Industrial production index (1990=100)

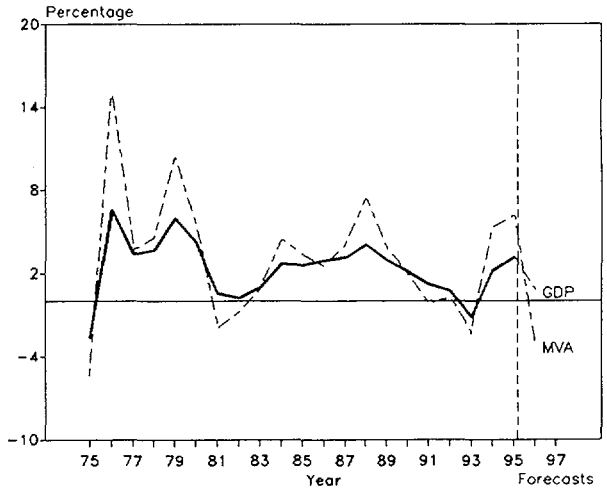


ITALY

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)



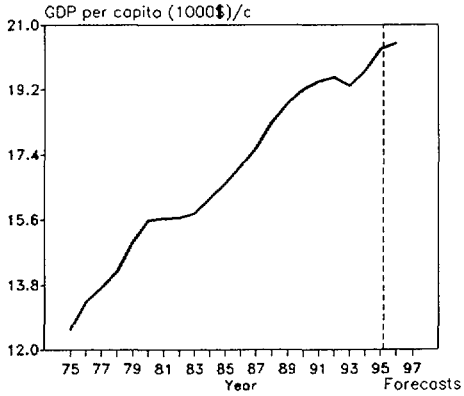
Source: National Accounts Statistics from UN/UNSO.

Estimated by UNIDO/IRD/RES.

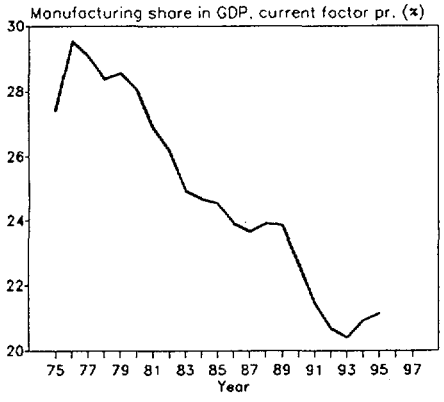
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	879 689	942 953	1 095 122	1 162 623
Per capita [na] (1990-dollars)	15 588	16 610	19 205	20 324
Manufacturing share [na] (%) (current factor prices)	28.1	24.5	22.7	*21.1*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	191 859	202 663	245 232	267 456
Industrial production index (1990=100)	90	85	100	101
Value added (millions of dollars)	97 032	64 726	144 733	*156 300*
Gross output (millions of dollars)	250 912	212 913	478 032	553 812
Employment (thousands)	3 333	2 875	2 757	*2 830*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	61	70	70	*72*
Wages and salaries including supplements (%)	*21*	*18*	*27*	*18*
Gross operating surplus and net taxes (%)	*18*	*12*	*4*	*10*
-PRODUCTIVITY: (dollars)				
Gross output per worker	74 433	73 115	170 315	*191 448*
Value added per worker	28 784	22 227	51 566	*54 143*
Average wage (including supplements)	*15 647*	*13 630*	*46 298*	*35 051*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*5.30*	*5.87*	7.91	*9.12*
as a percentage of 1970-1975 structural change	*100*	*111*	149	*172*
MVA growth rate perer unit of structural change	4.58	-0.91	-1.38	0.84
Degree of specialization	10.2	10.9	11.0	9.6
-VALUE ADDED: (millions of dollars)				
311/2 Food products	6 362	3 618	9 599	*11 291*
313 Beverages	1 672	1 354	2 015	*2 297*
314 Tobacco products	307	224	556	*747*
321 Textiles	6 716	5 062	10 327	*10 423*
322 Wearing apparel	3 197	2 322	4 876	*6 120*
323 Leather and fur products	718	560	1 234	*1 764*
324 Footwear	1 495	1 260	2 231	*2 912*
331 Wood and wood products	1 318	786	1 616	*1 986*
332 Furniture and fixtures	1 936	1 257	2 900	*3 812*
341 Paper and paper products	2 260	1 661	3 878	*4 236*
342 Printing and publishing	3 017	2 271	6 171	*5 358*
351 Industrial chemicals	*6 364*	*4 217*	5 906	*5 446*
352 Other chemical products	*4 058*	*2 473*	3 974	*9 938*
353 Petroleum refineries	*1 095*	*899*	1 718	*3 086*
354 Miscellaneous petroleum and coal products	*238*	*208*	406	*804*
355 Rubber products	1 832	1 107	2 254	*2 630*
356 Plastic products	1 465	1 729	4 799	*4 570*
361 Pottery, china and earthenware	*1 445*	*848*	2 860	*731*
362 Glass and glass products	*1 093*	*662*	1 673	*1 666*
369 Other non-metal mineral products	*4 143*	*2 338*	4 299	*6 572*
371 Iron and steel	8 354	3 846	8 117	*5 720*
372 Non-ferrous metals	1 315	875	1 788	*2 012*
381 Metal products	5 687	3 405	8 014	*11 131*
382 Non-electrical machinery	9 326	8 914	20 330	*21 607*
383 Electrical machinery	8 435	5 813	14 990	*12 601*
384 Transport equipment	10 280	6 172	14 550	*11 798*
385 Professional and scientific equipment	2 032	550	1 761	*3 406*
390 Other manufacturing industries	871	297	1 890	*1 626*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

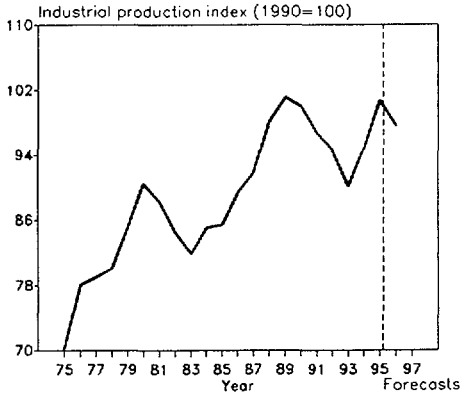
GDP per capito (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

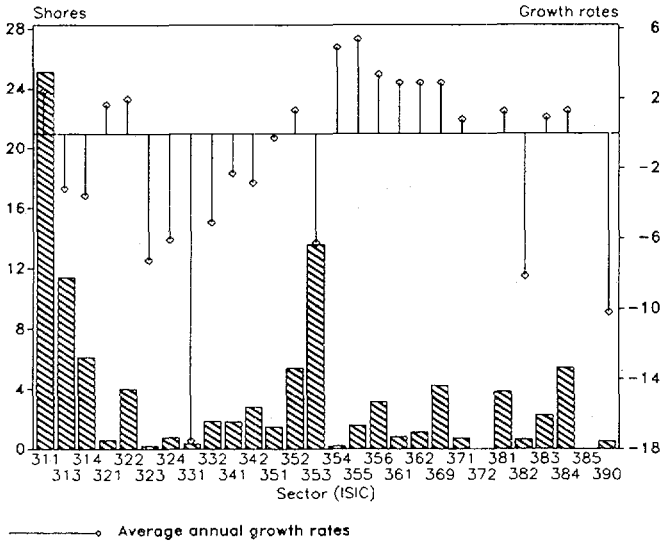


Industrial production index (1990=100)

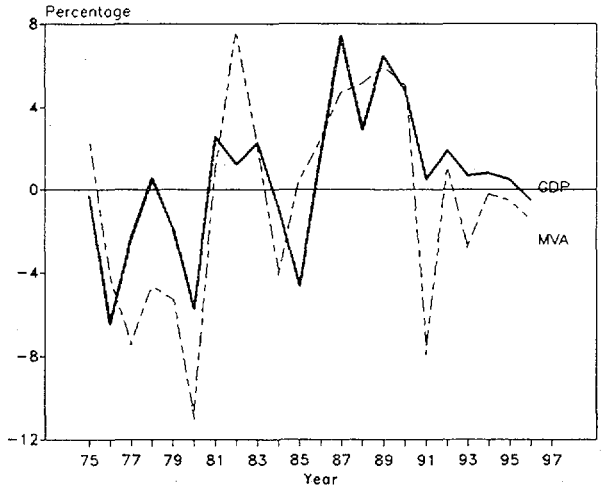


JAMAICA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



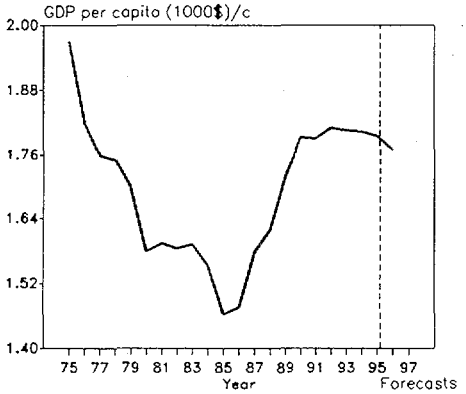
Annual growth rates of GDP and MVA (Constant 1990 prices)



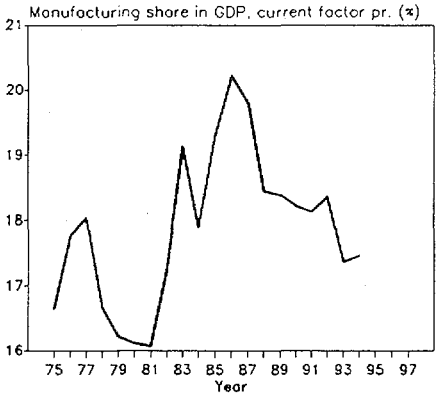
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	3 369	3 382	4 242	4 432
Per capita [na] (1990-dollars)	1 579	1 464	1 793	1 796
Manufacturing share [na] (%) (current factor prices)	16.1	19.3	18.2	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	619	658	824	*739*
Industrial production index (1990=100)	137	111	100	*107*
Value added (millions of dollars)	441	*363*	831	*847*
Gross output (millions of dollars)	1 661	1 498	2 549	*3 512*
Employment (thousands)	44	*54*	65	*63*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	80	*76*	74	*76*
Wages and salaries including supplements (%)	*11*	*10*	*10*	*10*
Gross operating surplus and net taxes (%)	*9*	*14*	*16*	*14*
-PRODUCTIVITY: (dollars)				
Gross output per worker	48 137	*27 761*	42 749	*56 156*
Value added per worker	*9 985*	*6 737*	11 381	*13 548*
Average wage (including supplements)	*5 378*	*2 783*	*4 442*	*5 510*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*9.20*	*11.77*	*9.76*	*9.48*
as a percentage of 1970-1975 structural change	*100*	*128*	*106*	*103*
MVA growth rate perer unit of structural change	-0.35	-0.67	4.04	2.83
Degree of specialization	17.8	17.8	20.4	20.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	78	*73*	182	*223*
313 Beverages	63	*43*	103	*93*
314 Tobacco products	61	*40*	56	*50*
321 Textiles	*3*	*2*	*4*	*5*
322 Wearing apparel	*15*	*14*	*29*	*35*
323 Leather and fur products	2	*2*	2	*2*
324 Footwear	8	*4*	7	*6*
331 Wood and wood products	3	*2*	5	*2*
332 Furniture and fixtures	12	*10*	19	*15*
341 Paper and paper products	*8*	*8*	*16*	*15*
342 Printing and publishing	*13*	*12*	*25*	*23*
351 Industrial chemicals	*4*	*4*	*11*	*13*
352 Other chemical products	*22*	*25*	*42*	*48*
353 Petroleum refineries	55	*50*	151	*105*
354 Miscellaneous petroleum and coal products	-	-	*1*	*2*
355 Rubber products	*12*	*4*	*10*	*15*
356 Plastic products	*13*	*8*	*22*	*28*
361 Pottery, china and earthenware	*1*	*2*	*5*	*7*
362 Glass and glass products	*2*	*3*	*8*	*10*
369 Other non-metal mineral products	*8*	*11*	*29*	*38*
371 Iron and steel	*1*	*2*	*6*	*6*
372 Non-ferrous metals	-	-	-	-
381 Metal products	*10*	*13*	*28*	*33*
382 Non-electrical machinery	*11*	*3*	*6*	*4*
383 Electrical machinery	*7*	*7*	*17*	*20*
384 Transport equipment	*26*	*19*	*40*	*47*
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	4	*3*	6	*4*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

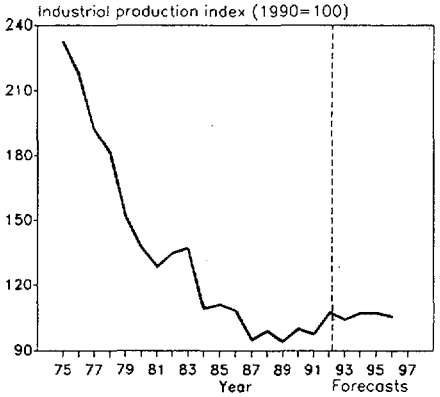
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

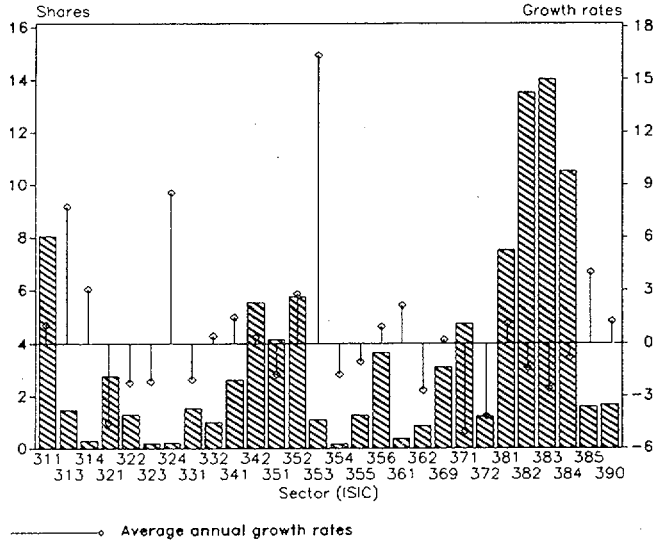


Industrial production index (1990=100)

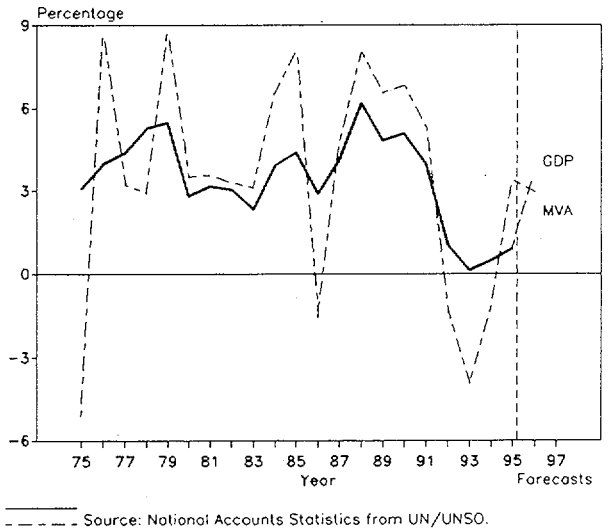


JAPAN

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



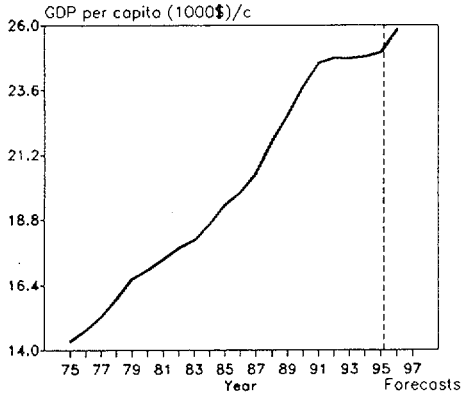
Annual growth rates of GDP and MVA (Constant 1990 prices)



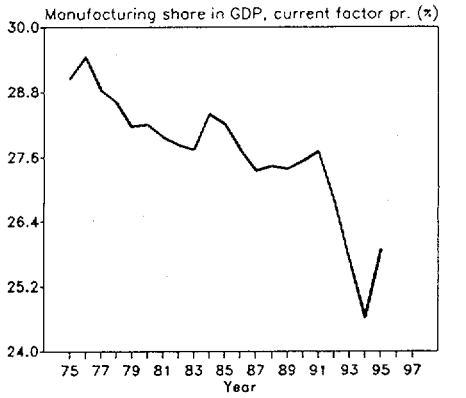
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	1 981 279	2 338 590	2 932 088	3 127 999
Per capita [na] (1990-dollars)	16 962	19 353	23 734	25 010
Manufacturing share [na] (%) (current factor prices)	28.2	28.2	27.5	*25.9*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	530 348	673 212	852 566	867 160
Industrial production index (1990=100)	72	82	100	97
Value added (millions of dollars)	339 234	412 505	891 767	*1 365 523*
Gross output (millions of dollars)	970 567	1 114 671	2 245 766	3 258 635
Employment (thousands)	10 253	10 652	11 172	*10 474*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	65	63	60	*58*
Wages and salaries including supplements (%)	12	13	13	*15*
Gross operating surplus and net taxes (%)	23	24	27	*27*
-PRODUCTIVITY: (dollars)				
Gross output per worker	88 443	102 310	201 017	*308 627*
Value added per worker	30 912	37 862	79 822	*132 802*
Average wage (including supplements)	11 522	13 644	26 368	*46 638*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	5.99	6.39	5.61	*4.57*
as a percentage of 1970-1975 structural change	100	107	94	*76*
MVA growth rate perer unit of structural change	3.08	3.55	3.47	1.96
Degree of specialization	11.8	15.1	15.8	14.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	25 889	32 041	66 676	*110 520*
313 Beverages	5 015	5 303	10 305	*25 449*
314 Tobacco products	1 888	700	2 003	*3 962*
321 Textiles	15 436	15 259	27 046	*33 629*
322 Wearing apparel	5 156	5 622	11 921	*16 495*
323 Leather and fur products	886	977	1 865	*2 614*
324 Footwear	697	658	1 478	*3 805*
331 Wood and wood products	8 997	6 888	14 006	*20 235*
332 Furniture and fixtures	3 788	3 798	8 730	*14 065*
341 Paper and paper products	9 310	9 759	22 287	*38 739*
342 Printing and publishing	17 099	20 789	47 938	*76 769*
351 Industrial chemicals	13 809	16 811	38 076	*54 306*
352 Other chemical products	15 471	19 758	46 764	*85 315*
353 Petroleum refineries	6 620	4 595	4 841	*19 146*
354 Miscellaneous petroleum and coal products	1 063	713	1 540	*2 312*
355 Rubber products	4 150	5 077	11 403	*16 846*
356 Plastic products	9 478	13 570	30 796	*50 978*
361 Pottery, china and earthenware	1 623	1 627	2 984	*5 415*
362 Glass and glass products	2 876	4 029	8 467	*11 388*
369 Other non-metal mineral products	12 565	12 321	26 652	*42 670*
371 Iron and steel	26 444	25 224	48 539	*57 823*
372 Non-ferrous metals	7 458	5 236	11 976	*15 062*
381 Metal products	22 409	26 356	62 905	*105 807*
382 Non-electrical machinery	39 270	53 576	126 563	*182 363*
383 Electrical machinery	38 868	63 180	133 884	*178 557*
384 Transport equipment	32 107	45 158	95 594	*142 745*
385 Professional and scientific equipment	5 685	6 972	12 798	*25 331*
390 Other manufacturing industries	5 178	6 510	13 730	*23 128*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

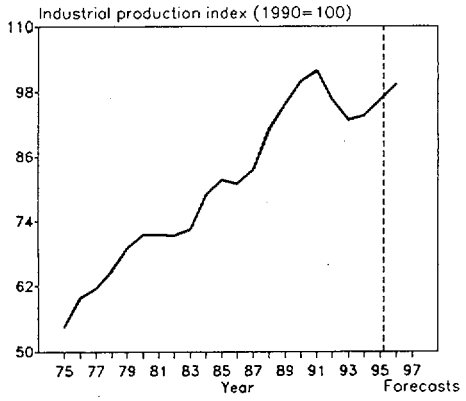
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

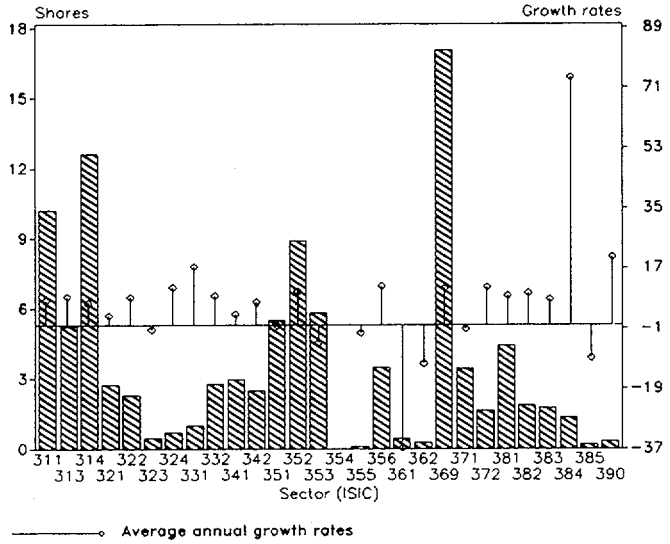


Industrial production index (1990=100)

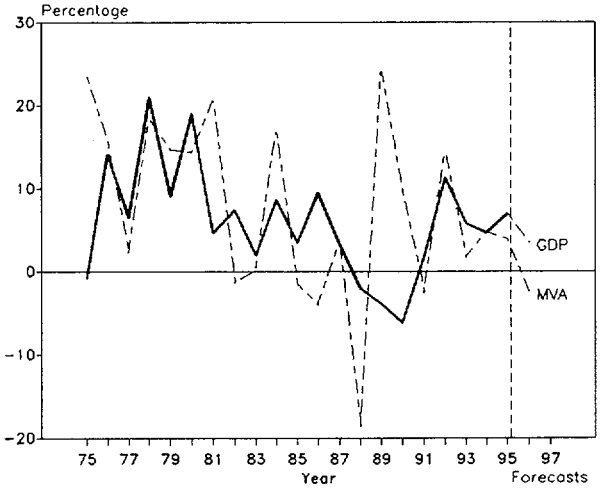


JORDAN

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

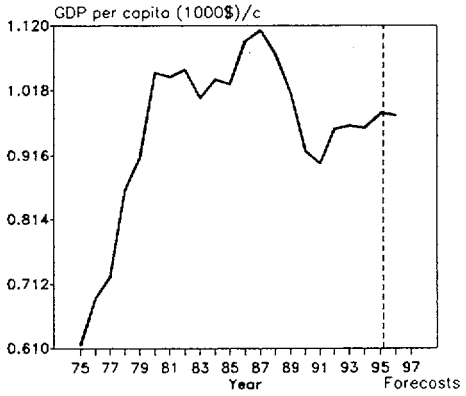


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

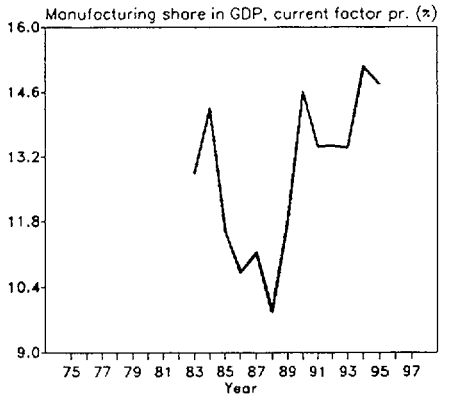
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	3 058	3 940	3 934	5 281
Per capita [na] (1990-dollars)	1 046	1 028	924	983
Manufacturing share [na] (%) (current factor prices)	..	11.6	14.6	*14.4*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	349	477	520	641
Industrial production index (1990=100)	64	83	100	111
Value added (millions of dollars)	406	581	583	*1 046*
Gross output (millions of dollars)	917	1 997	1 846	*3 690*
Employment (thousands)	25	42	44	*84*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	56	71	68	*72*
Wages and salaries including supplements (%)	12	9	7	*7*
Gross operating surplus and net taxes (%)	32	20	25	*22*
-PRODUCTIVITY: (dollars)				
Gross output per worker	26 708	38 671	33 230	*36 419*
Value added per worker	11 819	11 243	10 489	*10 487*
Average wage (including supplements)	4 418	4 326	2 786	*2 860*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	19.05	18.77	16.04	*16.72*
as a percentage of 1970-1975 structural change	100	99	84	*88*
MVA growth rate perer unit of structural change	4.39	3.97	1.70	1.81
Degree of specialization	19.5	21.1	15.3	15.7
-VALUE ADDED: (millions of dollars)				
311/2 Food products	24	48	58	*116*
313 Beverages	20	27	28	*57*
314 Tobacco products	50	92	75	*136*
321 Textiles	10	14	20	*28*
322 Wearing apparel	8	10	13	*26*
323 Leather and fur products	2	2	4	*4*
324 Footwear	8	8	3	*8*
331 Wood and wood products	7	7	4	*12*
332 Furniture and fixtures	11	11	14	*28*
341 Paper and paper products	9	9	20	*31*
342 Printing and publishing	7	11	12	*23*
351 Industrial chemicals	10	14	44	*51*
352 Other chemical products	20	28	42	*87*
353 Petroleum refineries	53	87	55	*44*
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	-	-	1	*1*
356 Plastic products	12	13	17	*41*
361 Pottery, china and earthenware	2	3	3	-
362 Glass and glass products	2	3	3	*2*
369 Other non-metal mineral products	98	123	85	*184*
371 Iron and steel	*11*	8	24	*26*
372 Non-ferrous metals	*5*	4	9	*19*
381 Metal products	*27*	31	23	*48*
382 Non-electrical machinery	*2*	4	9	*20*
383 Electrical machinery	2	2	11	*23*
384 Transport equipment	-	1	1	*23*
385 Professional and scientific equipment	-	-	2	*1*
390 Other manufacturing industries	7	23	2	*5*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

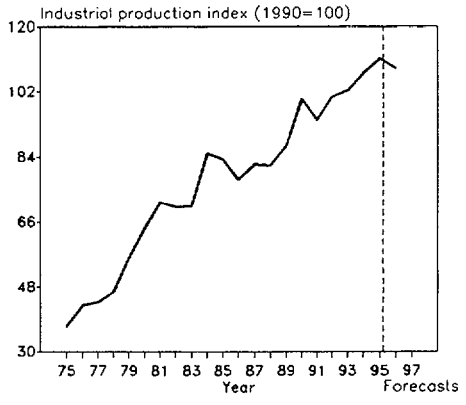
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

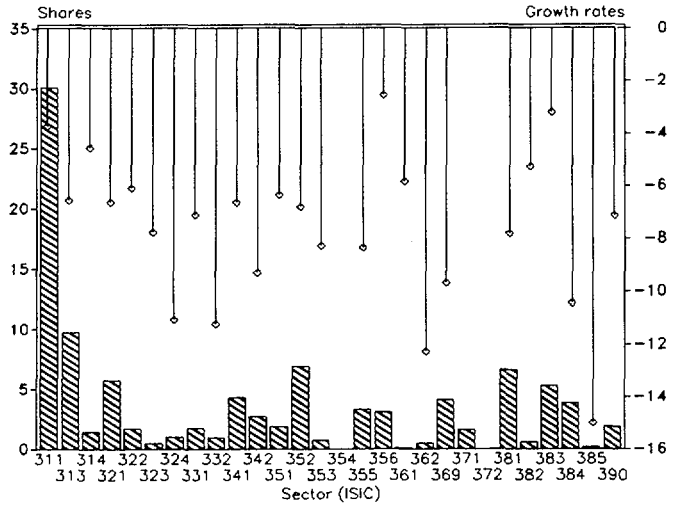


Industriol production index (1990=100)

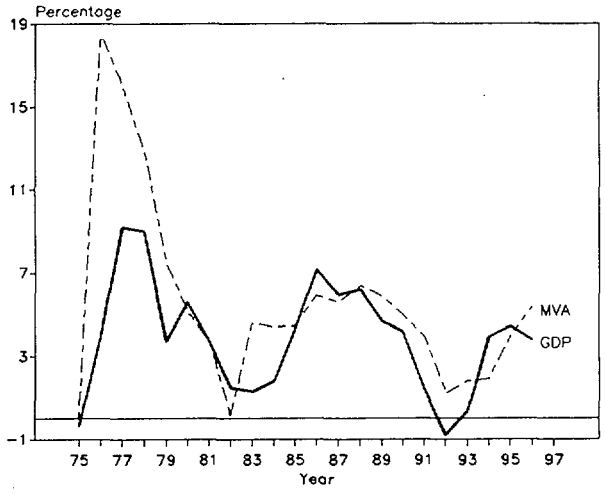


KENYA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

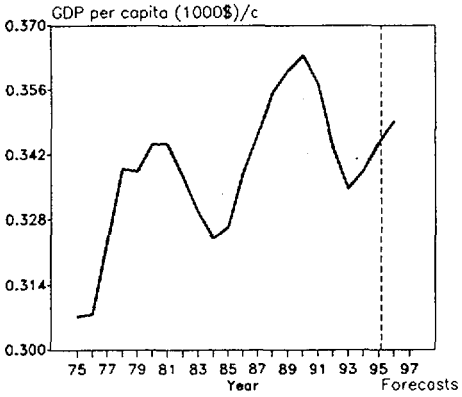


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

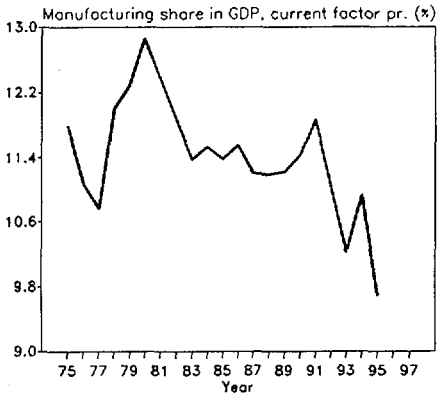
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	5 726	6 488	8 532	9 351
Per capita [na] (1990-dollars)	344	327	363	344
Manufacturing share [na] (%) (current factor prices)	12.9	11.4	11.4	*9.5*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	552	653	862	977
Industrial production index (1990=100)	74	79	100	*109*
Value added (millions of dollars)	744	670	921	*814*
Gross output (millions of dollars)	3 656	4 301	7 975	*9 644*
Employment (thousands)	*143*	163	188	*199*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	80	84	88	*92*
Wages and salaries including supplements (%)	9	7	4	*3*
Gross operating surplus and net taxes (%)	11	9	8	*6*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*25 544*	26 428	42 491	*48 488*
Value added per worker	*5 197*	4 115	4 907	*4 025*
Average wage (including supplements)	*2 269*	1 795	1 605	*1 251*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	10.54	9.80	9.33	*7.24*
as a percentage of 1970-1975 structural change	100	93	88	*69*
MVA growth rate perer unit of structural change	4.94	1.59	1.26	-1.07
Degree of specialization	15.8	18.7	18.1	21.1
-VALUE ADDED: (millions of dollars)				
311/2 Food products	177	185	252	*258*
313 Beverages	65	72	90	*78*
314 Tobacco products	10	13	12	*12*
321 Textiles	59	40	55	*47*
322 Wearing apparel	17	19	16	*13*
323 Leather and fur products	6	3	4	*3*
324 Footwear	9	6	13	*8*
331 Wood and wood products	20	17	17	*14*
332 Furniture and fixtures	9	8	11	*6*
341 Paper and paper products	34	23	42	*36*
342 Printing and publishing	22	19	27	*19*
351 Industrial chemicals	25	16	17	*15*
352 Other chemical products	39	50	67	*54*
353 Petroleum refineries	15	6	7	*6*
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	25	27	33	*25*
356 Plastic products	14	13	24	*27*
361 Pottery, china and earthenware	1	-	1	*1*
362 Glass and glass products	3	4	5	*3*
369 Other non-metal mineral products	20	17	42	*29*
371 Iron and steel	*12* [a]	*6* [a]	12 [a]	*14* [a]
372 Non-ferrous metals	- [a]	- [a]	- [a]	- [a]
381 Metal products	44	31	64	*51*
382 *Non-electrical machinery*	*6*	4	5	*5*
383 Electrical machinery	40	36	44	*46*
384 Transport equipment	64	43	39	*28*
385 Professional and scientific equipment	1	1	2	*1*
390 Other manufacturing industries	6	8	18	*14*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

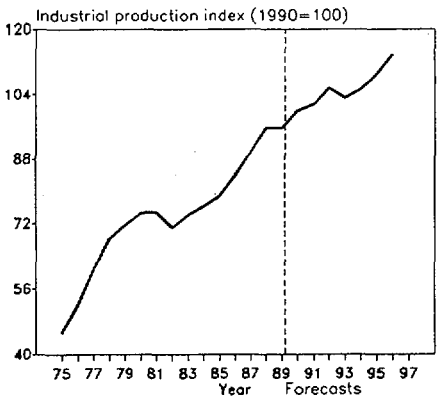
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

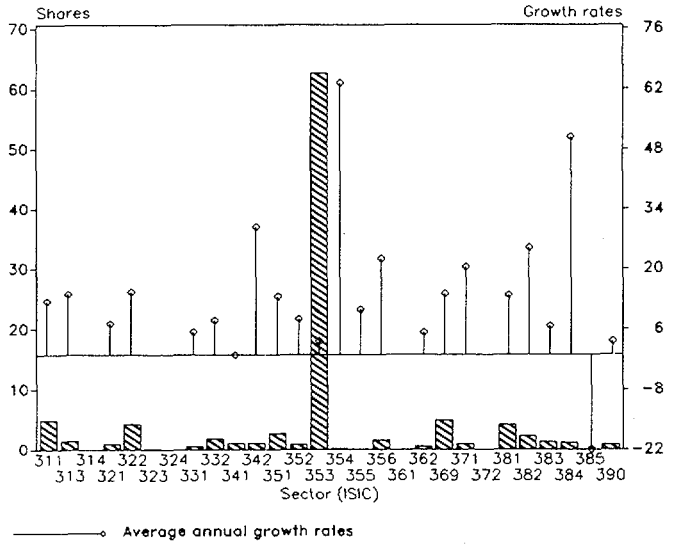


Industrial production index (1990=100)

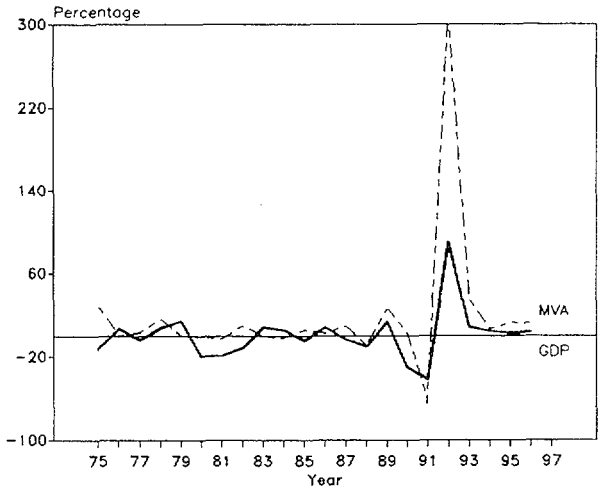


KUWAIT

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



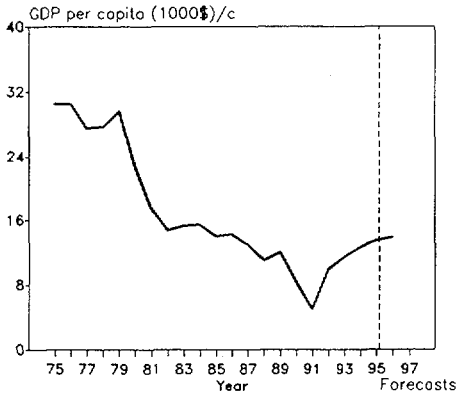
Annual growth rates of GDP and MVA (Constant 1990 prices)



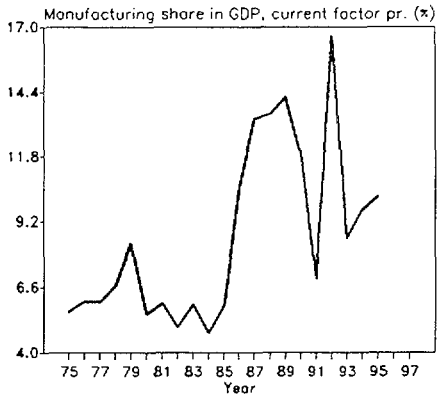
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	31 087	24 187	17 969	22 798
Per capita [na] (1990-dollars)	22 608	14 062	8 385	13 482
Manufacturing share [na] (%) (current factor prices)	5.6	5.9	11.9	*10.3*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	1 608	1 717	2 151	*4 733*
Industrial production index (1990=100)	103	122	100	*103*
Value added (millions of dollars)	1 752	1 275	2 179	*3 168*
Gross output (millions of dollars)	6 218	7 435	5 531	*7 106*
Employment (thousands)	43	46	56	*62*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	72	83	61	*55*
Wages and salaries including supplements (%)	*7*	8	*8*	*10*
Gross operating surplus and net taxes (%)	*21*	9	*31*	*34*
-PRODUCTIVITY: (dollars)				
Gross output per worker	144 813	151 542	94 963	*111 264*
Value added per worker	40 798	25 988	37 394	*49 619*
Average wage (including supplements)	*9 789*	13 000	*8 062*	*11 615*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	20.37	12.95	23.38	*23.00*
as a percentage of 1970-1975 structural change	100	64	115	*113*
MVA growth rate perer unit of structural change	3.00	3.39	0.29	1.69
Degree of specialization	39.7	31.3	61.5	49.2
-VALUE ADDED: (millions of dollars)				
311/2 Food products	96	101	69	*143*
313 Beverages	20	31	21	*46*
314 Tobacco products	-	-	-	-
321 Textiles	7	8	16	*24*
322 Wearing apparel	84	75	54	*125*
323 Leather and fur products	-	-	-	*4*
324 Footwear	-	-	-	*1*
331 Wood and wood products	40	14	10	*15*
332 Furniture and fixtures	41	31	30	*50*
341 Paper and paper products	5	12	31	*31*
342 Printing and publishing	40	52	5	*28*
351 Industrial chemicals	118	56	43	*102*
352 Other chemical products	13	16	15	*24*
353 Petroleum refineries	915	561	1 652	*2 010*
354 Miscellaneous petroleum and coal products	1	1	-	*7*
355 Rubber products	*5*	7	2	*3*
356 Plastic products	24	24	16	*55*
361 Pottery, china and earthenware	2	-	-	-
362 Glass and glass products	2	4	12	*17*
369 Other non-metal mineral products	143	115	72	*168*
371 Iron and steel	7	14	11	*33*
372 Non-ferrous metals	-	-	-	-
381 Metal products	99	88	54	*120*
382 Non-electrical machinery	10	30	19	*71*
383 Electrical machinery	22	15	27	*43*
384 Transport equipment	45	12	2	*27*
385 Professional and scientific equipment	5	*2*	*1*	-
390 Other manufacturing industries	7	5	17	*20*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

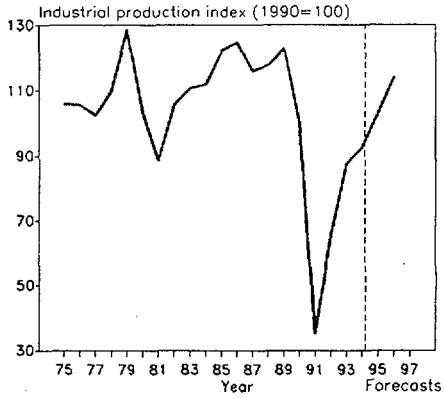
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

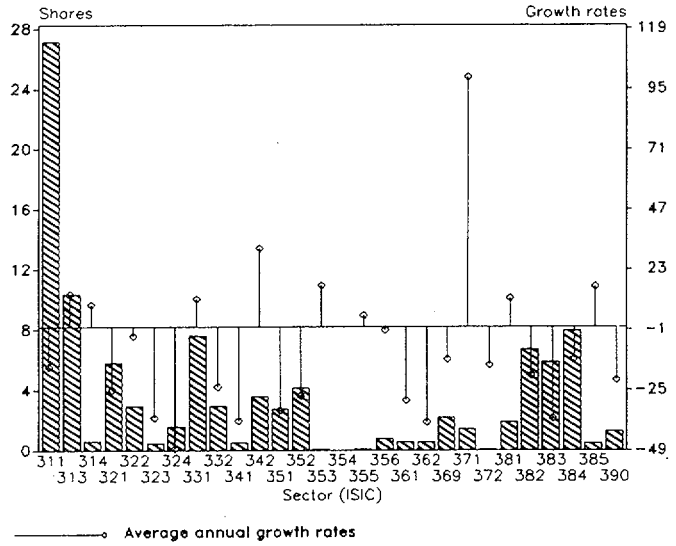


Industrial production index (1990=100)

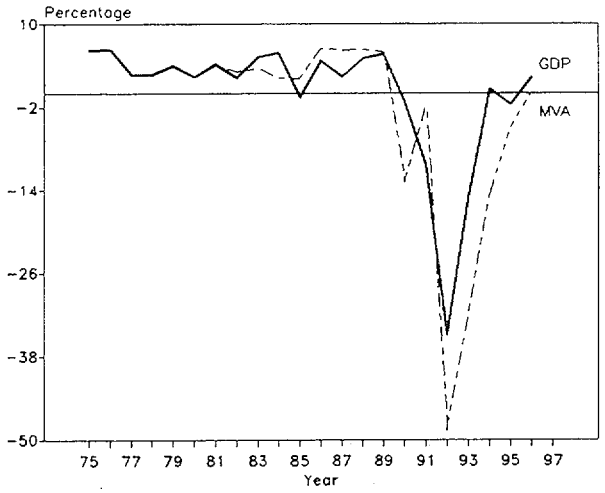


LATVIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1993–1995 (Percentage)

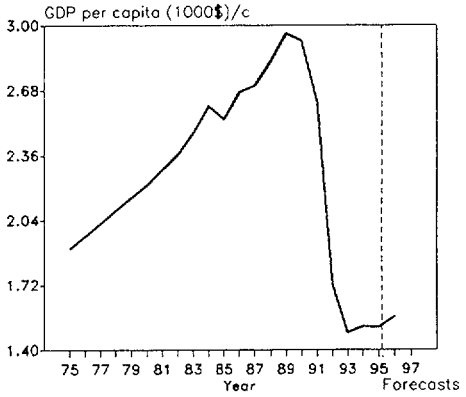


Annual growth rates of GDP and MVA (Constant 1990 prices)

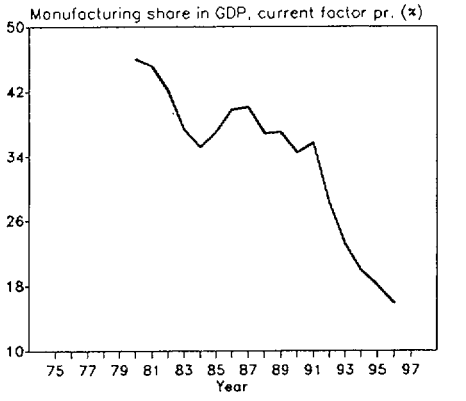


	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	5 617	6 632	7 805	3 836
Per capita [na] (1990-dollars)	2 217	2 538	2 923	1 513
Manufacturing share [na] (%) (current factor prices)	46.0	37.1	34.5	18.1
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	2 100	2 429	2 690	*740*
Industrial production index (1990=100)	..	..	..	..
Value added (millions of dollars)	..	..	..	828
Gross output (millions of dollars)	*12 055*	*10 779*	6 362	1 851
Employment (thousands)	*531*	*422*	346	154
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	..	..	..	55
Wages and salaries including supplements (%)	..	..	..	*11*
Gross operating surplus and net taxes (%)	..	..	..	*33*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*22 632*	*25 490*	18 413	12 035
Value added per worker	..	..	..	5 383
Average wage (including supplements)	*2 713*	*3 001*	*2 330*	*1 357*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	..	..	..	..
as a percentage of 1970-1975 structural change	..	..	..	..
MVA growth rate perer unit of structural change	..	..	..	..
Degree of specialization	..	..	..	..
-VALUE ADDED: (millions of dollars)				
311/2 Food products	..	..	..	214
313 Beverages	..	..	..	109
314 Tobacco products	..	..	..	6
321 Textiles	..	..	..	40
322 Wearing apparel	..	..	..	26
323 Leather and fur products	..	..	..	3
324 Footwear	..	..	..	7
331 Wood and wood products	..	..	..	79
332 Furniture and fixtures	..	..	..	20
341 Paper and paper products	..	..	..	3
342 Printing and publishing	..	..	..	44
351 Industrial chemicals	..	..	..	18
352 Other chemical products	..	..	..	31
353 Petroleum refineries	..	..	..	1
354 Miscellaneous petroleum and coal products	..	..	..	..
355 Rubber products	..	..	..	1
356 Plastic products	..	..	..	7
361 Pottery, china and earthenware	..	..	..	3
362 Glass and glass products	..	..	..	3
369 Other non-metal mineral products	..	..	..	17
371 Iron and steel	..	..	..	12
372 Non-ferrous metals	..	..	..	1
381 Metal products	..	..	..	20
382 Non-electrical machinery	..	..	..	55
383 Electrical machinery	..	..	..	32
384 Transport equipment	..	..	..	64
385 Professional and scientific equipment	..	..	..	5
390 Other manufacturing industries	..	..	..	9

GDP per capita (1000$)/c



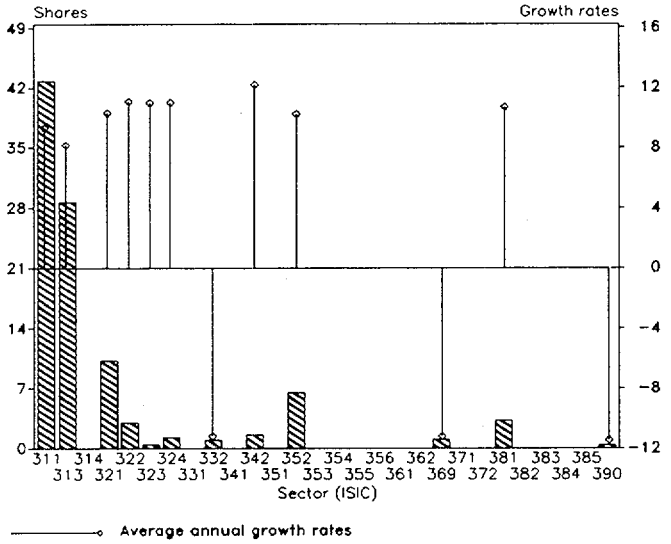
Manufacturing share in GDP, current factor pr. (%)



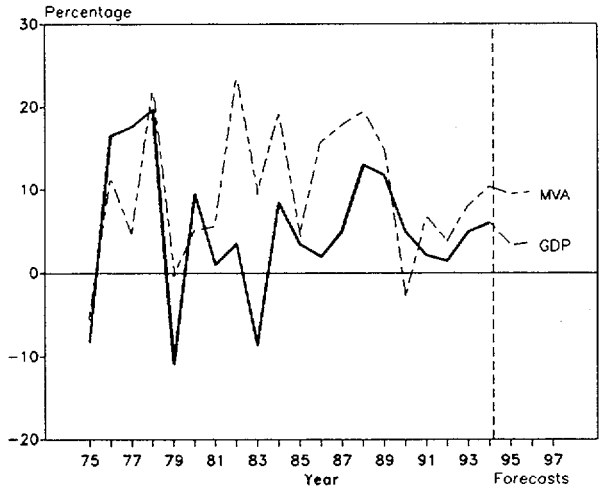
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

LESOTHO

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

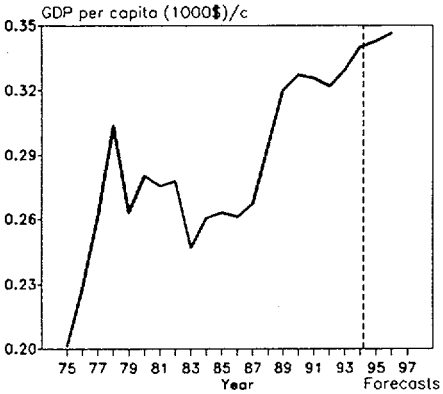


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

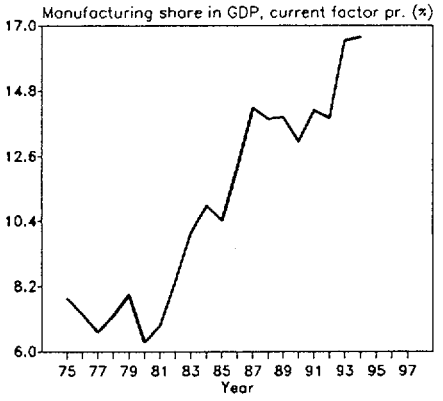
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	383	411	584	*695*
Per capita [na] (1990-dollars)	280	263	327	*343*
Manufacturing share [na] (%) (current factor prices)	6.3	10.4	13.1	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	20	36	64	*93*
Industrial production index (1990=100)	27	63	*100*	*149*
Value added (millions of dollars)	*14*	*22*	*68*	*134*
Gross output (millions of dollars)	*57*	*66*	*189*	*378*
Employment (thousands)	*4*	*7*	*19*	*18*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	75	67	65	*67*
Wages and salaries including supplements (%)	*6*	*9*	*6*	*6*
Gross operating surplus and net taxes (%)	*18*	*24*	*28*	*28*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*13 616*	9 778	*10 162*	*20 697*
Value added per worker	*3 372*	3 234	*3 659*	*7 521*
Average wage (including supplements)	*949*	*1 039*	*1 369*	*3 391*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*12.25*	*10.38*	*5.39*	*2.25*
as a percentage of 1970-1975 structural change	*100*	*85*	*44*	*18*
MVA growth rate perer unit of structural change	2.13	7.58	17.67	23.72
Degree of specialization	33.2	34.1	34.4	36.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*6*	*9*	*29*	*58*
313 Beverages	*5*	*6*	*20*	*38*
314 Tobacco products	..	..	..	..
321 Textiles	*1*	*2*	*7*	*14*
322 Wearing apparel	-	*1*	*2*	*4*
323 Leather and fur products	-	-	-	*1*
324 Footwear	-	-	*1*	*2*
331 Wood and wood products	..	..	..	..
332 Furniture and fixtures	-	-	*1*	*1*
341 Paper and paper products	..	..	..	..
342 Printing and publishing	-	-	*1*	*2*
351 Industrial chemicals	..	..	..	..
352 Other chemical products	1	1	*4*	*9*
353 Petroleum refineries	..	..	..	..
354 Miscellaneous petroleum and coal products	..	..	..	..
355 Rubber products	..	..	..	..
356 Plastic products	..	..	..	..
361 Pottery, china and earthenware	..	..	..	..
362 Glass and glass products	..	..	..	..
369 Other non-metal mineral products	-	-	*1*	*1*
371 Iron and steel	..	..	..	..
372 Non-ferrous metals	..	..	..	..
381 Metal products	1	1	2	*4*
382 Non-electrical machinery	..	..	..	..
383 Electrical machinery	..	..	..	..
384 Transport equipment	..	..	..	..
385 Professional and scientific equipment	..	..	..	..
390 Other manufacturing industries	-	-	-	-

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

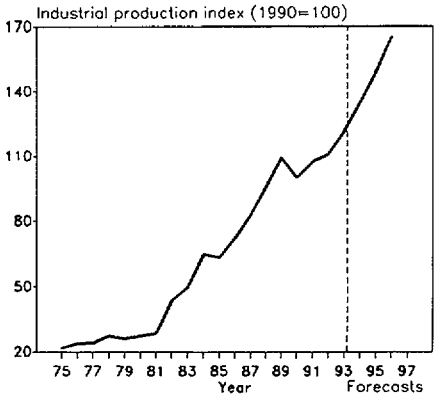
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

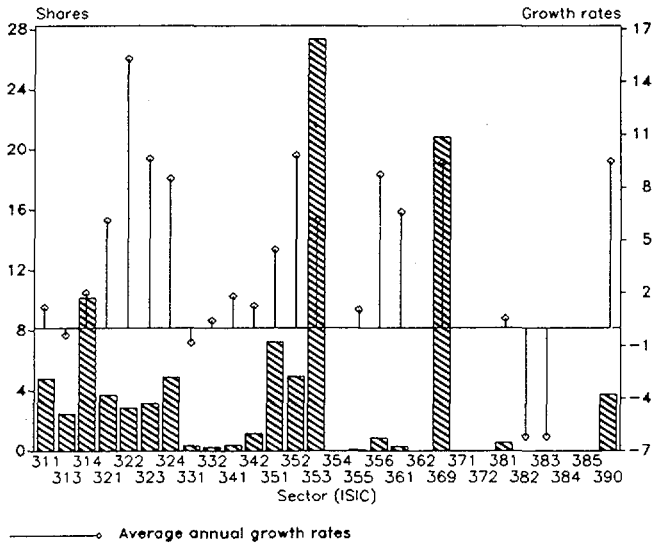


Industrial production index (1990=100)

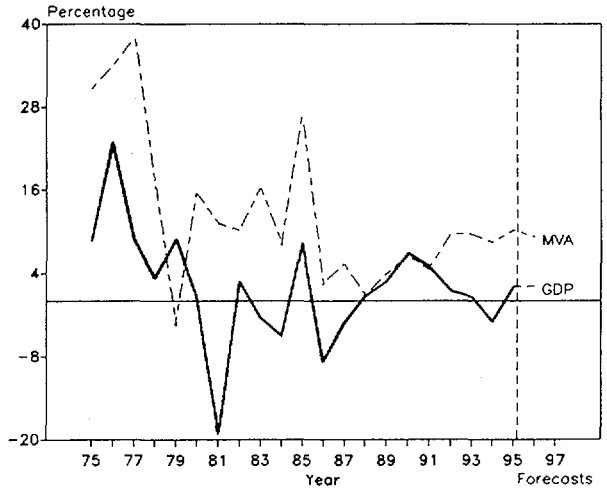


LIBYAN ARAB JAMAHIRIYA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

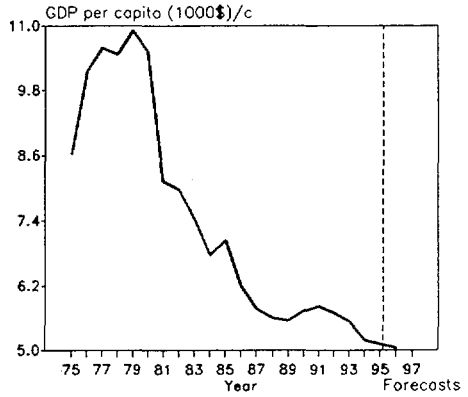


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

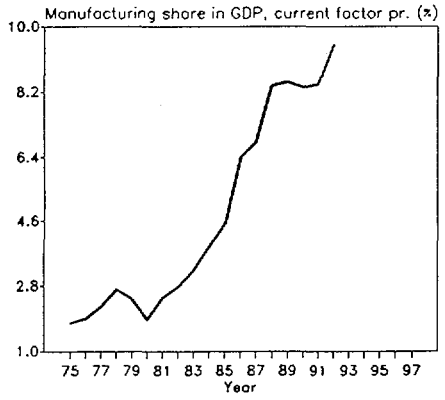
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	31 992	26 663	26 078	27 664
Per capita [na] (1990-dollars)	10 513	7 043	5 738	5 116
Manufacturing share [na] (%) (current factor prices)	1.9	4.5	*8.3*	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	937	1 821	2 185	*3 276*
Industrial production index (1990=100)	62	*87*	100	*150*
Value added (millions of dollars)	358	*541*	*693*	*857*
Gross output (millions of dollars)	1 177	*1 726*	*2 301*	*2 761*
Employment (thousands)	18	*23*	*26*	*33*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	70	*69*	*70*	*69*
Wages and salaries including supplements (%)	13	*13*	*12*	*12*
Gross operating surplus and net taxes (%)	17	*19*	*18*	*19*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*64 186*	*75 484*	*85 187*	*80 602*
Value added per worker	*19 577*	*24 557*	*27 763*	*27 641*
Average wage (including supplements)	*8 327*	*9 620*	*10 187*	*9 856*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	24.39	*24.47*	*8.08*	*6.74*
as a percentage of 1970-1975 structural change	100	*100*	*33*	*28*
MVA growth rate perer unit of structural change	1.40	0.93	3.31	4.28
Degree of specialization	18.9	23.0	25.9	26.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	35	*37*	*38*	*37*
313 Beverages	17	*18*	*21*	*19*
314 Tobacco products	55	*73*	*79*	*81*
321 Textiles	14	*22*	*26*	*32*
322 Wearing apparel	*5*	*8*	*15*	*28*
323 Leather and fur products	7	*15*	*20*	*29*
324 Footwear	14	*25*	*32*	*44*
331 Wood and wood products	*3*	*4*	*3*	*3*
332 Furniture and fixtures	2	*2*	*2*	*2*
341 Paper and paper products	3	*3*	*3*	*3*
342 Printing and publishing	-	*8*	*9*	*9*
351 Industrial chemicals	35	*41*	*52*	*60*
352 Other chemical products	21	*33*	*31*	*45*
353 Petroleum refineries	81	*124*	*198*	*234*
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	-	-	*1*	*1*
356 Plastic products	2	*4*	*5*	*7*
361 Pottery, china and earthenware	1	*2*	*2*	*2*
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	51	*99*	*131*	*187*
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	-	-	-	-
381 Metal products	3	*5*	*4*	*4*
382 Non-electrical machinery	-	-	-	-
383 Electrical machinery	-	-	-	-
384 Transport equipment	-	-	-	-
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	9	*18*	*23*	*34*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

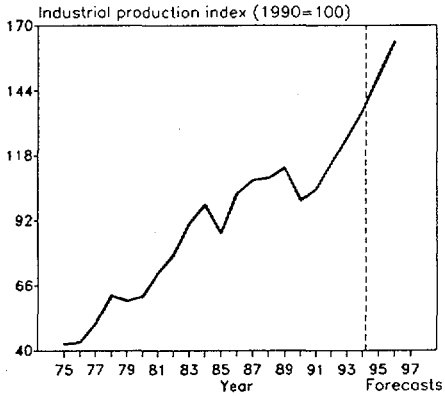
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

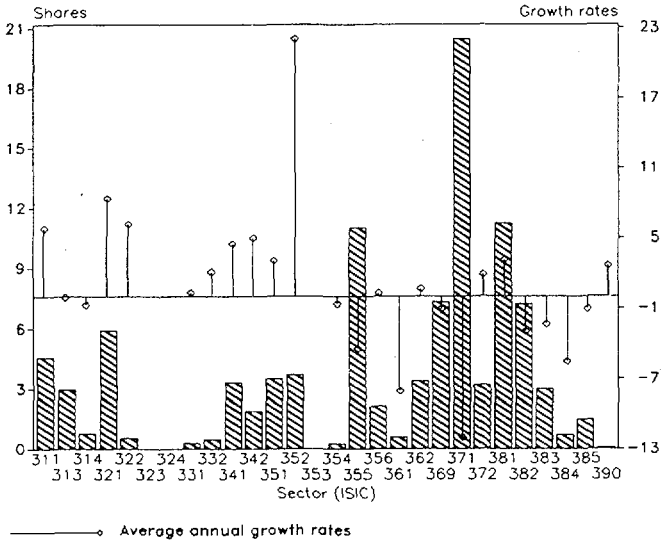


Industrial production index (1990=100)

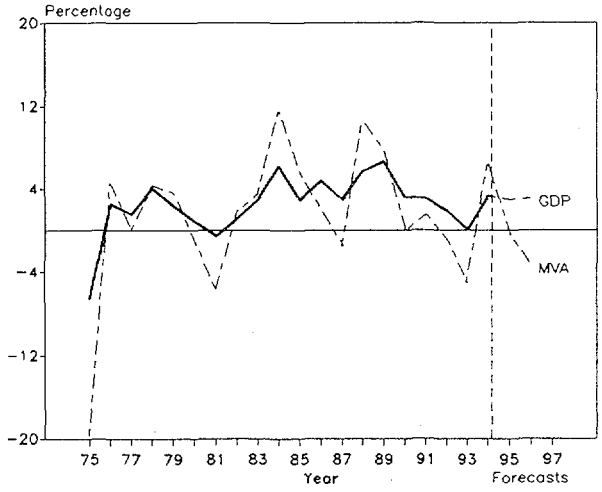


LUXEMBOURG

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

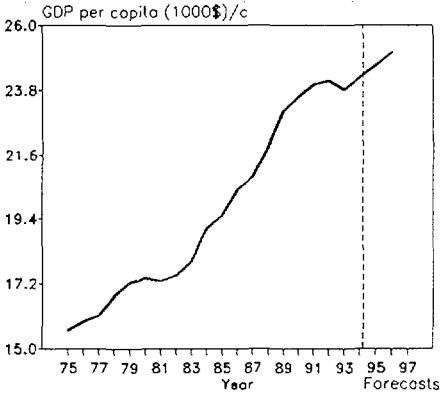


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

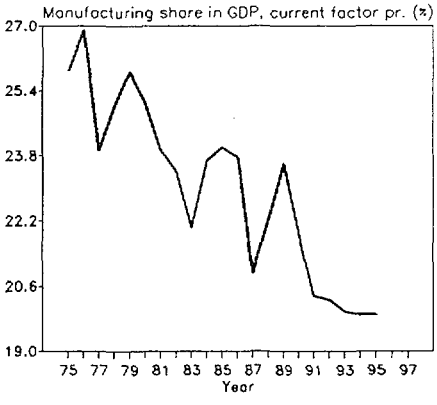
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	6 329	7 164	8 989	*10 033*
Per capita [na] (1990-dollars)	17 386	19 520	23 594	*24 650*
Manufacturing share [na] (%) (current factor prices)	25.1	24.0	21.9	*19.9*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	1 670	1 946	2 316	2 340
Industrial production index (1990=100)	69	84	100	102
Value added (millions of dollars)	1 168	944	2 130	*2 459*
Gross output (millions of dollars)	3 269	2 916	6 057	7 272
Employment (thousands)	38	37	36	*34*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	71	73	73	*72*
Wages and salaries including supplements (%)	*26*	*18*	*18*	*18*
Gross operating surplus and net taxes (%)	*3*	*9*	*9*	*10*
-PRODUCTIVITY: (dollars)				
Gross output per worker	92 439	84 771	196 286	*213 982*
Value added per worker	29 294	24 952	57 389	*67 558*
Average wage (including supplements)	*23 530*	*15 415*	*34 185*	*41 841*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*9.73*	*10.82*	*13.41*	*15.51*
as a percentage of 1970-1975 structural change	*100*	*111*	*138*	*159*
MVA growth rate perer unit of structural change	-0.91	0.34	1.15	-0.04
Degree of specialization	39.2	33.0	21.6	14.2
-VALUE ADDED: (millions of dollars)				
311/2 Food products	31	33	67	*118*
313 Beverages	*33*	*24*	*58*	*75*
314 Tobacco products	*9*	*6*	*15*	*19*
321 Textiles	24	*15*	*88*	*171*
322 Wearing apparel	5	*3*	*8*	*15*
323 Leather and fur products	-	-	-	..
324 Footwear	-	-	-	..
331 Wood and wood products	*2*	*3*	*6*	*8*
332 Furniture and fixtures	*2*	*3*	*8*	*12*
341 Paper and paper products	*21*	*21*	*56*	*90*
342 Printing and publishing	*11*	*11*	*31*	*52*
351 Industrial chemicals	*15*	*16*	*62*	*91*
352 Other chemical products	3	8	28	*117*
353 Petroleum refineries	-	-	-	-
354 Miscellaneous petroleum and coal products	2	*1*	*5*	*6*
355 Rubber products	*145*	*127*	*249*	*261*
356 Plastic products	*11*	*11*	*39*	*56*
361 Pottery, china and earthenware	*11*	*6*	*15*	*12*
362 Glass and glass products	*10*	*14*	*66*	*85*
369 Other non-metal mineral products	*50*	*40*	*154*	*184*
371 Iron and steel	592	405	623	*391*
372 Non-ferrous metals	32	26	62	*86*
381 Metal products	24	78	210	*300*
382 Non-electrical machinery	98	63	158	*178*
383 Electrical machinery	19	*19*	*71*	*77*
384 Transport equipment	7	4	19	*16*
385 Professional and scientific equipment	10	*7*	*32*	*37*
390 Other manufacturing industries	-	-	*1*	*2*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

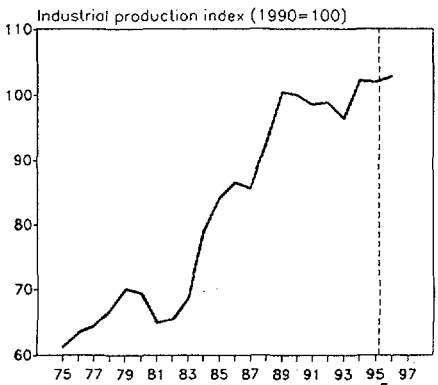
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

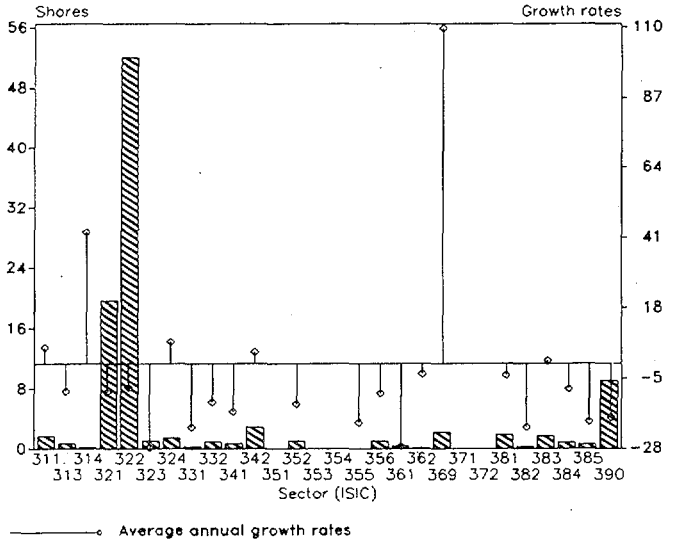


Industrial production index (1990=100)

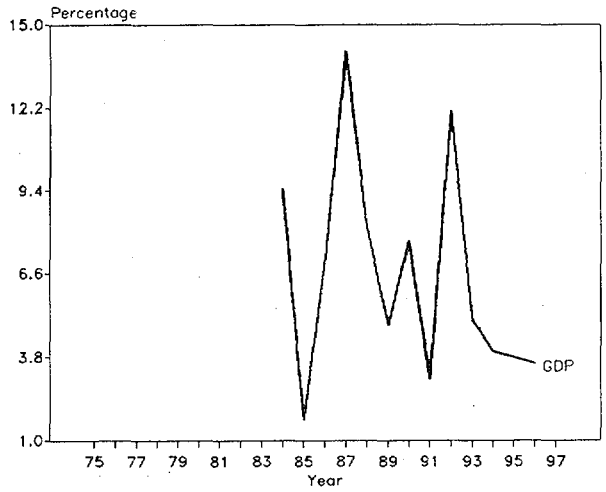


MACAO

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



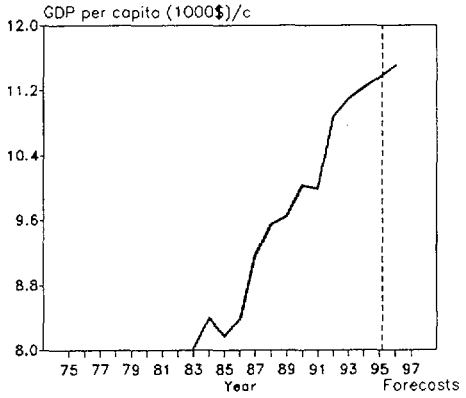
Annual growth rate of GDP (Constant 1990 prices)



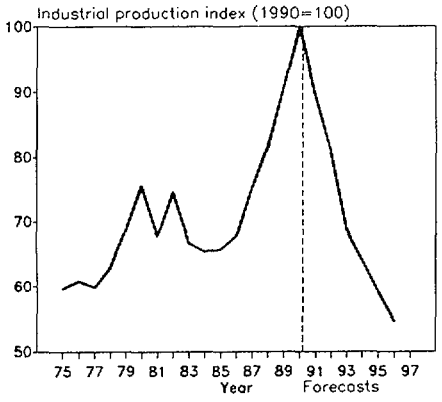
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	..	2 502	3 731	4 887
Per capita [na] (1990-dollars)	..	8 176	10 029	11 364
Manufacturing share [na] (%) (current factor prices)	..	..	..	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	..	..	..	..
Industrial production index (1990=100)	*76*	*66*	100	*59*
Value added (millions of dollars)	127	225	470	*450*
Gross output (millions of dollars)	..	759	1 625	*1 718*
Employment (thousands)	46	59	63	*44*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	..	70	71	*74*
Wages and salaries including supplements (%)	..	17	16	*15*
Gross operating surplus and net taxes (%)	..	13	13	*11*
-PRODUCTIVITY: (dollars)				
Gross output per worker	..	12 557	25 090	*37 966*
Value added per worker	2 693	3 723	7 263	*9 932*
Average wage (including supplements)	..	2 113	4 155	*5 901*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	19.69	21.94	14.73	*10.70*
as a percentage of 1970-1975 structural change	100	111	75	*54*
MVA growth rate perer unit of structural change	-0.93	0.04	2.39	1.09
Degree of specialization	43.2	45.4	45.7	43.4
-VALUE ADDED: (millions of dollars)				
311/2 Food products	1	3	6	*11*
313 Beverages	1	1	4	*3*
314 Tobacco products	-	-	-	*2*
321 Textiles	31	43	92	*82*
322 Wearing apparel	71	99	231	*227*
323 Leather and fur products	2	4	8	*2*
324 Footwear	-	1	5	*10*
331 Wood and wood products	1	1	2	*1*
332 Furniture and fixtures	1	2	5	*3*
341 Paper and paper products	1	2	4	*2*
342 Printing and publishing	4	3	9	*16*
351 Industrial chemicals	-	-	-	-
352 Other chemical products	-	1	6	*4*
353 Petroleum refineries	-	-	-	-
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	-	-	-	-
356 Plastic products	2	1	3	2
361 Pottery, china and earthenware	-	2	3	*1*
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	-	-	-	*23*
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	-	-	-	-
381 Metal products	1	1	8	*9*
382 Non-electrical machinery	-	-	1	*1*
383 Electrical machinery	2	8	7	*11*
384 Transport equipment	1	2	4	*3*
385 Professional and scientific equipment	1	3	4	*2*
390 Other manufacturing industries	6	46	68	*34*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

GDP per capita (1000$)/c

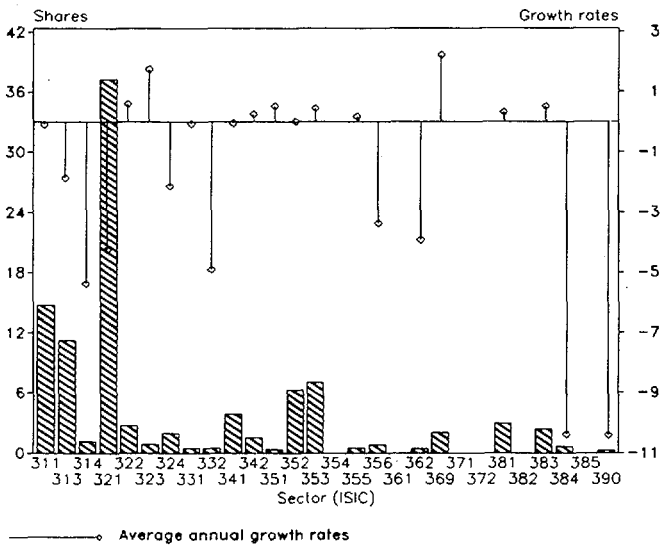


Industrial production index (1990=100)

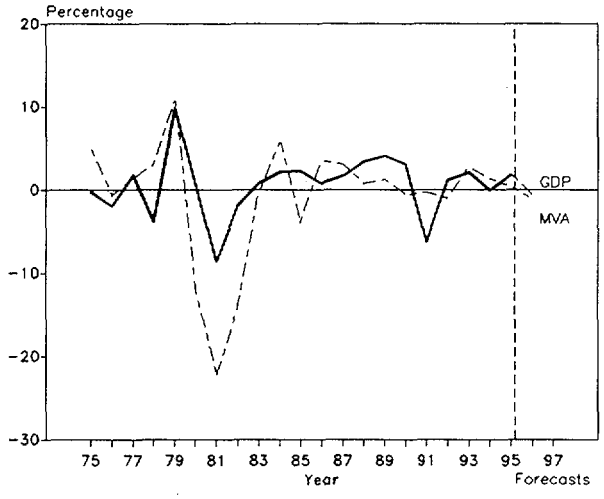


MADAGASCAR

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

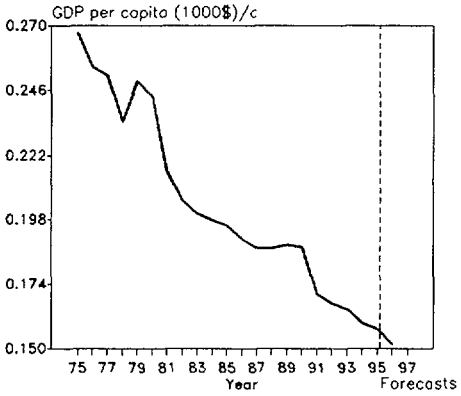


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

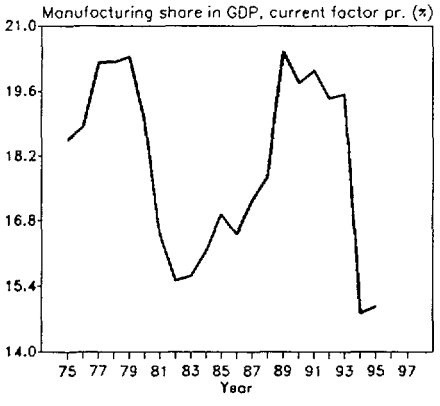
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	2 211	2 089	2 376	2 339
Per capita [na] (1990-dollars)	244	196	188	157
Manufacturing share [na] (%) (current factor prices)	19.0	16.9	19.8	*15.0*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	627	420	453	*466*
Industrial production index (1990=100)	121	87	100	*76*
Value added (millions of dollars)	221	132	*142*	*127*
Gross output (millions of dollars)	569	328	*343*	*316*
Employment (thousands)	41	47	*46*	*50*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	61	60	*59*	*60*
Wages and salaries including supplements (%)	15	16	*13*	*13*
Gross operating surplus and net taxes (%)	24	25	*28*	*27*
-PRODUCTIVITY: (dollars)				
Gross output per worker	14 005	6 872	*7 456*	*6 339*
Value added per worker	5 460	2 790	*3 105*	*2 562*
Average wage (including supplements)	2 083	1 099	*988*	*837*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	17.92	24.85	*31.77*	*19.52*
as a percentage of 1970-1975 structural change	100	139	*177*	*109*
MVA growth rate perer unit of structural change	0.11	-0.42	-0.09	0.22
Degree of specialization	22.4	24.2	31.3	28.1
-VALUE ADDED: (millions of dollars)				
311/2 Food products	23	45	*19*	*19*
313 Beverages	34	16	*16*	*15*
314 Tobacco products	3	3	*2*	*1*
321 Textiles	67	16	58	*45*
322 Wearing apparel	19	6	*3*	*4*
323 Leather and fur products	3	1	*1*	*1*
324 Footwear	8	5	*3*	*2*
331 Wood and wood products	2	1	*1*	*1*
332 Furniture and fixtures	2	-	*1*	*1*
341 Paper and paper products	4	3	*5*	*5*
342 Printing and publishing	6	2	*2*	*2*
351 Industrial chemicals	1	1	-	-
352 Other chemical products	10	11	*8*	*8*
353 Petroleum refineries	*11*	7	*9*	*10*
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	1	1	*1*	*1*
356 Plastic products	3	2	*1*	*1*
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	2	-	*1*	-
369 Other non-metal mineral products	*2*	1	2	*3*
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	-	-	-	-
381 Metal products	9	5	*4*	*4*
382 Non-electrical machinery	-	-	-	-
383 Electrical machinery	3	3	*3*	*3*
384 Transport equipment	7	2	*1*	*1*
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	2	1	-	-

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

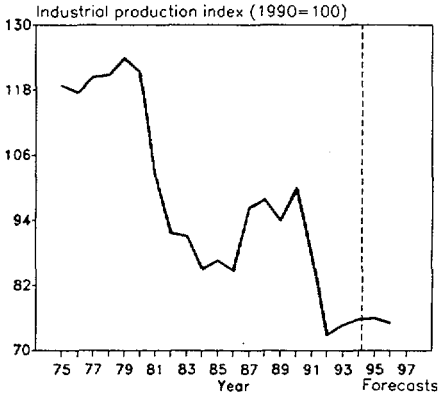
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

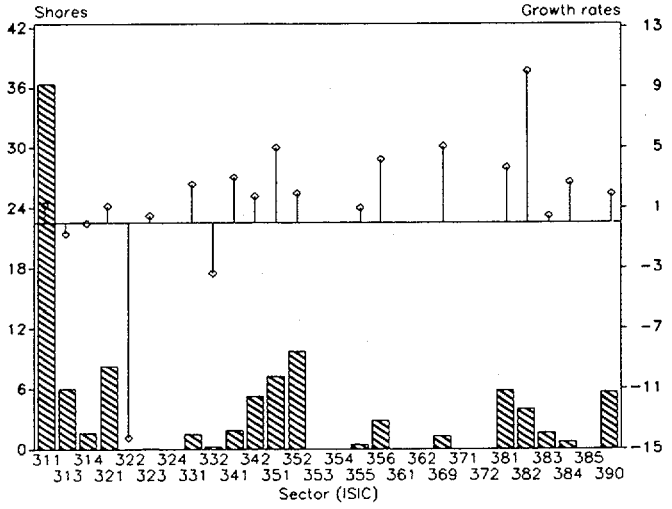


Industrial production index (1990=100)

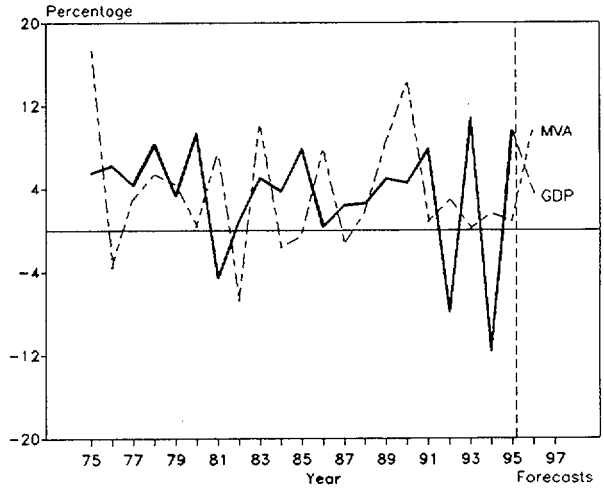


MALAWI

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

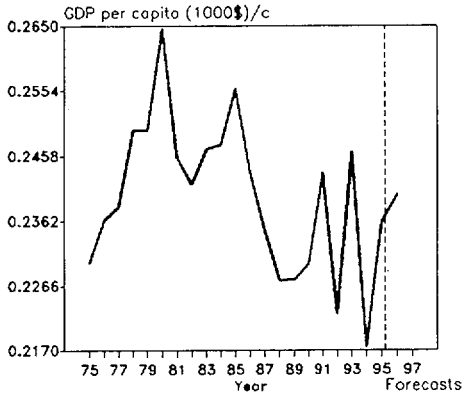


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

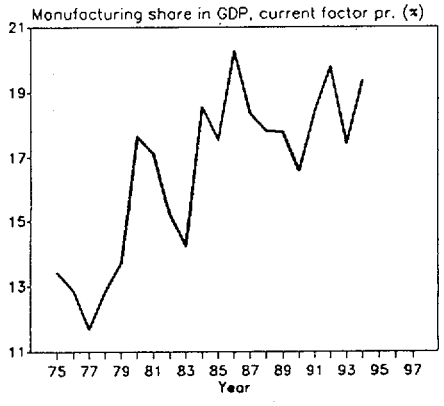
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	1 636	1 853	2 145	2 283
Per capita [na] (1990-dollars)	265	256	230	236
Manufacturing share [na] (%) (current factor prices)	17.6	17.5	16.6	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	220	236	315	335
Industrial production index (1990=100)	58	69	100	97
Value added (millions of dollars)	123	90	*193*	*153*
Gross output (millions of dollars)	340	330	*623*	*487*
Employment (thousands)	39	31	*25*	*28*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	64	73	*69*	*69*
Wages and salaries including supplements (%)	12	10	*9*	*9*
Gross operating surplus and net taxes (%)	24	18	*21*	*22*
-PRODUCTIVITY: (dollars)				
Gross output per worker	8 783	10 745	*23 908*	*16 833*
Value added per worker	3 174	2 923	*7 349*	*5 251*
Average wage (including supplements)	1 046	1 035	*2 318*	*1 627*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	20.15	30.15	*32.46*	*16.43*
as a percentage of 1970-1975 structural change	100	150	*161*	*82*
MVA growth rate perer unit of structural change	2.51	1.11	0.54	1.69
Degree of specialization	27.7	16.7	23.8	22.5
-VALUE ADDED: (millions of dollars)				
311/2 Food products	54	14	*72*	*54*
313 Beverages	8	7	*13*	*9*
314 Tobacco products	9	5	*3*	*2*
321 Textiles	12	14	*16*	*12*
322 Wearing apparel	2	1	*-1*	-
323 Leather and fur products	-	-	-	-
324 Footwear	*1*	3	..	..
331 Wood and wood products	2	2	*3*	*2*
332 Furniture and fixtures	1	1	*1*	-
341 Paper and paper products	2	2	*3*	*3*
342 Printing and publishing	8	6	*10*	*8*
351 Industrial chemicals	2	8	*13*	*12*
352 Other chemical products	5	14	*19*	*15*
353 Petroleum refineries	-	-	-	-
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	1	1	*1*	*1*
356 Plastic products	2	2	*5*	*5*
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	3	1	*2*	*2*
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	-	-	-	-
381 Metal products	6	6	*11*	*9*
382 Non-electrical machinery	-	1	*6*	*7*
383 Electrical machinery	5	1	*3*	*2*
384 Transport equipment	*1*	1	*1*	*1*
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	-	-	*11*	*9*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

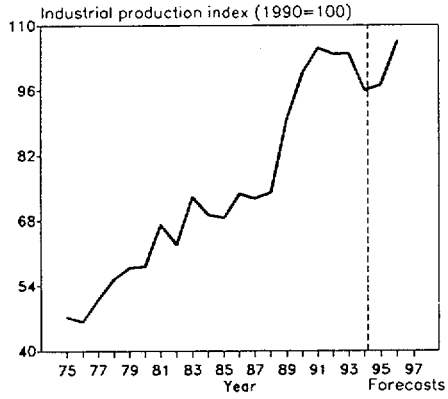
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

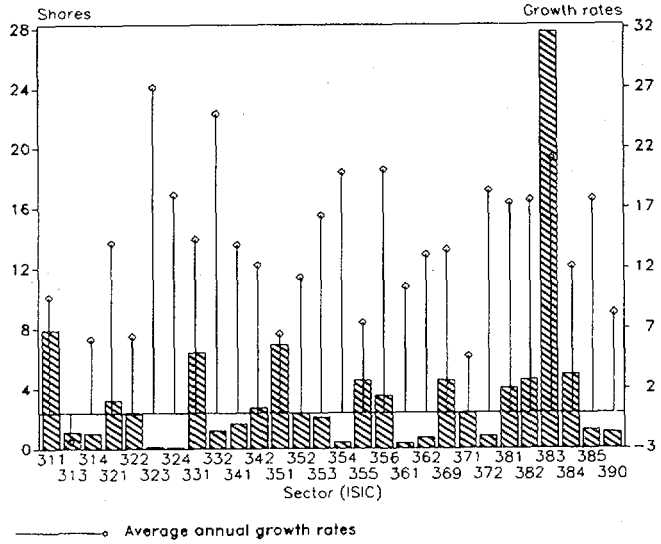


Industrial production index (1990=100)

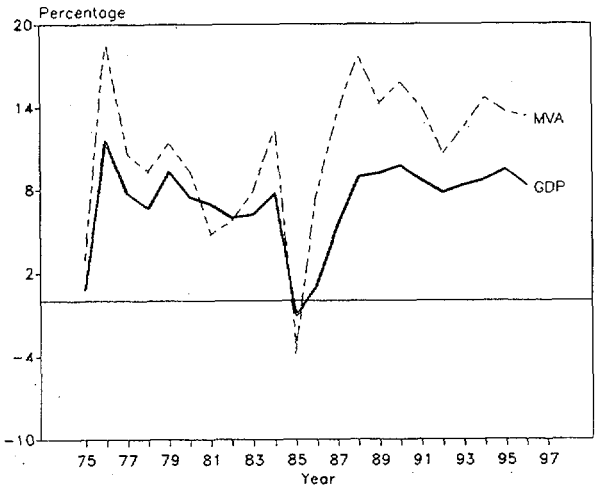


MALAYSIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



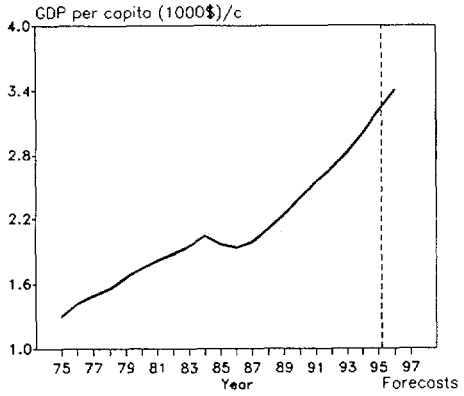
Annual growth rates of GDP and MVA (Constant 1990 prices)



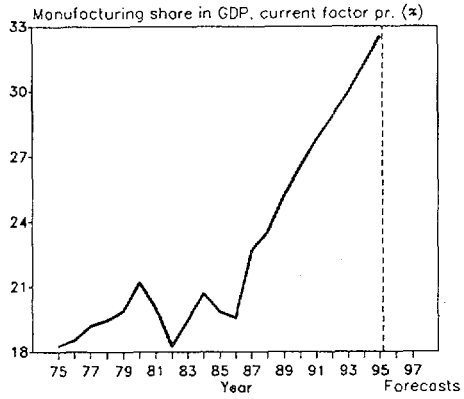
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	23 989	30 784	42 822	64 688
Per capita [na] (1990-dollars)	1 743	1 964	2 393	3 212
Manufacturing share [na] (%) (current factor prices)	21.2	19.9	26.5	32.5
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	4 707	6 064	11 493	21 186
Industrial production index (1990=100)	46	53	100	200
Value added (millions of dollars)	*3 624*	4 879	9 068	*23 831*
Gross output (millions of dollars)	*13 550*	18 359	35 422	*92 809*
Employment (thousands)	*456*	473	831	*1 299*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*73*	73	74	*74*
Wages and salaries including supplements (%)	*8*	9	8	*7*
Gross operating surplus (%)	*19*	18	18	*19*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*29 370*	38 561	42 503	*71 398*
Value added per worker	*8 067*	10 249	10 881	*18 475*
Average wage (including supplements)	*2 247*	3 375	3 240	*4 903*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*13.99*	*13.51*	17.35	*14.34*
as a percentage of 1970-1975 structural change	*100*	*97*	124	*102*
MVA growth rate perer unit of structural change	6.19	4.49	2.72	5.87
Degree of specialization	15.5	15.3	14.8	19.2
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*667*	703	865	*1 790*
313 Beverages	*106*	122	201	*206*
314 Tobacco products	*94*	205	127	*217*
321 Textiles	*185*	133	297	*774*
322 Wearing apparel	*67*	100	280	*478*
323 Leather and fur products	*3*	2	6	*32*
324 Footwear	*11*	5	4	*13*
331 Wood and wood products	*388*	263	584	*1 551*
332 Furniture and fixtures	*34*	40	70	*314*
341 Paper and paper products	*34*	55	155	*401*
342 Printing and publishing	*145*	197	266	*638*
351 Industrial chemicals	*79*	616	748	*1 298*
352 Other chemical products	*117*	153	232	*525*
353 Petroleum refineries	*115*	136	199	*589*
354 Miscellaneous petroleum and coal products	*2*	21	32	*115*
355 Rubber products	*295*	250	528	*977*
356 Plastic products	*69*	92	261	*922*
361 Pottery, china and earthenware	*10*	13	36	*77*
362 Glass and glass products	*24*	23	73	*180*
369 Other non-metal mineral products	*169*	297	441	*1 120*
371 Iron and steel	*79*	153	287	*448*
372 Non-ferrous metals	*39*	35	63	*204*
381 Metal products	*139*	147	316	*976*
382 Non-electrical machinery	*117*	99	348	*1 097*
383 Electrical machinery	*434*	738	1 945	*7 219*
384 Transport equipment	*153*	211	494	*1 156*
385 Professional and scientific equipment	*25*	30	97	*302*
390 Other manufacturing industries	*23*	39	111	*211*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

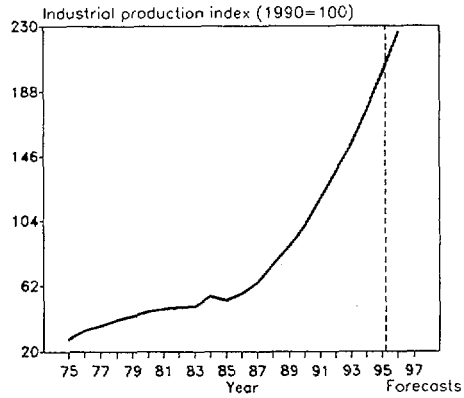
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (*)

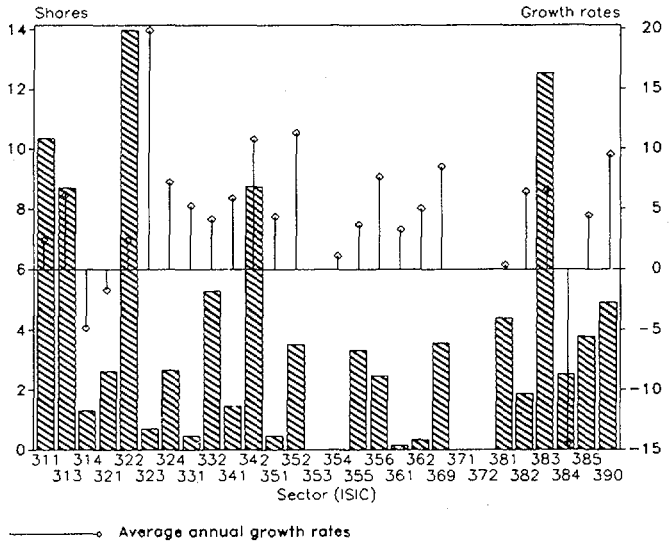


Industrial production index (1990=100)

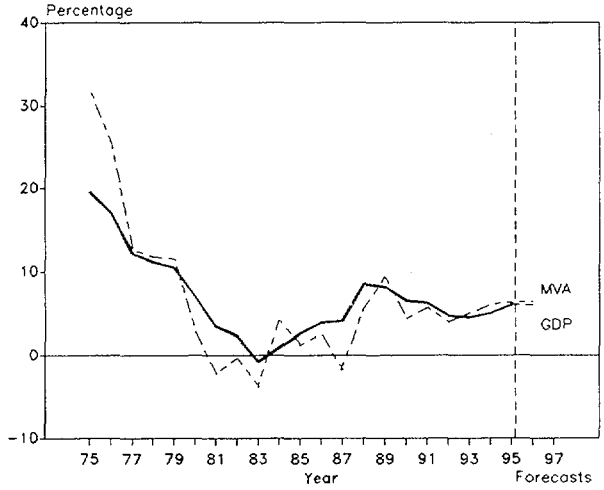


MALTA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

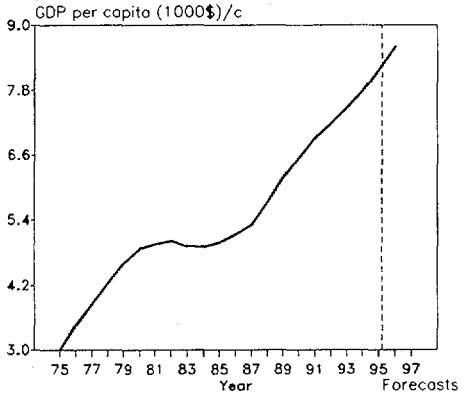


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

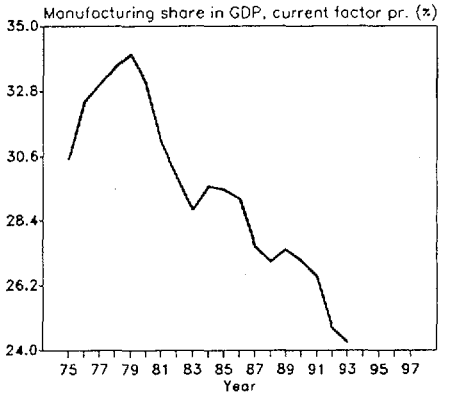
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	1 577	1 715	2 318	3 000
Per capita [na] (1990-dollars)	4 866	4 987	6 547	8 173
Manufacturing share [na] (%) (current factor prices)	33.1	29.5	27.0	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	464	457	554	*718*
Industrial production index (1990=100)	72	75	100	*146*
Value added (millions of dollars)	302	265	511	*661*
Gross output (millions of dollars)	706	650	1 637	*2 611*
Employment (thousands)	29	26	27	*28*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	57	59	69	*75*
Wages and salaries including supplements (%)	*23*	22	*17*	*13*
Gross operating surplus and net taxes (%)	*20*	19	*15*	*13*
-PRODUCTIVITY: (dollars)				
Gross output per worker	23 265	24 271	58 341	*88 220*
Value added per worker	9 945	9 914	18 230	*23 179*
Average wage (including supplements)	*5 653*	5 561	*10 150*	*11 943*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	22.05	12.71	13.78	*11.56*
as a percentage of 1970-1975 structural change	100	58	62	*52*
MVA growth rate perer unit of structural change	3.97	3.37	0.88	1.91
Degree of specialization	18.3	17.7	13.6	13.8
-VALUE ADDED: (millions of dollars)				
311/2 Food products	20	25	56	*65*
313 Beverages	20	22	42	*60*
314 Tobacco products	8	8	9	*7*
321 Textiles	17	8	17	*16*
322 Wearing apparel	88	65	80	*91*
323 Leather and fur products	4	1	2	*6*
324 Footwear	8	9	12	*19*
331 Wood and wood products	2	1	2	*3*
332 Furniture and fixtures	14	9	28	*35*
341 Paper and paper products	2	3	7	*10*
342 Printing and publishing	22	17	34	*61*
351 Industrial chemicals	1	2	2	*3*
352 Other chemical products	5	6	*14*	*25*
353 Petroleum refineries	-	-	-	-
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	10	7	17	*21*
356 Plastic products	6	4	11	*17*
361 Pottery, china and earthenware	1	-	1	*1*
362 Glass and glass products	2	1	2	*2*
369 Other non-metal mineral products	6	7	15	*24*
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	-	-	-	-
381 Metal products	14	10	26	*26*
382 Non-electrical machinery	5	8	8	*12*
383 Electrical machinery	22	31	61	*88*
384 Transport equipment	6	3	27	*10*
385 Professional and scientific equipment	12	12	19	*24*
390 Other manufacturing industries	8	5	21	*35*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

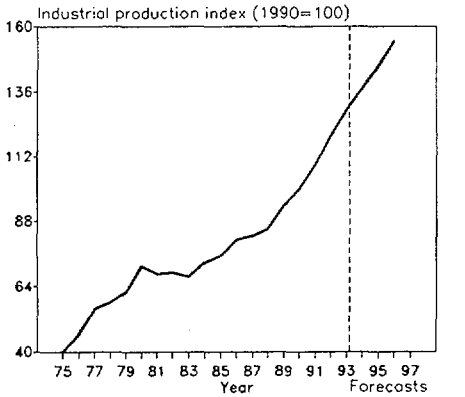
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

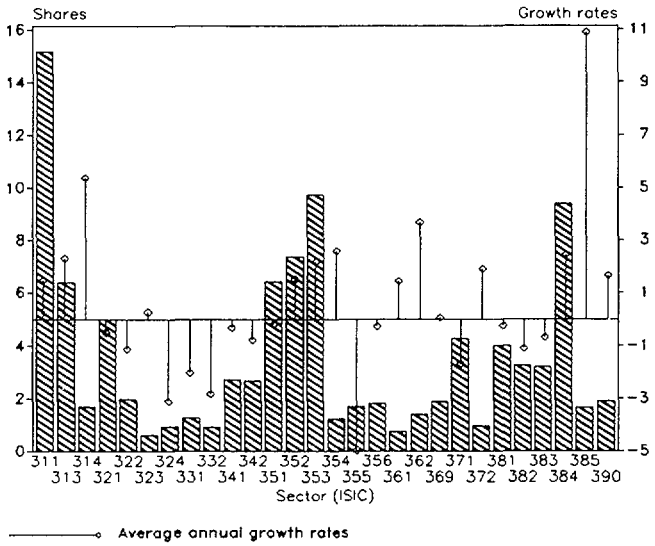


Industrial production index (1990=100)

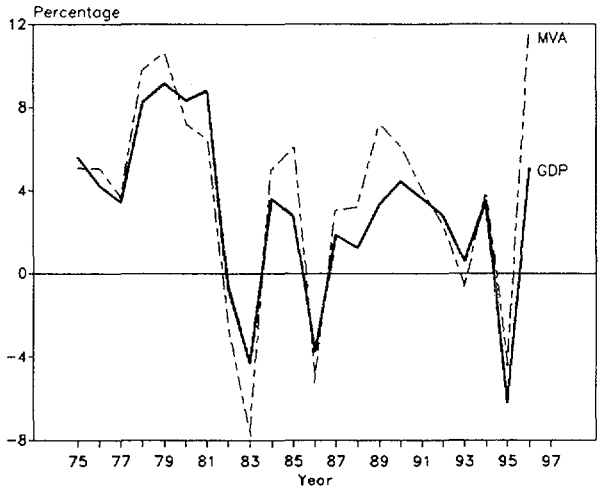


MEXICO

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



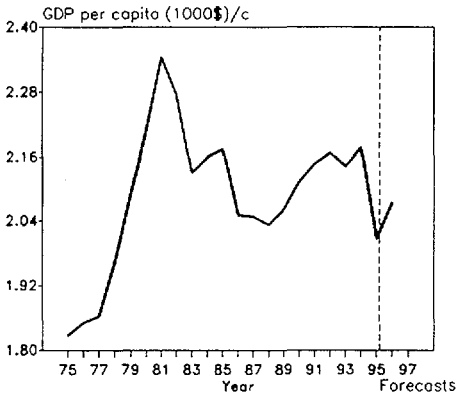
Annual growth rates of GDP and MVA (Constant 1990 prices)



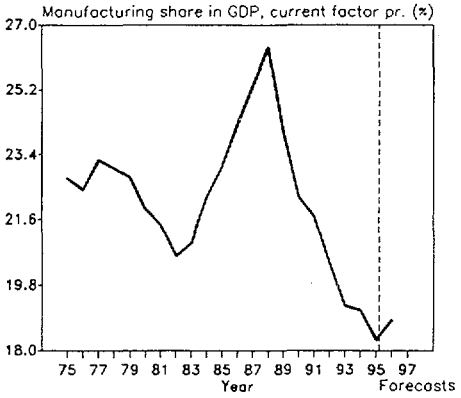
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	149 105	164 127	175 839	182 964
Per capita [na] (1990-dollars)	2 207	2 175	2 113	2 007
Manufacturing share [na] (%) (current factor prices)	21.9	23.1	22.2	18.3
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	32 928	34 995	40 055	41 872
Industrial production index (1990=100)	79	86	100	104
Value added (millions of dollars)	43 048	*46 373*	*41 416*	*54 750*
Gross output (millions of dollars)	102 047	*106 972*	*95 678*	129 526
Employment (thousands)	2 417	*2 314*	*2 145*	*1 893*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	58	*57*	*57*	*58*
Wages and salaries including supplements (%)	14	*9*	*9*	*7*
Gross operating surplus and net taxes (%)	28	*34*	*35*	*35*
-PRODUCTIVITY: (dollars)				
Gross output per worker	42 221	*46 227*	*44 602*	*68 057*
Value added per worker	17 811	*20 040*	*19 307*	*33 368*
Average wage (including supplements)	5 846	*4 192*	*3 872*	*5 080*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	5.06	*7.88*	*6.85*	*4.43*
as a percentage of 1970-1975 structural change	100	*156*	*135*	*88*
MVA growth rate perer unit of structural change	7.32	3.89	1.83	-0.36
Degree of specialization	8.9	9.6	10.4	10.9
-VALUE ADDED: (millions of dollars)				
311/2 Food products	6 989	*7 015*	*6 240*	*8 405*
313 Beverages	2 723	*2 589*	*2 377*	*3 526*
314 Tobacco products	623	*740*	*571*	*1 017*
321 Textiles	3 133	*3 099*	*2 216*	*2 658*
322 Wearing apparel	1 277	*1 094*	*863*	*1 045*
323 Leather and fur products	366	*397*	*250*	*329*
324 Footwear	845	*658*	*414*	*463*
331 Wood and wood products	919	*786*	*609*	*675*
332 Furniture and fixtures	784	*498*	*407*	*459*
341 Paper and paper products	1 189	*1 180*	*1 196*	*1 463*
342 Printing and publishing	1 050	*1 250*	*1 192*	*1 401*
351 Industrial chemicals	2 235	*2 982*	*2 738*	*3 457*
352 Other chemical products	2 235	*2 562*	*2 972*	*4 006*
353 Petroleum refineries	1 917	*4 341*	*3 987*	*5 660*
354 Miscellaneous petroleum and coal products	222	*529*	*489*	*701*
355 Rubber products	767	*1 164*	*865*	*789*
356 Plastic products	754	*767*	*774*	*974*
361 Pottery, china and earthenware	383	*420*	*287*	*401*
362 Glass and glass products	566	*529*	*511*	*782*
369 Other non-metal mineral products	1 464	*1 113*	*752*	*949*
371 Iron and steel	2 070	*2 227*	*1 955*	*2 263*
372 Non-ferrous metals	562	*506*	*430*	*595*
381 Metal products	1 961	*1 849*	*1 718*	*2 112*
382 Non-electrical machinery	2 074	*1 643*	*1 463*	*1 703*
383 Electrical machinery	1 900	*1 635*	*1 374*	*1 678*
384 Transport equipment	2 980	*3 621*	*3 542*	*5 089*
385 Professional and scientific equipment	305	*381*	*485*	*1 112*
390 Other manufacturing industries	754	*798*	*738*	*1 040*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

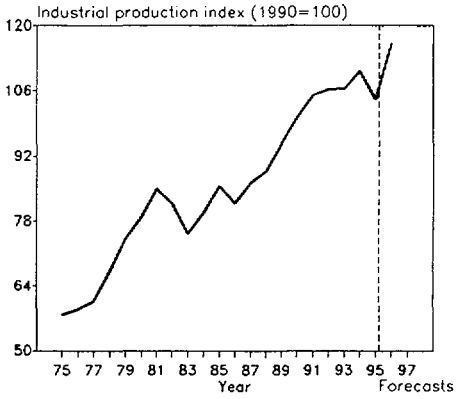
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

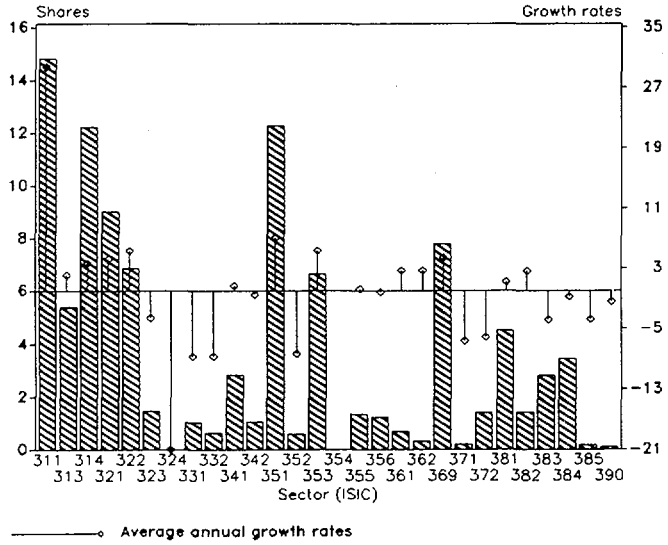


Industrial production index (1990=100)

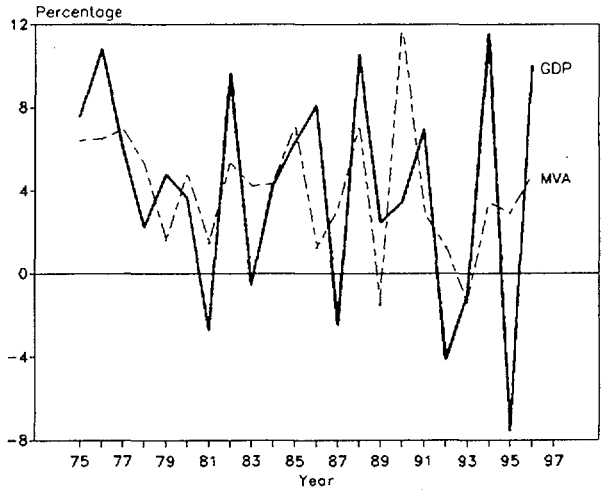


MOROCCO

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

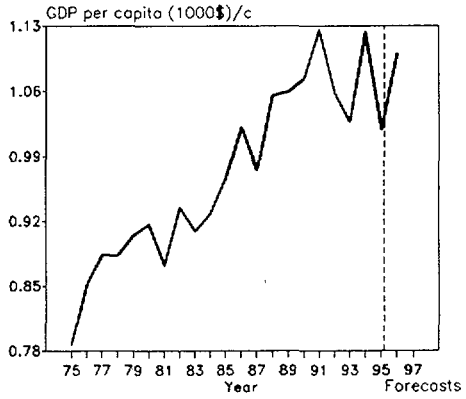


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

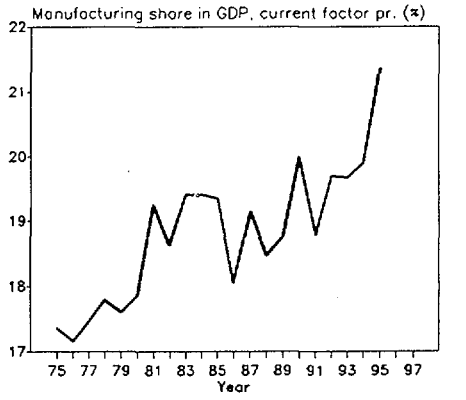
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	17 776	20 900	25 826	27 027
Per capita [na] (1990-dollars)	917	965	1 074	1 019
Manufacturing share [na] (%) (current factor prices)	17.8	19.4	20.0	*21.4*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	3 205	3 984	4 888	5 333
Industrial production index (1990=100)	82	88	100	107
Value added (millions of dollars)	1 485	*1 399*	*3 289*	5 485
Gross output (millions of dollars)	6 242	4 685	11 206	15 664
Employment (thousands)	176	227	307	454
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	77	*71*	*72*	66
Wages and salaries including supplements (%)	13	*12*	*11*	*12*
Gross operating surplus and net taxes (%)	10	*17*	*18*	*21*
-PRODUCTIVITY: (dollars)				
Gross output per worker	33 920	19 779	35 272	33 570
Value added per worker	7 801	*5 736*	*10 011*	11 282
Average wage (including supplements)	4 363	*2 434*	*3 774*	*4 144*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*10.70*	*14.63*	*13.75*	*11.51*
as a percentage of 1970-1975 structural change	*100*	*137*	*128*	*108*
MVA growth rate perer unit of structural change	3.01	2.50	3.76	3.55
Degree of specialization	12.8	14.9	14.0	18.9
-VALUE ADDED: (millions of dollars)				
311/2 Food products	130	110	144	838
313 Beverages	62	*92*	*209*	*292*
314 Tobacco products	38	*150*	*423*	*677*
321 Textiles	202	172	315	488
322 Wearing apparel	32	45	228	385
323 Leather and fur products	15	*30*	*68*	*70*
324 Footwear	24	-	-	-
331 Wood and wood products	30	*25*	*49*	*41*
332 Furniture and fixtures	19	*16*	*30*	*25*
341 Paper and paper products	64	64	151	*186*
342 Printing and publishing	26	19	43	*52*
351 Industrial chemicals	127	166	403	*743*
352 Other chemical products	97	13	30	*24*
353 Petroleum refineries	*114*	*100*	*217*	*368*
354 Miscellaneous petroleum and coal products	..	..	..	..
355 Rubber products	34	*35*	*54*	*68*
356 Plastic products	20	*20*	*45*	*60*
361 Pottery, china and earthenware	6	*6*	*25*	*36*
362 Glass and glass products	10	*6*	*11*	*16*
369 Other non-metal mineral products	154	*92*	*264*	*429*
371 Iron and steel	7	*1*	*10*	*9*
372 Non-ferrous metals	8	*7*	*71*	*69*
381 Metal products	110	96	166	220
382 Non-electrical machinery	30	*23*	*49*	68
383 Electrical machinery	61	56	132	138
384 Transport equipment	62	49	140	172
385 Professional and scientific equipment	1	*3*	7	7
390 Other manufacturing industries	2	1	4	4

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

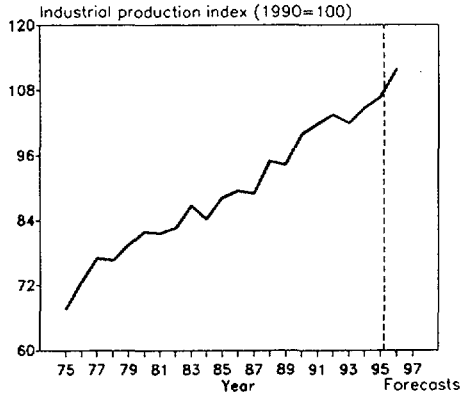
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

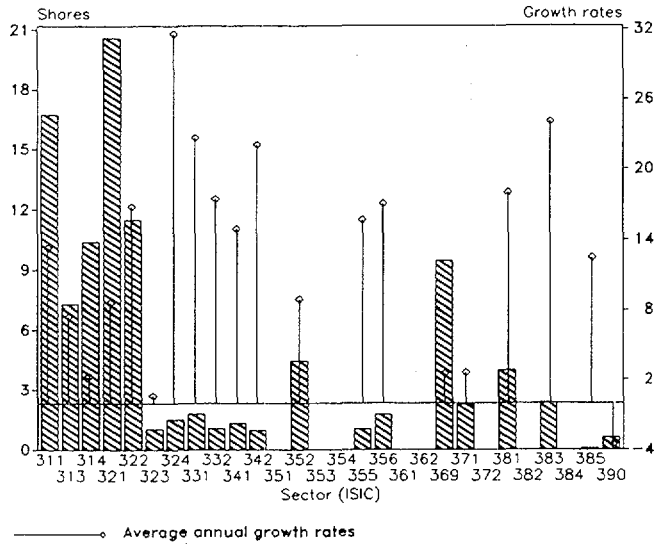


Industrial production index (1990=100)

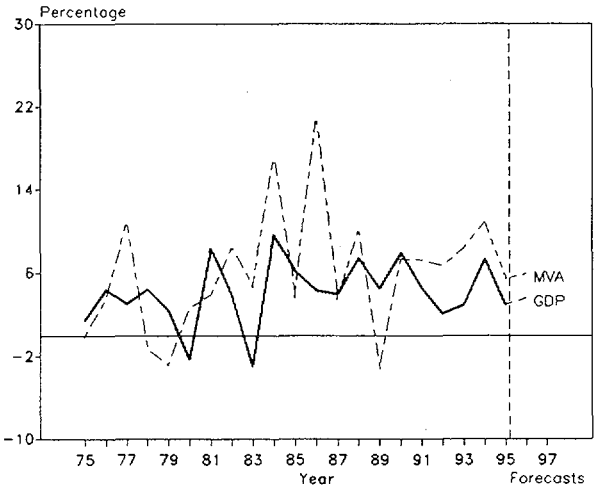


NEPAL

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

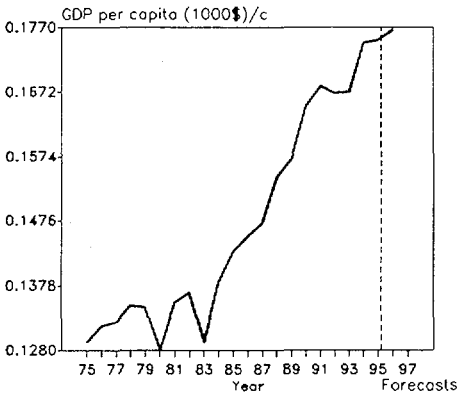


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

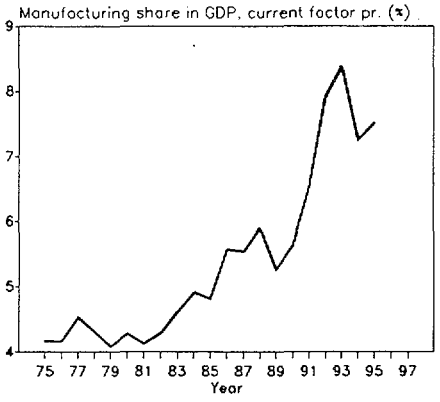
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	1 858	2 359	3 099	3 756
Per capita [na] (1990-dollars)	128	143	165	175
Manufacturing share [na] (%) (current factor prices)	4.3	4.8	5.6	*7.5*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	80	114	163	*235*
Industrial production index (1990=100)	60	92	100	*144*
Value added (millions of dollars)	*83*	*100*	269	*421*
Gross output (millions of dollars)	*510*	*473*	656	*1 049*
Employment (thousands)	*56*	*78*	156	*239*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*84*	*79*	59	*60*
Wages and salaries including supplements (%)	*3*	*4*	10	*9*
Gross operating surplus and net taxes (%)	*13*	*17*	31	*31*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*8 609*	*5 737*	4 067	*4 045*
Value added per worker	*1 411*	*1 274*	1 666	*1 625*
Average wage (including supplements)	*295*	*236*	400	*399*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*7.43*	*19.47*	*24.11*	*17.75*
as a percentage of 1970-1975 structural change	*100*	*262*	*325*	*239*
MVA growth rate perer unit of structural change	2.44	0.98	3.51	6.00
Degree of specialization	33.7	26.1	20.5	17.5
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*35*	*32*	38	*74*
313 Beverages	*1*	*3*	23	*31*
314 Tobacco products	*14*	*15*	40	*41*
321 Textiles	*5*	*13*	54	*78*
322 Wearing apparel	*1*	*4*	24	*54*
323 Leather and fur products	*1*	*2*	4	*4*
324 Footwear	-	-	1	*7*
331 Wood and wood products	*2*	*2*	3	*8*
332 Furniture and fixtures	*4*	*1*	2	*4*
341 Paper and paper products	-	*1*	3	*6*
342 Printing and publishing	*1*	*2*	2	*5*
351 Industrial chemicals	-	-	-	-
352 Other chemical products	*2*	*5*	13	*20*
353 Petroleum refineries	..	..	..	..
354 Miscellaneous petroleum and coal products	..	..	..	..
355 Rubber products	-	-	2	*5*
356 Plastic products	-	*1*	3	*8*
361 Pottery, china and earthenware	..	..	..	..
362 Glass and glass products	..	..	..	..
369 Other non-metal mineral products	*3*	*12*	34	*35*
371 Iron and steel	*3*	*2*	8	*9*
372 Non-ferrous metals	..	..	..	..
381 Metal products	*1*	*3*	8	*19*
382 Non-electrical machinery	..	..	..	..
383 Electrical machinery	*1*	*1*	4	*12*
384 Transport equipment	..	..	..	..
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	*9*	*1*	3	*2*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

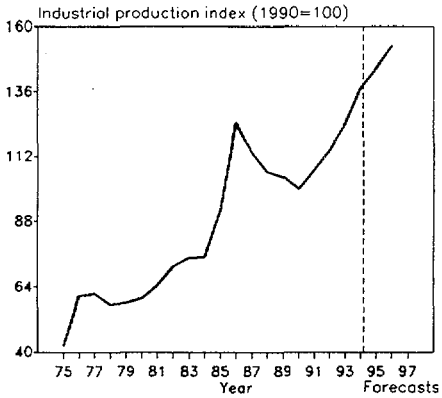
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

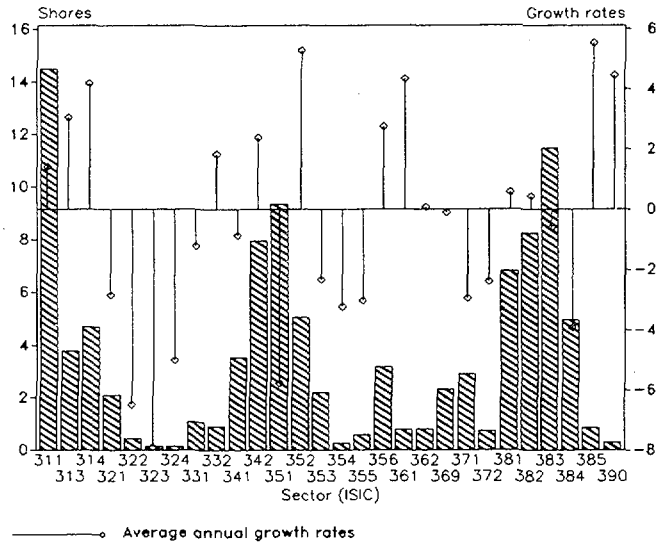


Industrial production index (1990=100)

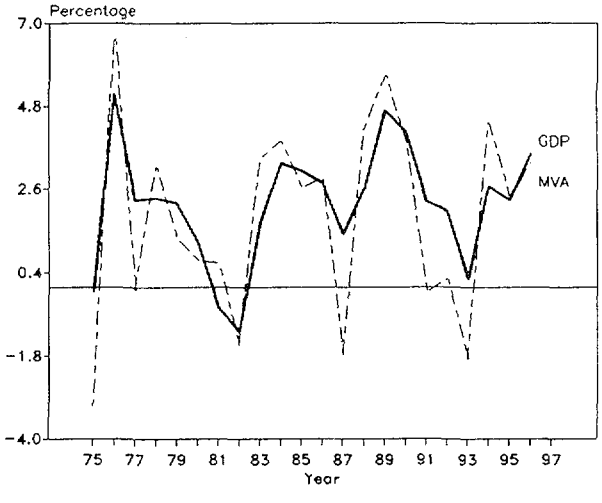


NETHERLANDS

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



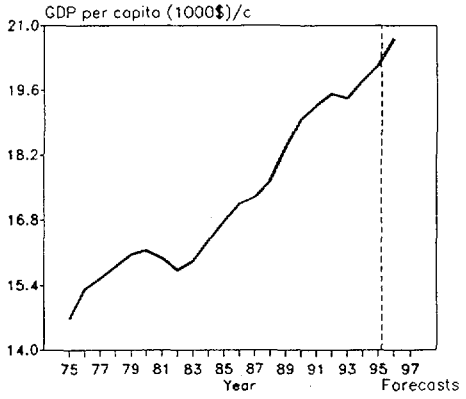
Annual growth rates of GDP and MVA (Constant 1990 prices)



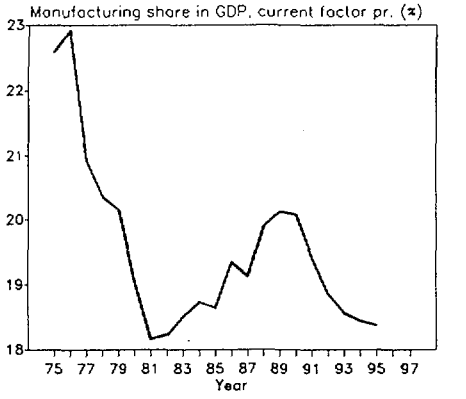
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	228 472	243 292	283 525	311 472
Per capita [na] (1990-dollars)	16 153	16 788	18 962	20 118
Manufacturing share [na] (%) (current factor prices)	19.1	18.6	20.1	*18.4*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	42 722	46 648	53 804	56 422
Industrial production index (1990=100)	77	86	100	107
Value added (millions of dollars)	29 080	20 595	44 818	*56 417*
Gross output (millions of dollars)	109 618	80 068	153 729	184 177
Employment (thousands)	944	797	780	*701*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	73	74	71	*69*
Wages and salaries including supplements (%)	*20*	*21*	*19*	*16*
Gross operating surplus and net taxes (%)	*7*	*5*	*10*	*15*
-PRODUCTIVITY: (dollars)				
Gross output per worker	110 019	87 824	157 892	*260 794*
Value added per worker	29 285	22 782	46 329	*83 229*
Average wage (including supplements)	*23 135*	*21 037*	*37 835*	*41 230*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	5.56	8.78	7.91	*5.27*
as a percentage of 1970-1975 structural change	100	158	142	*95*
MVA growth rate perer unit of structural change	-0.74	-0.36	0.78	0.85
Degree of specialization	15.0	15.5	15.2	14.9
-VALUE ADDED: (millions of dollars)				
311/2 Food products	4 562	2 896	6 037	*8 344*
313 Beverages	654	737	1 500	*2 252*
314 Tobacco products	282	775	1 848	*2 920*
321 Textiles	734	463	1 002	*1 117*
322 Wearing apparel	372	*134*	234	*217*
323 Leather and fur products	68	*34*	70	*59*
324 Footwear	118	51	72	*73*
331 Wood and wood products	594	234	477	*578*
332 Furniture and fixtures	418	164	362	*509*
341 Paper and paper products	805	660	1 618	*1 952*
342 Printing and publishing	2 480	1 446	3 217	*4 656*
351 Industrial chemicals	2 263	2 436	5 592	*4 826*
352 Other chemical products	913	902	1 846	*3 130*
353 Petroleum refineries	533	521	1 095	*1 195*
354 Miscellaneous petroleum and coal products	101	55	131	*138*
355 Rubber products	156	139	284	*300*
356 Plastic products	472	466	1 305	*1 865*
361 Pottery, china and earthenware	134	77	304	*493*
362 Glass and glass products	245	*145*	358	*457*
369 Other non-metal mineral products	893	*465*	1 016	*1 290*
371 Iron and steel	882	*793*	*1 484*	*1 573*
372 Non-ferrous metals	371	*215*	*341*	*380*
381 Metal products	2 455	1 293	2 904	*3 811*
382 Non-electrical machinery	2 369	*1 628*	3 552	*4 604*
383 Electrical machinery	3 687	2 656	5 286	*6 445*
384 Transport equipment	1 927	1 015	2 464	*2 524*
385 Professional and scientific equipment	237	146	308	*527*
390 Other manufacturing industries	356	49	111	*179*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

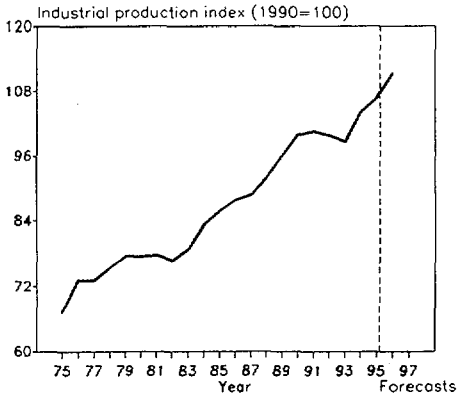
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

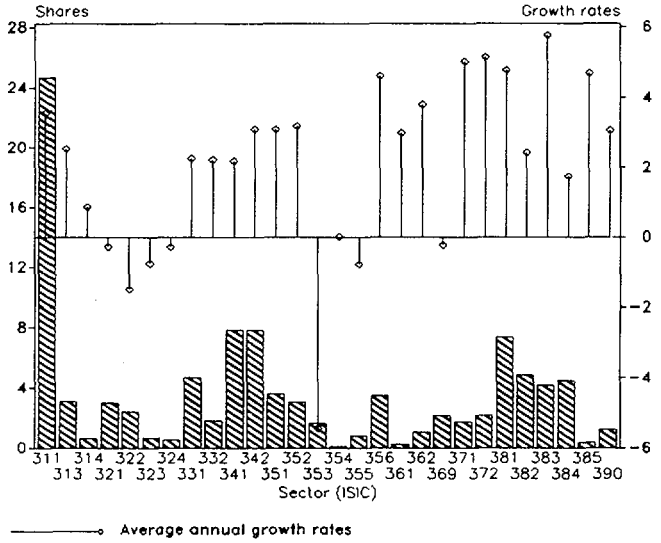


Industrial production index (1990=100)

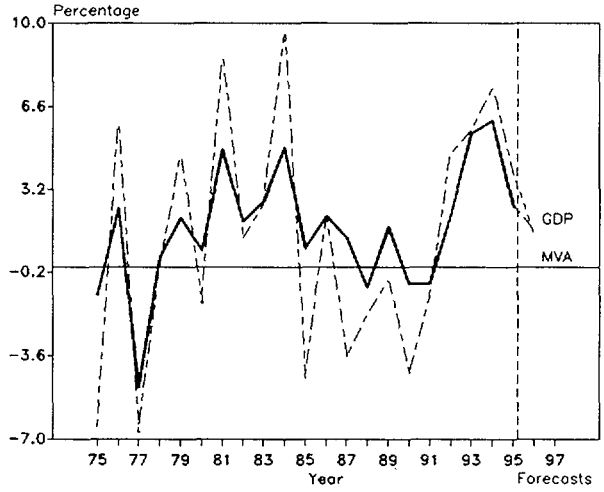


NEW ZEALAND

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

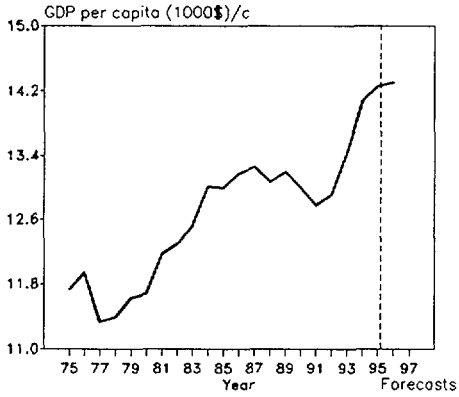


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

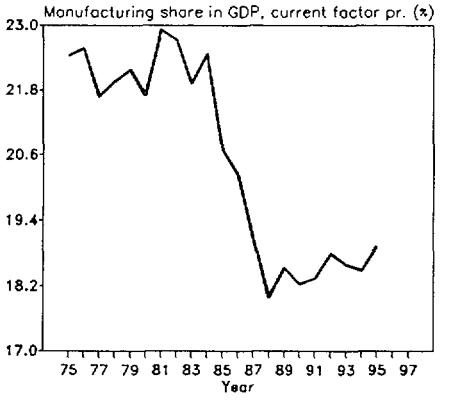
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	36 354	42 183	43 657	50 789
Per capita [na] (1990-dollars)	11 678	12 991	12 993	14 262
Manufacturing share [na] (%) (current factor prices)	21.7	20.7	18.2	*18.9*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	7 086	8 335	7 636	9 283
Industrial production index (1990=100)	93	104	100	122
Value added (millions of dollars)	4 756	4 657	6 923	*9 878*
Gross output (millions of dollars)	14 790	15 399	23 433	*33 635*
Employment (thousands)	*285*	278	212	*233*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	68	70	70	*71*
Wages and salaries including supplements (%)	*22*	*18*	*18*	*16*
Gross operating surplus and net taxes (%)	*10*	*12*	*12*	*13*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*51 964*	50 964	100 229	*125 417*
Value added per worker	*16 711*	15 414	29 611	*37 594*
Average wage (including supplements)	*11 354*	*10 180*	*19 410*	*23 308*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	6.03	5.05	6.79	*6.07*
as a percentage of 1970-1975 structural change	100	84	113	*101*
MVA growth rate perer unit of structural change	2.82	1.46	-0.89	-0.29
Degree of specialization	14.6	14.7	15.3	16.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	1 098	1 082	1 676	*2 482*
313 Beverages	110	93	216	*301*
314 Tobacco products	30	19	45	*57*
321 Textiles	222	193	232	*284*
322 Wearing apparel	185	170	202	*225*
323 Leather and fur products	45	46	54	*63*
324 Footwear	55	46	41	*50*
331 Wood and wood products	253	257	323	*452*
332 Furniture and fixtures	92	95	126	*176*
341 Paper and paper products	266	276	553	*756*
342 Printing and publishing	294	326	537	*775*
351 Industrial chemicals	140	134	249	*357*
352 Other chemical products	155	142	211	*310*
353 Petroleum refineries	26	-1	137	*136*
354 Miscellaneous petroleum and coal products	9	7	9	*11*
355 Rubber products	96	70	62	*74*
356 Plastic products	110	138	229	*359*
361 Pottery, china and earthenware	13	11	*18*	*26*
362 Glass and glass products	44	41	*70*	*106*
369 Other non-metal mineral products	114	127	*169*	*207*
371 Iron and steel	93	71	113	*180*
372 Non-ferrous metals	82	102	139	*224*
381 Metal products	371	404	480	*761*
382 Non-electrical machinery	235	264	340	*474*
383 Electrical machinery	239	200	260	*439*
384 Transport equipment	318	274	322	*432*
385 Professional and scientific equipment	14	20	24	*37*
390 Other manufacturing industries	45	48	86	*124*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

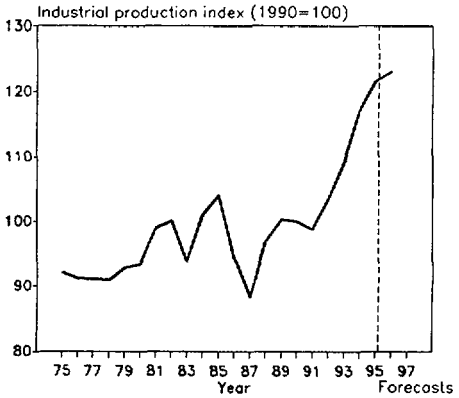
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

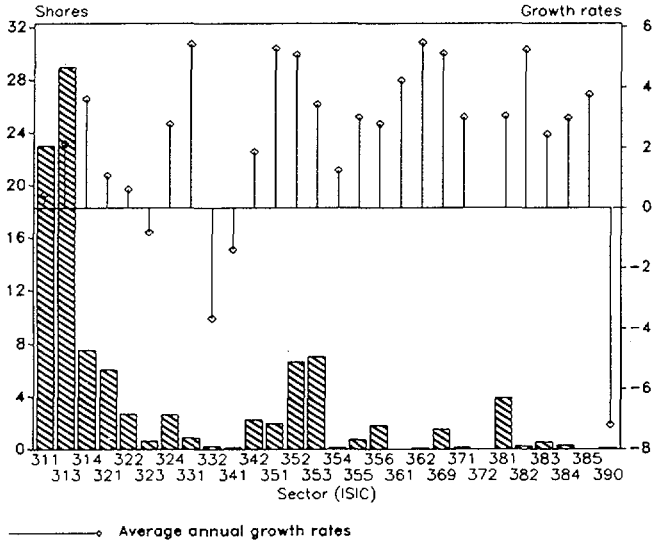


Industrial production index (1990=100)

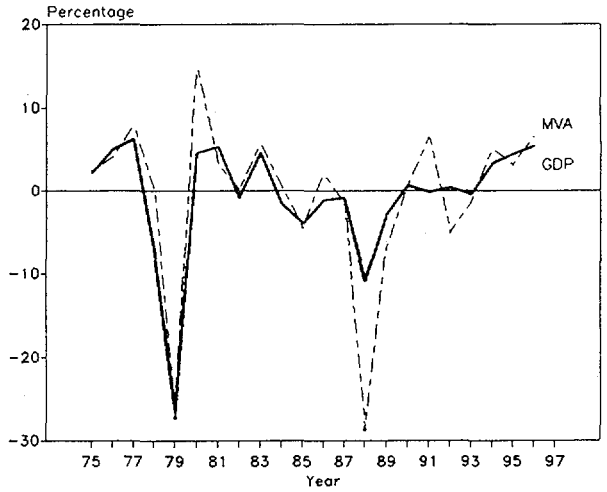


NICARAGUA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)

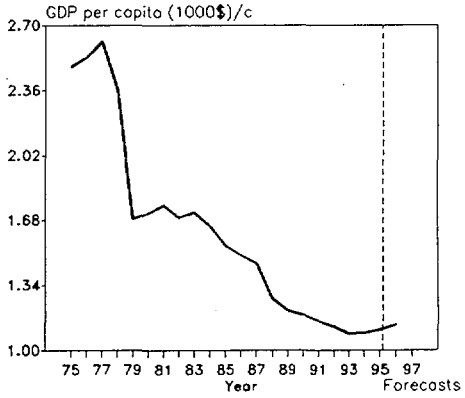


Annual growth rates of GDP and MVA (Constant 1990 prices)

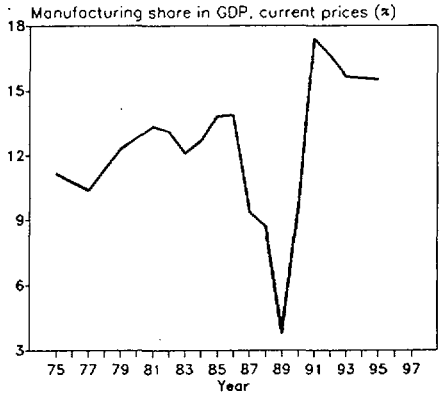


	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	4 788	4 951	4 232	4 563
Per capita [na] (1990-dollars)	1 716	1 546	1 186	1 107
Manufacturing share [na] (%) (current factor prices)	12.8	13.8	9.4	*15.5*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	373	390	260	280
Industrial production index (1990=100)	105	107	100	108
Value added (millions of dollars)	242	982	*1 606*	*700*
Gross output (millions of dollars)	612	1 587	*2 434*	*1 052*
Employment (thousands)	34	39	*47*	*59*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	60	38	*34*	*33*
Wages and salaries including supplements (%)	12	10	*11*	*12*
Gross operating surplus and net taxes (%)	28	52	*55*	*55*
-PRODUCTIVITY: (dollars)				
Gross output per worker	18 017	38 009	*48 250*	*16 676*
Value added per worker	7 131	23 515	*31 846*	*11 101*
Average wage (including supplements)	2 078	4 152	*5 750*	*2 085*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	18.18	22.25	*11.41*	*4.85*
as a percentage of 1970-1975 structural change	100	122	*63*	*27*
MVA growth rate perer unit of structural change	0.20	-0.39	0.44	-0.46
Degree of specialization	27.7	29.6	31.4	31.5
-VALUE ADDED: (millions of dollars)				
311/2 Food products	52	268	*392*	*157*
313 Beverages	48	227	*452*	*200*
314 Tobacco products	28	64	*118*	*55*
321 Textiles	9	70	*102*	*42*
322 Wearing apparel	4	23	*44*	*18*
323 Leather and fur products	2	6	*11*	*4*
324 Footwear	4	27	*42*	*19*
331 Wood and wood products	3	10	*13*	*7*
332 Furniture and fixtures	1	4	*4*	*1*
341 Paper and paper products	1	3	*3*	*1*
342 Printing and publishing	4	22	*36*	*16*
351 Industrial chemicals	11	23	*30*	*15*
352 Other chemical products	14	56	*100*	*49*
353 Petroleum refineries	35	78	*110*	*49*
354 Miscellaneous petroleum and coal products	-	1	*2*	*1*
355 Rubber products	1	6	*11*	*5*
356 Plastic products	4	20	*29*	*13*
361 Pottery, china and earthenware	-	2	-	-
362 Glass and glass products	-	1	*1*	*1*
369 Other non-metal mineral products	7	17	*23*	*11*
371 Iron and steel	-	1	*2*	*1*
372 Non-ferrous metals	-	-	-	-
381 Metal products	9	40	*62*	*28*
382 Non-electrical machinery	-	3	*4*	*2*
383 Electrical machinery	1	5	*8*	*4*
384 Transport equipment	1	3	*4*	*2*
385 Professional and scientific equipment	1	-	-	-
390 Other manufacturing industries	-	2	*2*	*1*

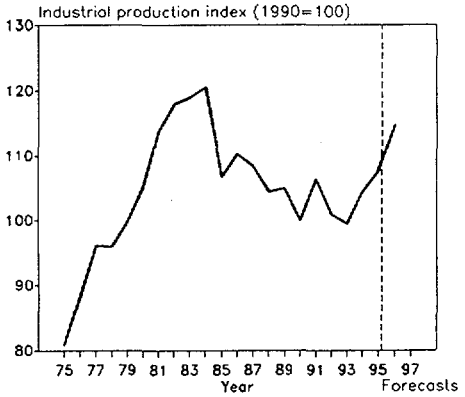
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)



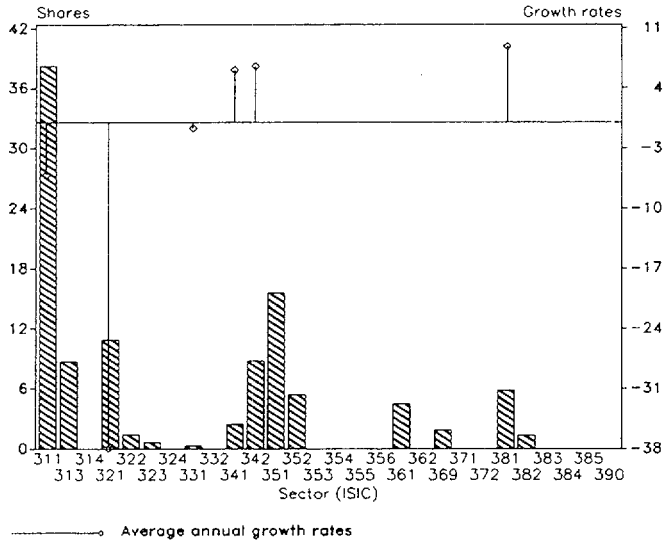
Industriol production index (1990=100)



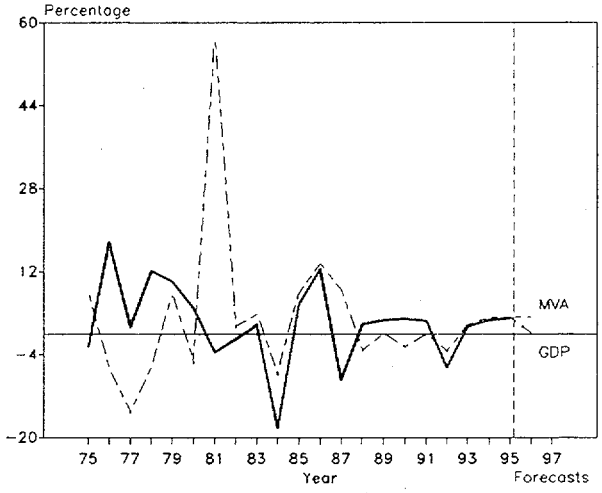
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

NIGER

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

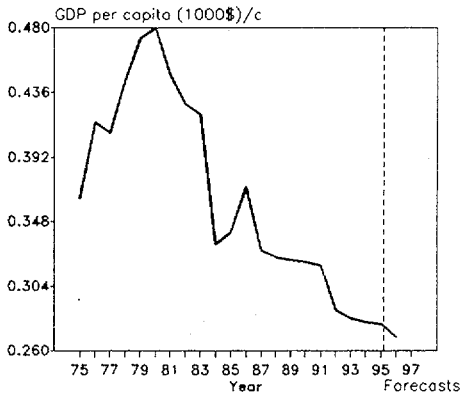


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

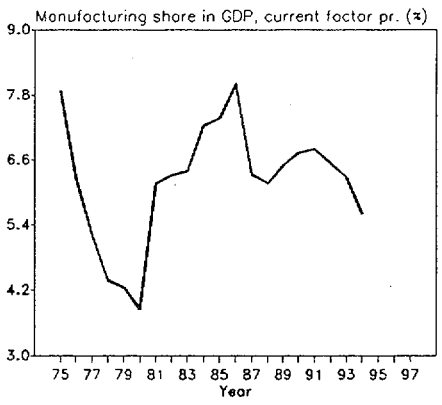
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	2 680	2 251	2 481	2 548
Per capita [na] (1990-dollars)	480	341	321	278
Manufacturing share [na] (%) (current factor prices)	3.8	7.4	6.7	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	87	141	163	*170*
Industrial production index (1990=100)	98	76	100	*104*
Value added (millions of dollars)	*31*	*21*	27	*21*
Gross output (millions of dollars)	*89*	*63*	97	*66*
Employment (thousands)	*2*	*3*	*2*	*2*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	65	*63*	72	*61*
Wages and salaries including supplements (%)	15	*14*	*6*	*16*
Gross operating surplus and net taxes (%)	20	*23*	*21*	*23*
-PRODUCTIVITY: (dollars)				
Gross output per worker	43 564	*22 429*	*71 121*	*22 621*
Value added per worker	15 075	*8 085*	*19 679*	*8 177*
Average wage (including supplements)	6 537	*2 996*	*3 935*	*2 774*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*13.57*	*17.24*	*31.50*	*48.21*
as a percentage of 1970-1975 structural change	*100*	*127*	*232*	*355*
MVA growth rate perer unit of structural change	2.34	1.47	-0.17	0.02
Degree of specialization	25.5	20.6	36.3	21.5
-VALUE ADDED: (millions of dollars)				
311/2 Food products	2	*2*	10 [a]	*6*
313 Beverages	7	*6*	- [a]	*5*
314 Tobacco products	..	..	- [a]	..
321 Textiles	6	*5*	8 [b]	-
322 Wearing apparel	1	*1*	- [b]	*1*
323 Leather and fur products	*1*	-	- [b]	-
324 Footwear	1	..	- [b]	..
331 Wood and wood products	-	-	- [c]	-
332 Furniture and fixtures	-	..	- [c]	..
341 Paper and paper products	-	-	*1*	*1*
342 Printing and publishing	2	*1*	2	2
351 Industrial chemicals	2	..	4 [e]	..
352 Other chemical products	3	*3*	- [e]	*3*
353 Petroleum refineries	..	..	- [e]	..
354 Miscellaneous petroleum and coal products	..	..	- [e]	..
355 Rubber products	..	..	- [e]	..
356 Plastic products	1	..	- [e]	..
361 Pottery, china and earthenware	-	..	1 [f]	..
362 Glass and glass products	..	..	- [f]	..
369 Other non-metal mineral products	2	*1*	- [f]	*1*
371 Iron and steel	..	..	..	..
372 Non-ferrous metals	..	..	..	..
381 Metal products	3	*1*	1 [g]	*1*
382 Non-electrical machinery	-	*1*	- [g]	*1*
383 Electrical machinery	-	-	- [g]	-
384 Transport equipment	..	..	- [g]	..
385 Professional and scientific equipment	..	..	- [g]	..
390 Other manufacturing industries	..	..	..	..

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

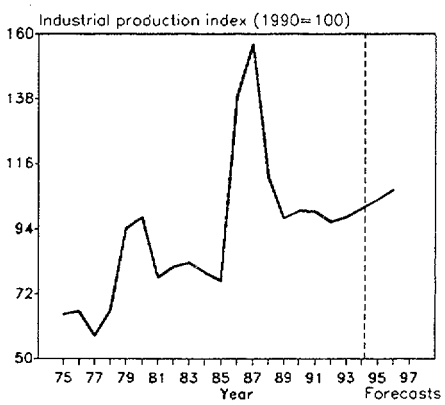
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

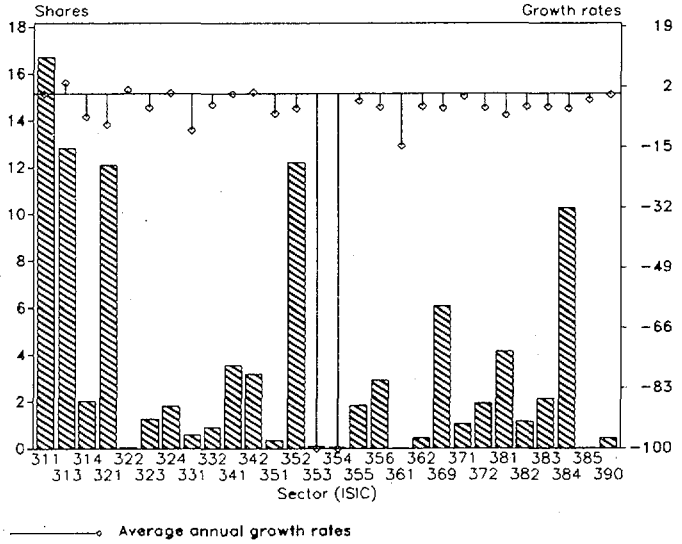


Industrial production index (1990=100)

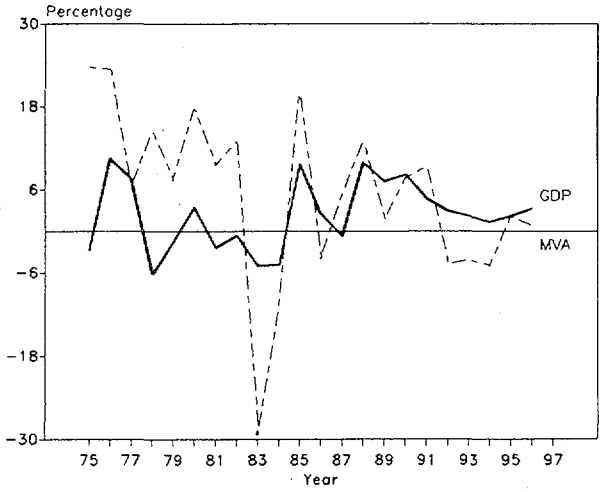


NIGERIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)

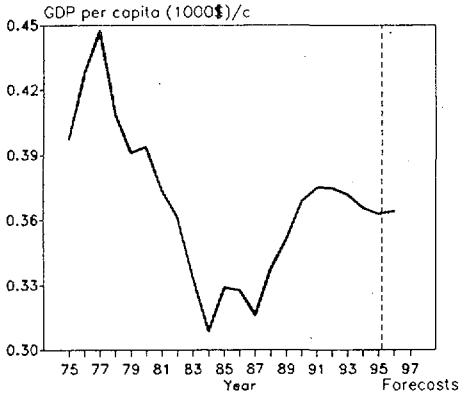


Annual growth rates of GDP and MVA (Constant 1990 prices)

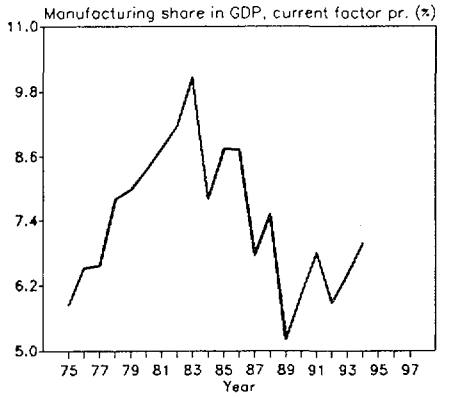


	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	28 357	27 329	35 462	40 510
Per capita [na] (1990-dollars)	394	329	369	363
Manufacturing share [na] (%) (current factor prices)	8.3	8.7	6.0	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	1 813	1 682	2 098	2 028
Industrial production index (1990=100)	144	100	100	97
Value added (millions of dollars)	2 422	1 726	*3 682*	*7 884*
Gross output (millions of dollars)	4 740	3 534	*6 273*	*13 412*
Employment (thousands)	432	336	*405*	*448*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	49	51	*41*	*41*
Wages and salaries including supplements (%)	*11*	*10*	*9*	*10*
Gross operating surplus and net taxes (%)	*40*	*39*	*50*	*49*
-PRODUCTIVITY: (dollars)				
Gross output per worker	10 238	9 899	*14 487*	*28 365*
Value added per worker	5 260	4 866	*8 706*	*16 865*
Average wage (including supplements)	*1 226*	*1 014*	*1 416*	*2 975*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	27.00	27.44	*13.57*	*6.16*
as a percentage of 1970-1975 structural change	100	102	*50*	*23*
MVA growth rate perer unit of structural change	2.94	1.57	0.83	3.52
Degree of specialization	18.5	18.5	20.6	20.9
-VALUE ADDED: (millions of dollars)				
311/2 Food products	149	251	*566*	*1 390*
313 Beverages	267	205	*390*	*1 205*
314 Tobacco products	96	*52*	*83*	*148*
321 Textiles	231	233	*536*	*823*
322 Wearing apparel	3	1	*2*	*5*
323 Leather and fur products	12	23	*48*	*96*
324 Footwear	12	28	*61*	*152*
331 Wood and wood products	88	14	*26*	*39*
332 Furniture and fixtures	56	14	*34*	*70*
341 Paper and paper products	38	51	*121*	*296*
342 Printing and publishing	75	45	*106*	*266*
351 Industrial chemicals	30	9	*14*	*25*
352 Other chemical products	265	213	*463*	*925*
353 Petroleum refineries	*70*	*-6*	*9*	*1*
354 Miscellaneous petroleum and coal products	*9*	*-1*	*3*	-
355 Rubber products	26	31	*66*	*146*
356 Plastic products	98	49	*108*	*220*
361 Pottery, china and earthenware	-	2	*2*	*2*
362 Glass and glass products	24	7	*16*	*32*
369 Other non-metal mineral products	87	106	*230*	*460*
371 Iron and steel	3	17	*36*	*81*
372 Non-ferrous metals	33	*34*	*73*	*146*
381 Metal products	140	92	*166*	*295*
382 Non-electrical machinery	23	19	*42*	*87*
383 Electrical machinery	46	36	*79*	*160*
384 Transport equipment	526	193	*388*	*774*
385 Professional and scientific equipment	-	-	-	*1*
390 Other manufacturing industries	13	6	*15*	*37*

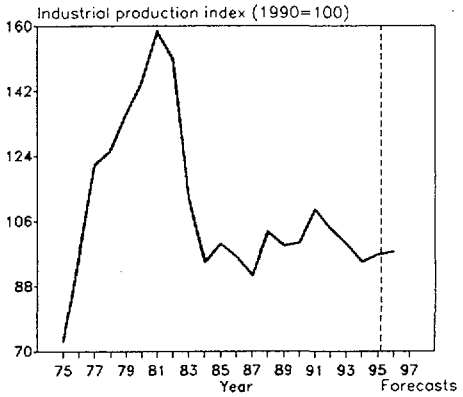
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)



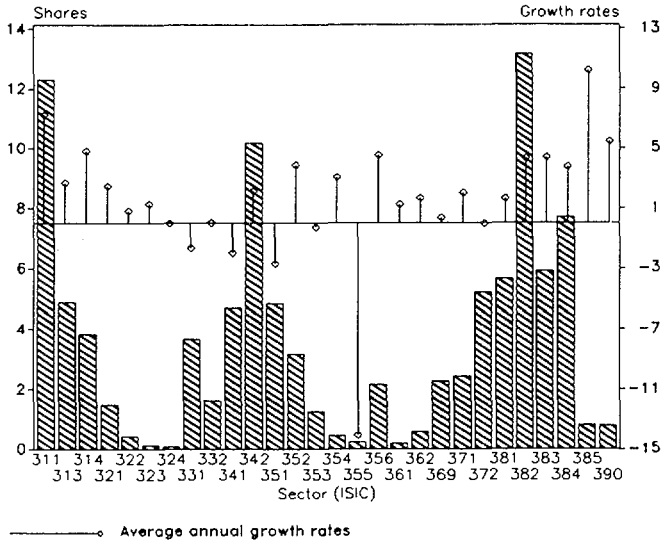
Industriol production index (1990=100)



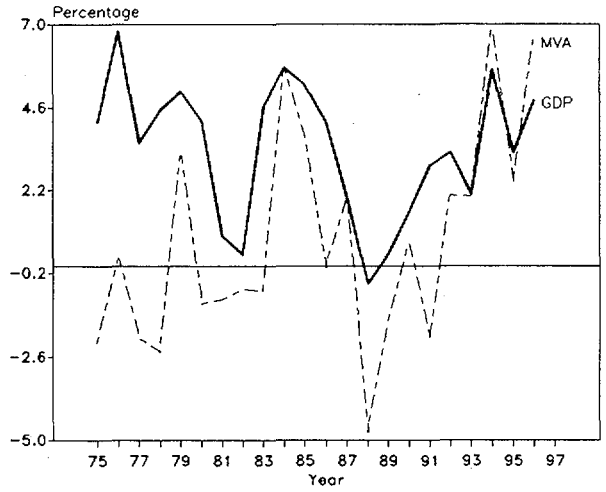
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

NORWAY

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

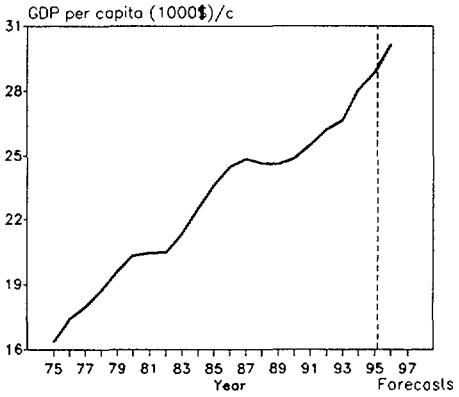


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

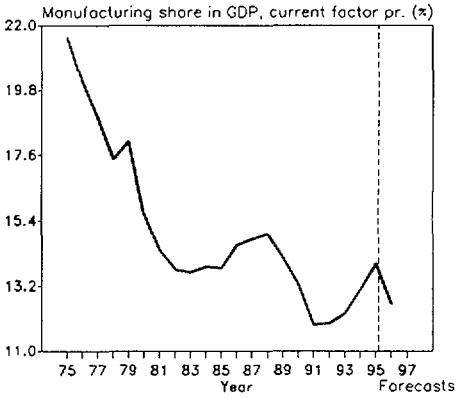
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	83 082	97 949	105 524	125 035
Per capita [na] (1990-dollars)	20 333	23 585	24 882	28 863
Manufacturing share [na] (%) (current factor prices)	15.7	13.8	13.2	14.0
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	14 041	15 028	14 437	16 092
Industrial production index (1990=100)	95	99	100	110
Value added (millions of dollars)	9 339	7 660	13 504	*16 422*
Gross output (millions of dollars)	31 936	28 186	50 107	56 962
Employment (thousands)	354	312	271	*255*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	71	73	73	*71*
Wages and salaries including supplements (%)	21	20	19	*20*
Gross operating surplus and net taxes (%)	8	7	8	*9*
-PRODUCTIVITY: (dollars)				
Gross output per worker	89 656	89 774	184 331	*216 892*
Value added per worker	26 217	24 397	49 677	*64 116*
Average wage (including supplements)	19 129	17 852	35 540	*43 972*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	9.19	8.90	8.92	*7.17*
as a percentage of 1970-1975 structural change	100	97	97	*78*
MVA growth rate perer unit of structural change	0.29	-0.70	-0.70	0.30
Degree of specialization	12.2	13.2	12.9	14.2
-VALUE ADDED: (millions of dollars)				
311/2 Food products	908	633	1 307	*2 137*
313 Beverages	292	296	660	*779*
314 Tobacco products	168	220	478	*659*
321 Textiles	213	126	191	*250*
322 Wearing apparel	101	59	58	*67*
323 Leather and fur products	18	9	16	*18*
324 Footwear	24	10	11	*13*
331 Wood and wood products	587	366	619	*584*
332 Furniture and fixtures	196	165	236	*255*
341 Paper and paper products	452	400	787	*721*
342 Printing and publishing	668	717	1 381	*1 674*
351 Industrial chemicals	452	422	811	*733*
352 Other chemical products	227	183	393	*539*
353 Petroleum refineries	103	24	195	*193*
354 Miscellaneous petroleum and coal products	53	59	63	*76*
355 Rubber products	51	39	58	*25*
356 Plastic products	170	147	278	*366*
361 Pottery, china and earthenware	26	18	27	*31*
362 Glass and glass products	55	50	77	*91*
369 Other non-metal mineral products	281	215	361	*366*
371 Iron and steel	385	276	347	*396*
372 Non-ferrous metals	743	550	826	*832*
381 Metal products	595	465	784	*912*
382 Non-electrical machinery	933	1 079	1 590	*2 121*
383 Electrical machinery	547	498	751	*1 004*
384 Transport equipment	1 000	555	1 028	*1 300*
385 Professional and scientific equipment	32	39	82	*148*
390 Other manufacturing industries	59	42	89	*133*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

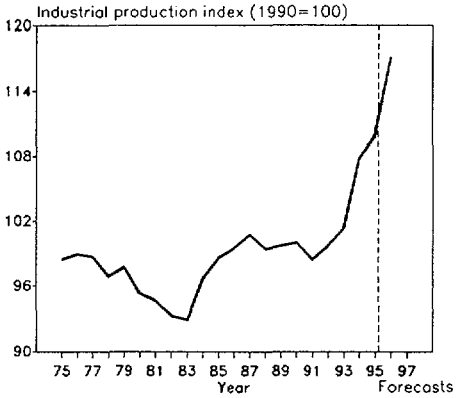
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

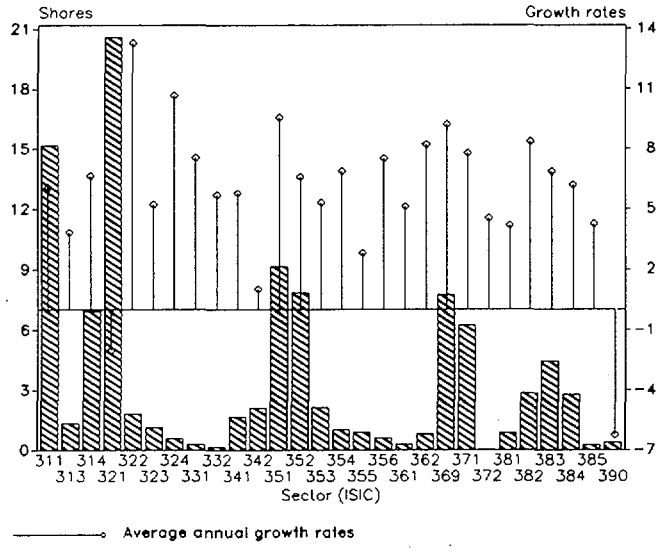


Industrial production index (1990=100)

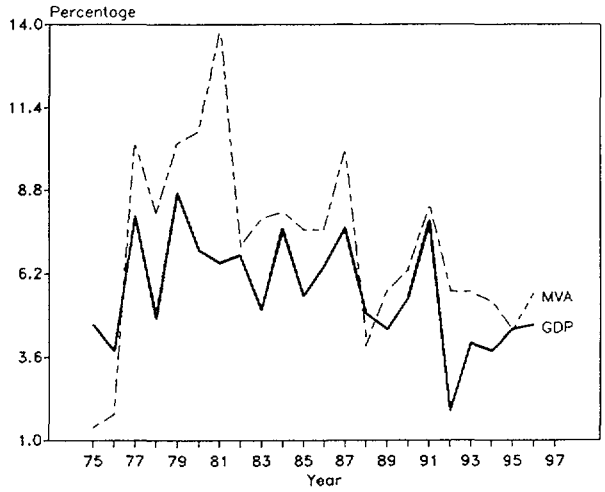


PAKISTAN

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

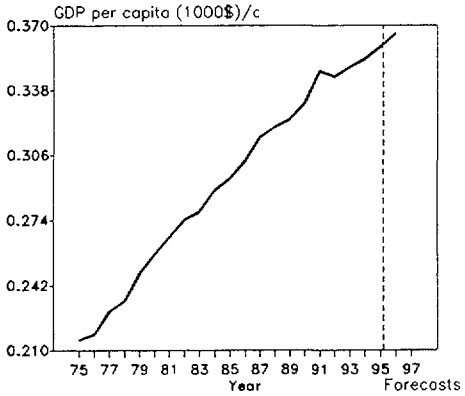


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

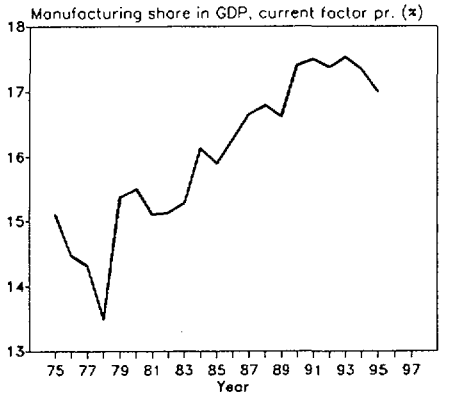
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	21 959	29 792	39 464	48 936
Per capita [na] (1990-dollars)	257	294	331	359
Manufacturing share [na] (%) (current factor prices)	13.9	15.9	17.4	*17.0*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	2 891	4 415	6 096	8 093
Industrial production index (1990=100)	82	92	100	114
Value added (millions of dollars)	2 423	3 236	5 114	*7 550*
Gross output (millions of dollars)	7 144	10 132	17 269	*25 218*
Employment (thousands)	452	493	622	*614*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	66	68	70	*70*
Wages and salaries including supplements (%)	7	6	7	*7*
Gross operating surplus and net taxes (%)	27	26	23	*23*
-PRODUCTIVITY: (dollars)				
Gross output per worker	14 606	20 482	27 702	*39 359*
Value added per worker	4 953	6 542	8 203	*11 887*
Average wage (including supplements)	1 122	1 323	1 965	*2 925*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*12.92*	13.02	14.56	*12.99*
as a percentage of 1970-1975 structural change	*100*	101	113	*101*
MVA growth rate perer unit of structural change	2.07	2.45	3.50	3.16
Degree of specialization	23.2	23.5	23.4	20.0
-VALUE ADDED: (millions of dollars)				
311/2 Food products	431	580	719	*1 145*
313 Beverages	45	74	72	*100*
314 Tobacco products	300	372	325	*534*
321 Textiles	483	562	1 407	*1 412*
322 Wearing apparel	7	18	70	*155*
323 Leather and fur products	41	35	56	*85*
324 Footwear	4	3	23	*47*
331 Wood and wood products	4	9	14	*23*
332 Furniture and fixtures	3	6	8	*13*
341 Paper and paper products	29	33	80	*126*
342 Printing and publishing	24	36	116	*137*
351 Industrial chemicals	127	281	401	*743*
352 Other chemical products	156	230	368	*599*
353 Petroleum refineries	158	45	105	*158*
354 Miscellaneous petroleum and coal products	9	17	47	*78*
355 Rubber products	28	41	49	*65*
356 Plastic products	12	21	28	*48*
361 Pottery, china and earthenware	5	8	13	*20*
362 Glass and glass products	11	17	36	*62*
369 Other non-metal mineral products	171	199	339	*624*
371 Iron and steel	99	342	283	*490*
372 Non-ferrous metals	1	1	1	*2*
381 Metal products	38	33	44	*64*
382 Non-electrical machinery	43	80	129	*227*
383 Electrical machinery	78	98	210	*344*
384 Transport equipment	97	83	132	*211*
385 Professional and scientific equipment	6	6	12	*17*
390 Other manufacturing industries	11	11	27	*22*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

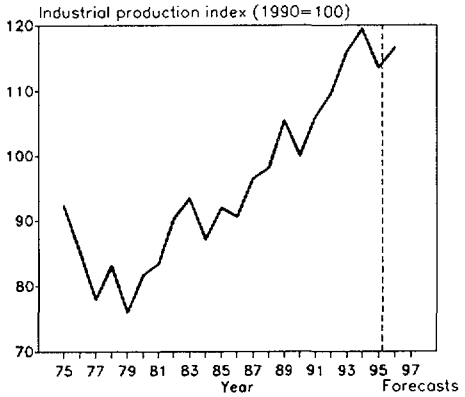
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

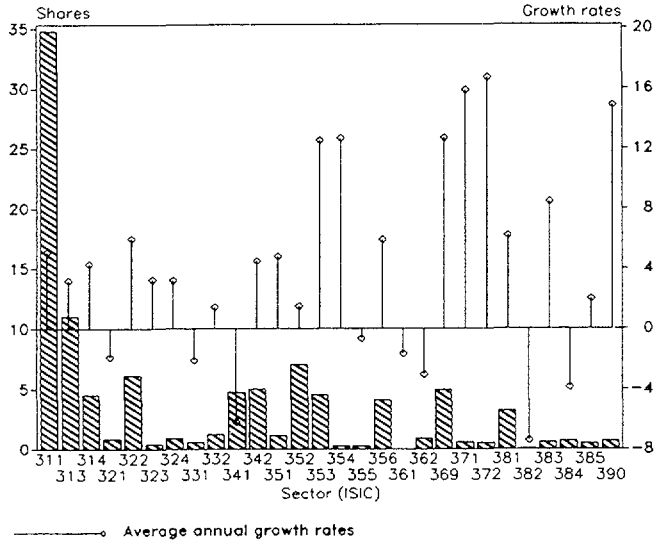


Industrial production index (1990=100)

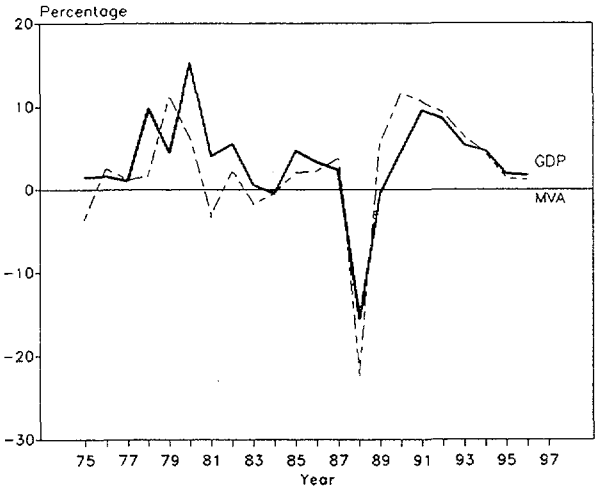


PANAMA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

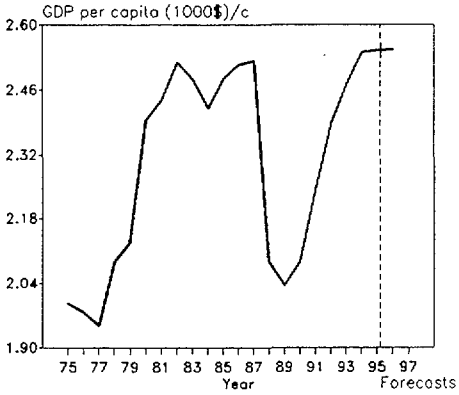


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

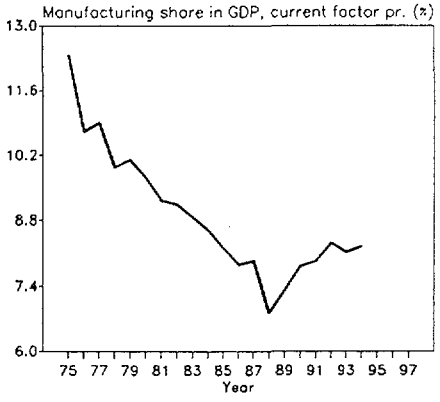
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	4 672	5 383	5 009	6 699
Per capita [na] (1990-dollars)	2 396	2 484	2 089	2 546
Manufacturing share [na] (%) (current factor prices)	9.7	8.2	7.8	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	428	421	407	*552*
Industrial production index (1990=100)	97	102	100	134
Value added (millions of dollars)	477	551	591	*798*
Gross output (millions of dollars)	*1 473*	1 765	1 703	*2 338*
Employment (thousands)	*31*	36	37	*44*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*68*	69	65	*66*
Wages and salaries including supplements (%)	*9*	*13*	*13*	*12*
Gross operating surplus and net taxes (%)	*23*	*18*	*21*	*22*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*46 753*	48 678	46 202	*52 559*
Value added per worker	*15 159*	15 183	16 040	*18 045*
Average wage (including supplements)	*4 241*	*6 270*	*6 133*	*6 204*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	13.97	10.30	10.12	*8.79*
as a percentage of 1970-1975 structural change	100	74	72	*63*
MVA growth rate perer unit of structural change	2.10	0.94	0.17	1.85
Degree of specialization	24.2	23.2	27.7	28.1
-VALUE ADDED: (millions of dollars)				
311/2 Food products	155	171	205	*289*
313 Beverages	52	53	69	*86*
314 Tobacco products	26	30	27	*36*
321 Textiles	4	3	6	*6*
322 Wearing apparel	31	26	34	*50*
323 Leather and fur products	4	1	3	*4*
324 Footwear	7	9	5	*7*
331 Wood and wood products	8	7	4	*4*
332 Furniture and fixtures	8	11	7	*9*
341 Paper and paper products	20	33	48	*34*
342 Printing and publishing	22	29	29	*40*
351 Industrial chemicals	4	9	6	*9*
352 Other chemical products	26	42	42	*49*
353 Petroleum refineries	*28*	*23*	*17*	*37*
354 Miscellaneous petroleum and coal products	*1*	-	*1*	*2*
355 Rubber products	2	2	2	*2*
356 Plastic products	12	21	23	*32*
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	*1*	7	7	*6*
369 Other non-metal mineral products	31	26	19	*41*
371 Iron and steel	5	*4*	*2*	*5*
372 Non-ferrous metals	2	*3*	*2*	*4*
381 Metal products	19	20	17	*27*
382 Non-electrical machinery	1	1	1	-
383 Electrical machinery	3	4	3	*5*
384 Transport equipment	4	13	6	*5*
385 Professional and scientific equipment	1	2	3	*4*
390 Other manufacturing industries	*1*	*3*	*2*	*6*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

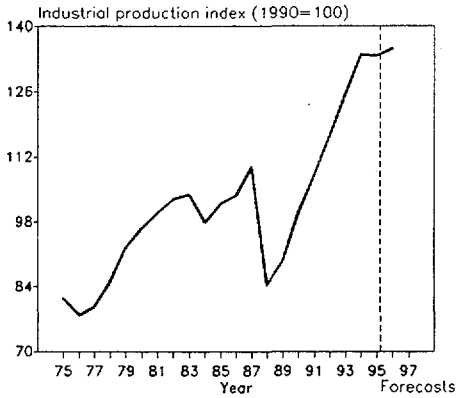
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

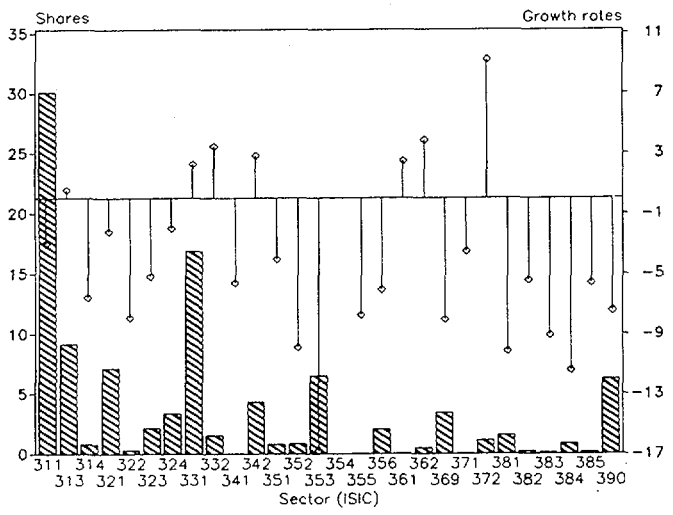


Industrial production index (1990=100)

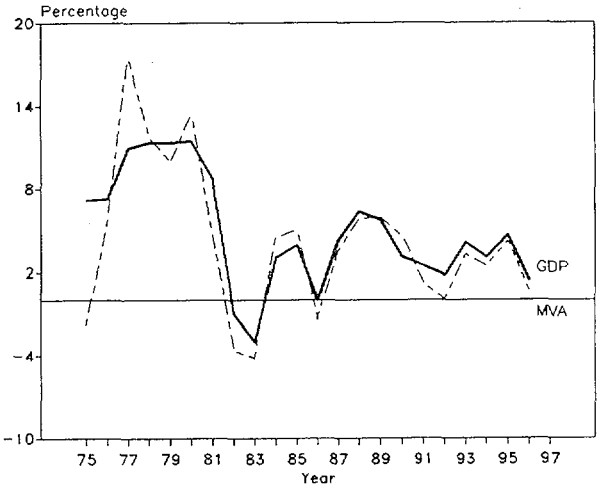


PARAGUAY

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

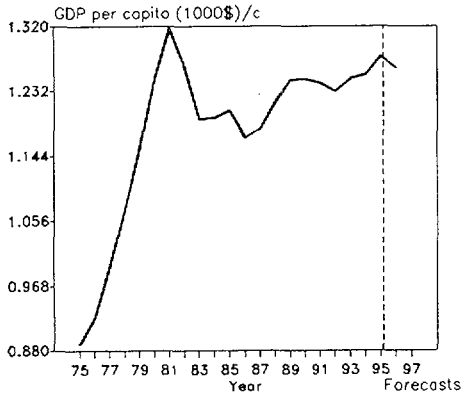


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

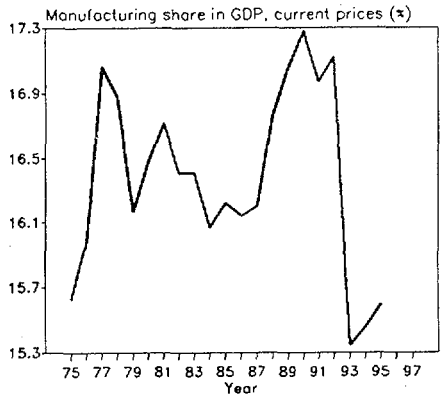
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	3 887	4 350	5 265	6 174
Per capita [na] (1990-dollars)	1 248	1 205	1 248	1 279
Manufacturing share [na] (%) (current factor prices)	16.5	16.2	17.3	*15.6*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	721	761	910	*1 013*
Industrial production index (1990=100)	75	83	100	*84*
Value added (millions of dollars)	575	*661*	*769*	*904*
Gross output (millions of dollars)	1 312	1 395	1 408	*1 979*
Employment (thousands)	*143*	*129*	*156*	*166*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	..	..	..	..
Wages and salaries including supplements (%)	..	..	..	..
Gross operating surplus and net taxes (%)	..	..	..	..
-PRODUCTIVITY: (dollars)				
Gross output per worker	*9 131*	*10 788*	*8 911*	*11 695*
Value added per worker	*4 132*	*5 134*	*4 991*	*5 414*
Average wage (including supplements)	..	..	..	..
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	14.45	*14.32*	*10.54*	*8.94*
as a percentage of 1970-1975 structural change	100	*99*	*73*	*62*
MVA growth rate perer unit of structural change	3.00	2.33	2.47	0.96
Degree of specialization	31.7	28.7	27.5	29.7
-VALUE ADDED: (millions of dollars)				
311/2 Food products	170	*220*	*235*	*277*
313 Beverages	43	*56*	*62*	*90*
314 Tobacco products	6	*7*	*7*	*6*
321 Textiles	44	*42*	*54*	*67*
322 Wearing apparel	2	*3*	*3*	*3*
323 Leather and fur products	7	*14*	*16*	*17*
324 Footwear	18	*20*	*25*	*31*
331 Wood and wood products	95	*96*	*106*	*170*
332 Furniture and fixtures	6	*8*	*9*	*16*
341 Paper and paper products	-	*1*	*1*	*1*
342 Printing and publishing	24	*36*	*26*	*42*
351 Industrial chemicals	4	*6*	*6*	*7*
352 Other chemical products	10	*10*	*8*	*7*
353 Petroleum refineries	94	*51*	*68*	*39*
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	-	-	-	-
356 Plastic products	6	*16*	*18*	*17*
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	1	*2*	*3*	*5*
369 Other non-metal mineral products	26	*23*	*31*	*27*
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	1	*4*	*6*	*12*
381 Metal products	9	*15*	*15*	*11*
382 Non-electrical machinery	1	*1*	*2*	*2*
383 Electrical machinery	-	*1*	*1*	*1*
384 Transport equipment	5	*10*	*8*	*6*
385 Professional and scientific equipment	1	*1*	*1*	*1*
390 Other manufacturing industries	2	*17*	*58*	*50*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

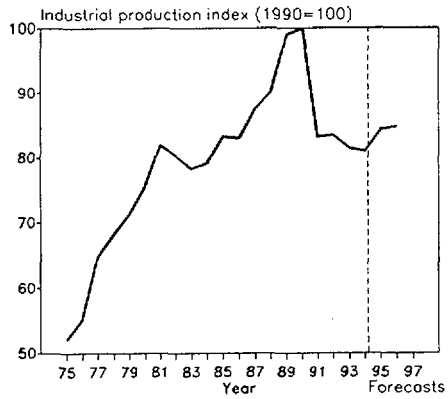
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)

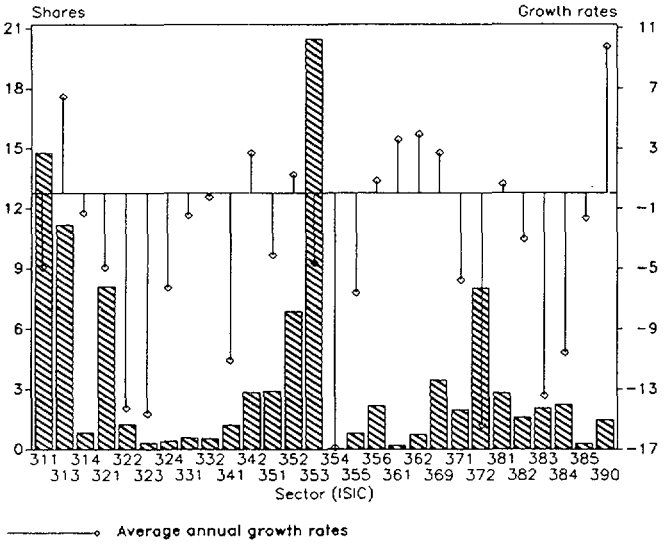


Industrial production index (1990=100)

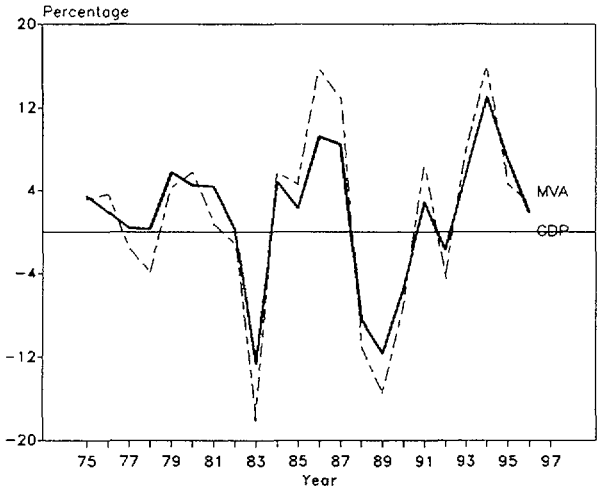


PERU

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

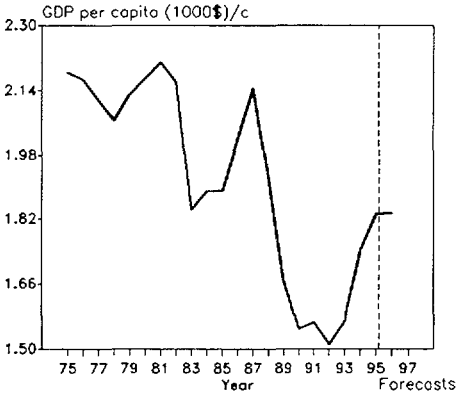


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

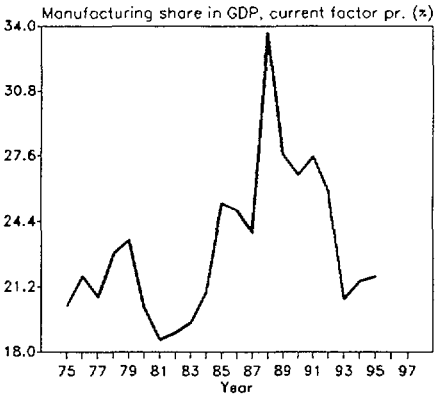
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	37 582	36 829	33 427	43 124
Per capita [na] (1990-dollars)	2 169	1 889	1 550	1 833
Manufacturing share [na] (%) (current factor prices)	20.2	25.3	26.7	*21.7*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	11 958	10 758	9 745	12 861
Industrial production index (1990=100)	129	112	100	126
Value added (millions of dollars)	4 985	3 918	7 366	*7 485*
Gross output (millions of dollars)	12 977	9 573	14 186	*18 185*
Employment (thousands)	273	263	285	*273*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	62	59	48	*59*
Wages and salaries including supplements (%)	*7*	6	*10*	*7*
Gross operating surplus and net taxes (%)	*32*	35	*42*	*34*
-PRODUCTIVITY: (dollars)				
Gross output per worker	47 484	36 350	49 727	*66 261*
Value added per worker	18 242	14 877	25 821	*27 318*
Average wage (including supplements)	*3 150*	2 154	*4 941*	*4 877*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	14.06	20.68	20.91	*14.12*
as a percentage of 1970-1975 structural change	100	147	149	*100*
MVA growth rate perer unit of structural change	1.99	0.13	-1.52	-2.67
Degree of specialization	12.7	21.3	19.5	19.6
-VALUE ADDED: (millions of dollars)				
311/2 Food products	767	402	1 077	*1 109*
313 Beverages	379	303	545	*991*
314 Tobacco products	84	61	59	*66*
321 Textiles	466	352	647	*648*
322 Wearing apparel	65	52	133	*66*
323 Leather and fur products	56	20	32	*18*
324 Footwear	41	20	26	*27*
331 Wood and wood products	81	32	39	*43*
332 Furniture and fixtures	42	19	30	*40*
341 Paper and paper products	156	77	135	*86*
342 Printing and publishing	100	80	151	*238*
351 Industrial chemicals	215	158	237	*223*
352 Other chemical products	289	193	427	*577*
353 Petroleum refineries	192	1 154	1 409	*1 357*
354 Miscellaneous petroleum and coal products	6	1	5	*2*
355 Rubber products	62	52	74	*59*
356 Plastic products	89	90	144	*181*
361 Pottery, china and earthenware	15	8	10	*15*
362 Glass and glass products	47	15	37	*64*
369 Other non-metal mineral products	129	113	204	*300*
371 Iron and steel	192	123	177	*151*
372 Non-ferrous metals	604	172	930	*449*
381 Metal products	188	113	180	*233*
382 Non-electrical machinery	156	58	116	*116*
383 Electrical machinery	211	111	235	*118*
384 Transport equipment	278	106	219	*147*
385 Professional and scientific equipment	14	10	21	*23*
390 Other manufacturing industries	58	25	66	*138*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

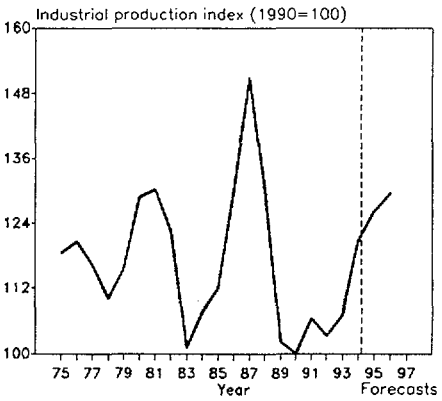
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

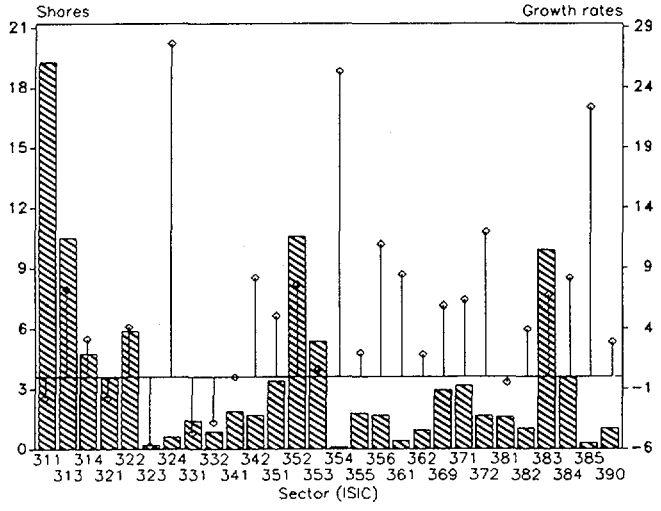


Industrial production index (1990=100)

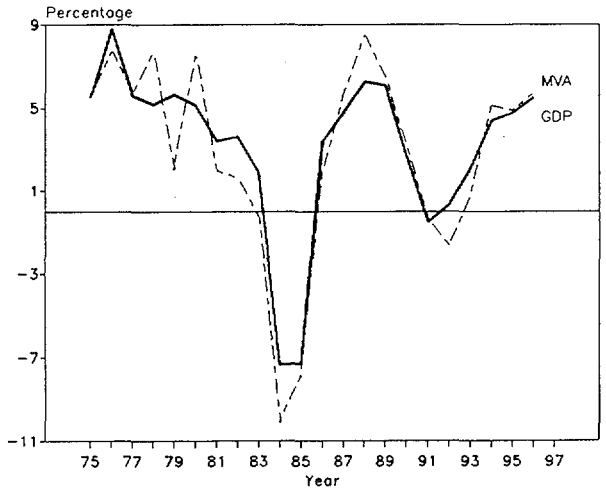


PHILIPPINES

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

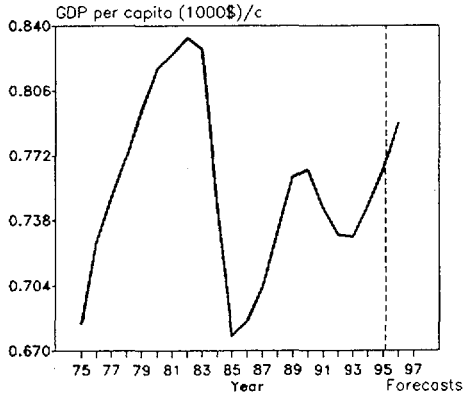


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

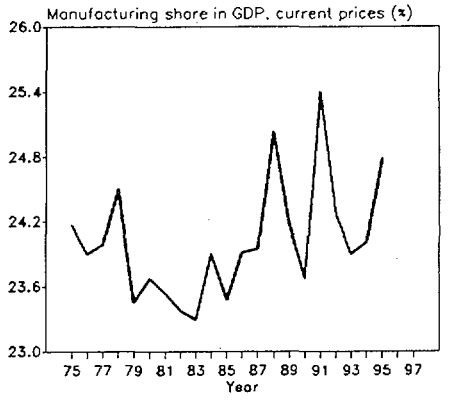
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	39 508	37 054	46 473	51 820
Per capita [na] (1990-dollars)	818	678	765	764
Manufacturing share [na] (%) (current factor prices)	23.7	23.5	23.7	*24.8*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	10 067	8 605	11 003	*11 951*
Industrial production index (1990=100)	34	63	100	165
Value added (millions of dollars)	4 861	3 448	8 852	*15 779*
Gross output (millions of dollars)	17 369	12 081	24 321	*41 069*
Employment (thousands)	949	619	1 109	*997*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	72	71	64	*62*
Wages and salaries including supplements (%)	6	6	8	*8*
Gross operating surplus and net taxes (%)	22	22	28	*31*
-PRODUCTIVITY: (dollars)				
Gross output per worker	16 263	19 369	19 805	*40 848*
Value added per worker	4 552	5 528	7 209	*15 771*
Average wage (including supplements)	1 127	1 257	1 802	*3 151*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	15.56	22.56	24.48	*16.96*
as a percentage of 1970-1975 structural change	100	145	157	*109*
MVA growth rate perer unit of structural change	2.00	-0.31	2.08	4.26
Degree of specialization	14.4	22.0	18.3	16.1
-VALUE ADDED: (millions of dollars)				
311/2 Food products	969	658	2 206	*2 934*
313 Beverages	195	423	815	*1 787*
314 Tobacco products	309	209	420	*739*
321 Textiles	395	109	393	*514*
322 Wearing apparel	205	105	509	*913*
323 Leather and fur products	8	3	25	*26*
324 Footwear	13	9	18	*117*
331 Wood and wood products	229	86	164	*180*
332 Furniture and fixtures	75	22	103	*116*
341 Paper and paper products	128	97	184	*264*
342 Printing and publishing	89	46	125	*297*
351 Industrial chemicals	296	101	277	*524*
352 Other chemical products	389	205	767	*1 735*
353 Petroleum refineries	328	715	489	*715*
354 Miscellaneous petroleum and coal products	2	3	3	*17*
355 Rubber products	103	34	158	*269*
356 Plastic products	85	32	111	*286*
361 Pottery, china and earthenware	33	9	29	*67*
362 Glass and glass products	42	28	86	*138*
369 Other non-metal mineral products	63	60	240	*491*
371 Iron and steel	98	164	236	*488*
372 Non-ferrous metals	35	28	117	*343*
381 Metal products	127	49	156	*228*
382 Non-electrical machinery	98	31	84	*152*
383 Electrical machinery	260	156	775	*1 607*
384 Transport equipment	234	35	258	*614*
385 Professional and scientific equipment	5	5	11	*56*
390 Other manufacturing industries	49	28	93	*161*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

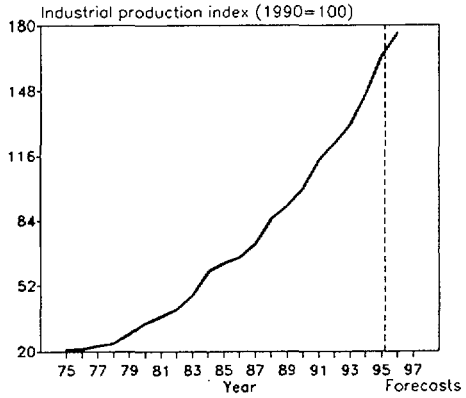
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)

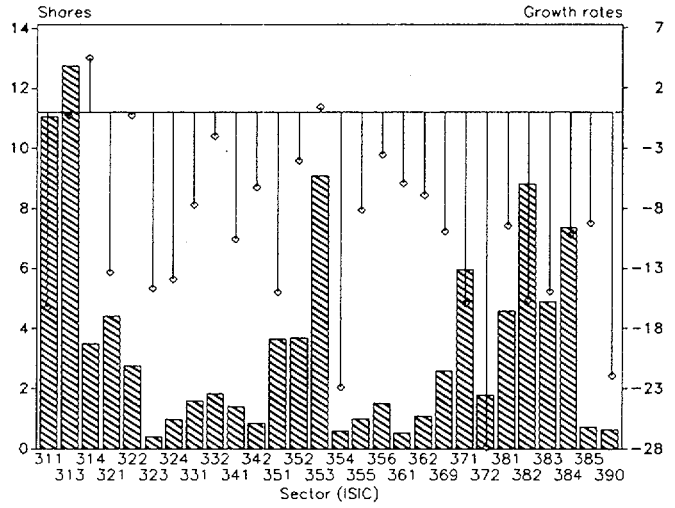


Industrial production index (1990=100)

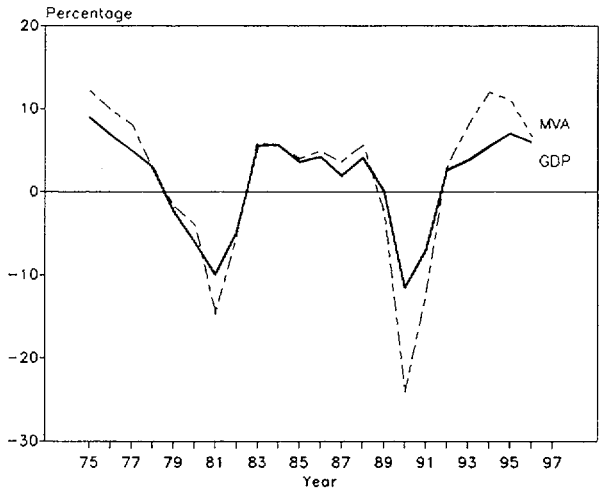


POLAND

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



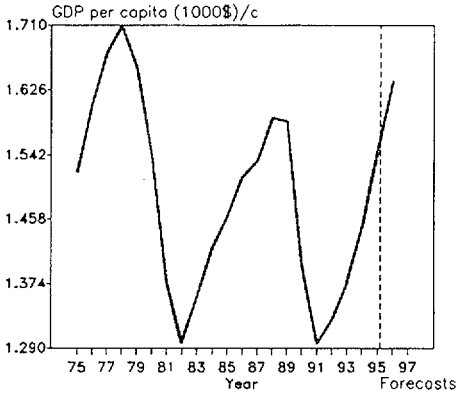
Annual growth rates of GDP and MVA (Constant 1990 prices)



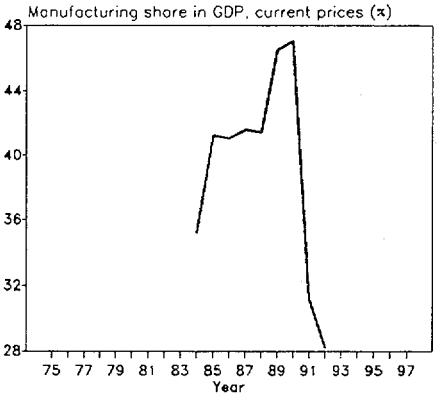
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	54 856	54 357	53 290	59 607
Per capita [na] (1990-dollars)	1 542	1 461	1 398	1 546
Manufacturing share [na] (%) (current factor prices)	..	41.2	47.0	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	31 971	29 768	25 072	30 102
Industrial production index (1990=100)	128	122	100	122
Value added (millions of dollars)	22 833	24 432	23 017	*27 149*
Gross output (millions of dollars)	*55 597*	*54 448*	46 092	*70 975*
Employment (thousands)	4 063	3 578	3 014	*2 193*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*59*	*55*	50	*62*
Wages and salaries including supplements (%)	*12*	*11*	8	*11*
Gross operating surplus and net taxes (%)	*30*	*34*	42	*28*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*12 957*	*13 487*	15 293	*32 159*
Value added per worker	5 321	6 052	7 637	*12 305*
Average wage (including supplements)	1 575	1 627	1 258	*3 457*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	11.27	12.88	16.77	*20.58*
as a percentage of 1970-1975 structural change	100	114	149	*183*
MVA growth rate perer unit of structural change	3.15	-1.21	-0.12	-0.51
Degree of specialization	11.7	14.4	11.3	12.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	- 889	144	2 595	*2 392*
313 Beverages	3 062	3 582	1 838	*3 836*
314 Tobacco products	636	74	379	*1 132*
321 Textiles	2 795	2 444	1 222	*1 112*
322 Wearing apparel	572	801	432	*899*
323 Leather and fur products	122	221	120	*96*
324 Footwear	403	430	263	*225*
331 Wood and wood products	423	434	325	*448*
332 Furniture and fixtures	491	500	307	*574*
341 Paper and paper products	224	269	348	*385*
342 Printing and publishing	154	208	166	*238*
351 Industrial chemicals	837	734	1 056	*877*
352 Other chemical products	961	644	649	*1 132*
353 Petroleum refineries	1 058	1 239	1 419	*3 089*
354 Miscellaneous petroleum and coal products	54	60	249	*111*
355 Rubber products	317	341	209	*291*
356 Plastic products	360	296	274	*464*
361 Pottery, china and earthenware	97	146	107	*157*
362 Glass and glass products	269	282	227	*312*
369 Other non-metal mineral products	335	634	602	*693*
371 Iron and steel	868	1 161	1 887	*1 411*
372 Non-ferrous metals	602	336	951	*275*
381 Metal products	1 343	1 347	1 081	*1 255*
382 Non-electrical machinery	3 263	3 360	2 604	*2 060*
383 Electrical machinery	1 558	1 801	1 420	*1 214*
384 Transport equipment	2 436	2 255	1 855	*2 148*
385 Professional and scientific equipment	244	251	173	*200*
390 Other manufacturing industries	237	438	258	*121*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

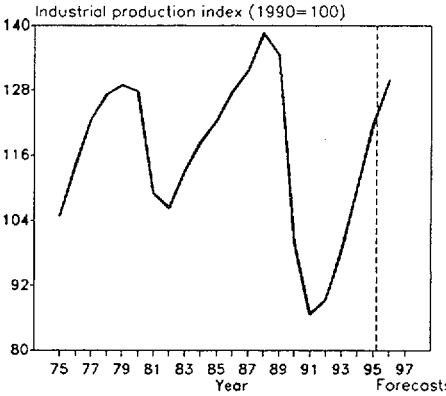
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)

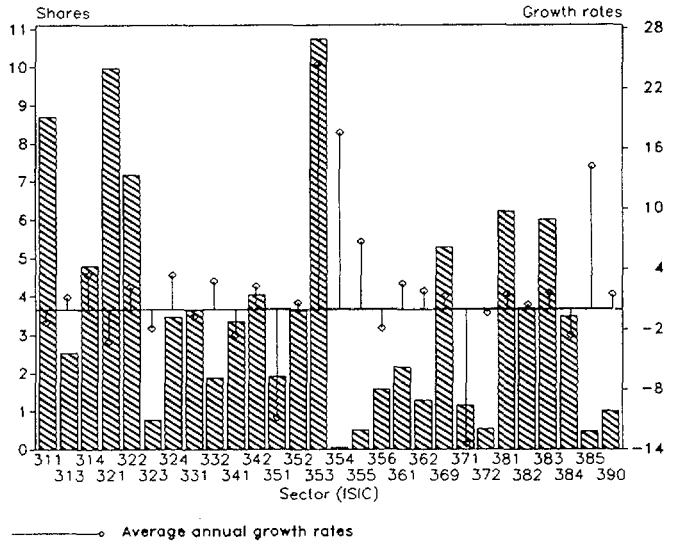


Industrial production index (1990=100)

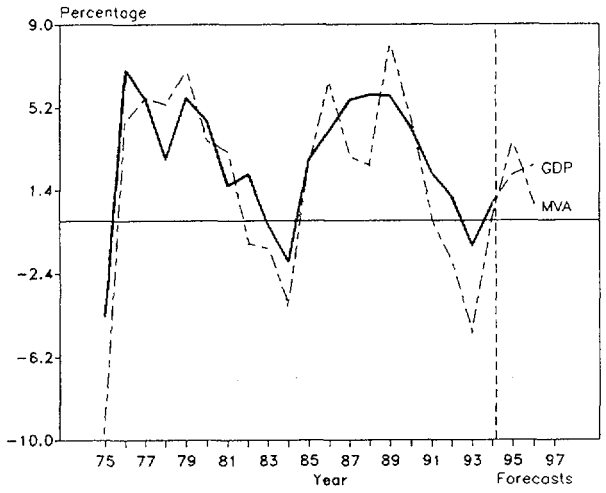


PORTUGAL

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

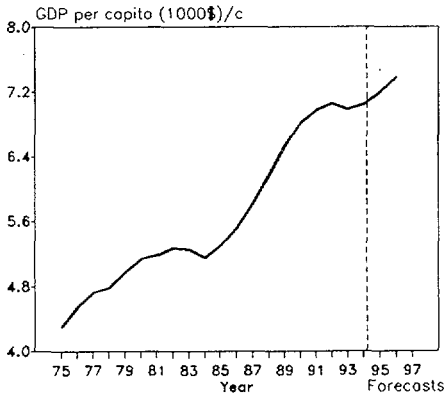


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

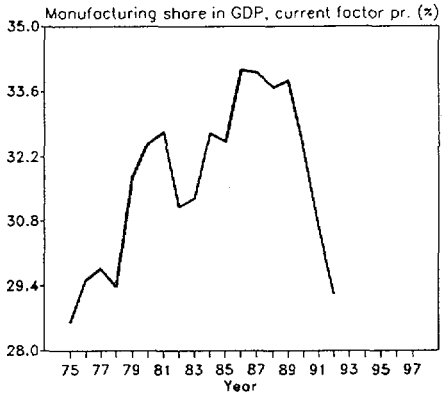
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	50 202	52 468	67 271	*70 630*
Per capita [na] (1990-dollars)	5 140	5 298	6 816	*7 196*
Manufacturing share [na] (%) (current factor prices)	32.5	32.5	32.3	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	14 936	14 817	18 765	18 073
Industrial production index (1990=100)	78	83	100	97
Value added (millions of dollars)	5 602	4 108	13 609	*20 211*
Gross output (millions of dollars)	17 932	15 534	47 171	61 723
Employment (thousands)	680	622	489	*421*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	69	74	71	*67*
Wages and salaries including supplements (%)	17	14	*10*	*8*
Gross operating surplus and net taxes (%)	14	12	*18*	*25*
-PRODUCTIVITY: (dollars)				
Gross output per worker	25 887	24 566	46 392	*63 026*
Value added per worker	8 087	6 497	13 384	*20 638*
Average wage (including supplements)	4 541	3 490	*10 129*	*11 118*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	8.83	10.17	14.08	*13.11*
as a percentage of 1970-1975 structural change	100	115	159	*149*
MVA growth rate perer unit of structural change	4.23	1.80	1.26	1.94
Degree of specialization	11.2	10.3	8.8	10.3
-VALUE ADDED: (*millions of dollars*)				
311/2 Food products	544	475	1 305	*1 641*
313 Beverages	135	133	344	*503*
314 Tobacco products	64	93	592	*952*
321 Textiles	905	679	1 654	*1 903*
322 *Wearing apparel*	186	182	985	*1 445*
323 Leather and fur products	41	41	126	*150*
324 Footwear	86	86	452	*738*
331 Wood and wood products	325	150	532	*698*
332 Furniture and fixtures	106	30	233	*359*
341 Paper and paper products	274	276	577	*701*
342 Printing and publishing	180	140	523	*805*
351 Industrial chemicals	147	215	432	*301*
352 Other chemical products	224	190	481	*682*
353 Petroleum refineries	*218*	*-18*	*591*	*2 747*
354 Miscellaneous petroleum and coal products	*1*	-	*3*	*11*
355 Rubber products	58	*45*	54	*109*
356 Plastic products	128	*87*	237	*293*
361 Pottery, china and earthenware	80	67	291	*447*
362 Glass and glass products	87	53	173	*265*
369 Other non-metal mineral products	295	200	724	*1 044*
371 Iron and steel	207	98	273	*162*
372 Non-ferrous metals	33	26	81	*109*
381 Metal products	323	219	826	*1 204*
382 Non-electrical machinery	170	143	528	*708*
383 Electrical machinery	319	247	834	*1 233*
384 Transport equipment	428	222	583	*697*
385 Professional and scientific equipment	15	16	36	*106*
390 Other manufacturing industries	20	11	141	*200*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

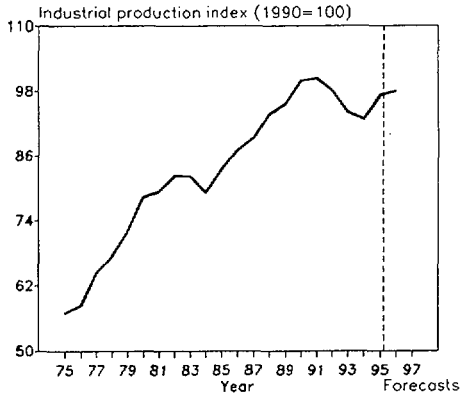
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

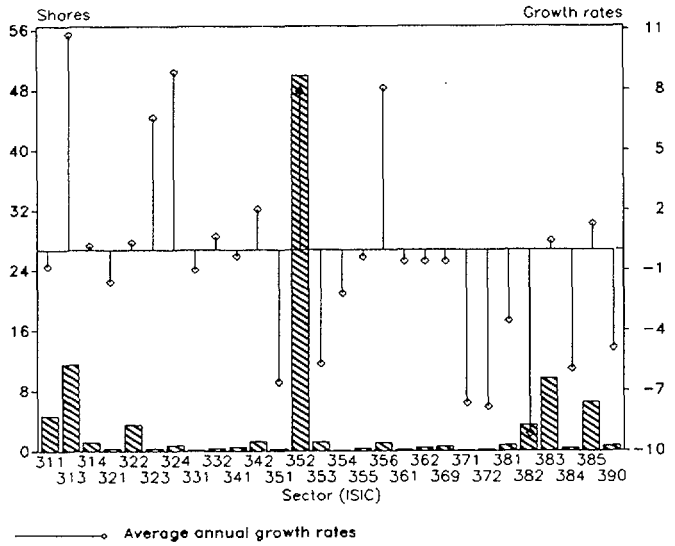


Industrial production index (1990=100)

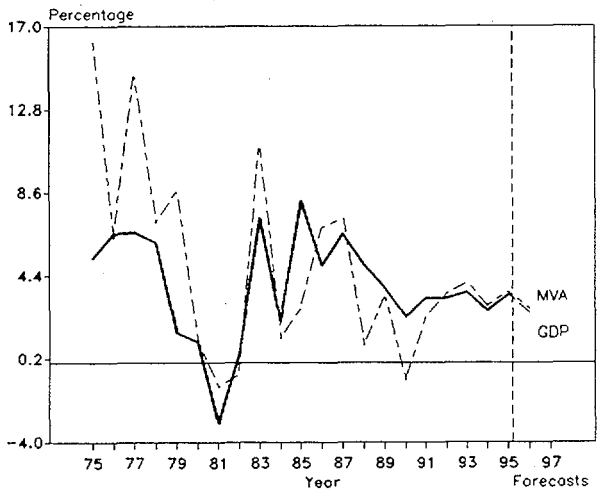


PUERTO RICO

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

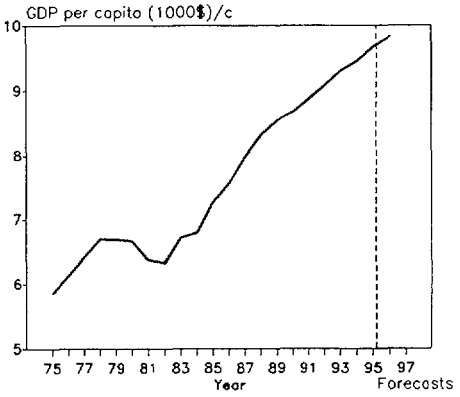


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

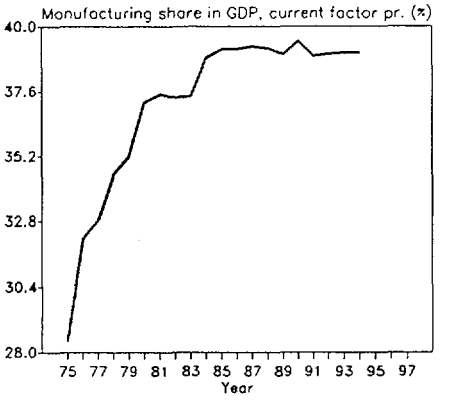
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	21 300	24 583	30 604	35 824
Per capita [na] (1990-dollars)	6 663	7 277	8 675	9 679
Manufacturing share [na] (%) (current factor prices)	37.2	39.2	39.5	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	9 070	10 258	12 126	*14 195*
Industrial production index (1990=100)	*67*	76	100	*126*
Value added (millions of dollars)	*5 976*	7 968	12 126	*17 675*
Gross output (millions of dollars)	*18 662*	*22 901*	29 777	*37 798*
Employment (thousands)	155	149	129	*123*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*68*	*65*	59	*53*
Wages and salaries including supplements (%)	*8*	*9*	*10*	*10*
Gross operating surplus and net taxes (%)	*25*	*26*	*31*	*37*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*120 663*	*153 923*	193 356	*259 883*
Value added per worker	*38 637*	53 554	78 740	*121 530*
Average wage (including supplements)	*9 109*	13 499	*23 196*	*30 047*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*9.81*	*8.75*	8.50	*10.39*
as a percentage of 1970-1975 structural change	*100*	*89*	87	*106*
MVA growth rate perer unit of structural change	1.29	1.76	2.67	2.77
Degree of specialization	29.8	32.3	37.2	44.9
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*405*	485	673	*733*
313 Beverages	*440*	714	1 117	*2 167*
314 Tobacco products	*122*	143	171	*200*
321 Textiles	*31*	34	42	*47*
322 Wearing apparel	*397*	437	486	*551*
323 Leather and fur products	*15*	*24*	*35*	*57*
324 Footwear	*58*	*64*	*78*	*138*
331 Wood and wood products	*15*	*15*	*19*	*21*
332 Furniture and fixtures	*26*	*29*	*40*	*49*
341 Paper and paper products	*51*	56	66	*80*
342 Printing and publishing	*57*	86	164	*207*
351 Industrial chemicals	*55*	58	39	*33*
352 Other chemical products	*1 817*	2 849	5 334	*9 239*
353 Petroleum refineries	*94*	*146*	*195*	*169*
354 Miscellaneous petroleum and coal products	*9*	*19*	*9*	*9*
355 Rubber products	*27*	*31*	*43*	*51*
356 Plastic products	*50*	*83*	*120*	*214*
361 Pottery, china and earthenware	*15*	*18*	*27*	*31*
362 Glass and glass products	*34*	*40*	*62*	*70*
369 Other non-metal mineral products	*48*	*57*	*87*	*98*
371 Iron and steel	*3*	*10*	*18*	*14*
372 Non-ferrous metals	*6*	*20*	*37*	*29*
381 Metal products	*81*	93	116	*112*
382 Non-electrical machinery	*534*	502	668	*455*
383 Electrical machinery	*1 027*	1 246	1 409	*1 669*
384 Transport equipment	*23*	29	68	*53*
385 Professional and scientific equipment	*438*	582	889	*1 080*
390 Other manufacturing industries	*98*	98	113	*101*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

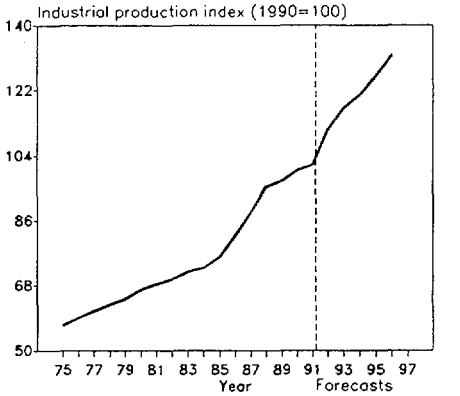
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

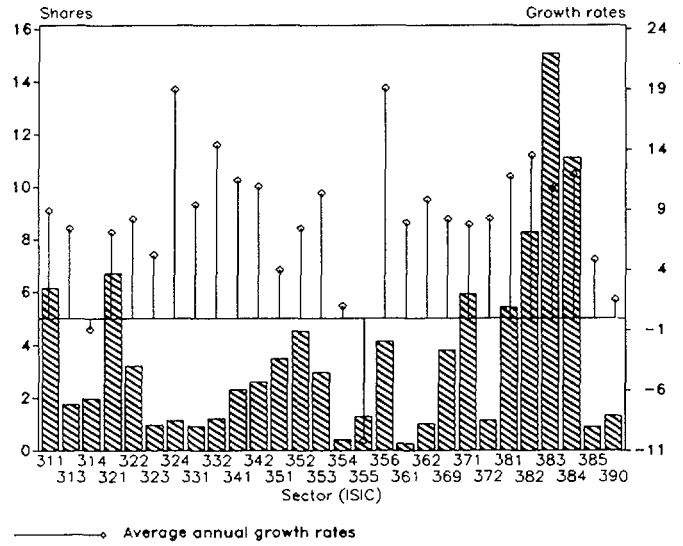


Industrial production index (1990=100)

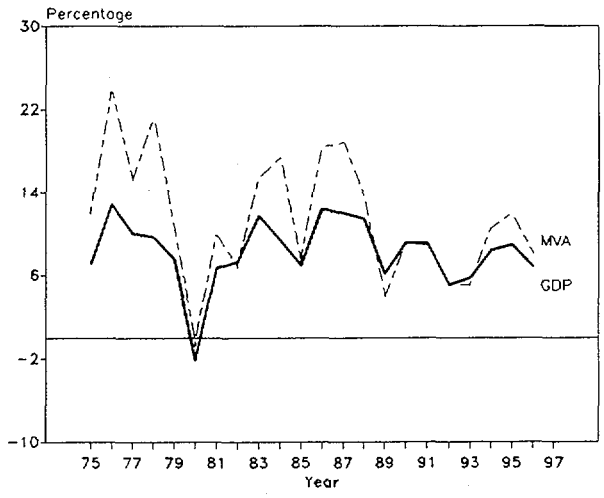


REPUBLIC OF KOREA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

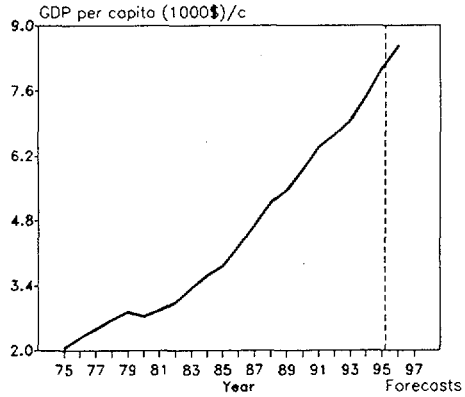


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

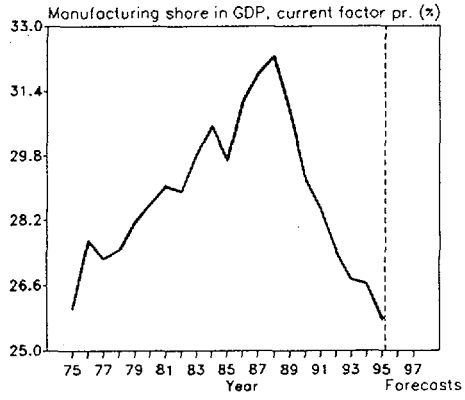
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	104 146	155 956	253 672	363 191
Per capita [na] (1990-dollars)	2 732	3 822	5 917	8 087
Manufacturing share [na] (%) (current factor prices)	28.6	29.7	29.2	*26.1*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	24 133	41 035	73 967	109 785
Industrial production index (1990=100)	36	60	100	142
Value added (millions of dollars)	19 520	30 731	100 209	*196 400*
Gross output (millions of dollars)	59 725	88 541	250 519	*448 198*
Employment (thousands)	2 015	2 395	2 958	*2 985*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	67	65	60	*56*
Wages and salaries including supplements (%)	10	9	11	*11*
Gross operating surplus and net taxes (%)	23	25	29	*33*
-PRODUCTIVITY: (dollars)				
Gross output per worker	29 206	36 314	82 959	*146 227*
Value added per worker	9 545	12 604	33 184	*64 077*
Average wage (including supplements)	2 837	3 476	9 353	*16 435*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	12.58	11.30	10.04	*8.74*
as a percentage of 1970-1975 structural change	100	90	80	*69*
MVA growth rate perer unit of structural change	7.34	5.94	8.41	9.37
Degree of specialization	9.1	9.5	10.4	12.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	1 526	2 048	6 047	*11 726*
313 Beverages	571	764	1 889	*3 456*
314 Tobacco products	1 143	1 442	2 794	*3 020*
321 Textiles	2 649	3 295	6 833	*12 479*
322 Wearing apparel	905	1 293	3 401	*6 339*
323 Leather and fur products	138	270	1 144	*1 811*
324 Footwear	112	211	594	*1 891*
331 Wood and wood products	239	262	876	*1 774*
332 Furniture and fixtures	100	203	972	*2 441*
341 Paper and paper products	426	682	2 123	*4 631*
342 Printing and publishing	440	732	2 531	*5 329*
351 Industrial chemicals	998	1 275	4 181	*6 129*
352 Other chemical products	1 016	1 422	4 926	*8 702*
353 Petroleum refineries	757	1 079	2 865	*5 855*
354 Miscellaneous petroleum and coal products	211	291	517	*623*
355 Rubber products	657	910	3 063	*2 033*
356 Plastic products	359	709	2 734	*8 774*
361 Pottery, china and earthenware	89	107	275	*500*
362 Glass and glass products	198	307	991	*1 979*
369 Other non-metal mineral products	838	1 065	3 697	*6 872*
371 Iron and steel	1 256	2 040	6 187	*11 239*
372 Non-ferrous metals	265	335	1 201	*2 203*
381 Metal products	635	1 237	5 145	*11 258*
382 Non-electrical machinery	672	1 453	7 004	*16 853*
383 Electrical machinery	1 587	3 621	15 066	*31 789*
384 Transport equipment	1 152	2 790	10 242	*22 602*
385 Professional and scientific equipment	214	290	1 144	*1 756*
390 Other manufacturing industries	367	598	1 769	*2 335*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

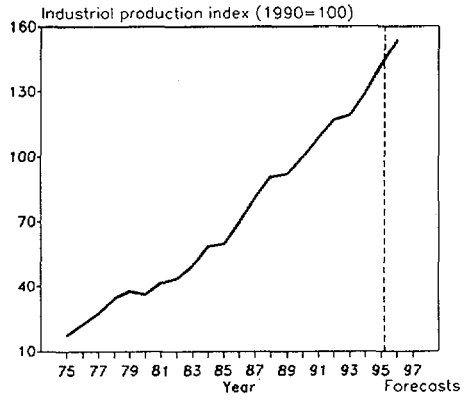
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

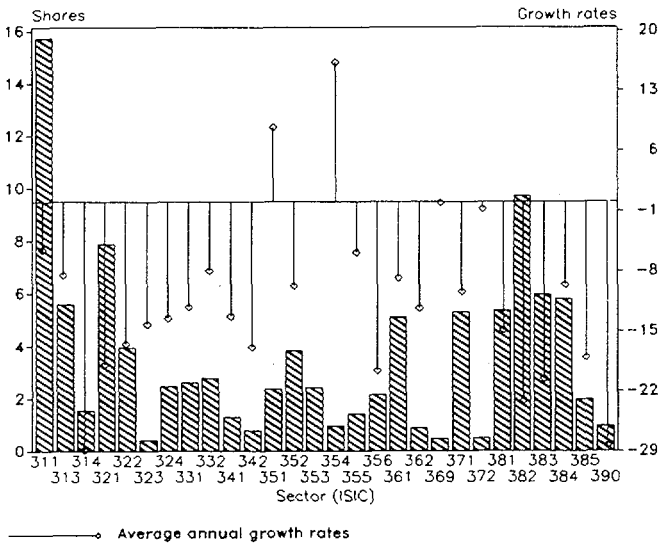


Industrial production index (1990=100)

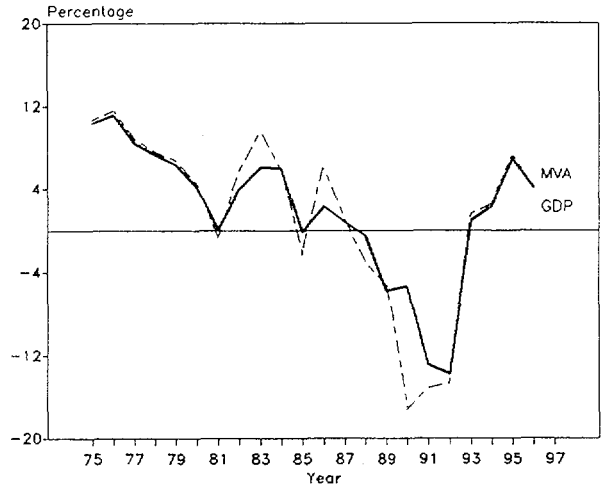


ROMANIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

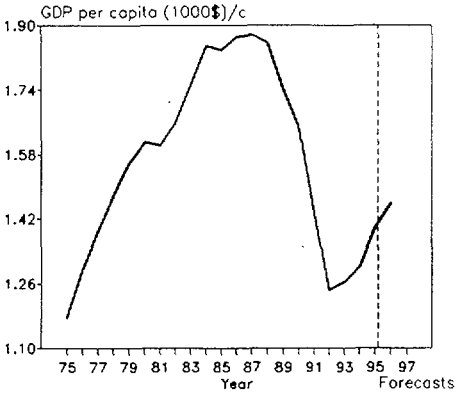


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

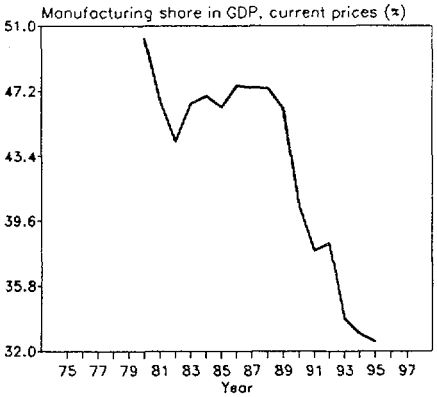
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	35 767	41 786	38 244	31 753
Per capita [na] (1990-dollars)	1 611	1 839	1 648	1 397
Manufacturing share [na] (%) (current factor prices)	50.2	46.3	40.5	*32.6*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	18 912	22 369	18 135	*14 636*
Industrial production index (1990=100)	91	106	100	*72*
Value added (millions of dollars)	*9 091*	*16 778*	14 047	*8 606*
Gross output (millions of dollars)	*41 052*	54 494	47 936	*23 750*
Employment (thousands)	2 800	2 945	3 451	*2 471*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*78*	*69*	71	*64*
Wages and salaries including supplements (%)	*9*	*10*	*12*	*11*
Gross operating surplus and net taxes (%)	*13*	*21*	*17*	*25*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*14 647*	18 499	13 219	*9 230*
Value added per worker	*3 243*	*5 696*	3 874	*3 345*
Average wage (including supplements)	*1 352*	*1 861*	*1 725*	*1 078*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*12.92*	*12.31*	*17.06*	*23.18*
as a percentage of 1970-1975 structural change	*100*	*95*	*132*	*179*
MVA growth rate perer unit of structural change	4.35	2.67	1.09	-1.31
Degree of specialization	11.1	11.3	12.2	11.5
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*998*	*1 699*	1 649	*1 610*
313 Beverages	*665*	*770*	642	*570*
314 Tobacco products	*15*	*19*	410	*71*
321 Textiles	*469*	*1 259*	1 449	*570*
322 Wearing apparel	*290*	*761*	691	*324*
323 Leather and fur products	*124*	*287*	67	*35*
324 Footwear	*186*	*277*	366	*214*
331 Wood and wood products	*424*	*657*	312	*213*
332 Furniture and fixtures	*278*	*455*	321	*275*
341 Paper and paper products	*96*	*206*	169	*98*
342 Printing and publishing	*13*	*39*	143	*66*
351 Industrial chemicals	*382*	*538*	111	*265*
352 Other chemical products	*222*	*448*	441	*328*
353 Petroleum refineries	*354*	*515*	- 134	*316*
354 Miscellaneous petroleum and coal products	*44*	*62*	36	*133*
355 Rubber products	*188*	*271*	129	*137*
356 Plastic products	*45*	*136*	397	*145*
361 Pottery, china and earthenware	*11*	*44*	571	*439*
362 Glass and glass products	*72*	*152*	120	*74*
369 Other non-metal mineral products	*33*	*53*	40	*57*
371 Iron and steel	*597*	*978*	651	*463*
372 Non-ferrous metals	*278*	*353*	22	*36*
381 Metal products	*267*	*726*	869	*446*
382 Non-electrical machinery	*807*	*2 069*	*2 073*	*576*
383 Electrical machinery	*681*	*964*	1 208	*428*
384 Transport equipment	*737*	*1 371*	704	*522*
385 Professional and scientific equipment	*138*	*370*	*361*	*146*
390 Other manufacturing industries	*675*	*1 297*	227	*47*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

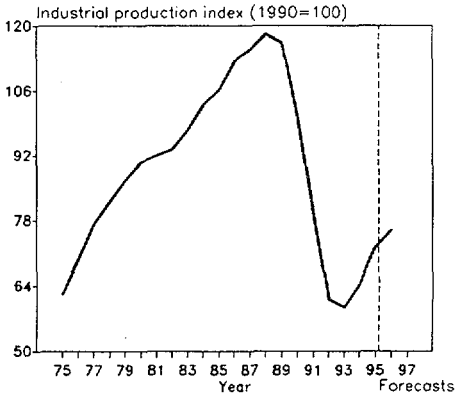
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)

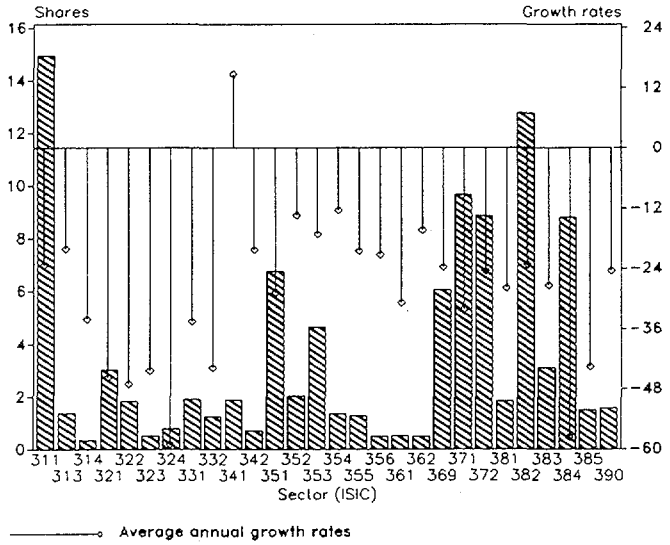


Industrial production index (1990=100)

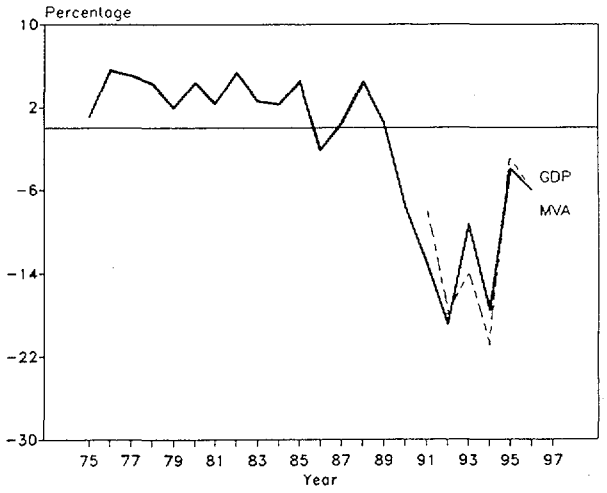


RUSSIAN FEDERATION

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1993–1995 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

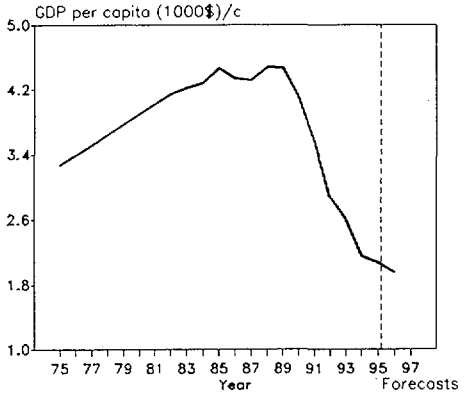


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

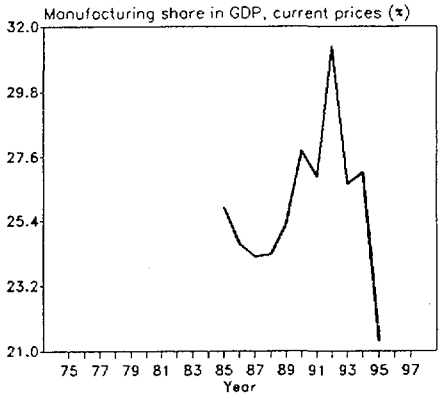
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	540 060	638 631	608 121	307 661
Per capita [na] (1990-dollars)	3 900	4 465	4 111	2 072
Manufacturing share [na] (%) (current factor prices)	..	25.9	*27.8*	*21.3*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	..	..	169 135	84 097
Industrial production index (1990=100)	..	..	..	..
Value added (millions of dollars)	..	..	..	54 973
Gross output (millions of dollars)	..	..	*413 285*	148 065
Employment (thousands)	..	..	..	11 919
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	..	..	..	63
Wages and salaries including supplements (%)	..	..	..	10
Gross operating surplus and net taxes (%)	..	..	..	27
-PRODUCTIVITY: (dollars)				
Gross output per worker	..	..	..	12 423
Value added per worker	..	..	..	4 612
Average wage (including supplements)	..	..	..	1 217
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	..	..	..	..
as a percentage of 1970-1975 structural change	..	..	..	..
MVA growth rate perer unit of structural change	..	..	..	..
Degree of specialization	..	..	..	..
-VALUE ADDED: (millions of dollars)				
311/2 Food products	..	..	..	8 772
313 Beverages	..	..	..	878
314 Tobacco products	..	..	..	185
321 Textiles	..	..	..	1 215
322 Wearing apparel	..	..	..	693
323 Leather and fur products	..	..	..	211
324 Footwear	..	..	..	203
331 Wood and wood products	..	..	..	962
332 Furniture and fixtures	..	..	..	519
341 Paper and paper products	..	..	..	1 834
342 Printing and publishing	..	..	..	429
351 Industrial chemicals	..	..	..	3 602
352 Other chemical products	..	..	..	1 368
353 Petroleum refineries	..	..	..	3 283
354 Miscellaneous petroleum and coal products	..	..	..	969
355 Rubber products	..	..	..	806
356 Plastic products	..	..	..	298
361 Pottery, china and earthenware	..	..	..	276
362 Glass and glass products	..	..	..	347
369 Other non-metal mineral products	..	..	..	3 529
371 Iron and steel	..	..	..	5 162
372 Non-ferrous metals	..	..	..	5 413
381 Metal products	..	..	..	1 030
382 Non-electrical machinery	..	..	..	7 592
383 Electrical machinery	..	..	..	1 842
384 Transport equipment	..	..	..	2 075
385 Professional and scientific equipment	..	..	..	568
390 Other manufacturing industries	..	..	..	911

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

GDP per capita (1000$)/c

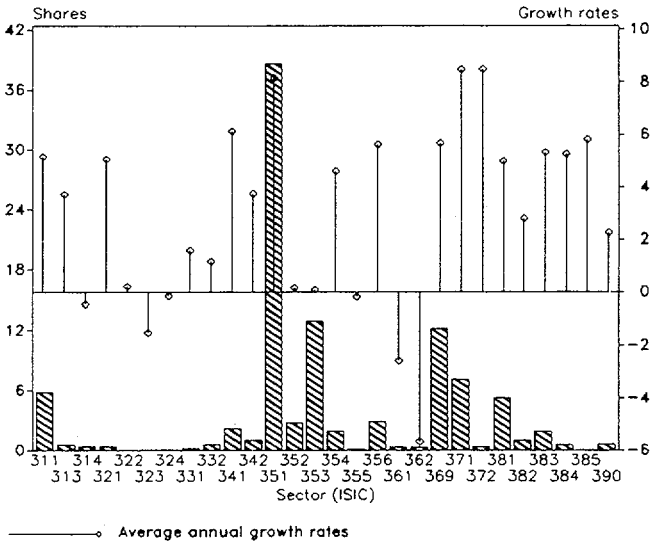


Manufacturing share in GDP, current prices (%)

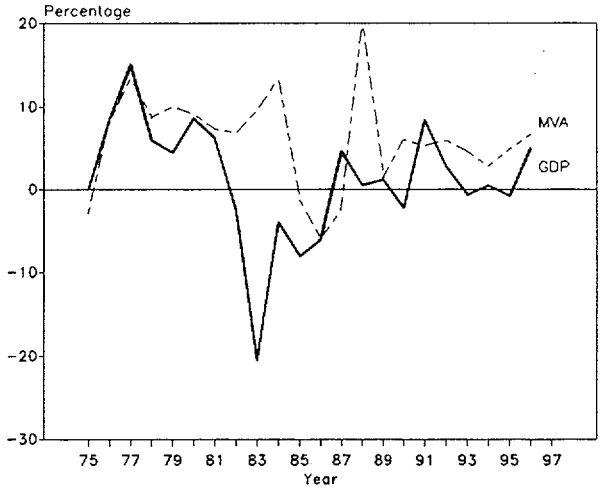


SAUDI ARABIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

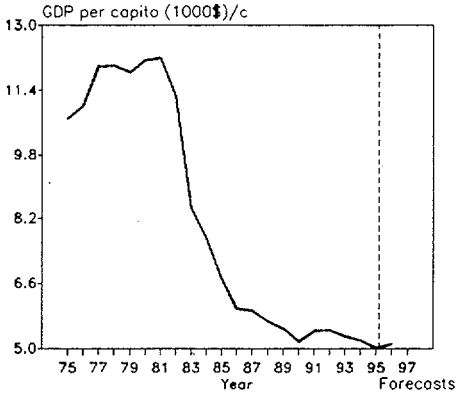


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

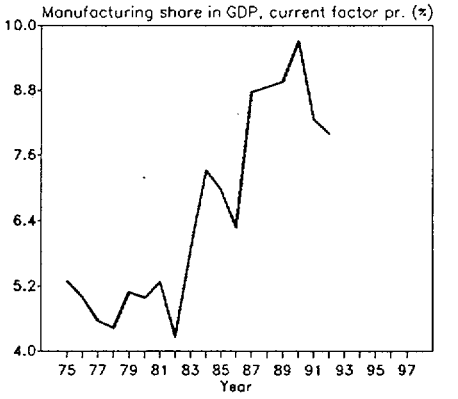
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	116 723	84 895	82 997	91 614
Per capita [na] (1990-dollars)	12 154	6 712	5 172	5 019
Manufacturing share [na] (%) (current factor prices)	5.0	7.0	9.7	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	4 829	6 756	7 962	*9 986*
Industrial production index (1990=100)	40	69	100	*125*
Value added (millions of dollars)	*5 287*	*4 564*	*5 268*	*7 461*
Gross output (millions of dollars)	*10 401*	*13 479*	*17 710*	*29 407*
Employment (thousands)	*83*	*129*	*121*	*188*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	..	..	..	..
Wages and salaries including supplements (%)	..	..	..	..
Gross operating surplus and net taxes (%)	..	..	..	..
-PRODUCTIVITY: (dollars)				
Gross output per worker	*125 141*	*100 038*	*146 190*	*156 630*
Value added per worker	*74 006*	*33 958*	*43 957*	*39 790*
Average wage (including supplements)	..	..	..	..
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*9.03*	*14.81*	*22.35*	*15.03*
as a percentage of 1970-1975 structural change	*100*	*164*	*247*	*166*
MVA growth rate perer unit of structural change	5.25	1.60	0.34	1.57
Degree of specialization	46.3	35.4	33.1	35.7
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*267*	*286*	*300*	*431*
313 Beverages	*54*	*38*	*30*	*39*
314 Tobacco products	*41*	*28*	*23*	*23*
321 Textiles	*23*	*22*	*20*	*30*
322 Wearing apparel	*7*	*5*	*5*	*5*
323 Leather and fur products	*6*	*5*	*5*	*4*
324 Footwear	*2*	*1*	*1*	*1*
331 Wood and wood products	*11*	*9*	*9*	*11*
332 Furniture and fixtures	*45*	*34*	*35*	*41*
341 Paper and paper products	*68*	*86*	*110*	*162*
342 Printing and publishing	*48*	*51*	*56*	*75*
351 Industrial chemicals	447	*896*	1 868	*3 014*
352 Other chemical products	*153*	*150*	*161*	*175*
353 Petroleum refineries	2 964	*1 638*	844	*839*
354 Miscellaneous petroleum and coal products	156	*113*	*100*	*139*
355 Rubber products	*7*	*7*	*8*	*8*
356 Plastic products	*170*	*153*	*148*	*221*
361 Pottery, china and earthenware	*24*	*16*	*20*	*20*
362 Glass and glass products	*22*	*14*	*20*	*16*
369 Other non-metal mineral products	505	*571*	619	*907*
371 Iron and steel	*17*	*94*	*342*	*561*
372 Non-ferrous metals	*1*	*5*	*17*	*28*
381 Metal products	*129*	*186*	*289*	*394*
382 Non-electrical machinery	*29*	*41*	*63*	*76*
383 Electrical machinery	*47*	*67*	*105*	*147*
384 Transport equipment	*14*	*20*	*31*	*43*
385 Professional and scientific equipment	*1*	*1*	*2*	*3*
390 Other manufacturing industries	29	*28*	*38*	*46*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

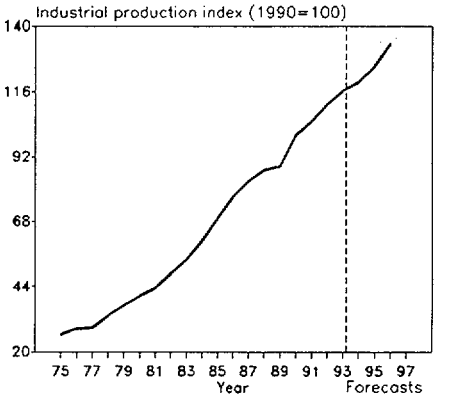
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

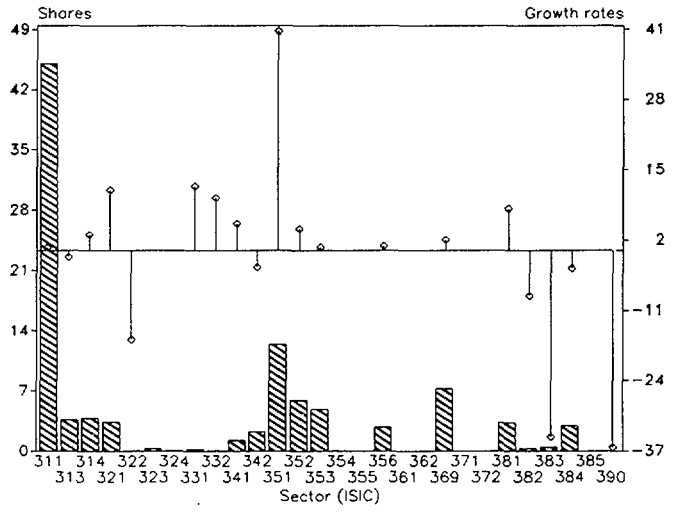


Industrial production index (1990=100)

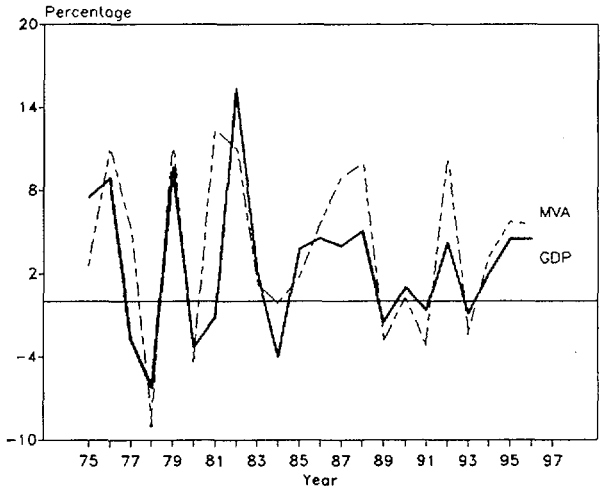


SENEGAL

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



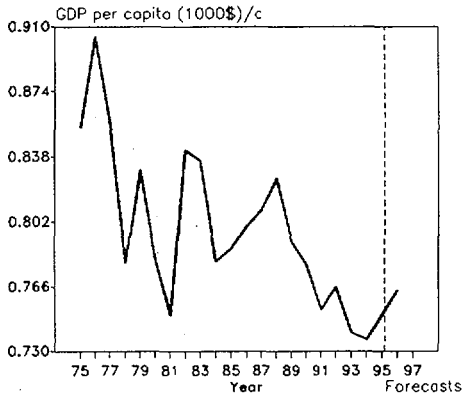
Annual growth rates of GDP and MVA (Constant 1990 prices)

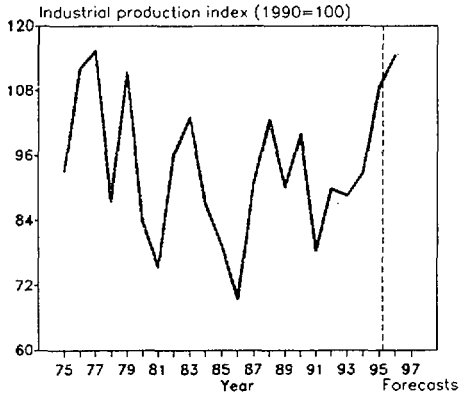


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	4 326	5 019	5 703	6 237
Per capita [na] (1990-dollars)	781	787	778	750
Manufacturing share [na] (%) (current factor prices)	10.6	12.8	13.1	*18.2*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	476	609	747	*845*
Industrial production index (1990=100)	84	79	100	109
Value added (millions of dollars)	266	268	421	*398*
Gross output (millions of dollars)	1 070	926	1 583	*1 278*
Employment (thousands)	32	30	32	*29*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	75	71	73	*69*
Wages and salaries including supplements (%)	*10*	*11*	10	*8*
Gross operating surplus and net taxes (%)	*14*	*18*	16	*23*
-PRODUCTIVITY: (dollars)				
Gross output per worker	33 812	18 247	48 738	*42 802*
Value added per worker	8 400	3 701	12 956	*13 604*
Average wage (including supplements)	*3 508*	*3 298*	5 056	*3 584*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	12.32	*14.73*	*23.47*	*22.21*
as a percentage of 1970-1975 structural change	100	*120*	*191*	*180*
MVA growth rate perer unit of structural change	0.52	0.23	0.53	0.44
Degree of specialization	26.8	25.7	36.5	35.0
-VALUE ADDED: (millions of dollars)				
311/2 Food products	113	*100*	221	*169*
313 Beverages	12	*8*	17	*11*
314 Tobacco products	7	*8*	16	*14*
321 Textiles	33	*23*	13	*17*
322 Wearing apparel	10	*7*	-	-
323 Leather and fur products	5	*4*	-	*4*
324 Footwear	2	*1*	-	*1*
331 Wood and wood products	2	*1*	1	*1*
332 Furniture and fixtures	2	*1*	-	-
341 Paper and paper products	4	*3*	5	*5*
342 Printing and publishing	6	*9*	10	*6*
351 Industrial chemicals	16	*18*	13	*70*
352 Other chemical products	5	*7*	24	*21*
353 Petroleum refineries	18	-	27	*22*
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	-	*2*	-	-
356 Plastic products	-	*6*	11	*9*
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	12	*22*	31	*25*
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	-	-	-	-
381 Metal products	10	*24*	11	*13*
382 Non-electrical machinery	3	*9*	2	*1*
383 Electrical machinery	1	*2*	3	-
384 Transport equipment	5	*13*	17	*10*
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	-	*1*	-	-

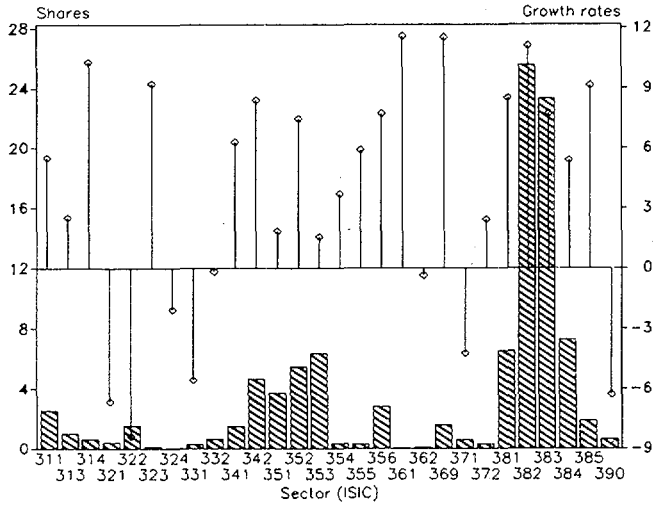
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.



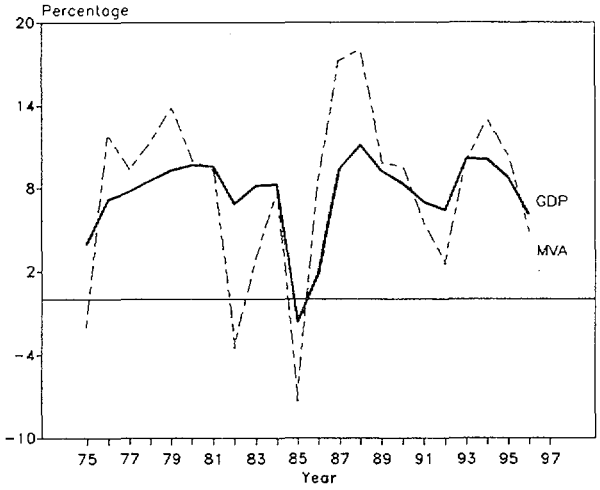


SINGAPORE

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

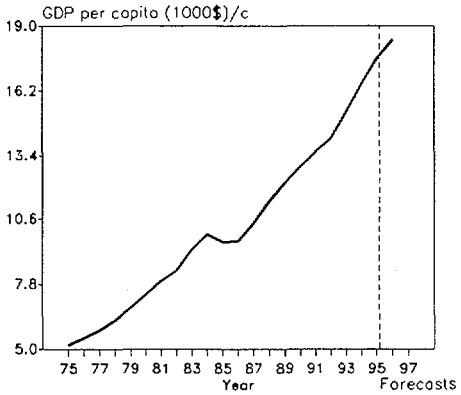


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

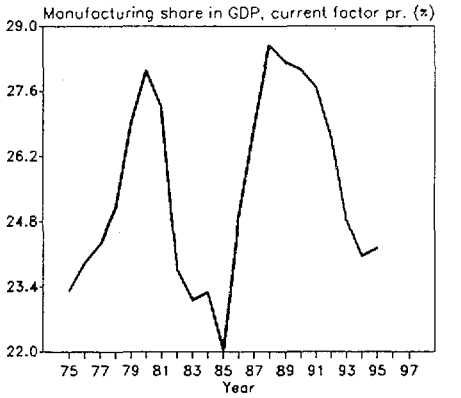
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	17 684	23 874	34 991	52 540
Per capita [na] (1990-dollars)	7 338	9 615	12 912	17 590
Manufacturing share [na] (%) (current factor prices)	28.0	22.0	28.0	*24.1*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	5 311	5 738	10 343	15 299
Industrial production index (1990=100)	64	64	100	127
Value added (millions of dollars)	4 001	4 864	11 896	*24 848*
Gross output (millions of dollars)	15 278	17 575	39 345	*79 733*
Employment (thousands)	287	254	352	*382*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	74	72	70	*69*
Wages and salaries including supplements (%)	8	10	10	*10*
Gross operating surplus (%)	18	17	21	*22*
-PRODUCTIVITY: (dollars)				
Gross output per worker	53 196	69 187	111 880	*208 585*
Value added per worker	13 929	19 147	33 826	*65 058*
Average wage (including supplements)	4 139	7 235	10 786	*20 104*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	14.06	13.60	17.43	*12.90*
as a percentage of 1970-1975 structural change	100	97	124	*92*
MVA growth rate perer unit of structural change	7.22	4.18	2.55	4.91
Degree of specialization	22.0	24.0	25.7	29.9
-VALUE ADDED: (millions of dollars)				
311/2 Food products	121	180	322	*629*
313 Beverages	52	76	139	*230*
314 Tobacco products	25	35	64	*168*
321 Textiles	70	28	72	*74*
322 Wearing apparel	127	157	294	*242*
323 Leather and fur products	7	5	11	*27*
324 Footwear	9	5	9	*12*
331 Wood and wood products	84	43	55	*59*
332 Furniture and fixtures	40	61	89	*133*
341 Paper and paper products	45	82	189	*376*
342 Printing and publishing	128	229	514	*1 175*
351 Industrial chemicals	52	138	584	*877*
352 Other chemical products	143	267	600	*1 277*
353 Petroleum refineries	*656*	*379*	*872*	*1 339*
354 Miscellaneous petroleum and coal products	*30*	*18*	*45*	*80*
355 Rubber products	44	21	35	*77*
356 Plastic products	84	102	327	*714*
361 Pottery, china and earthenware	*1*	-	*2*	*7*
362 Glass and glass products	*7*	*7*	*9*	*13*
369 Other non-metal mineral products	82	140	149	*410*
371 Iron and steel	62	48	97	*102*
372 Non-ferrous metals	9	17	41	*65*
381 Metal products	206	298	730	*1 650*
382 Non-electrical machinery	319	370	2 737	*6 805*
383 Electrical machinery	950	1 538	2 707	*5 991*
384 Transport equipment	500	470	890	*1 733*
385 Professional and scientific equipment	80	89	200	*474*
390 Other manufacturing industries	69	58	114	*111*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

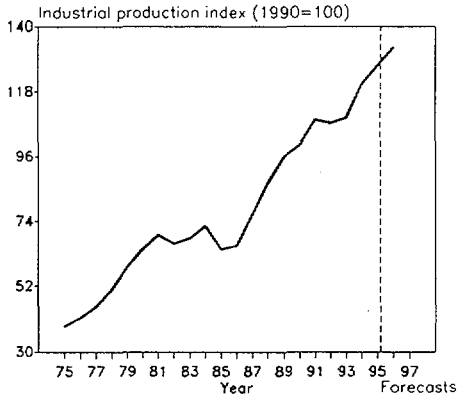
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

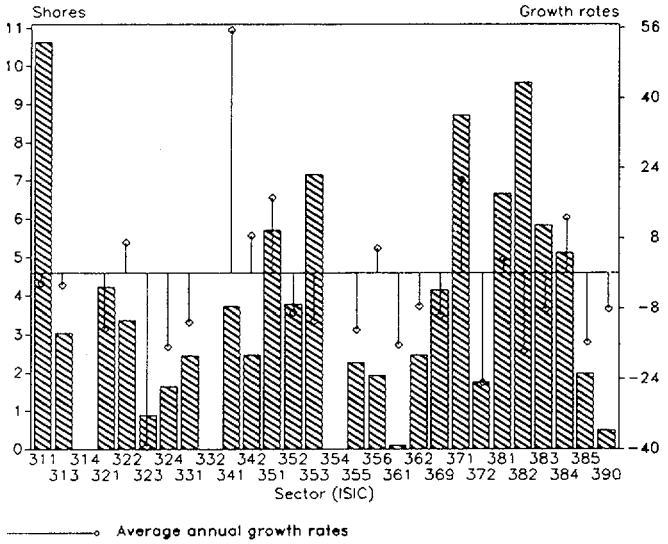


Industrial production index (1990=100)

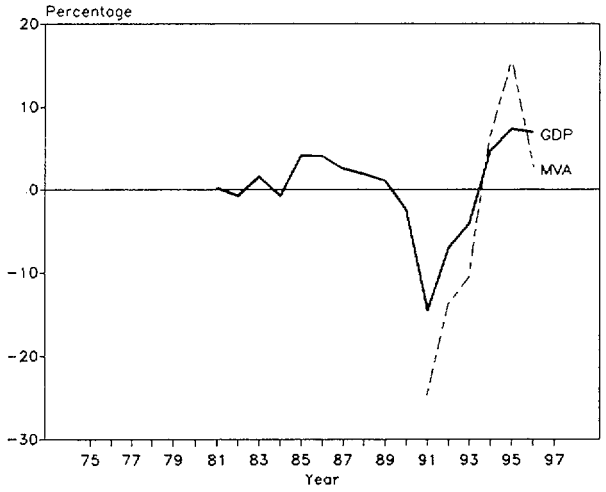


SLOVAKIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1993–1994 (Percentage)



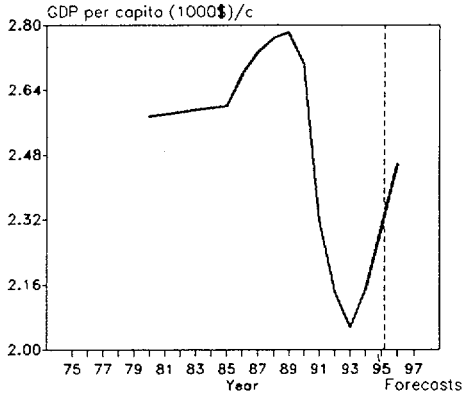
Annual growth rates of GDP and MVA (Constant 1990 prices)



Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

	1980	1985	1990	1994
GDP: [na] (millions of 1990-dollars)	12 814	13 370	14 323	11 441
Per capita [na] (1990-dollars)	2 575	2 601	2 702	2 149
Manufacturing share [na] (%) (current factor prices)	..	..	..	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	..	..	5 282	3 261
Industrial production index (1990=100)	..	..	..	..
Value added (millions of dollars)	..	..	..	2 690
Gross output (millions of dollars)	*609*	*592*	*12 489*	*11 952*
Employment (thousands)	*120*	*123*	*617*	445
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	..	..	..	*77*
Wages and salaries including supplements (%)	..	..	..	*9*
Gross operating surplus and net taxes (%)	..	..	..	*14*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*14 386*	*13 600*	*20 240*	*26 862*
Value added per worker	..	..	..	6 047
Average wage (including supplements)	*1 752*	*1 638*	*1 679*	2 327
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	..	..	..	..
as a percentage of 1970-1975 structural change	..	..	..	..
MVA growth rate perer unit of structural change	..	..	..	..
Degree of specialization	..	..	..	..
-VALUE ADDED: (millions of dollars)				
311/2 Food products	..	..	..	285
313 Beverages	..	..	..	81
314 Tobacco products	..	..	..	..
321 Textiles	..	..	..	107
322 Wearing apparel	..	..	..	94
323 Leather and fur products	..	..	..	18
324 Footwear	..	..	..	41
331 Wood and wood products	..	..	..	62
332 Furniture and fixtures	..	..	..	..
341 Paper and paper products	..	..	..	123
342 Printing and publishing	..	..	..	69
351 Industrial chemicals	..	..	..	167
352 Other chemical products	..	..	..	98
353 Petroleum refineries	..	..	..	183
354 Miscellaneous petroleum and coal products	..	..	..	..
355 Rubber products	..	..	..	57
356 Plastic products	..	..	..	54
361 Pottery, china and earthenware	..	..	..	2
362 Glass and glass products	..	..	..	64
369 Other non-metal mineral products	..	..	..	107
371 Iron and steel	..	..	..	259
372 Non-ferrous metals	..	..	..	40
381 Metal products	..	..	..	183
382 Non-electrical machinery	..	..	..	235
383 Electrical machinery	..	..	..	151
384 Transport equipment	..	..	..	147
385 Professional and scientific equipment	..	..	..	49
390 Other manufacturing industries	..	..	..	13

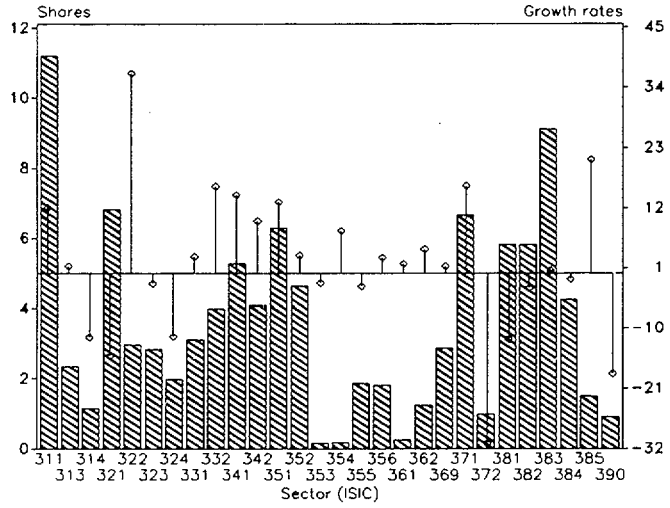
GDP per capita (1000$)/c



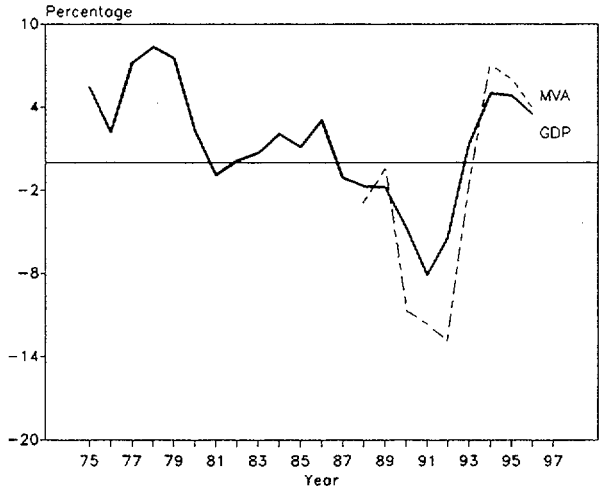
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

SLOVENIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



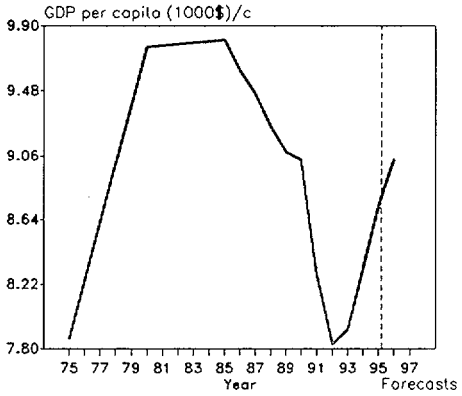
Annual growth rates of GDP and MVA (Constant 1990 prices)



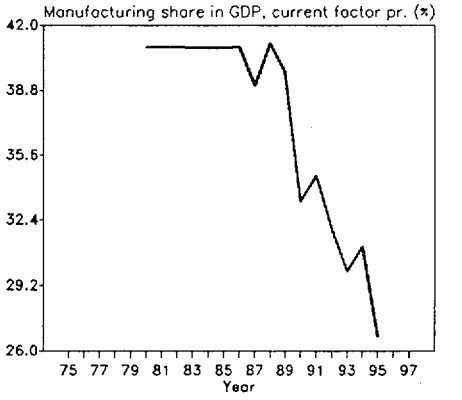
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	17 886	18 451	17 330	16 800
Per capita [na] (1990-dollars)	9 763	9 809	9 035	.8 727
Manufacturing share [na] (%) (current factor prices)	40.9	40.9	33.3	26.7
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	..	..	5 157	*4 407*
Industrial production index (1990=100)	..	116	100	81
Value added (millions of dollars)	*2 977*	*2 519*	5 305	*6 033*
Gross output (millions of dollars)	*22 178*	*10 859*	15 774	*16 665*
Employment (thousands)	*499*	*402*	356	*262*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*85*	*77*	66	*64*
Wages and salaries including supplements (%)	*14*	*16*	*22*	*16*
Gross operating surplus and net taxes (%)	*1*	*7*	*12*	*20*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*40 259*	*24 922*	42 911	*59 943*
Value added per worker	*7 129*	*5 916*	14 418	*22 181*
Average wage (including supplements)	*6 827*	*4 388*	*9 561*	*10 264*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*14.66*	*14.55*	*13.88*	*19.21*
as a percentage of 1970-1975 structural change	*100*	*99*	*95*	*131*
MVA growth rate perer unit of structural change	-0.33	1.22	0.48	-0.05
Degree of specialization	16.1	24.7	9.8	10.8
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*186*	*150*	*426*	*762*
313 Beverages	*53*	*39*	*127*	*130*
314 Tobacco products	*14*	*7*	*52*	*27*
321 Textiles	..	*402*	*581*	*239*
322 Wearing apparel	*3*	*4*	*48*	*262*
323 Leather and fur products	*17*	*24*	*158*	*142*
324 Footwear	*40*	*32*	*138*	*71*
331 Wood and wood products	*99*	*95*	193	*198*
332 Furniture and fixtures	*50*	*64*	*157*	*323*
341 Paper and paper products	*121*	*102*	*173*	*406*
342 Printing and publishing	..	*72*	*159*	*238*
351 Industrial chemicals	*102*	*80*	*234*	*438*
352 Other chemical products	*96*	*72*	*251*	*291*
353 Petroleum refineries	*10*	*5*	*5*	*5*
354 Miscellaneous petroleum and coal products	*4*	*2*	*5*	*9*
355 Rubber products	*85*	*58*	*109*	*101*
356 Plastic products	*51*	*44*	*100*	*107*
361 Pottery, china and earthenware	..	*8*	*13*	*14*
362 Glass and glass products	*24*	*22*	*67*	*78*
369 Other non-metal mineral products	*82*	*68*	*171*	*168*
371 Iron and steel	*204*	*119*	*196*	*509*
372 Non-ferrous metals	*126*	*42*	*131*	*15*
381 Metal products	*467*	*264*	*504*	*251*
382 Non-electrical machinery	*540*	*261*	*349*	*322*
383 Electrical machinery	*308*	*297*	546	*534*
384 Transport equipment	*148*	*107*	287	*252*
385 Professional and scientific equipment	*8*	*10*	*40*	*115*
390 Other manufacturing industries	*138*	*66*	*85*	*27*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

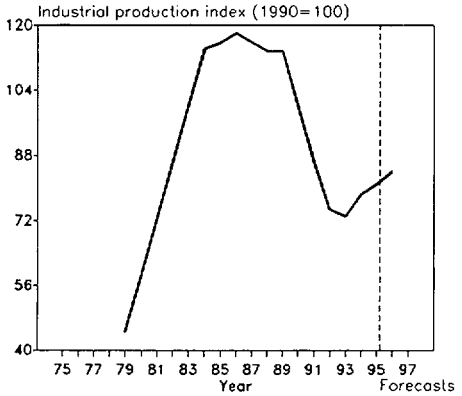
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

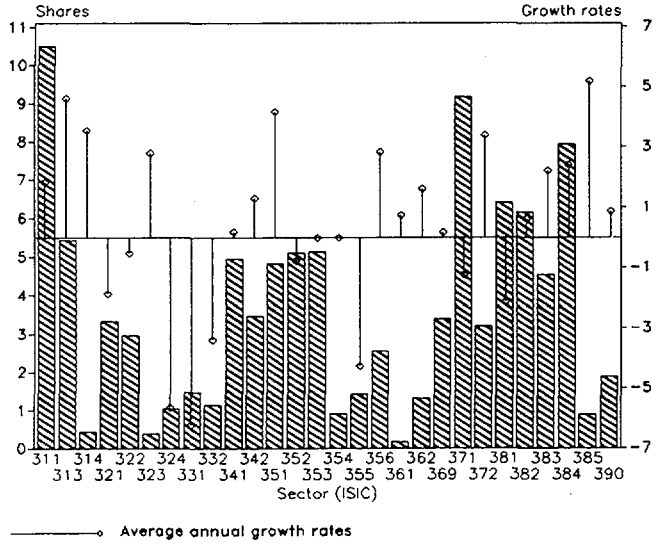


Industrial production index (1990=100)

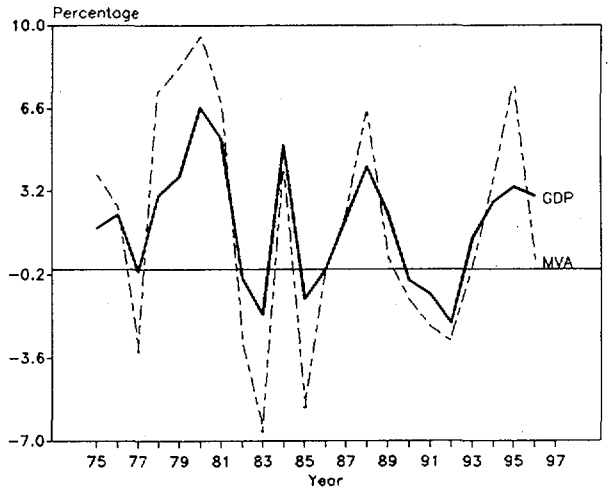


SOUTH AFRICA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



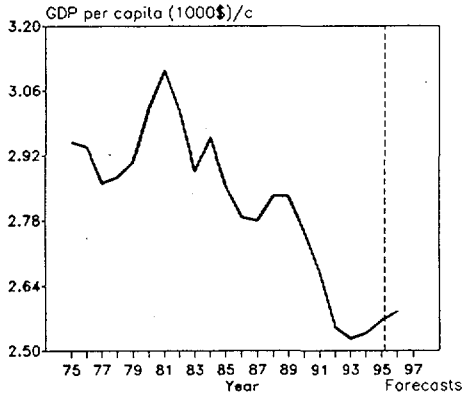
Annual growth rates of GDP and MVA (Constant 1990 prices)



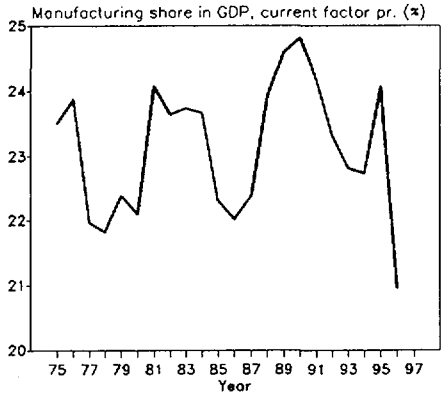
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	88 156	94 292	102 167	106 403
Per capita [na] (1990-dollars)	3 022	2 854	2 756	2 566
Manufacturing share [na] (%) (current factor prices)	22.1	22.3	24.8	24.1
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	22 709	21 534	23 181	24 442
Industrial production index (1990=100)	91	93	100	103
Value added (millions of dollars)	17 866	12 409	23 181	*29 071*
Gross output (millions of dollars)	*53 686*	36 059	68 770	*78 533*
Employment (thousands)	1 392	1 422	1 525	*1 432*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*67*	66	66	*63*
Wages and salaries including supplements (%)	*16*	18	*17*	*18*
Gross operating surplus (%)	*17*	17	*17*	*19*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*38 568*	24 972	45 095	*54 820*
Value added per worker	12 835	8 629	15 201	*20 303*
Average wage (including supplements)	*6 120*	4 466	*7 708*	*10 093*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	7.44	11.56	13.10	*8.57*
as a percentage of 1970-1975 structural change	100	155	176	*115*
MVA growth rate perer unit of structural change	1.99	1.41	0.75	0.92
Degree of specialization	10.7	9.2	8.4	8.8
-VALUE ADDED: (millions of dollars)				
311/2 Food products	1 626	1 277	2 220	*3 028*
313 Beverages	458	418	1 055	*1 660*
314 Tobacco products	111	108	83	*126*
321 Textiles	886	408	851	*923*
322 Wearing apparel	477	334	701	*828*
323 Leather and fur products	40	44	75	*107*
324 Footwear	152	113	316	*272*
331 Wood and wood products	213	190	469	*387*
332 Furniture and fixtures	219	138	307	*306*
341 Paper and paper products	591	471	1 208	*1 466*
342 Printing and publishing	549	392	763	*990*
351 Industrial chemicals	1 006	717	932	*1 457*
352 Other chemical products	639	1 047	1 255	*1 424*
353 Petroleum refineries	634	1 038	1 244	*1 457*
354 Miscellaneous petroleum and coal products	111	182	217	*255*
355 Rubber products	297	157	401	*382*
356 Plastic products	355	225	560	*761*
361 Pottery, china and earthenware	28	24	42	*52*
362 Glass and glass products	154	102	292	*389*
369 Other non-metal mineral products	754	481	794	*993*
371 Iron and steel	2 135	986	2 343	*2 700*
372 Non-ferrous metals	555	418	642	*923*
381 Metal products	1 576	860	1 697	*1 825*
382 Non-electrical machinery	1 351	805	1 432	*1 819*
383 Electrical machinery	1 229	607	970	*1 369*
384 Transport equipment	1 258	566	1 705	*2 334*
385 Professional and scientific equipment	49	54	160	*263*
390 Other manufacturing industries	415	246	448	*575*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

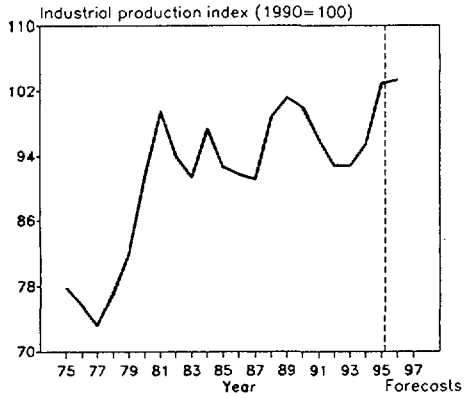
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

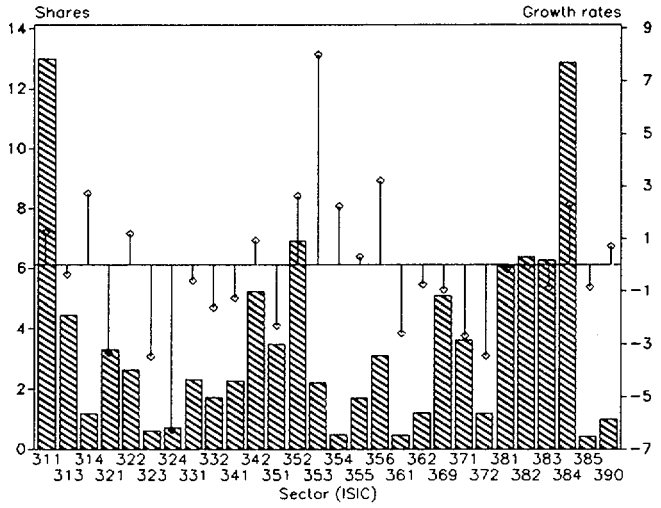


Industrial production index (1990=100)

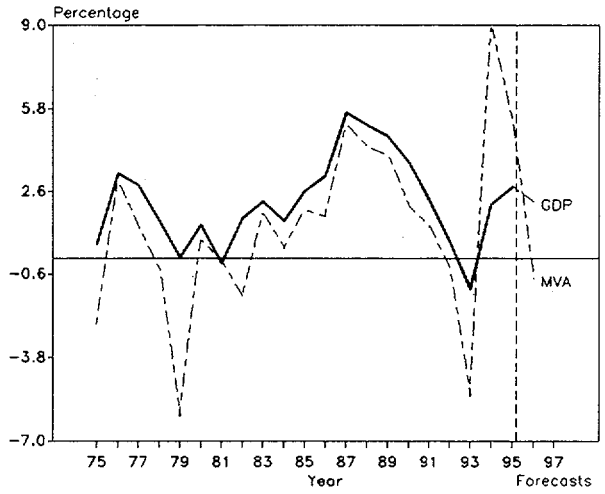


SPAIN

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

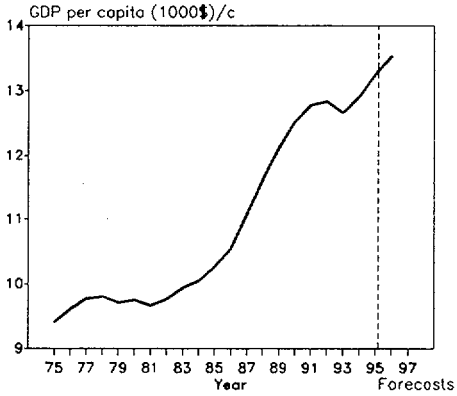


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

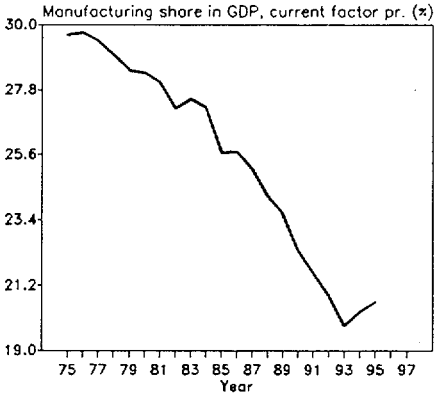
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	365 986	394 916	491 957	525 324
Per capita [na] (1990-dollars)	9 749	10 264	12 527	13 257
Manufacturing share [na] (%) (current factor prices)	28.4	25.7	22.4	*20.6*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	92 018	94 161	111 315	121 881
Industrial production index (1990=100)	83	83	100	103
Value added (millions of dollars)	51 944	33 139	87 679	*95 386*
Gross output (millions of dollars)	149 786	104 594	259 945	*275 846*
Employment (thousands)	2 383	1 793	1 907	*1 774*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	65	68	66	*65*
Wages and salaries including supplements (%)	20	17	18	*14*
Gross operating surplus (%)	14	15	16	*21*
-PRODUCTIVITY: (dollars)				
Gross output per worker	59 041	53 985	127 029	*145 447*
Value added per worker	20 475	17 112	42 847	*50 296*
Average wage (including supplements)	12 852	9 694	24 205	*21 646*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	9.37	9.59	7.52	*6.03*
as a percentage of 1970-1975 structural change	100	102	80	*64*
MVA growth rate perer unit of structural change	4.74	2.01	-0.03	1.17
Degree of specialization	8.4	8.5	10.1	10.9
-VALUE ADDED: (millions of dollars)				
311/2 Food products	5 665	4 193	10 773	*12 194*
313 Beverages	1 932	1 576	4 014	*4 126*
314 Tobacco products	649	471	912	*1 132*
321 Textiles	3 289	1 613	3 314	*3 005*
322 Wearing apparel	1 502	753	2 242	*2 600*
323 Leather and fur products	375	268	614	*554*
324 Footwear	810	415	781	*591*
331 Wood and wood products	1 258	707	2 164	*2 175*
332 Furniture and fixtures	1 262	617	1 534	*1 523*
341 Paper and paper products	1 278	947	2 101	*2 124*
342 Printing and publishing	1 506	1 198	4 403	*4 901*
351 Industrial chemicals	2 006	1 737	3 427	*3 245*
352 Other chemical products	2 506	1 923	5 609	*6 913*
353 Petroleum refineries	1 409	969	1 348	*2 225*
354 Miscellaneous petroleum and coal products	229	191	383	*462*
355 Rubber products	955	597	1 490	*1 643*
356 Plastic products	1 098	814	2 452	*3 184*
361 Pottery, china and earthenware	346	174	432	*416*
362 Glass and glass products	640	442	1 128	*1 165*
369 Other non-metal mineral products	2 522	1 617	4 797	*4 937*
371 Iron and steel	3 255	1 756	3 762	*3 489*
372 Non-ferrous metals	948	616	1 275	*1 127*
381 Metal products	3 720	2 044	5 437	*5 875*
382 Non-electrical machinery	3 595	2 226	5 745	*5 952*
383 Electrical machinery	3 669	2 064	5 978	*6 130*
384 Transport equipment	4 743	2 776	10 320	*12 371*
385 Professional and scientific equipment	205	122	375	*384*
390 Other manufacturing industries	573	316	870	*944*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

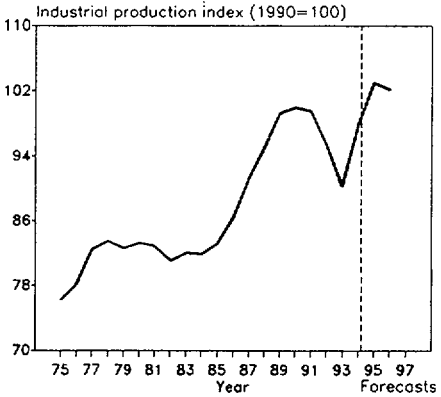
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

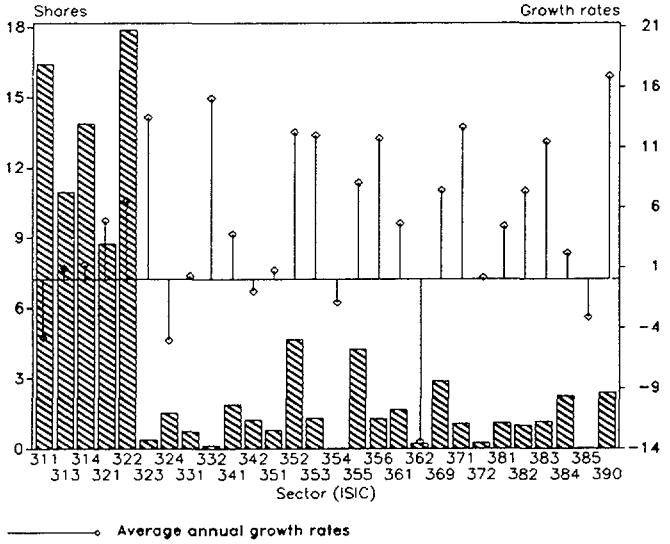


Industrial production index (1990=100)

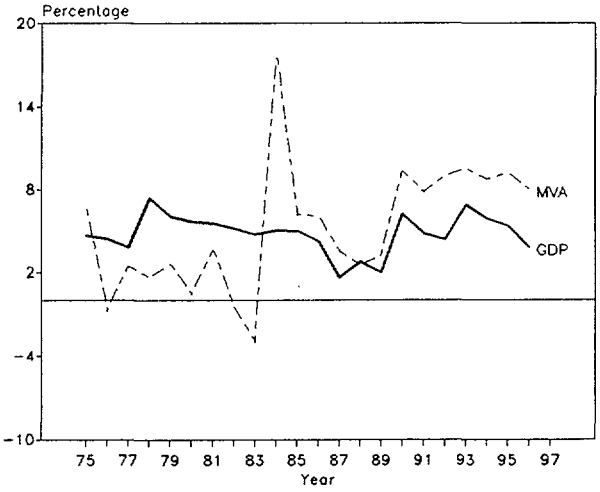


SRI LANKA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



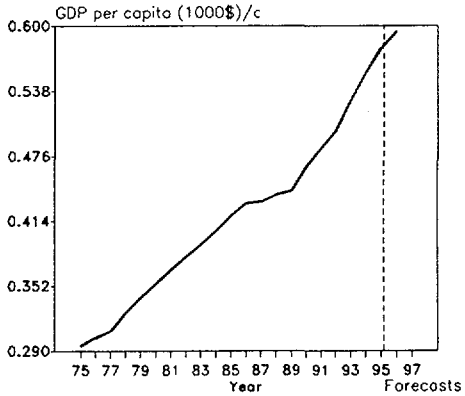
Annual growth rates of GDP and MVA (Constant 1990 prices)



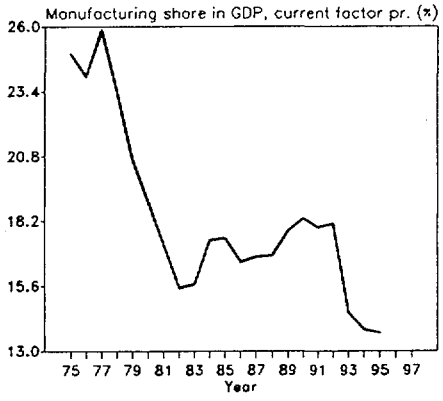
Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES

	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	5 242	6 725	7 935	10 359
Per capita [na] (1990-dollars)	354	419	465	578
Manufacturing share [na] (%) (current factor prices)	19.0	17.5	18.3	*13.8*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	868	1 081	1 371	2 094
Industrial production index (1990=100)	*71*	*73*	100	*222*
Value added (millions of dollars)	*375*	*597*	1 017	*1 495*
Gross output (millions of dollars)	*1 292*	1 815	2 519	*3 829*
Employment (thousands)	*195*	211	283	*334*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*71*	*67*	60	*61*
Wages and salaries including supplements (%)	*6*	6	7	*8*
Gross operating surplus and net taxes (%)	*23*	*27*	34	*31*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*6 636*	8 599	8 910	*11 448*
Value added per worker	*1 926*	*2 824*	3 597	*4 475*
Average wage (including supplements)	*407*	529	606	*936*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*21.40*	*20.78*	*20.69*	*16.65*
as a percentage of 1970-1975 structural change	*100*	*97*	*97*	*78*
MVA growth rate perer unit of structural change	3.80	3.54	2.13	1.66
Degree of specialization	23.6	30.0	25.5	21.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*90*	*170*	240	*226*
313 Beverages	8	*33*	118	*174*
314 Tobacco products	63	*144*	156	*201*
321 Textiles	27	*47*	82	*134*
322 Wearing apparel	12	*32*	142	*257*
323 Leather and fur products	1	*2*	3	*7*
324 Footwear	2	*3*	20	*20*
331 Wood and wood products	5	*8*	9	*11*
332 Furniture and fixtures	*2*	*2*	1	*2*
341 Paper and paper products	8	*10*	19	*28*
342 Printing and publishing	*8*	*7*	15	*17*
351 Industrial chemicals	6	*5*	10	*12*
352 Other chemical products	12	*15*	33	*79*
353 Petroleum refineries	55	*22*	*10*	*25*
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	14	*30*	35	*68*
356 Plastic products	4	*4*	9	*21*
361 Pottery, china and earthenware	4	*6*	17	*26*
362 Glass and glass products	2	*2*	4	*2*
369 Other non-metal mineral products	21	*26*	23	*44*
371 Iron and steel	3	*3*	8	*18*
372 Non-ferrous metals	2	*1*	3	*3*
381 Metal products	7	*8*	10	*18*
382 Non-electrical machinery	4	*5*	9	*16*
383 Electrical machinery	10	*4*	7	*17*
384 Transport equipment	4	*2*	25	*33*
385 Professional and scientific equipment	1	-	-	-
390 Other manufacturing industries	1	*5*	10	*36*

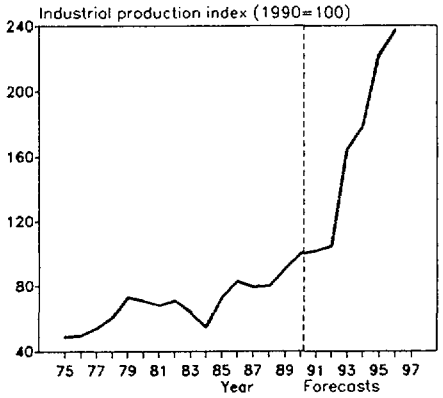
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)



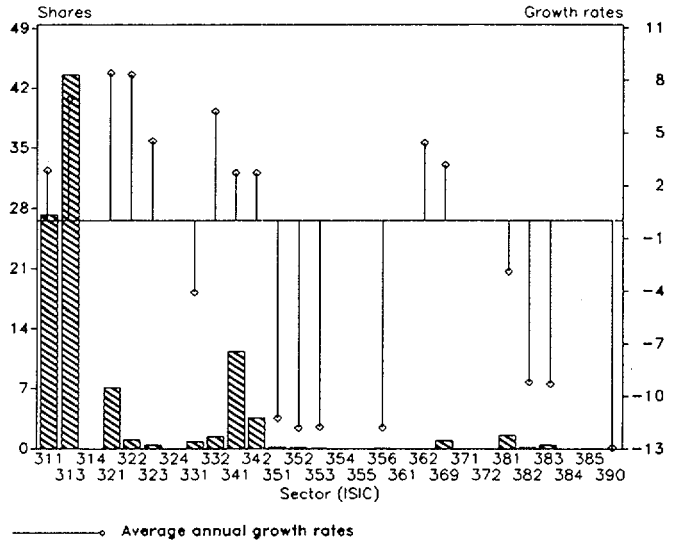
Industrial production index (1990=100)



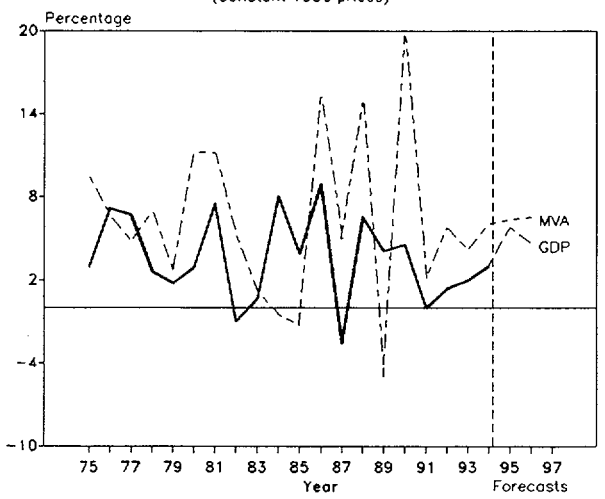
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

SWAZILAND

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

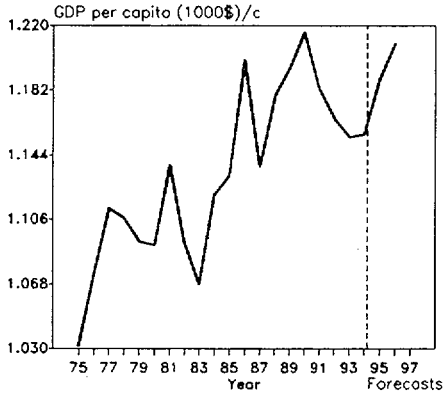


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

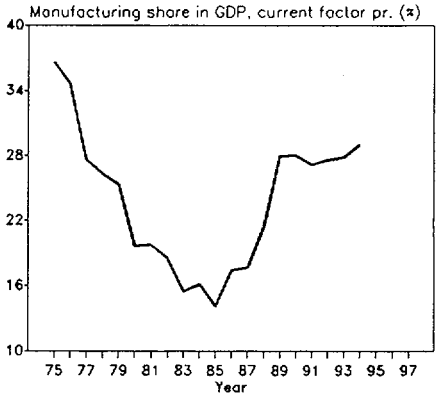
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	611	735	905	*1 019*
Per capita [na] (1990-dollars)	1 091	1 132	1 216	*1 189*
Manufacturing share [na] (%) (current factor prices)	19.7	14.1	28.0	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	138	161	254	*321*
Industrial production index (1990=100)	72	85	100	*117*
Value added (millions of dollars)	104	49	252	*411*
Gross output (millions of dollars)	394	195	615	*980*
Employment (thousands)	11	12	20	*25*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	74	75	59	*58*
Wages and salaries including supplements (%)	*11*	*12*	*11*	*10*
Gross operating surplus (%)	*16*	*13*	*30*	*32*
-PRODUCTIVITY: (dollars)				
Gross output per worker	36 593	16 709	30 711	*39 036*
Value added per worker	9 650	4 166	12 561	*17 957*
Average wage (including supplements)	*3 907*	*2 002*	*3 409*	*4 105*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*13.76*	*14.32*	*29.57*	*22.27*
as a percentage of 1970-1975 structural change	*100*	*104*	*215*	*162*
MVA growth rate perer unit of structural change	3.27	-1.06	3.65	6.18
Degree of specialization	30.6	44.6	43.2	46.2
-VALUE ADDED: (millions of dollars)				
311/2 Food products	39	26	74	*109*
313 Beverages	4	3	101	*184*
314 Tobacco products	-	-	-	-
321 Textiles	*2*	*1*	*16*	*31*
322 Wearing apparel	-	-	*2*	*4*
323 Leather and fur products	-	-	*1*	*2*
324 Footwear	-	-	-	-
331 Wood and wood products	*6*	*1*	*3*	*3*
332 Furniture and fixtures	*2*	*1*	*3*	*6*
341 Paper and paper products	*24*	*8*	*30*	*45*
342 Printing and publishing	*7*	*3*	*10*	*14*
351 Industrial chemicals	*3*	-	*1*	*1*
352 Other chemical products	*4*	-	*1*	-
353 Petroleum refineries	*2*	-	-	-
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	-	-	-	-
356 Plastic products	*1*	-	-	-
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	*1*	*1*	*3*	*4*
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	-	-	-	-
381 Metal products	4	3	5	*5*
382 Non-electrical machinery	-	-	-	-
383 Electrical machinery	2	-	*2*	*1*
384 Transport equipment	-	-	-	-
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	-	-	-	-

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

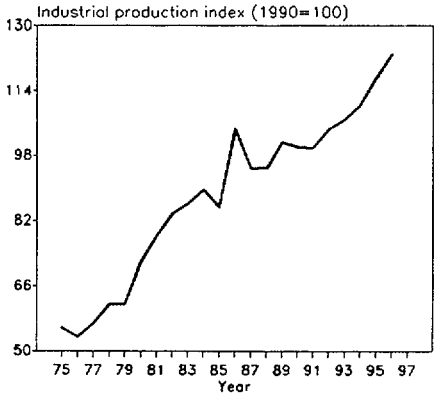
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

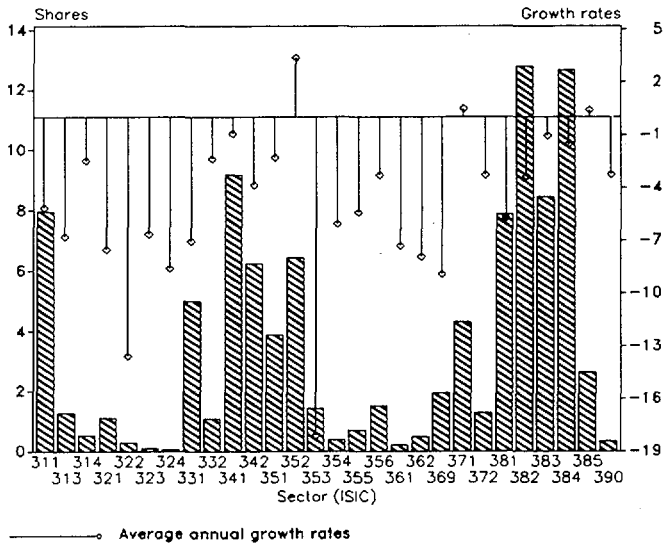


Industrial production index (1990=100)

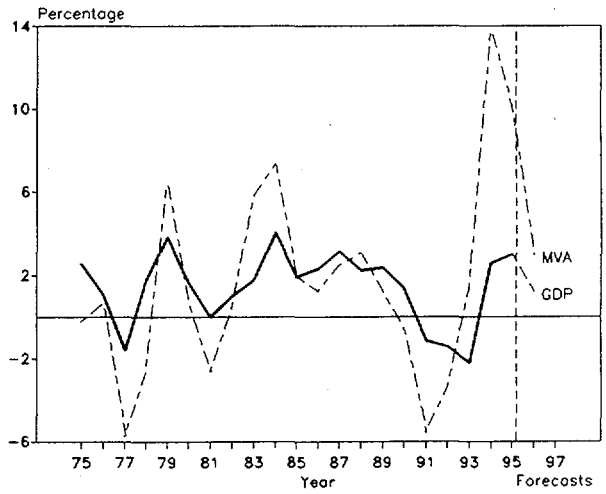


SWEDEN

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

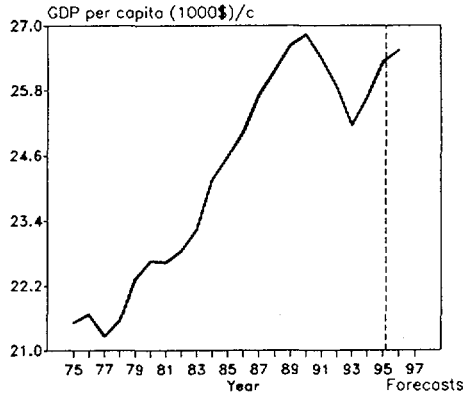


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

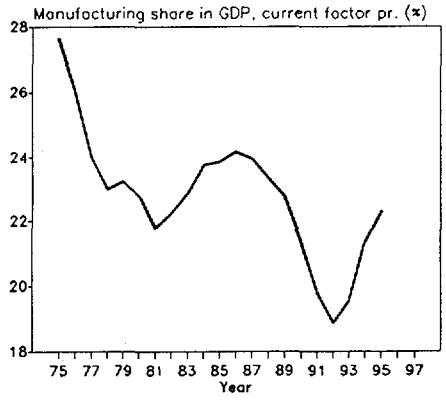
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	188 302	205 213	229 748	231 341
Per capita [na] (1990-dollars)	22 660	24 576	26 843	26 325
Manufacturing share [na] (%) (current factor prices)	22.8	23.9	21.4	*22.3*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	37 225	42 085	45 202	52 270
Industrial production index (1990=100)	85	93	100	112
Value added (millions of dollars)	30 905	24 486	51 429	*42 500*
Gross output (millions of dollars)	73 194	60 328	115 467	124 479
Employment (thousands)	853	768	719	*601*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	58	59	55	*66*
Wages and salaries including supplements (%)	18	15	16	*14*
Gross operating surplus (%)	24	26	29	*20*
-PRODUCTIVITY: (dollars)				
Gross output per worker	85 747	78 429	160 549	*195 794*
Value added per worker	36 206	31 833	71 509	*67 393*
Average wage (including supplements)	15 835	11 689	24 892	*28 441*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	6.15	4.92	4.68	*5.75*
as a percentage of 1970-1975 structural change	100	80	76	*94*
MVA growth rate perer unit of structural change	0.87	-0.15	1.11	-1.37
Degree of specialization	15.4	16.1	15.5	17.1
-VALUE ADDED: (millions of dollars)				
311/2 Food products	2 719	2 107	4 249	*3 139*
313 Beverages	338	250	743	*492*
314 Tobacco products	104	108	257	*219*
321 Textiles	534	378	620	*412*
322 Wearing apparel	274	157	199	*92*
323 Leather and fur products	54	40	52	*37*
324 Footwear	61	24	27	*17*
331 Wood and wood products	2 102	1 154	3 046	*2 048*
332 Furniture and fixtures	452	285	551	*462*
341 Paper and paper products	2 596	2 230	4 524	*4 128*
342 Printing and publishing	1 842	1 517	3 158	*2 534*
351 Industrial chemicals	986	840	1 983	*1 705*
352 Other chemical products	1 246	1 091	2 544	*2 994*
353 Petroleum refineries	359	396	1 325	*365*
354 Miscellaneous petroleum and coal products	137	122	218	*147*
355 Rubber products	314	225	387	*290*
356 Plastic products	402	334	786	*629*
361 Pottery, china and earthenware	87	71	123	*83*
362 Glass and glass products	175	124	294	*185*
369 Other non-metal mineral products	801	510	1 129	*673*
371 Iron and steel	1 650	1 185	2 097	*2 119*
372 Non-ferrous metals	390	331	640	*538*
381 Metal products	2 598	2 049	4 448	*3 209*
382 Non-electrical machinery	3 936	3 185	6 226	*5 165*
383 Electrical machinery	2 570	2 132	4 021	*3 754*
384 Transport equipment	3 652	3 153	6 459	*5 760*
385 Professional and scientific equipment	371	401	1 166	*1 173*
390 Other manufacturing industries	154	86	157	*132*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

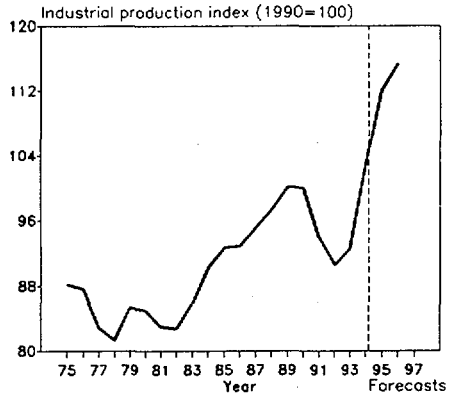
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

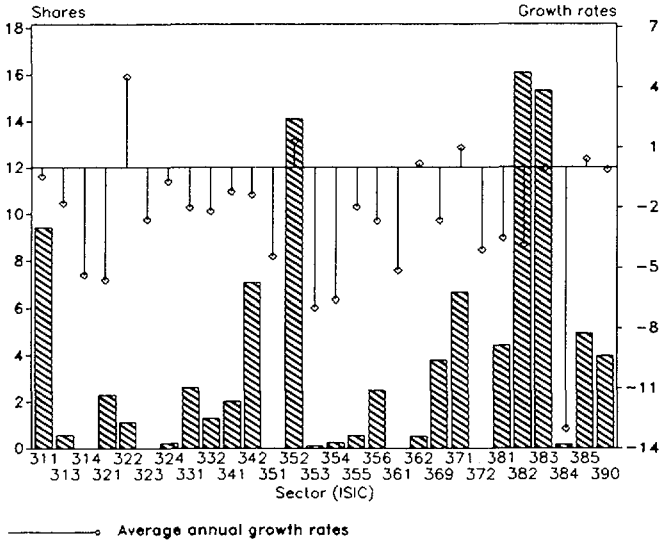


Industrial production index (1990=100)

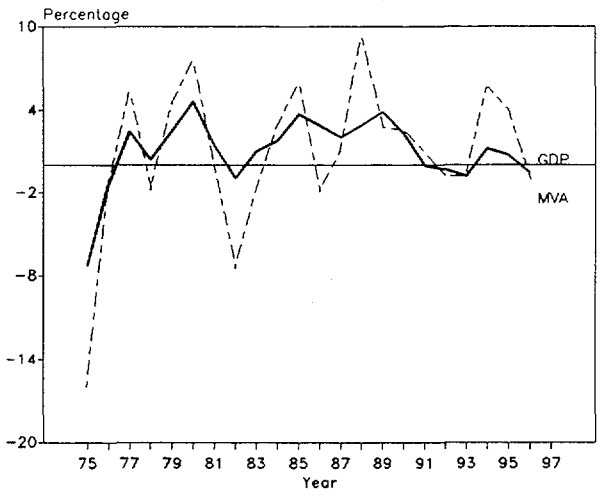


SWITZERLAND

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



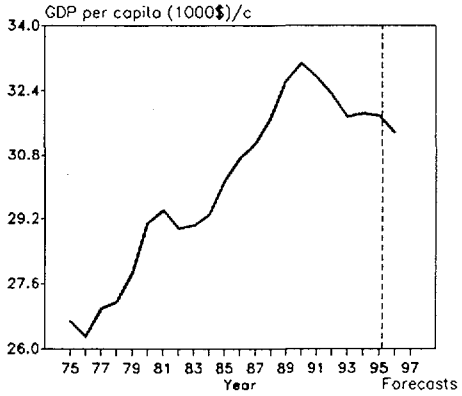
Annual growth rates of GDP and MVA (Constant 1990 prices)



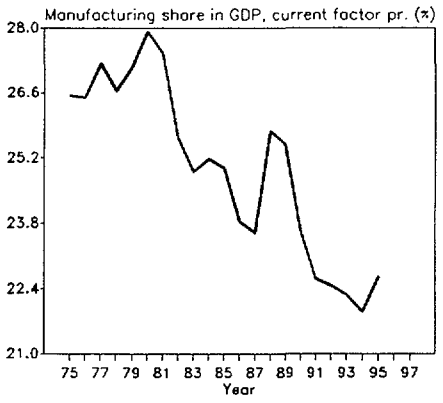
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	183 882	197 004	226 055	227 847
Per capita [na] (1990-dollars)	29 100	30 141	33 078	31 795
Manufacturing share [na] (%) (current factor prices)	27.9	25.0	23.7	22.7
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	49 121	48 483	55 235	60 153
Industrial production index (1990=100)	86	84	100	107
Value added (millions of dollars)	27 438	*24 716*	53 480	69 457
Gross output (millions of dollars)	*69 529*	*62 788*	141 040	179 768
Employment (thousands)	*828*	*835*	894	782
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	..	..	..	..
Wages and salaries including supplements (%)	..	..	..	..
Gross operating surplus and net taxes (%)	..	..	..	..
-PRODUCTIVITY: (dollars)				
Gross output per worker	*73 377*	*68 665*	139 944	203 293
Value added per worker	40 009	*37 654*	59 848	88 809
Average wage (including supplements)	..	..	..	..
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	12.46	*15.57*	*14.86*	*5.57*
as a percentage of 1970-1975 structural change	100	*125*	*119*	*45*
MVA growth rate perer unit of structural change	-0.38	0.83	0.31	-0.14
Degree of specialization	11.6	21.4	22.6	22.7
-VALUE ADDED: (millions of dollars)				
311/2 Food products	2 905	*2 628*	*4 782*	*6 472*
313 Beverages	499	*201*	*305*	*388*
314 Tobacco products	292	-	-	-
321 Textiles	972	*762*	1 408	1 518
322 Wearing apparel	864	*393*	*521*	*960*
323 Leather and fur products	124	-	-	-
324 Footwear	324	*109*	*128*	*153*
331 Wood and wood products	1 078	*732*	*1 471*	*1 802*
332 Furniture and fixtures	707	*373*	*733*	*898*
341 Paper and paper products	624	*598*	1 080	1 406
342 Printing and publishing	1 471	*1 772*	3 888	5 005
351 Industrial chemicals	1 529	-	-	-
352 Other chemical products	1 331	*2 454*	*6 776*	*10 372*
353 Petroleum refineries	584	*50*	*56*	*55*
354 Miscellaneous petroleum and coal products	96	*90*	*125*	*117*
355 Rubber products	225	*142*	*308*	*373*
356 Plastic products	625	*634*	*1 383*	*1 673*
361 Pottery, china and earthenware	136	-	-	-
362 Glass and glass products	187	*124*	*250*	*382*
369 Other non-metal mineral products	651	*889*	*2 142*	*2 477*
371 Iron and steel	454	*1 062*	*3 319*	*5 154*
372 Non-ferrous metals	583	-	*1*	*1*
381 Metal products	1 921	*1 265*	*2 525*	2 933
382 Non-electrical machinery	3 775	*4 533*	*9 221*	*10 269*
383 Electrical machinery	2 859	*3 814*	8 476	10 752
384 Transport equipment	508	*94*	*123*	*81*
385 Professional and scientific equipment	1 976	*1 209*	2 443	3 462
390 Other manufacturing industries	138	*788*	*2 017*	*2 755*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

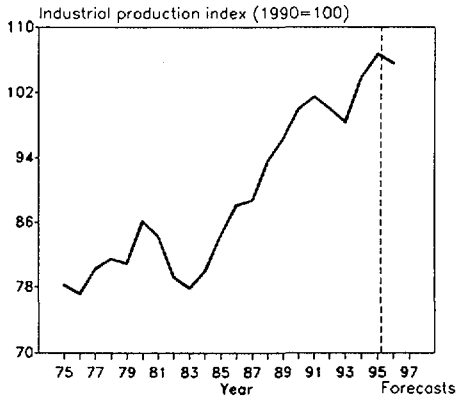
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

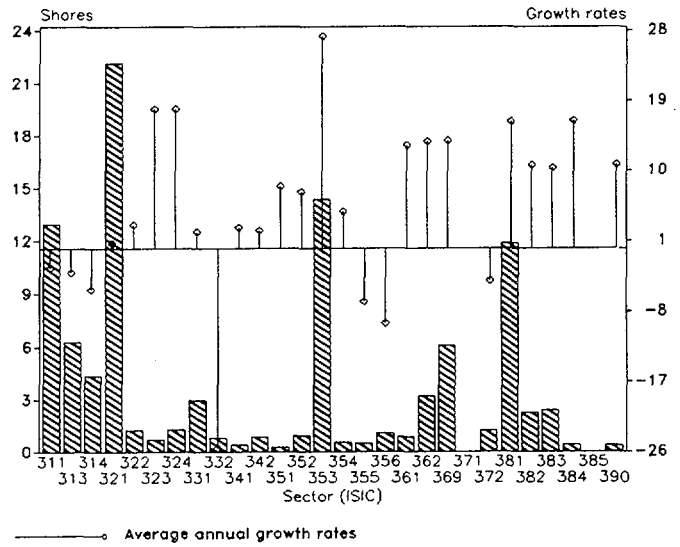


Industriol production index (1990=100)

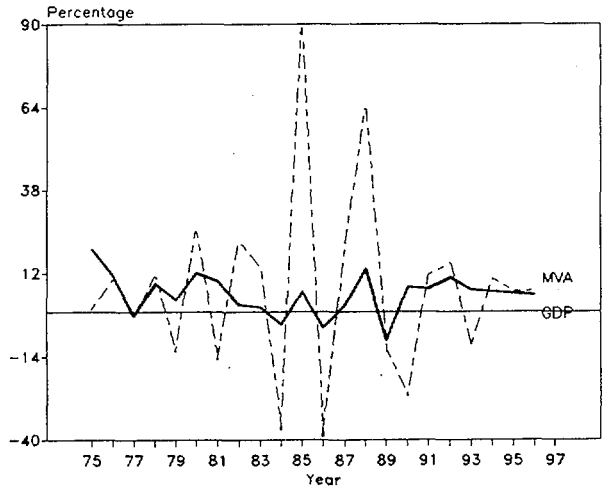


SYRIAN ARAB REPUBLIC

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



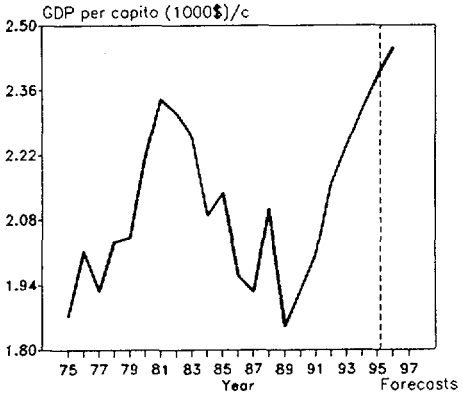
Annual growth rates of GDP and MVA (Constant 1990 prices)



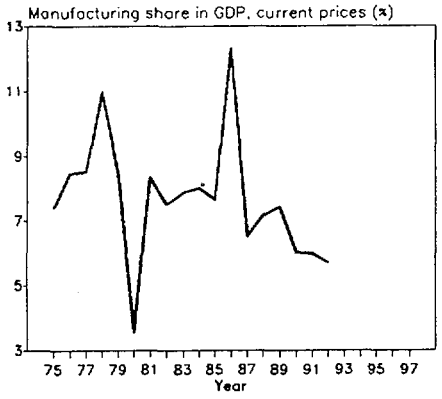
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	19 255	22 232	23 904	33 960
Per capita [na] (1990-dollars)	2 212	2 138	1 930	2 391
Manufacturing share [na] (%) (current factor prices)	3.6	7.7	6.0	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	1 343	1 883	1 441	*1 916*
Industrial production index (1990=100)	186	206	100	*148*
Value added (millions of dollars)	522	966	1 743	3 805
Gross output (millions of dollars)	3 259	6 050	9 373	17 990
Employment (thousands)	195	104	100	98
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	84	84	81	79
Wages and salaries including supplements (%)	*9*	*7*	*5*	*5*
Gross operating surplus (%)	*7*	*9*	*14*	*17*
-PRODUCTIVITY: (dollars)				
Gross output per worker	16 745	57 603	93 064	183 315
Value added per worker	2 681	9 104	17 325	38 844
Average wage (including supplements)	*1 634*	*4 601*	*4 601*	*8 595*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*43.08*	*92.07*	*78.68*	*36.02*
as a percentage of 1970-1975 structural change	*100*	*214*	*183*	*84*
MVA growth rate perer unit of structural change	0.36	0.00	0.43	0.80
Degree of specialization	-0.6	12.1	24.6	23.5
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*145*	*-16*	*326*	*456*
313 Beverages	*34*	*-5*	*161*	*220*
314 Tobacco products	*82*	*-7*	*122*	*146*
321 Textiles	*255*	*157*	*461*	*767*
322 Wearing apparel	*12*	*13*	*24*	*46*
323 Leather and fur products	*32*	*14*	*6*	*28*
324 Footwear	*57*	*25*	*11*	*51*
331 Wood and wood products	*40*	*50*	*49*	*85*
332 Furniture and fixtures	*63*	*46*	*27*	*8*
341 Paper and paper products	*3*	*8*	*8*	*16*
342 Printing and publishing	*5*	*16*	*18*	*32*
351 Industrial chemicals	*-9*	*5*	*4*	*9*
352 Other chemical products	*-57*	*27*	*14*	*33*
353 Petroleum refineries	*- 204*	*133*	*95*	*633*
354 Miscellaneous petroleum and coal products	*-12*	*11*	*9*	*18*
355 Rubber products	*-33*	*19*	*12*	*12*
356 Plastic products	*-34*	*30*	*29*	*24*
361 Pottery, china and earthenware	*2*	*12*	*11*	*37*
362 Glass and glass products	*6*	*46*	*42*	*142*
369 Other non-metal mineral products	*21*	*114*	*79*	*269*
371 Iron and steel	-	-	-	-
372 Non-ferrous metals	*13*	*28*	*20*	*24*
381 Metal products	*66*	*131*	*140*	*534*
382 Non-electrical machinery	*13*	*31*	*31*	*92*
383 Electrical machinery	*11*	*49*	*33*	*93*
384 Transport equipment	*2*	*4*	*5*	*17*
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	8	23	5	13

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

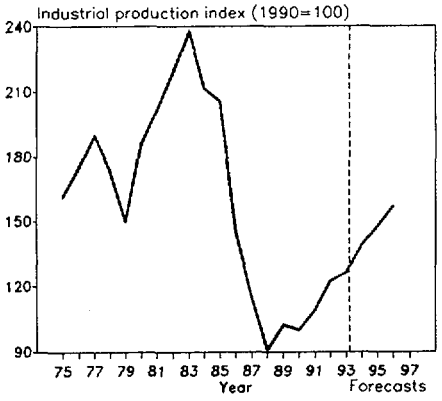
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)

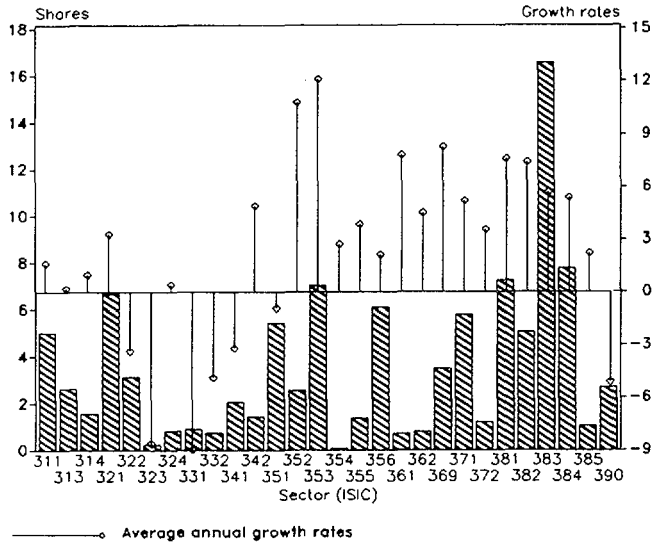


Industrial production index (1990=100)

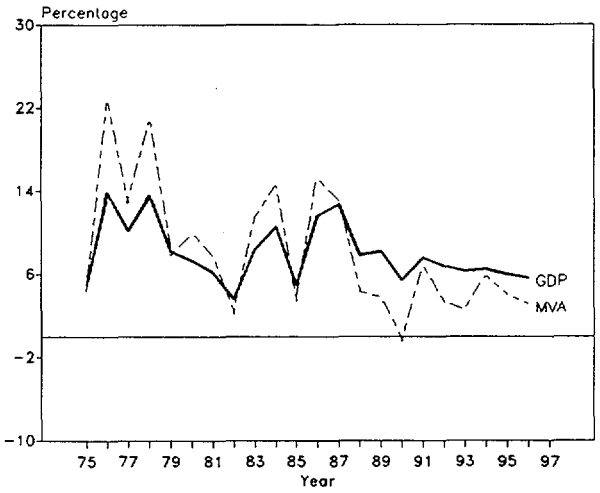


TAIWAN PROVINCE OF CHINA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

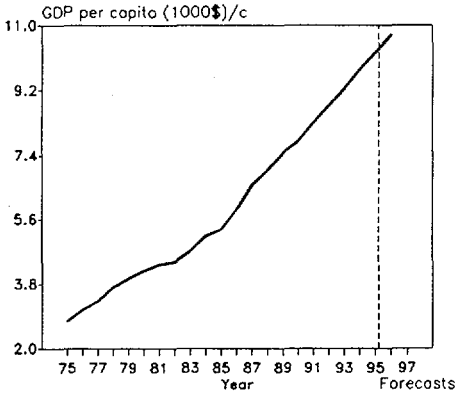


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

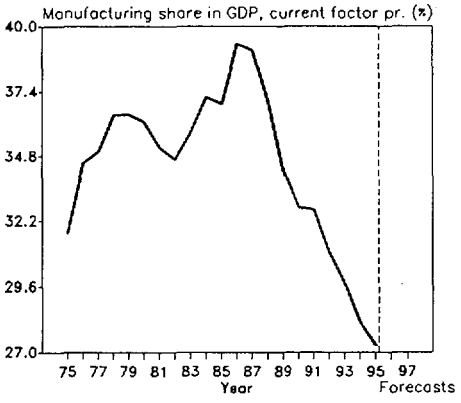
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	74 147	102 608	158 873	218 955
Per capita [na] (1990-dollars)	4 164	5 328	7 806	10 268
Manufacturing share [na] (%) (current factor prices)	36.2	36.9	32.7	27.3
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	26 048	37 761	52 916	*65 697*
Industrial production index (1990=100)	54	73	100	*127*
Value added (millions of dollars)	14 915	23 316	52 916	*77 097*
Gross output (millions of dollars)	55 374	75 673	167 929	*226 813*
Employment (thousands)	1 997	2 462	2 265	*2 182*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	73	69	68	*66*
Wages and salaries including supplements (%)	10	12	13	*15*
Gross operating surplus and net taxes (%)	17	18	18	*19*
-PRODUCTIVITY: (dollars)				
Gross output per worker	27 734	30 732	74 143	*103 929*
Value added per worker	7 470	9 469	23 363	*35 327*
Average wage (including supplements)	2 679	3 832	9 826	*15 297*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	12.64	7.73	8.58	*10.17*
as a percentage of 1970-1975 structural change	100	61	68	*80*
MVA growth rate perer unit of structural change	3.86	8.88	4.88	3.11
Degree of specialization	9.5	9.8	10.8	12.8
-VALUE ADDED: (millions of dollars)				
311/2 Food products	971	1 709	2 911	*3 734*
313 Beverages	455	723	1 623	*1 932*
314 Tobacco products	413	519	885	*1 130*
321 Textiles	1 385	1 995	3 544	*5 010*
322 Wearing apparel	815	1 480	2 196	*2 142*
323 Leather and fur products	182	222	194	*141*
324 Footwear	65	223	487	*578*
331 Wood and wood products	316	394	677	*511*
332 Furniture and fixtures	119	228	487	*460*
341 Paper and paper products	469	655	1 372	*1 388*
342 Printing and publishing	219	258	745	*1 124*
351 Industrial chemicals	885	1 610	3 344	*3 806*
352 Other chemical products	197	363	1 088	*2 181*
353 Petroleum refineries	997	1 338	2 431	*5 600*
354 Miscellaneous petroleum and coal products	19	22	37	*50*
355 Rubber products	205	330	732	*1 065*
356 Plastic products	839	1 543	3 454	*4 571*
361 Pottery, china and earthenware	85	137	330	*583*
362 Glass and glass products	114	165	419	*615*
369 Other non-metal mineral products	484	575	1 588	*2 911*
371 Iron and steel	828	1 155	2 965	*4 653*
372 Non-ferrous metals	139	220	667	*933*
381 Metal products	582	1 028	3 391	*5 886*
382 Non-electrical machinery	431	710	2 360	*4 089*
383 Electrical machinery	1 794	2 852	8 432	*13 398*
384 Transport equipment	880	1 274	3 966	*6 094*
385 Professional and scientific equipment	190	292	590	*777*
390 Other manufacturing industries	838	1 297	1 999	*1 737*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

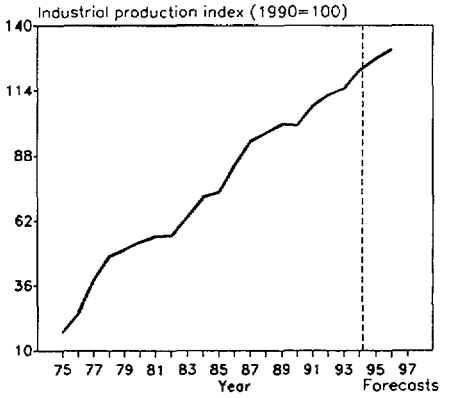
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

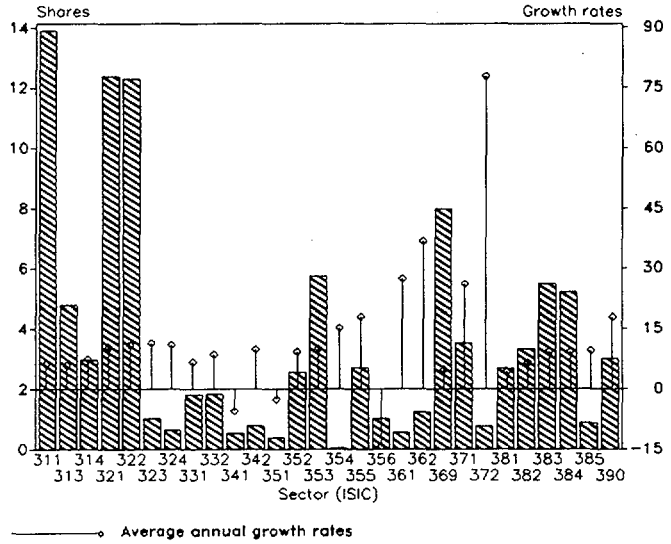


Industrial production index (1990=100)

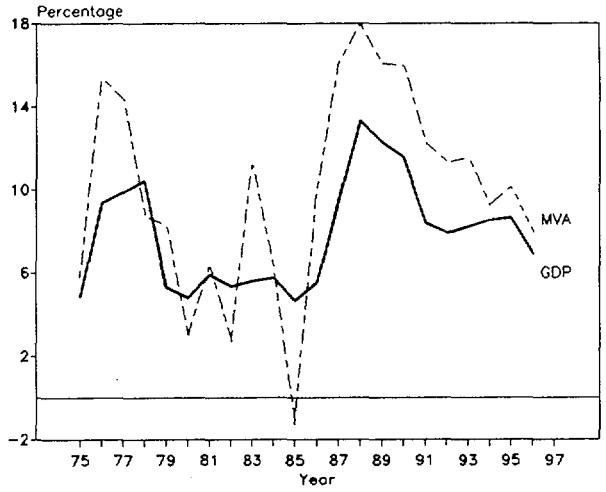


THAILAND

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



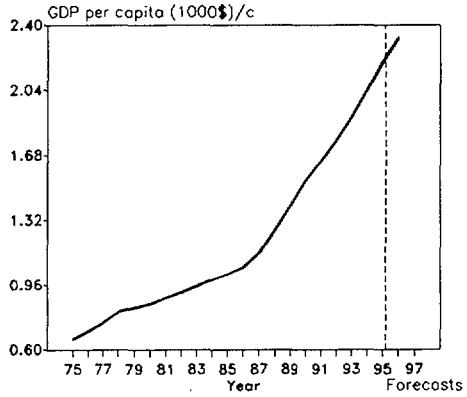
Annual growth rates of GDP and MVA (Constant 1990 prices)



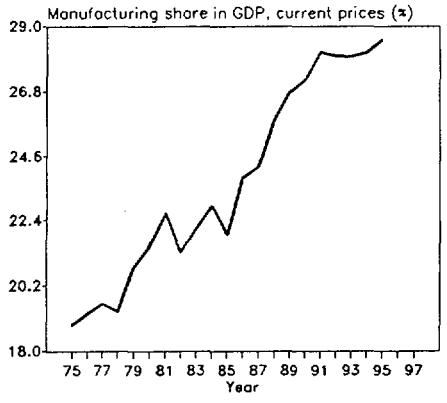
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	40 042	52 204	85 640	127 867
Per capita [na] (1990-dollars)	857	1 021	1 541	2 195
Manufacturing share [na] (%) (current factor prices)	21.5	21.9	27.2	28.6
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	9 065	11 518	23 290	39 005
Industrial production index (1990=100)	53	61	100	135
Value added (millions of dollars)	9 028	10 078	26 935	54 862
Gross output (millions of dollars)	25 476	29 388	80 938	160 414
Employment (thousands)	738	1 096	1 738	2 068
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	65	66	67	66
Wages and salaries including supplements (%)	7	9	7	7
Gross operating surplus and net taxes (%)	28	25	26	27
-PRODUCTIVITY: (dollars)				
Gross output per worker	15 683	15 122	40 425	58 577
Value added per worker	5 675	5 418	13 759	20 689
Average wage (including supplements)	2 513	2 395	3 486	5 389
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	9.31	10.04	13.66	14.00
as a percentage of 1970-1975 structural change	100	108	147	150
MVA growth rate perer unit of structural change	5.55	3.31	4.25	5.51
Degree of specialization	15.8	16.8	15.4	14.0
-VALUE ADDED: (millions of dollars)				
311/2 Food products	2 039	2 274	4 077	7 341
313 Beverages	682	786	1 409	2 504
314 Tobacco products	375	470	843	1 603
321 Textiles	1 118	1 044	3 099	6 898
322 Wearing apparel	591	1 025	3 043	6 902
323 Leather and fur products	38	85	252	577
324 Footwear	47	54	160	363
331 Wood and wood products	244	180	528	972
332 Furniture and fixtures	132	173	508	1 021
341 Paper and paper products	213	120	281	251
342 Printing and publishing	110	161	203	440
351 Industrial chemicals	94	63	154	172
352 Other chemical products	245	238	665	1 401
353 Petroleum refineries	537	683	1 468	3 189
354 Miscellaneous petroleum and coal products	27	21	10	27
355 Rubber products	221	147	473	1 534
356 Plastic products	102	103	892	417
361 Pottery, china and earthenware	35	48	59	316
362 Glass and glass products	64	54	92	740
369 Other non-metal mineral products	267	424	2 769	4 347
371 Iron and steel	316	236	430	2 088
372 Non-ferrous metals	118	74	11	432
381 Metal products	226	208	868	1 407
382 Non-electrical machinery	168	243	1 014	1 792
383 Electrical machinery	340	355	1 484	3 050
384 Transport equipment	338	337	1 409	2 913
385 Professional and scientific equipment	26	56	235	489
390 Other manufacturing industries	314	414	498	1 679

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

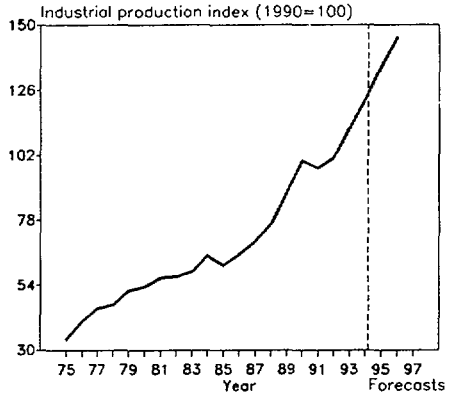
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)

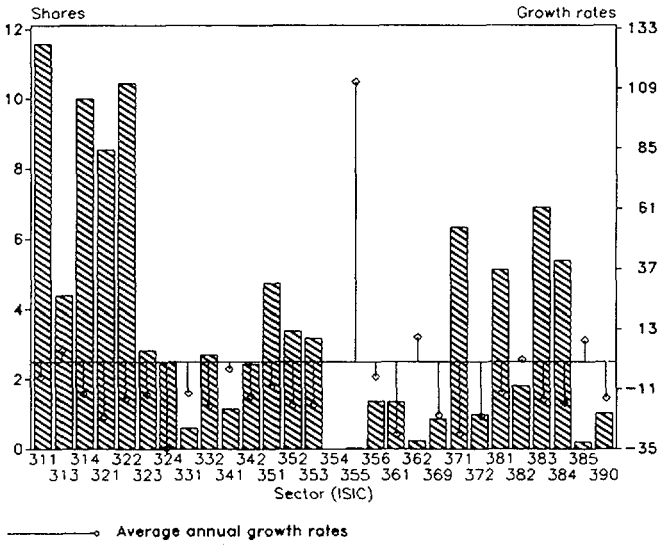


Industrial production index (1990=100)

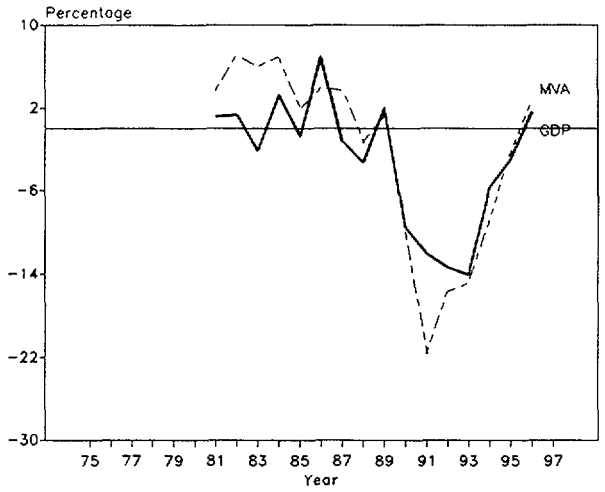


THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)

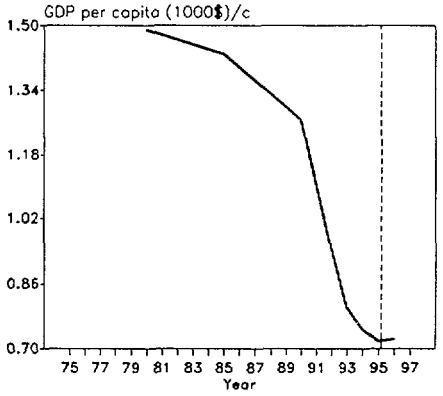


Annual growth rates of GDP and MVA (Constant 1990 prices)



	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	2 673	2 748	2 590	1 550
Per capita [na] (1990-dollars)	1 489	1 429	1 266	719
Manufacturing share [na] (%) (current factor prices)	..	..	..	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	1 478	1 892	1 822	*906*
Industrial production index (1990=100)	..	..	..	..
Value added (millions of dollars)	*1 459*	*959*	929	909
Gross output (millions of dollars)	*5 217*	*2 881*	2 206	2 044
Employment (thousands)	*230*	*199*	185	127
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*72*	*67*	58	56
Wages and salaries including supplements (%)	*8*	*10*	*20*	21
Gross operating surplus and net taxes (%)	*20*	*24*	*22*	23
-PRODUCTIVITY: (dollars)				
Gross output per worker	*22 677*	*14 482*	11 911	16 097
Value added per worker	*6 422*	*4 844*	5 016	7 157
Average wage (including supplements)	*1 861*	*1 416*	*2 389*	3 415
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*44.09*	*25.87*	*10.36*	15.24
as a percentage of 1970-1975 structural change	*100*	*59*	*23*	35
MVA growth rate perer unit of structural change	8.14	15.56	-1.20	-2.94
Degree of specialization	70.8	13.8	12.4	13.7
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*132*	*82*	80	137
313 Beverages	*33*	*23*	24	81
314 Tobacco products	*134*	*83*	82	89
321 Textiles	*108*	*102*	82	43
322 Wearing apparel	*232*	*141*	106	96
323 Leather and fur products	*34*	*22*	20	21
324 Footwear	*43*	*27*	37	7
331 Wood and wood products	*5*	*3*	5	6
332 Furniture and fixtures	*23*	*22*	31	23
341 Paper and paper products	*13*	*9*	7	14
342 Printing and publishing	*24*	*15*	22	22
351 Industrial chemicals	*89*	*55*	46	61
352 Other chemical products	*15*	*12*	37	33
353 Petroleum refineries	*56*	*36*	42	34
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	*2*	*2*	-	1
356 Plastic products	*29*	*15*	9	17
361 Pottery, china and earthenware	*44*	*16*	16	6
362 Glass and glass products	*4*	*3*	1	4
369 Other non-metal mineral products	*17*	*11*	8	5
371 Iron and steel	*169*	*63*	83	30
372 Non-ferrous metals	*5*	*3*	8	4
381 Metal products	*69*	*58*	45	48
382 Non-electrical machinery	*19*	*18*	6	14
383 Electrical machinery	*69*	*62*	69	62
384 Transport equipment	*80*	*66*	52	41
385 Professional and scientific equipment	*1*	*1*	1	3
390 Other manufacturing industries	*11*	*9*	9	9

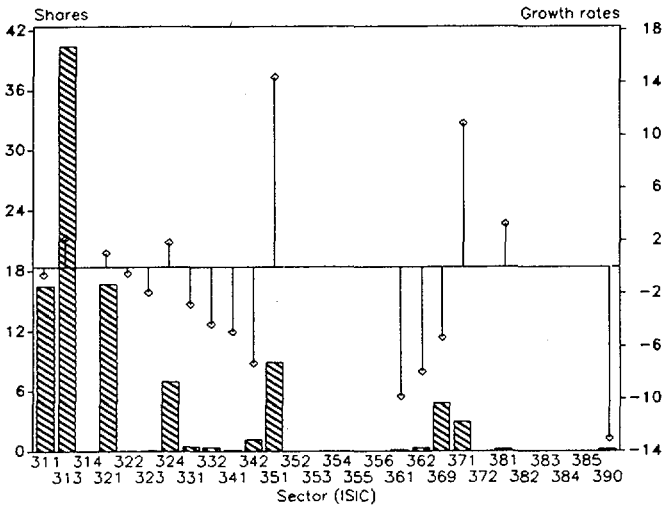
GDP per capita (1000$)/c



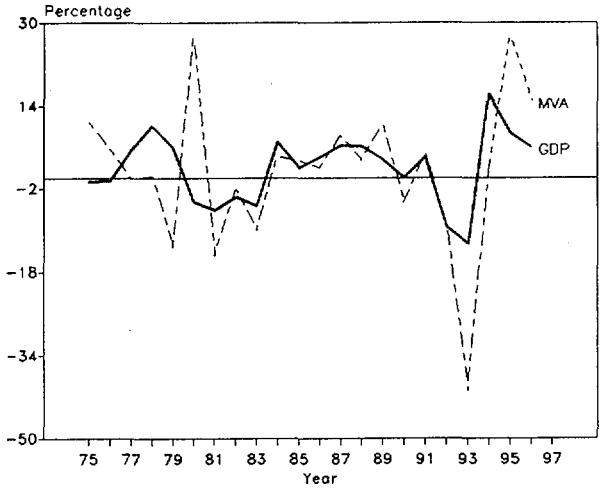
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

TOGO

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

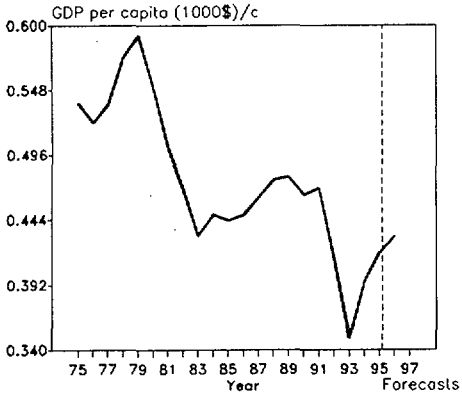


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

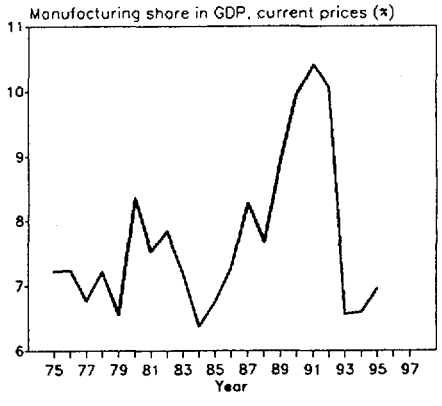
		1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)		1 438	1 343	1 636	1 706
Per capita [na] (1990-dollars)		550	444	464	418
Manufacturing share [na] (%) (current factor prices)		8.4	6.7	9.9	*7.0*
MANUFACTURING:					
Value added [na] (millions of 1990-dollars)		169	136	163	*117*
Industrial production index (1990=100)		*46*	*59*	100	*127*
Value added (millions of dollars)		*52*	*38*	*67*	*59*
Gross output (millions of dollars)		*149*	94	226	*210*
Employment (thousands)		*5*	*5*	*5*	*5*
-PROFITABILITY: (in percent of gross output)					
Intermediate input (%)		*62*	*72*	*80*	*67*
Wages and salaries including supplements (%)		*14*	*12*	*14*	*19*
Gross operating surplus and net taxes (%)		*24*	*16*	*6*	*14*
-PRODUCTIVITY: (dollars)					
Gross output per worker		*27 608*	*21 738*	*52 521*	*44 560*
Value added per worker		*9 554*	*7 752*	*14 030*	*12 889*
Average wage (including supplements)		*3 356*	*2 976*	*8 459*	*7 705*
-STRUCTURAL INDICES:					
Structural change indicator (5-year period, %)		*33.09*	*24.17*	*19.25*	*9.35*
as a percentage of 1970-1975 structural change		*100*	*73*	*58*	*28*
MVA growth rate perer unit of structural change		-0.28	0.75	-0.21	-0.02
Degree of specialization		25.2	38.0	37.5	37.7
-VALUE ADDED: (millions of dollars)					
311/2	Food products	4	*11*	*12*	*9*
313	Beverages	16	*14*	*27*	*24*
314	Tobacco products	..	..	..	..
321	Textiles	*8*	*5*	*11*	*10*
322	Wearing apparel	-	-	-	-
323	Leather and fur products	-	-	-	-
324	Footwear	6	*2*	*5*	*4*
331	Wood and wood products	1	-	-	-
332	Furniture and fixtures	-	-	-	-
341	Paper and paper products	-	-	-	-
342	Printing and publishing	3	*1*	*1*	*1*
351	Industrial chemicals	3	*1*	*4*	*6*
352	Other chemical products	..	..	..	..
353	Petroleum refineries	..	..	..	..
354	Miscellaneous petroleum and coal products	..	..	..	..
355	Rubber products	..	..	..	..
356	Plastic products	..	..	..	..
361	Pottery, china and earthenware	-	-	-	-
362	Glass and glass products	*1*	-	-	-
369	Other non-metal mineral products	6	*2*	*4*	*2*
371	Iron and steel	2	*1*	*1*	*2*
372	Non-ferrous metals	..	..	..	..
381	Metal products	1	-	-	-
382	Non-electrical machinery	..	..	..	..
383	Electrical machinery	..	..	..	..
384	Transport equipment	..	..	..	..
385	Professional and scientific equipment	..	..	..	..
390	Other manufacturing industries	-	-	-	-

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

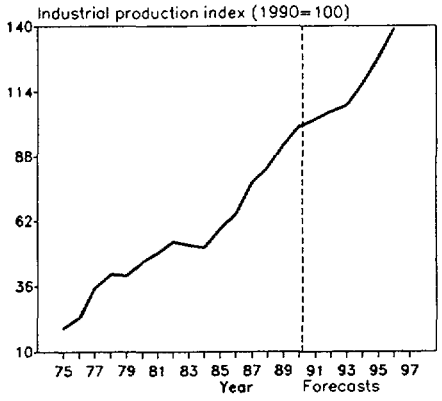
GDP per capita (1000$)/c



Manufacturing share in GDP, current prices (%)

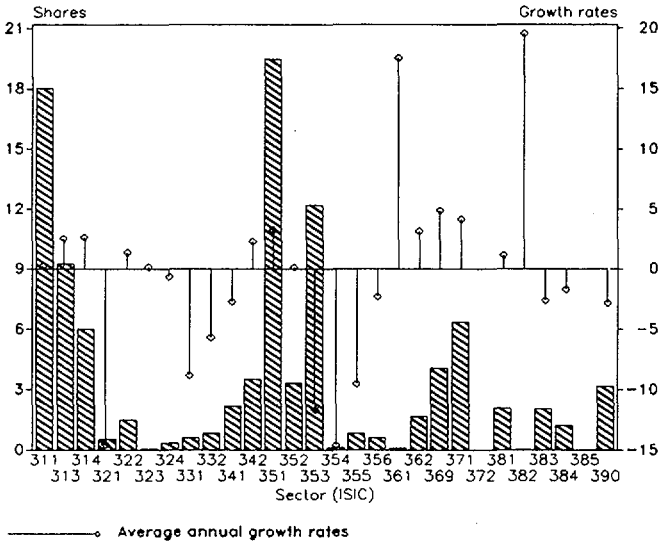


Industrial production index (1990=100)

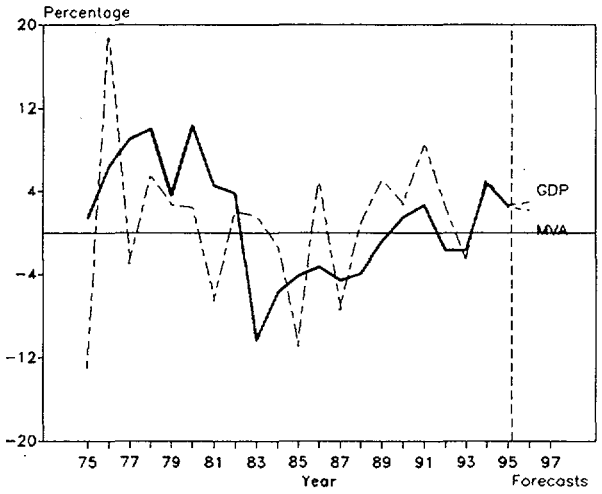


TRINIDAD AND TOBAGO

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



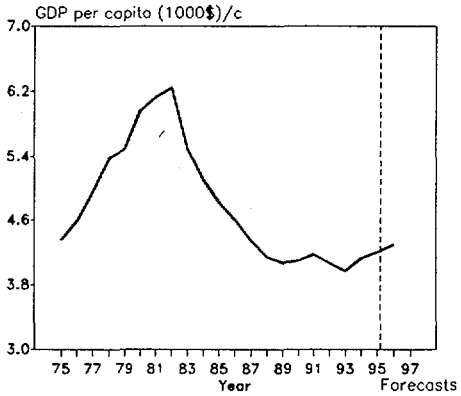
Annual growth rates of GDP and MVA (Constant 1990 prices)



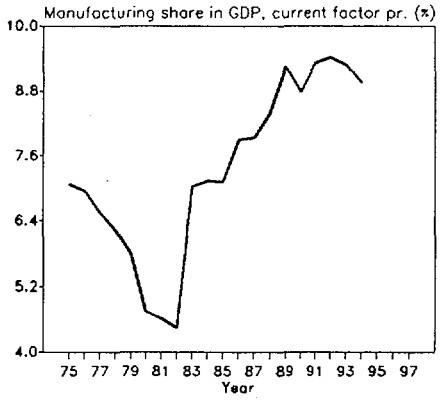
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	6 452	5 677	5 068	5 410
Per capita [na] (1990-dollars)	5 963	4 819	4 100	4 203
Manufacturing share [na] (%) (current factor prices)	4.7	7.1	8.8	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	487	414	438	*508*
Industrial production index (1990=100)	189	114	100	*106*
Value added (millions of dollars)	492	387	683	*643*
Gross output (millions of dollars)	*1 540*	1 765	2 353	*2 313*
Employment (thousands)	44	34	38	*41*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*68*	78	71	*72*
Wages and salaries including supplements (%)	*17*	*18*	*13*	*11*
Gross operating surplus and net taxes (%)	*15*	*4*	*16*	*17*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*34 757*	52 667	62 038	*56 086*
Value added per worker	11 099	11 544	18 015	*15 621*
Average wage (including supplements)	*6 003*	*9 488*	*8 224*	*6 334*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*8.07*	*25.51*	40.34	*25.54*
as a percentage of 1970-1975 structural change	*100*	*316*	500	*317*
MVA growth rate perer unit of structural change	1.32	-0.70	-0.09	0.63
Degree of specialization	28.3	18.0	21.6	21.9
-VALUE ADDED: (millions of dollars)				
311/2 Food products	67	95	114	*112*
313 Beverages	27	34	58	*65*
314 Tobacco products	14	35	36	*41*
321 Textiles	1	2	5	*2*
322 Wearing apparel	16	13	10	*10*
323 Leather and fur products	-	-	-	-
324 Footwear	4	5	3	*2*
331 Wood and wood products	6	4	*5*	*3*
332 Furniture and fixtures	9	7	*7*	*5*
341 Paper and paper products	9	14	17	*14*
342 Printing and publishing	13	19	21	*23*
351 Industrial chemicals	5	6	109	*128*
352 Other chemical products	12	10	23	*22*
353 Petroleum refineries	*190*	*17*	*131*	*66*
354 Miscellaneous petroleum and coal products	2	-	*1*	*1*
355 Rubber products	9	10	8	*4*
356 Plastic products	2	8	5	*4*
361 Pottery, china and earthenware	-	-	-	*1*
362 Glass and glass products	3	4	10	*11*
369 Other non-metal mineral products	23	31	23	*29*
371 Iron and steel	-	-	37	*48*
372 Non-ferrous metals	-	-	-	-
381 Metal products	26	11	14	*14*
382 Non-electrical machinery	13	-	-	-
383 Electrical machinery	3	13	15	*12*
384 Transport equipment	28	43	7	*6*
385 Professional and scientific equipment	-	6 [b]	..	..
390 Other manufacturing industries	8	- [b]	24	*19*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

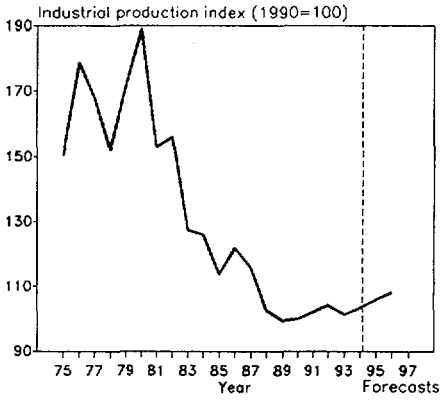
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

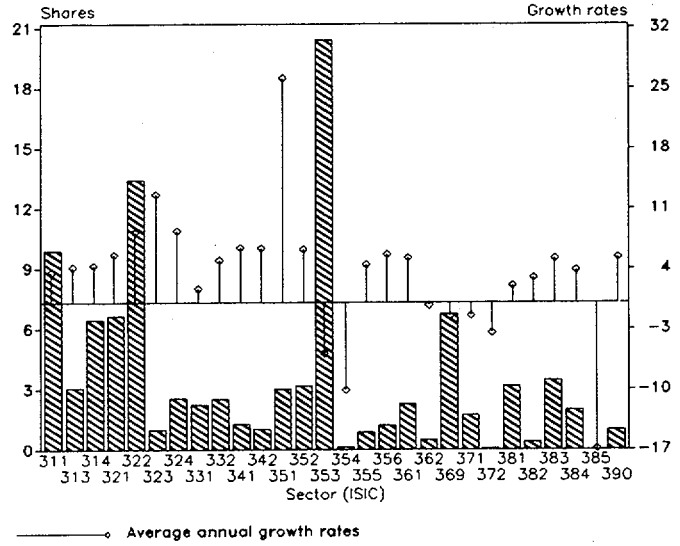


Industrial production index (1990=100)

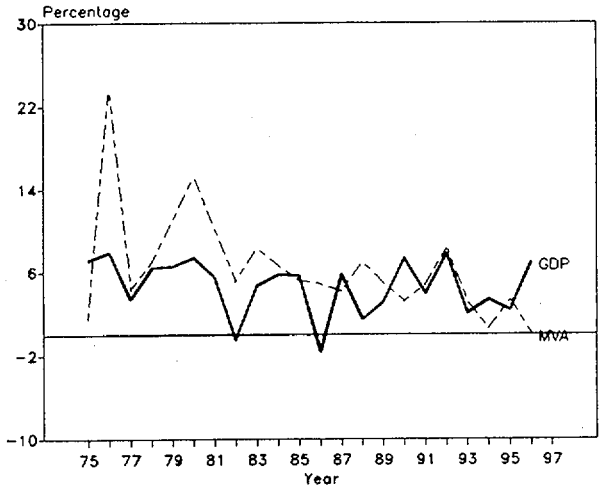


TUNISIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

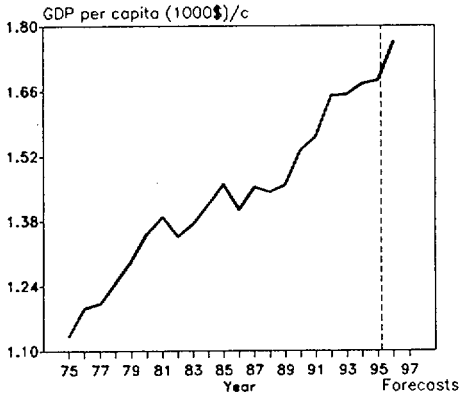


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

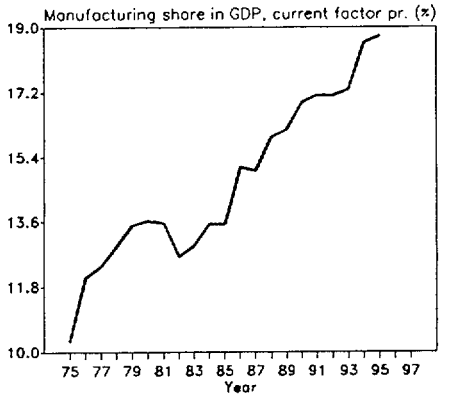
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	8 720	10 709	12 513	15 127
Per capita [na] (1990-dollars)	1 352	1 460	1 533	1 683
Manufacturing share [na] (%) (current factor prices)	13.6	13.5	16.9	*18.4*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	1 061	1 486	1 873	2 269
Industrial production index (1990=100)	76	89	100	105
Value added (millions of dollars)	939	*924*	3 304	4 781
Gross output (millions of dollars)	3 579	*4 207*	10 611	14 957
Employment (thousands)	125	*161*	*200*	274
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	74	*78*	69	68
Wages and salaries including supplements (%)	12	*11*	*9*	*10*
Gross operating surplus and net taxes (%)	14	*11*	*22*	*22*
-PRODUCTIVITY: (dollars)				
Gross output per worker	28 669	*26 030*	*52 891*	54 677
Value added per worker	7 525	*5 814*	*17 158*	17 474
Average wage (including supplements)	3 499	*2 905*	*5 023*	*5 658*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*13.75*	*14.85*	*18.37*	*18.45*
as a percentage of 1970-1975 structural change	*100*	*108*	*134*	*134*
MVA growth rate perer unit of structural change	5.59	4.26	5.30	4.97
Degree of specialization	13.6	13.2	20.3	15.6
-VALUE ADDED: (millions of dollars)				
311/2 Food products	96	*78*	315	455
313 Beverages	49	*46*	92	149
314 Tobacco products	22	*33*	207	323
321 Textiles	55	*61*	196	334
322 Wearing apparel	92	*94*	380	720
323 Leather and fur products	6	*6*	*23*	*55*
324 Footwear	21	*19*	*71*	*139*
331 Wood and wood products	12	*16*	*75*	*105*
332 Furniture and fixtures	13	*16*	*77*	*125*
341 Paper and paper products	24	*17*	*38*	*65*
342 Printing and publishing	17	*13*	*31*	*52*
351 Industrial chemicals	*57*	*46*	39	199
352 Other chemical products	*81*	*48*	95	162
353 Petroleum refineries	13	*87*	*866*	*763*
354 Miscellaneous petroleum and coal products	-	*1*	*6*	*4*
355 Rubber products	8	*8*	28	43
356 Plastic products	18	*17*	35	62
361 Pottery, china and earthenware	11	*11*	67	109
362 Glass and glass products	7	*5*	16	20
369 Other non-metal mineral products	156	*129*	263	317
371 Iron and steel	45	*48*	69	80
372 Non-ferrous metals	8	*4*	*2*	*2*
381 Metal products	53	*58*	*106*	*152*
382 Non-electrical machinery	2	*3*	13	19
383 Electrical machinery	35	*29*	101	178
384 Transport equipment	30	*27*	60	95
385 Professional and scientific equipment	1	-	-	-
390 Other manufacturing industries	5	*7*	31	51

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

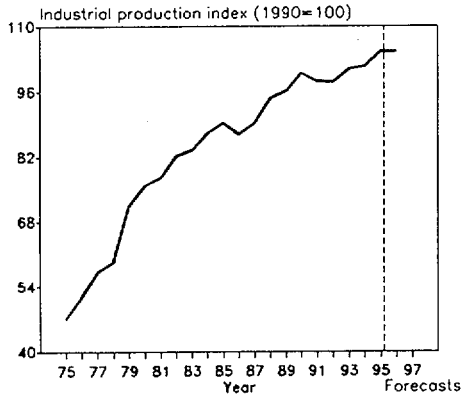
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

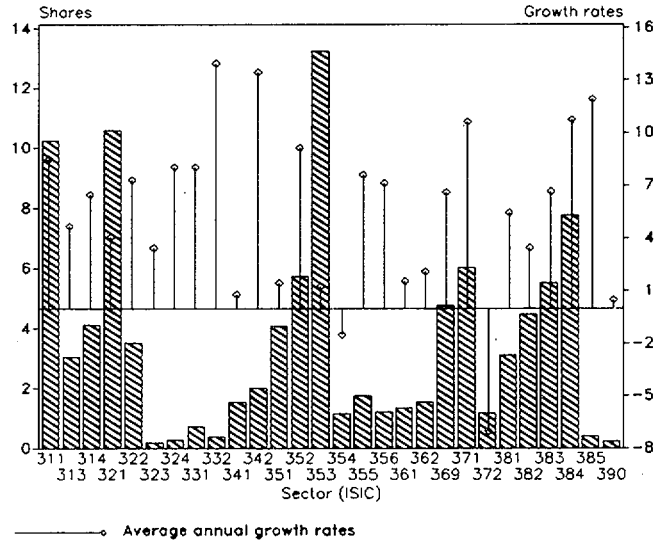


Industrial production index (1990=100)

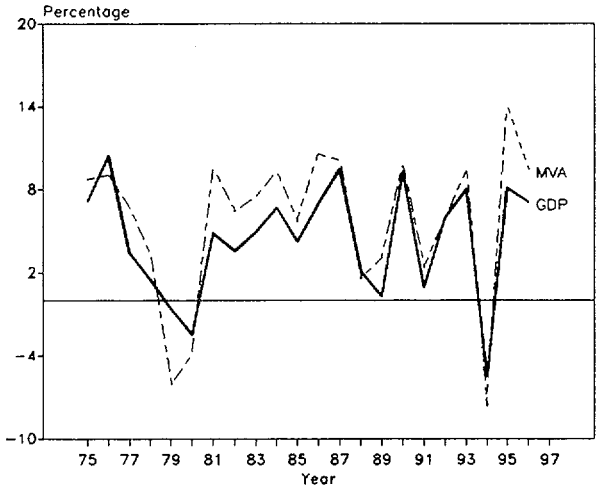


TURKEY

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

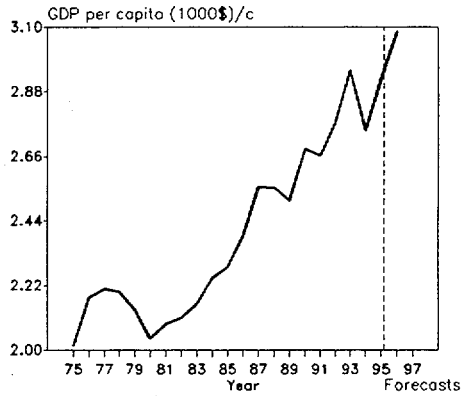


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

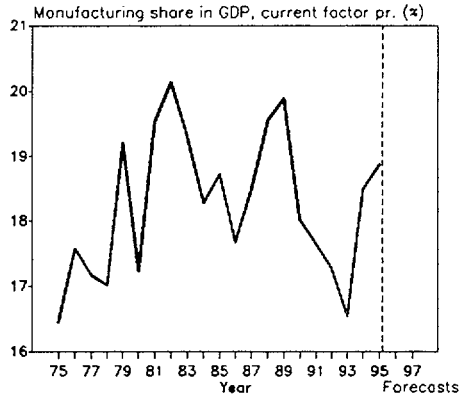
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	90 677	114 976	150 679	177 970
Per capita [na] (1990-dollars)	2 041	2 284	2 686	2 925
Manufacturing share [na] (%) (current factor prices)	17.2	18.7	18.0	18.9
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	16 401	23 704	33 086	41 193
Industrial production index (1990=100)	48	75	100	113
Value added (millions of dollars)	10 837	10 448	28 866	*37 733*
Gross output (millions of dollars)	29 413	32 470	72 968	88 821
Employment (thousands)	787	844	976	*915*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	63	68	60	*58*
Wages and salaries including supplements (%)	16	10	12	*9*
Gross operating surplus and net taxes (%)	20	23	27	*34*
-PRODUCTIVITY: (dollars)				
Gross output per worker	36 960	38 378	74 731	*90 992*
Value added per worker	13 617	12 349	29 563	*40 744*
Average wage (including supplements)	6 142	3 717	9 016	*8 571*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	10.26	9.75	9.86	*9.19*
as a percentage of 1970-1975 structural change	100	95	96	*90*
MVA growth rate perer unit of structural change	3.87	3.13	4.74	4.83
Degree of specialization	14.3	13.8	12.4	12.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	1 185	973	2 545	*3 944*
313 Beverages	335	330	893	*1 104*
314 Tobacco products	467	877	1 168	*1 606*
321 Textiles	1 535	1 289	3 222	*3 907*
322 Wearing apparel	60	146	947	*1 358*
323 Leather and fur products	25	37	60	*69*
324 Footwear	33	22	69	*103*
331 Wood and wood products	118	64	187	*280*
332 Furniture and fixtures	16	55	81	*166*
341 Paper and paper products	205	241	559	*557*
342 Printing and publishing	97	133	434	*871*
351 Industrial chemicals	719	457	1 421	*1 450*
352 Other chemical products	387	394	1 449	*2 301*
353 Petroleum refineries	1 352	1 514	4 525	*4 583*
354 Miscellaneous petroleum and coal products	222	152	458	*391*
355 Rubber products	201	151	452	*660*
356 Plastic products	125	76	328	*473*
361 Pottery, china and earthenware	93	102	467	*479*
362 Glass and glass products	110	167	531	*563*
369 Other non-metal mineral products	535	428	1 365	*1 886*
371 Iron and steel	783	734	1 403	*2 453*
372 Non-ferrous metals	292	181	580	*351*
381 Metal products	395	344	904	*1 178*
382 Non-electrical machinery	506	456	1 423	*1 652*
383 Electrical machinery	463	531	1 482	*2 059*
384 Transport equipment	541	534	1 743	*3 048*
385 Professional and scientific equipment	8	9	87	*161*
390 Other manufacturing industries	28	48	84	*81*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

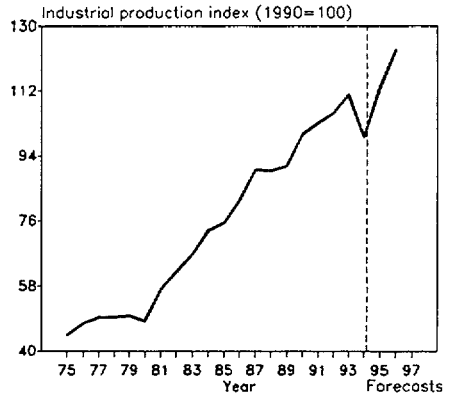
GDP per capita (1000$)/c



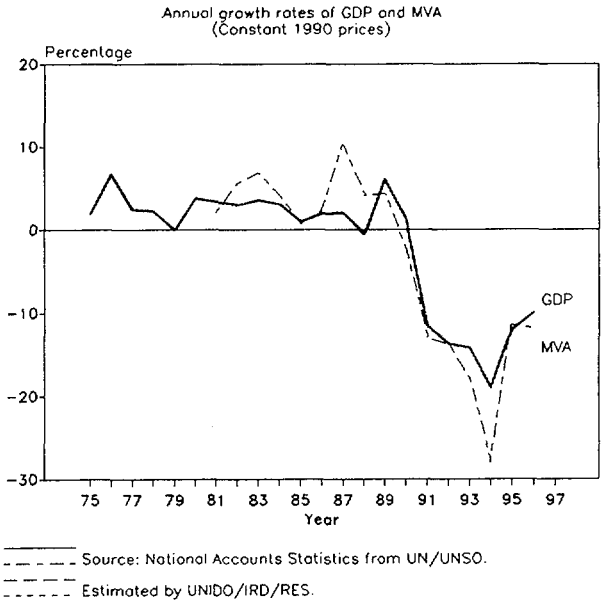
Manufacturing share in GDP, current factor pr. (%)



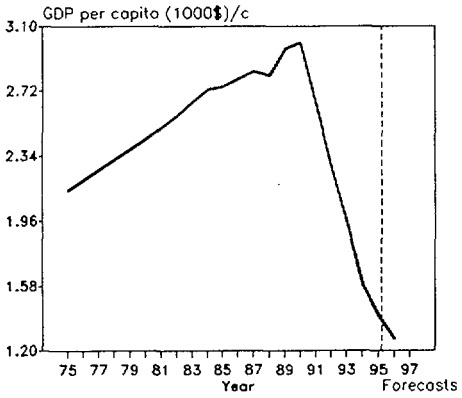
Industrial production index (1990=100)

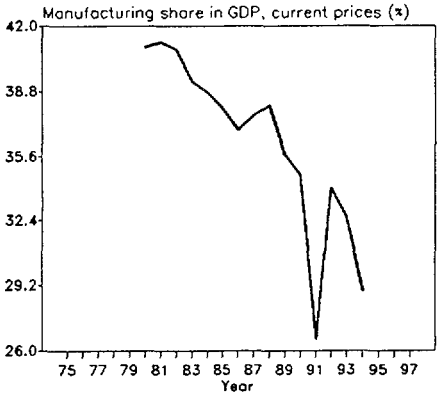


UKRAINE



	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	121 758	139 789	155 591	72 643
Per capita [na] (1990-dollars)	2 437	2 746	3 001	1 404
Manufacturing share [na] (%) (current factor prices)	41.0	38.0	34.7	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	37 515	45 185	53 966	21 117
Industrial production index (1990=100)	..	..	..	..
Value added (millions of dollars)	..	..	..	..
Gross output (millions of dollars)	..	*137 930*	121 057	*29 263*
Employment (thousands)	*6 098*	*5 568*	4 987	*3 670*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	..	..	..	..
Wages and salaries including supplements (%)	..	..	..	..
Gross operating surplus and net taxes (%)	..	..	..	..
-PRODUCTIVITY: (dollars)				
Gross output per worker	..	*24 376*	23 994	*7 911*
Value added per worker	..	..	..	..
Average wage (including supplements)	..	*2 730*	*2 801*	*487*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	..	..	..	..
as a percentage of 1970-1975 structural change	..	..	..	..
MVA growth rate perer unit of structural change	..	..	..	..
Degree of specialization	..	..	..	..
-VALUE ADDED: *(millions of dollars)*				
311/2 Food products	..	..	..	..
313 Beverages	..	..	..	..
314 Tobacco products	..	..	..	..
321 Textiles	..	..	..	..
322 *Wearing apparel*	..	..	..	..
323 Leather and fur products	..	..	..	..
324 Footwear	..	..	..	..
331 Wood and wood products	..	..	..	..
332 Furniture and fixtures	..	..	..	..
341 Paper and paper products	..	..	..	..
342 Printing and publishing	..	..	..	..
351 Industrial chemicals	..	..	..	..
352 Other chemical products	..	..	..	..
353 Petroleum refineries	..	..	..	..
354 Miscellaneous petroleum and coal products	..	..	..	..
355 Rubber products	..	..	..	..
356 Plastic products	..	..	..	..
361 Pottery, china and earthenware	..	..	..	..
362 Glass and glass products	..	..	..	..
369 Other non-metal mineral products	..	..	..	..
371 Iron and steel	..	..	..	..
372 Non-ferrous metals	..	..	..	..
381 Metal products	..	..	..	..
382 *Non-electrical machinery*	..	..	..	..
383 Electrical machinery	..	..	..	..
384 Transport equipment	..	..	..	..
385 Professional and scientific equipment	..	..	..	..
390 Other manufacturing industries	..	..	..	..

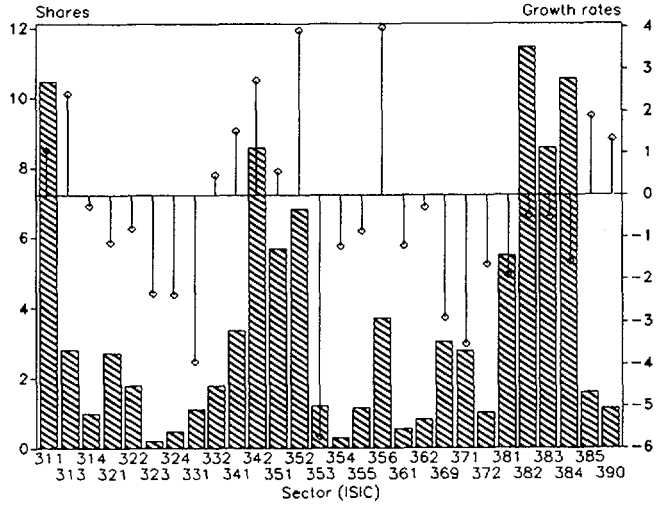




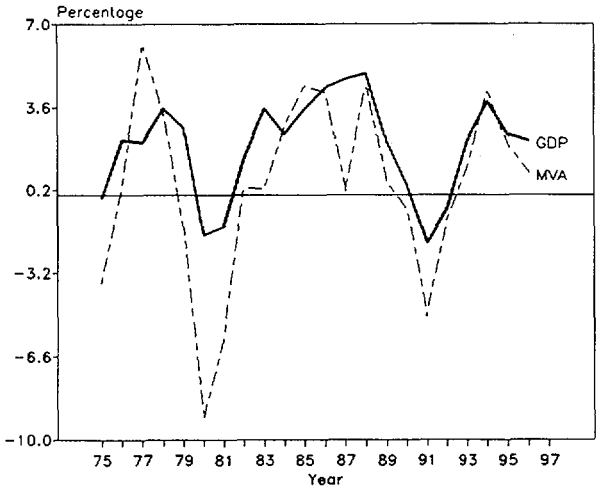
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



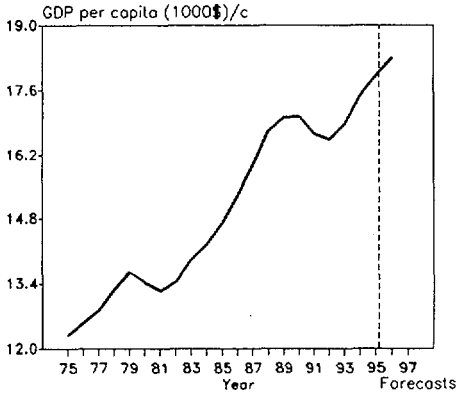
Annual growth rates of GDP and MVA (Constant 1990 prices)



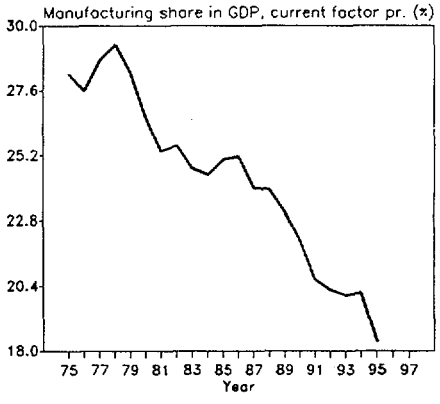
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	756 314	832 936	981 046	1 040 811
Per capita [na] (1990-dollars)	13 426	14 712	17 044	17 921
Manufacturing share [na] (%) (current factor prices)	26.7	25.1	22.1	*18.4*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	183 633	186 202	202 486	204 491
Industrial production index (1990=100)	90	92	100	102
Value added (millions of dollars)	163 790	124 384	254 946	*266 606*
Gross output (millions of dollars)	400 930	306 225	579 854	621 025
Employment (thousands)	6 462	4 935	4 798	*4 114*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	59	59	56	*57*
Wages and salaries including supplements (%)	23	20	21	*18*
Gross operating surplus (%)	17	20	23	*25*
-PRODUCTIVITY: (dollars)				
Gross output per worker	61 483	61 368	119 533	*144 114*
Value added per worker	25 117	24 927	52 577	*62 002*
Average wage (including supplements)	14 579	12 520	25 249	*27 017*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	5.10	5.79	4.34	*4.31*
as a percentage of 1970-1975 structural change	100	113	85	*84*
MVA growth rate perer unit of structural change	0.27	-0.59	0.96	1.19
Degree of specialization	11.1	11.9	12.2	12.6
-VALUE ADDED: (millions of dollars)				
311/2 Food products	14 744	12 192	25 143	*27 699*
313 Beverages	5 419	3 554	6 643	*7 760*
314 Tobacco products	1 814	1 479	2 375	*2 440*
321 Textiles	5 419	3 917	7 036	*7 044*
322 Wearing apparel	3 395	2 633	4 679	*4 702*
323 Leather and fur products	558	376	536	*502*
324 Footwear	1 093	752	1 268	*1 171*
331 Wood and wood products	2 349	1 556	3 214	2 681
332 Furniture and fixtures	2 558	2 101	4 554	*4 839*
341 Paper and paper products	4 860	3 813	8 036	*9 156*
342 Printing and publishing	9 814	8 807	19 643	*23 691*
351 Industrial chemicals	8 233	7 328	14 179	*15 311*
352 Other chemical products	7 512	6 641	14 893	*19 024*
353 Petroleum refineries	4 512	1 712	4 429	*3 143*
354 Miscellaneous petroleum and coal products	721	428	750	*738*
355 Rubber products	2 349	1 505	3 018	*3 041*
356 Plastic products	3 698	3 087	8 250	*10 588*
361 Pottery, china and earthenware	977	765	1 464	*1 414*
362 Glass and glass products	1 442	960	2 089	*2 150*
369 Other non-metal mineral products	5 698	4 202	9 036	*7 808*
371 Iron and steel	5 860	4 345	8 089	*6 999*
372 Non-ferrous metals	2 581	1 505	2 786	*2 681*
381 Metal products	10 140	7 211	15 018	*14 069*
382 Non-electrical machinery	21 326	15 097	30 071	*30 387*
383 Electrical machinery	15 209	12 387	22 357	*22 531*
384 Transport equipment	17 512	12 931	28 946	*27 552*
385 Professional and scientific equipment	2 209	1 803	3 661	*4 298*
390 Other manufacturing industries	1 791	1 297	2 786	*3 134*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

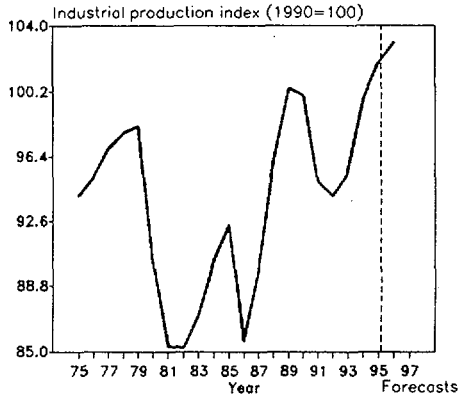
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

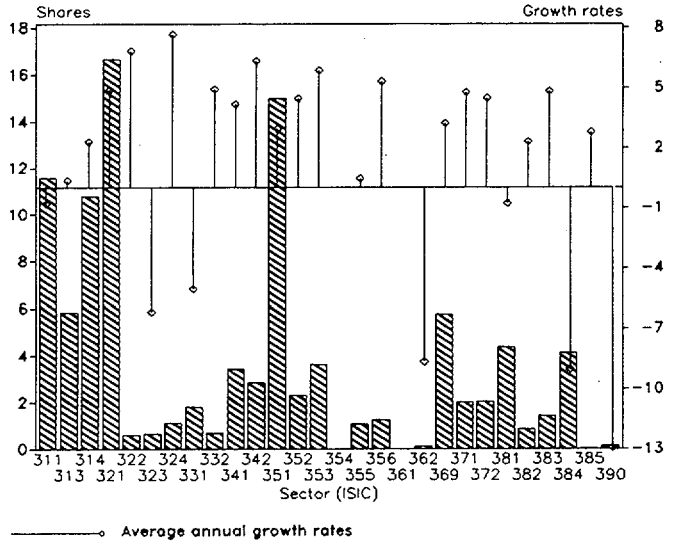


Industrial production index (1990=100)

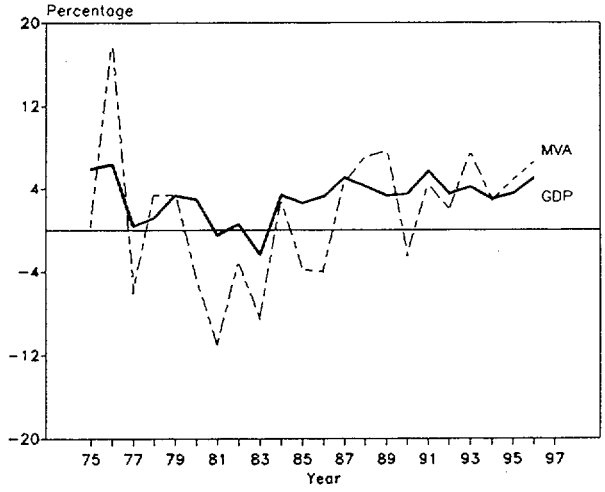


UNITED REPUBLIC OF TANZANIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

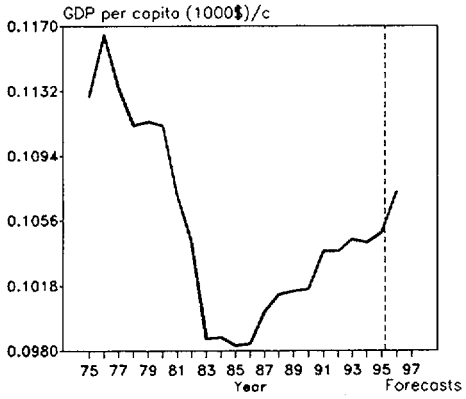


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

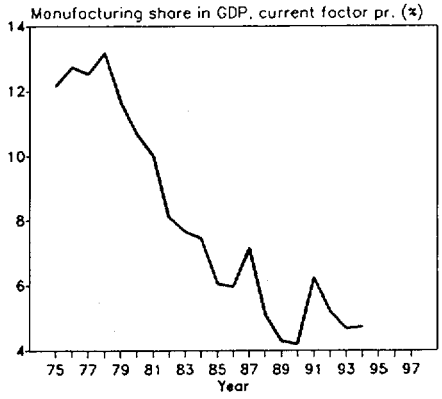
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	2 065	2 141	2 590	3 148
Per capita [na] (1990-dollars)	111	98	102	105
Manufacturing share [na] (%) (current factor prices)	10.7	6.1	4.2	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	108	83	94	*115*
Industrial production index (1990=100)	122	93	100	*92*
Value added (millions of dollars)	361	278	*99*	*119*
Gross output (millions of dollars)	1 266	1 145	*458*	*532*
Employment (thousands)	101	94	*124*	*157*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	71	76	*78*	*78*
Wages and salaries including supplements (%)	9	9	*5*	*7*
Gross operating surplus (%)	19	16	*16*	*15*
-PRODUCTIVITY: (dollars)				
Gross output per worker	12 457	12 141	*3 681*	*3 380*
Value added per worker	3 555	2 952	*797*	*767*
Average wage (including supplements)	1 174	1 042	*202*	*238*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*15.63*	16.80	*19.71*	*14.31*
as a percentage of 1970-1975 structural change	*100*	107	*126*	*92*
MVA growth rate perer unit of structural change	2.45	-0.02	-1.02	0.21
Degree of specialization	17.0	15.7	16.9	17.5
-VALUE ADDED: (millions of dollars)				
311/2 Food products	58	58	*12*	*13*
313 Beverages	14	21	*6*	*7*
314 Tobacco products	12	16	*10*	*13*
321 Textiles	95	43	*15*	*21*
322 Wearing apparel	10	4	*1*	*1*
323 Leather and fur products	7	4	*1*	*1*
324 Footwear	8	6	*1*	*1*
331 Wood and wood products	7	6	*2*	*2*
332 Furniture and fixtures	6	3	*1*	*1*
341 Paper and paper products	8	7	*3*	*4*
342 Printing and publishing	14	12	*2*	*4*
351 Industrial chemicals	11	9	*14*	*18*
352 Other chemical products	10	7	*2*	*3*
353 Petroleum refineries	15	10	*3*	*5*
354 Miscellaneous petroleum and coal products	-	-	-	-
355 Rubber products	11	11	*1*	*1*
356 Plastic products	8	2	*1*	*2*
361 Pottery, china and earthenware	-	-	-	-
362 Glass and glass products	-	-	-	-
369 Other non-metal mineral products	11	4	*5*	*7*
371 Iron and steel	*2*	*6*	*2*	*2*
372 Non-ferrous metals	*4*	*5*	*2*	*3*
381 Metal products	20	15	*5*	*5*
382 Non-electrical machinery	3	4	*1*	*1*
383 Electrical machinery	6	6	*1*	*2*
384 Transport equipment	19	19	*6*	*4*
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	2	2	-	-

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

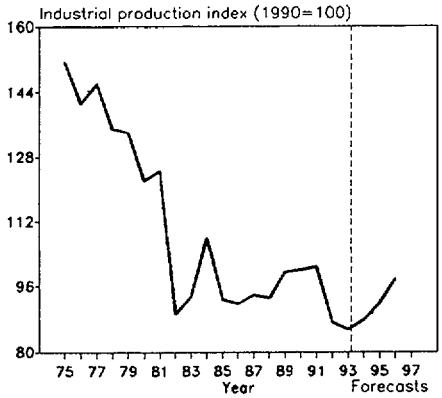
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

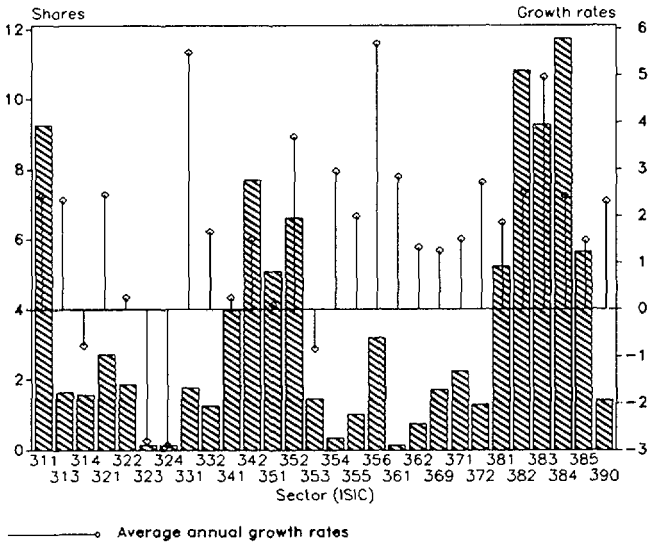


Industrial production index (1990=100)

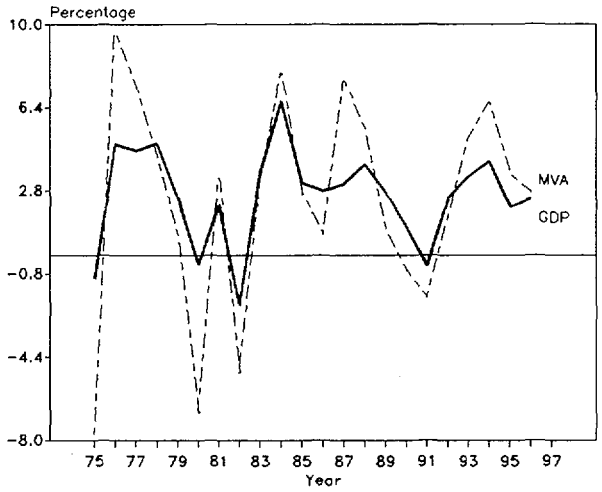


UNITED STATES OF AMERICA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

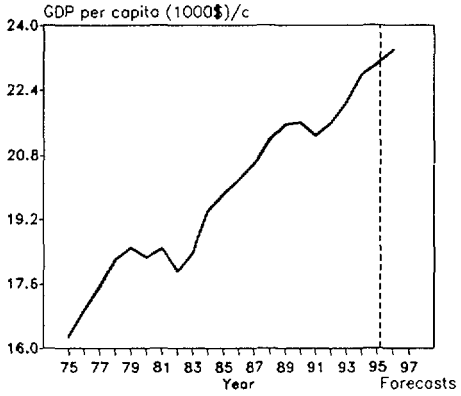


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

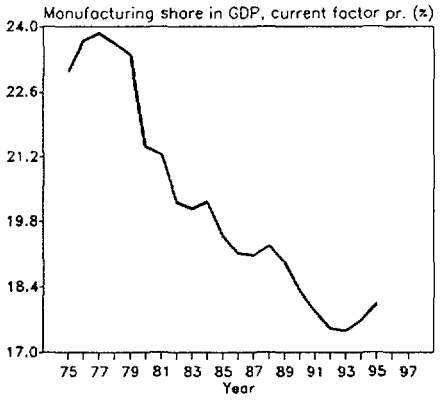
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	4 205 373	4 793 226	5 489 600	6 153 649
Per capita [na] (1990-dollars)	18 252	19 819	21 604	23 037
Manufacturing share [na] (%) (current factor prices)	21.4	19.5	18.3	*18.0*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	802 211	898 454	1 032 100	1 192 843
Industrial production index (1990=100)	78	88	100	118
Value added (millions of dollars)	769 899	996 439	1 322 110	*1 696 955*
Gross output (millions of dollars)	1 857 094	2 266 693	2 861 330	3 539 604
Employment (thousands)	19 210	17 424	17 502	*17 240*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	59	56	54	*52*
Wages and salaries including supplements (%)	21	21	21	*15*
Gross operating surplus (%)	21	22	26	*32*
-PRODUCTIVITY: (dollars)				
Gross output per worker	96 673	130 090	163 486	*202 793*
Value added per worker	40 078	57 188	75 541	*98 236*
Average wage (including supplements)	20 044	27 953	33 565	*31 803*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	4.61	6.75	7.35	*4.67*
as a percentage of 1970-1975 structural change	100	146	159	*101*
MVA growth rate perer unit of structural change	3.20	1.72	0.86	2.50
Degree of specialization	11.9	13.5	12.3	12.8
-VALUE ADDED: (millions of dollars)				
311/2 Food products	63 460	87 970	119 830	*154 049*
313 Beverages	11 810	16 170	21 140	*27 135*
314 Tobacco products	6 160	11 890	22 560	*23 693*
321 Textiles	23 030	26 910	34 960	*45 675*
322 Wearing apparel	19 780	22 150	25 480	*29 609*
323 Leather and fur products	1 850	1 580	2 210	*2 141*
324 Footwear	2 950	2 470	2 320	*2 301*
331 Wood and wood products	12 970	15 390	20 830	*31 991*
332 Furniture and fixtures	9 840	13 250	16 910	*20 984*
341 Paper and paper products	29 790	40 390	57 200	*65 083*
342 Printing and publishing	44 390	73 050	103 180	*124 873*
351 Industrial chemicals	38 920	43 370	73 480	*82 557*
352 Other chemical products	35 530	54 290	81 770	*112 538*
353 Petroleum refineries	23 010	13 890	22 820	*24 468*
354 Miscellaneous petroleum and coal products	2 670	3 450	4 390	*5 777*
355 Rubber products	8 030	10 970	13 430	*17 150*
356 Plastic products	14 540	24 740	37 320	*57 226*
361 Pottery, china and earthenware	1 210	1 300	1 840	*2 439*
362 Glass and glass products	6 470	7 660	10 080	*12 357*
369 Other non-metal mineral products	16 300	19 890	23 980	*29 040*
371 Iron and steel	30 780	24 070	31 780	*39 918*
372 Non-ferrous metals	14 340	11 440	17 510	*23 118*
381 Metal products	53 180	61 810	70 360	*89 158*
382 Non-electrical machinery	102 760	115 550	145 060	*188 929*
383 Electrical machinery	74 850	111 230	112 400	*170 719*
384 Transport equipment	81 280	128 220	154 030	*198 096*
385 Professional and scientific equipment	27 940	40 280	76 520	*91 882*
390 Other manufacturing industries	12 060	13 060	18 720	*24 055*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

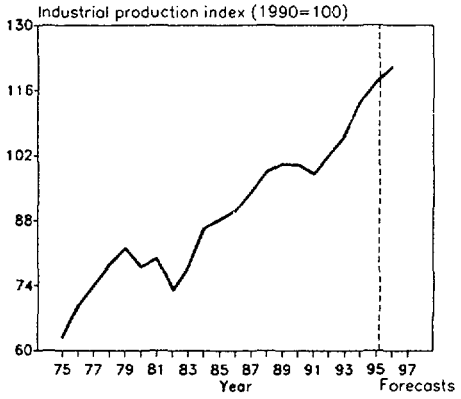
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

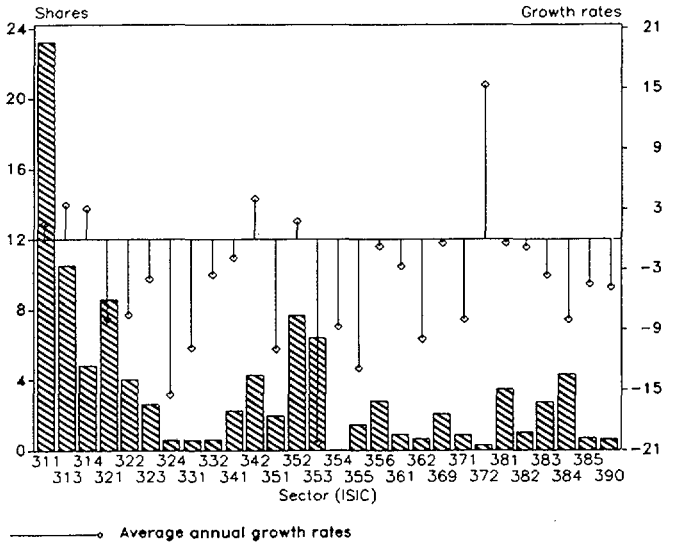


Industrial production index (1990=100)

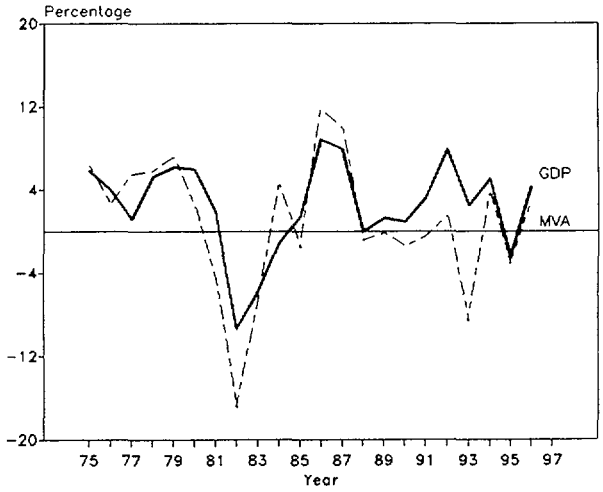


URUGUAY

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

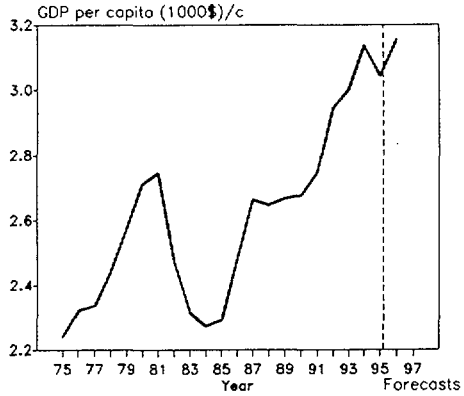


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

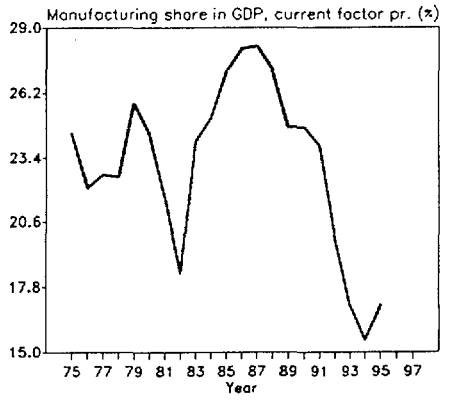
		1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)		7 905	6 897	8 281	9 693
Per capita [na] (1990-dollars)		2 713	2 293	2 677	3 042
Manufacturing share [na] (%) (current factor prices)		26.0	27.1	24.7	*16.9*
MANUFACTURING:					
Value added [na] (millions of 1990-dollars)		2 393	1 815	2 173	2 011
Industrial production index (1990=100)		116	85	100	98
Value added (millions of dollars)		1 286	1 337	2 379	*3 833*
Gross output (millions of dollars)		3 302	3 174	5 778	*8 205*
Employment (thousands)		160	122	168	*132*
-PROFITABILITY: (in percent of gross output)					
Intermediate input (%)		61	58	59	*53*
Wages and salaries including supplements (%)		*13*	9	10	*11*
Gross operating surplus and net taxes (%)		*26*	33	32	*35*
-PRODUCTIVITY: (dollars)					
Gross output per worker		20 456	26 023	34 428	*61 984*
Value added per worker		7 966	10 964	14 177	*29 050*
Average wage (including supplements)		*2 635*	2 442	3 280	*7 121*
-STRUCTURAL INDICES:					
Structural change indicator (5-year period, %)		13.82	15.46	14.56	*14.67*
as a percentage of 1970-1975 structural change		100	112	105	*106*
MVA growth rate perer unit of structural change		0.28	-0.15	0.75	-0.16
Degree of specialization		13.9	18.8	15.2	19.3
-VALUE ADDED: (millions of dollars)					
311/2	Food products	165	266	473	*1 012*
313	Beverages	104	92	181	*426*
314	Tobacco products	90	68	90	*211*
321	Textiles	109	137	235	*281*
322	Wearing apparel	59	43	111	*131*
323	Leather and fur products	31	76	67	*96*
324	Footwear	18	8	19	*15*
331	Wood and wood products	*14*	8	19	*18*
332	Furniture and fixtures	*7*	2	13	*22*
341	Paper and paper products	30	47	51	*81*
342	Printing and publishing	37	27	81	*195*
351	Industrial chemicals	20	26	68	*66*
352	Other chemical products	75	112	162	*336*
353	Petroleum refineries	192	194	239	*109*
354	Miscellaneous petroleum and coal products	2	4	1	*2*
355	Rubber products	40	34	58	*51*
356	Plastic products	24	25	65	*117*
361	Pottery, china and earthenware	13	7	20	*33*
362	Glass and glass products	14	7	21	*22*
369	Other non-metal mineral products	41	24	43	*82*
371	Iron and steel	10	14	31	*36*
372	Non-ferrous metals	3	3	3	*14*
381	Metal products	*53*	32	73	*137*
382	Non-electrical machinery	*16*	12	22	*40*
383	Electrical machinery	33	31	69	*108*
384	Transport equipment	78	32	129	*141*
385	Professional and scientific equipment	1	1	19	*28*
390	Other manufacturing industries	8	6	15	*22*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

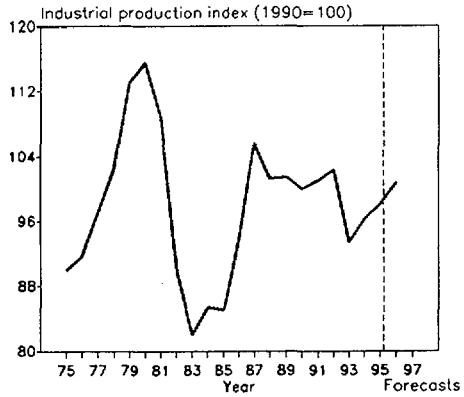
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

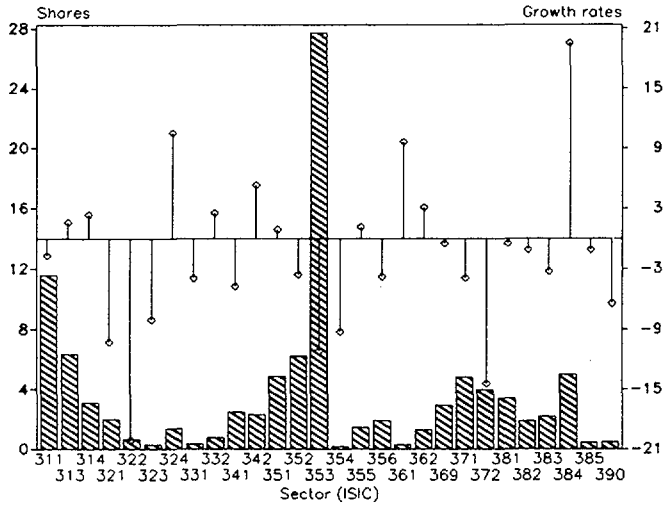


Industrial production index (1990=100)

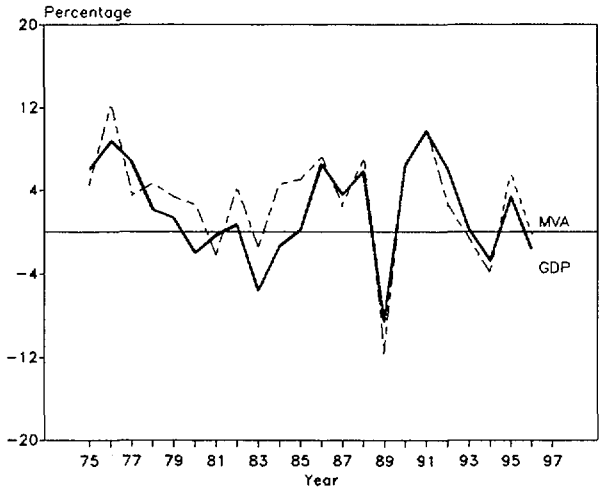


VENEZUELA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

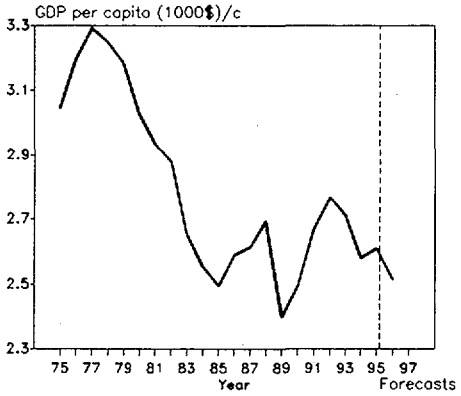


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

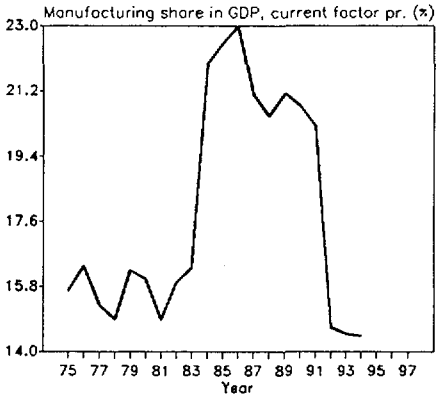
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	45 668	42 763	48 598	57 014
Per capita [na] (1990-dollars)	3 026	2 495	2 492	2 610
Manufacturing share [na] (%) (current factor prices)	16.0	22.5	20.8	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	8 300	9 087	9 974	*11 272*
Industrial production index (1990=100)	23	34	100	*119*
Value added (millions of dollars)	*14 461*	14 071	12 175	*15 309*
Gross output (millions of dollars)	*30 213*	30 305	24 128	*36 533*
Employment (thousands)	*426*	406	464	*462*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	*52*	54	50	*58*
Wages and salaries including supplements (%)	*15*	13	9	*9*
Gross operating surplus and net taxes (%)	*33*	34	42	*33*
-PRODUCTIVITY: (dollars)				
Gross output per worker	*67 966*	71 154	51 776	*78 889*
Value added per worker	*32 530*	33 038	26 127	*33 116*
Average wage (including supplements)	*10 358*	9 495	4 651	*6 742*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*13.35*	*9.99*	12.63	*17.11*
as a percentage of 1970-1975 structural change	*100*	*75*	95	*128*
MVA growth rate perer unit of structural change	6.16	2.59	0.55	-0.34
Degree of specialization	18.5	17.3	27.0	18.4
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*1 425*	1 597	1 210	*1 790*
313 Beverages	*953*	836	583	*1 071*
314 Tobacco products	*409*	597	273	*515*
321 Textiles	*430*	505	291	*257*
322 Wearing apparel	*348*	359	160	*57*
323 Leather and fur products	*57*	58	40	*39*
324 Footwear	*197*	158	90	*273*
331 Wood and wood products	*106*	80	36	*49*
332 Furniture and fixtures	*188*	142	65	*126*
341 Paper and paper products	*395*	357	277	*348*
342 Printing and publishing	*376*	299	182	*418*
351 Industrial chemicals	*325*	498	443	*767*
352 Other chemical products	*858*	890	662	*900*
353 Petroleum refineries	*4 222*	3 634	4 734	*3 955*
354 Miscellaneous petroleum and coal products	*25*	30	19	*18*
355 Rubber products	*151*	188	139	*244*
356 Plastic products	*394*	348	215	*279*
361 Pottery, china and earthenware	*60*	39	18	*52*
362 Glass and glass products	*137*	132	109	*219*
369 Other non-metal mineral products	*489*	378	290	*475*
371 Iron and steel	*651*	855	498	*642*
372 Non-ferrous metals	*256*	447	788	*563*
381 Metal products	*652*	503	336	*553*
382 Non-electrical machinery	*287*	241	180	*286*
383 Electrical machinery	*345*	307	245	*330*
384 Transport equipment	*605*	486	198	*960*
385 Professional and scientific equipment	*38*	26	37	*59*
390 Other manufacturing industries	*82*	81	56	*64*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

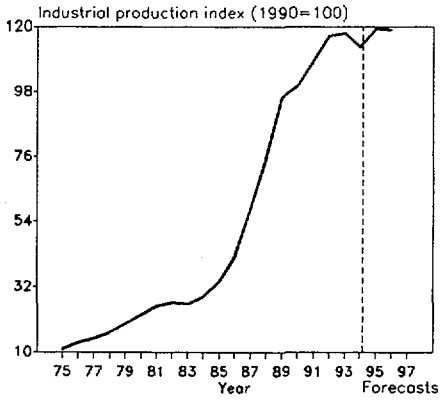
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

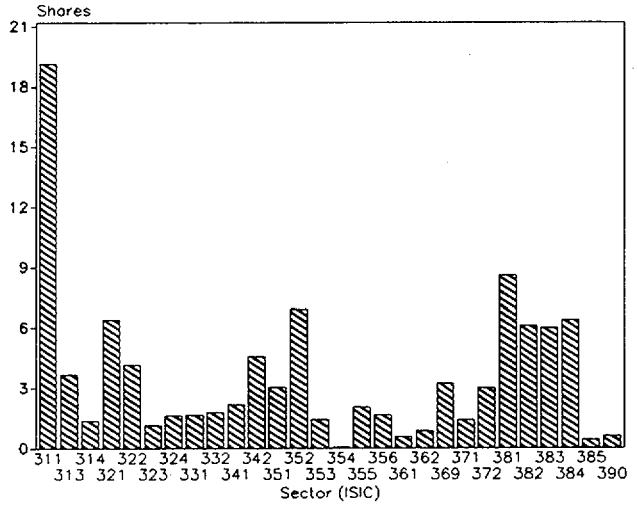


Industrial production index (1990=100)

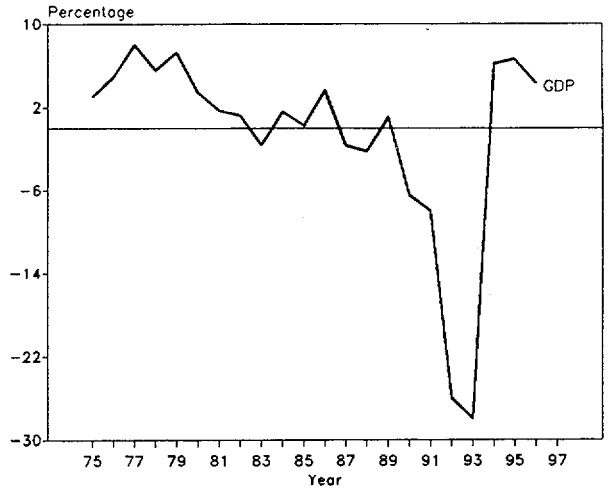


YUGOSLAVIA (SERBIA,MONTENEGRO)

Average sectoral shares in total Value Added, 1990–1996 (Percentage)



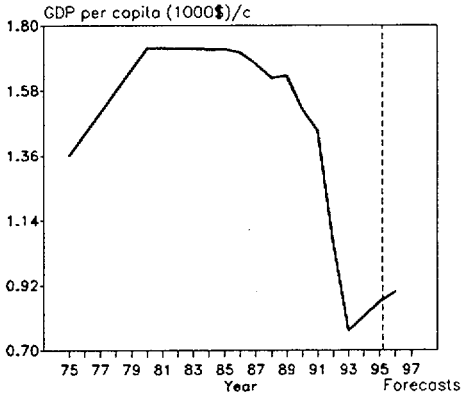
Annual growth rate of GDP (Constant 1990 prices)



Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	16 421	16 946	15 976	8 865
Per capita [na] (1990-dollars)	1 725	1 721	1 517	865
Manufacturing share [na] (%) (current factor prices)	..	..	..	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	..	..	..	..
Industrial production index (1990=100)	..	..	..	..
Value added (millions of dollars)	*12 600*	*8 259*	5 417	2 834
Gross output (millions of dollars)	*27 346*	*17 896*	13 533	6 581
Employment (thousands)	*991*	*1 002*	*957*	808
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	..	..	..	57
Wages and salaries including supplements (%)	..	..	..	10
Gross operating surplus and net taxes (%)	..	..	..	33
-PRODUCTIVITY: (dollars)				
Gross output per worker	*27 589*	*17 850*	*14 045*	8 146
Value added per worker	*12 960*	*8 400*	*5 630*	3 508
Average wage (including supplements)	..	..	..	794
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	*1.95*	*1.30*	*5.25*	11.98
as a percentage of 1970-1975 structural change	*100*	*67*	*269*	614
MVA growth rate perer unit of structural change	29.33	22.69	-4.44	-6.32
Degree of specialization	14.0	13.7	12.7	12.3
-VALUE ADDED: (millions of dollars)				
311/2 Food products	*2 193*	*1 434*	931	548
313 Beverages	*261*	*178*	176	153
314 Tobacco products	*74*	*52*	51	114
321 Textiles	*1 138*	*732*	365	145
322 Wearing apparel	*599*	*390*	242	70
323 Leather and fur products	*186*	*120*	58	27
324 Footwear	*380*	*242*	99	30
331 Wood and wood products	*191*	*125*	81	47
332 Furniture and fixtures	*242*	*157*	91	51
341 Paper and paper products	*179*	*120*	84	82
342 Printing and publishing	*226*	*173*	283	139
351 Industrial chemicals	*391*	*253*	136	68
352 Other chemical products	*553*	*364*	241	213
353 Petroleum refineries	*48*	*43*	121	61
354 Miscellaneous petroleum and coal products	*7*	*4*	3	3
355 Rubber products	*304*	*198*	128	43
356 Plastic products	*155*	*104*	83	59
361 Pottery, china and earthenware	*61*	*41*	38	15
362 Glass and glass products	*95*	*62*	37	23
369 Other non-metal mineral products	*320*	*213*	171	104
371 Iron and steel	*357*	*225*	60	38
372 Non-ferrous metals	*435*	*281*	144	97
381 Metal products	*1 309*	*851*	515	242
382 Non-electrical machinery	*1 030*	*668*	406	122
383 Electrical machinery	*904*	*585*	335	177
384 Transport equipment	*831*	*556*	477	142
385 Professional and scientific equipment	*69*	*45*	26	10
390 Other manufacturing industries	*61*	*41*	35	13

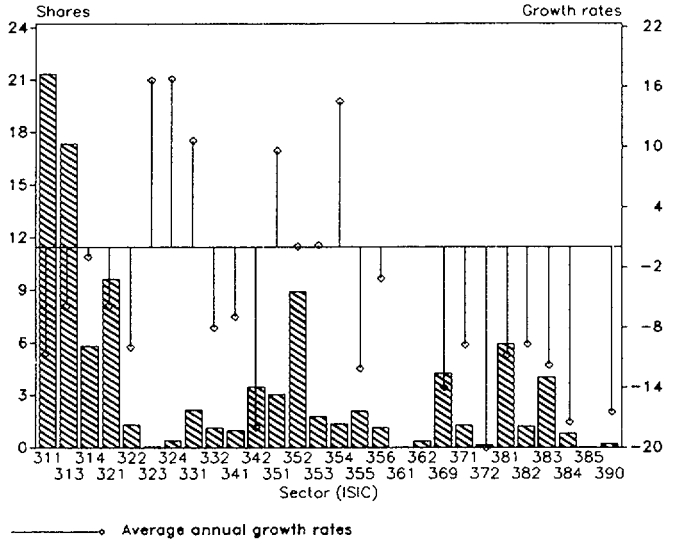
GDP per capita (1000$)/c



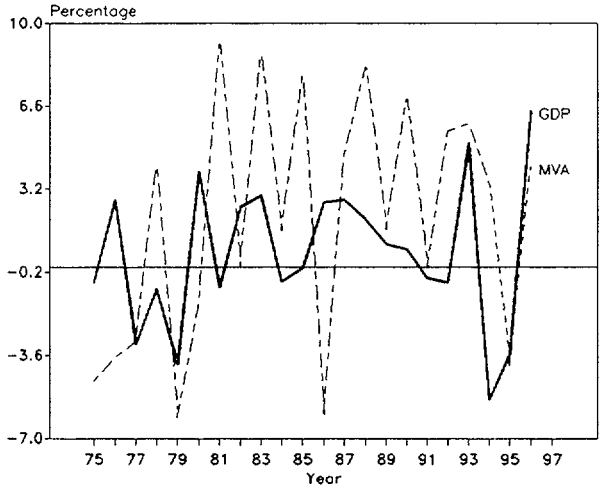
For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

ZAMBIA

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



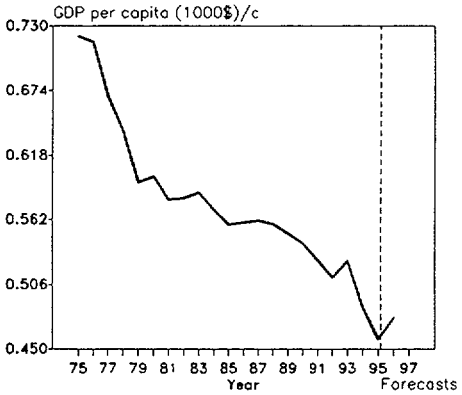
Annual growth rates of GDP and MVA (Constant 1990 prices)



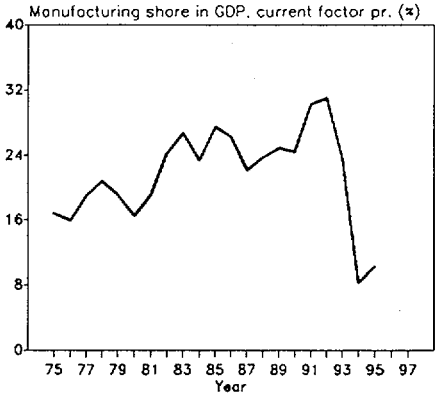
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	3 438	3 575	3 910	3 710
Per capita [na] (1990-dollars)	599	558	541	459
Manufacturing share [na] (%) (current factor prices)	16.5	27.5	24.4	*11.2*
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	588	763	880	*975*
Industrial production index (1990=100)	84	89	100	*115*
Value added (millions of dollars)	780	*520*	655	*450*
Gross output (millions of dollars)	1 671	*1 225*	1 270	*1 501*
Employment (thousands)	59	*61*	68	*53*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	53	*58*	48	*70*
Wages and salaries including supplements (%)	11	*12*	*9*	*12*
Gross operating surplus and net taxes (%)	35	*30*	*42*	*18*
-PRODUCTIVITY: (dollars)				
Gross output per worker	28 231	*20 150*	18 766	*28 004*
Value added per worker	13 173	*8 605*	9 696	*8 520*
Average wage (including supplements)	3 245	*2 492*	*1 767*	*3 429*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	10.66	*8.62*	*15.04*	*18.71*
as a percentage of 1970-1975 structural change	100	*81*	*141*	*176*
MVA growth rate perer unit of structural change	5.04	0.23	-0.88	-1.89
Degree of specialization	17.9	18.2	21.7	19.4
-VALUE ADDED: (millions of dollars)				
311/2 Food products	92	*66*	158	*86*
313 Beverages	193	*114*	*103*	*77*
314 Tobacco products	58	*32*	*28*	*30*
321 Textiles	51	*30*	64	*44*
322 Wearing apparel	34	*18*	10	*5*
323 Leather and fur products	4	*3*	-	-
324 Footwear	15	*9*	*1*	*3*
331 Wood and wood products	8	*8*	8	*15*
332 Furniture and fixtures	12	*9*	8	*5*
341 Paper and paper products	15	*7*	6	*4*
342 Printing and publishing	17	*13*	32	*10*
351 Industrial chemicals	22	*19*	12	*22*
352 Other chemical products	47	*45*	45	*47*
353 Petroleum refineries	9	*4*	*8*	*9*
354 Miscellaneous petroleum and coal products	3	*2*	*4*	*10*
355 Rubber products	20	*15*	16	*8*
356 Plastic products	7	*5*	6	*6*
361 Pottery, china and earthenware	1	*1*	*1*	-
362 Glass and glass products	3	*3*	*6*	*-1*
369 Other non-metal mineral products	33	*35*	35	*15*
371 Iron and steel	10	*6*	8	*6*
372 Non-ferrous metals	2	*1*	1	-
381 Metal products	50	*33*	44	*24*
382 Non-electrical machinery	18	*9*	8	*5*
383 Electrical machinery	26	*15*	31	*15*
384 Transport equipment	28	*17*	8	*3*
385 Professional and scientific equipment	-	-	-	-
390 Other manufacturing industries	2	*1*	2	*1*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

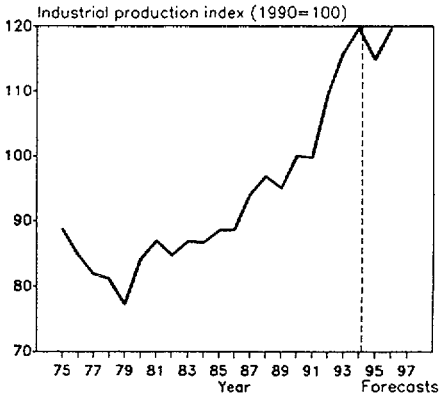
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)

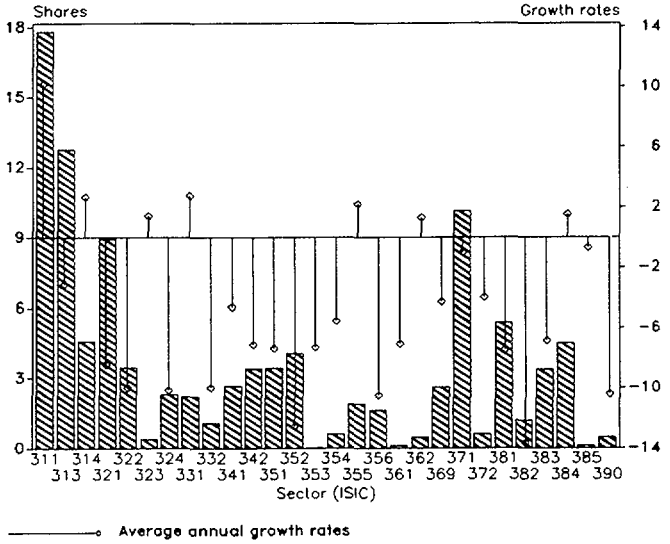


Industrial production index (1990=100)

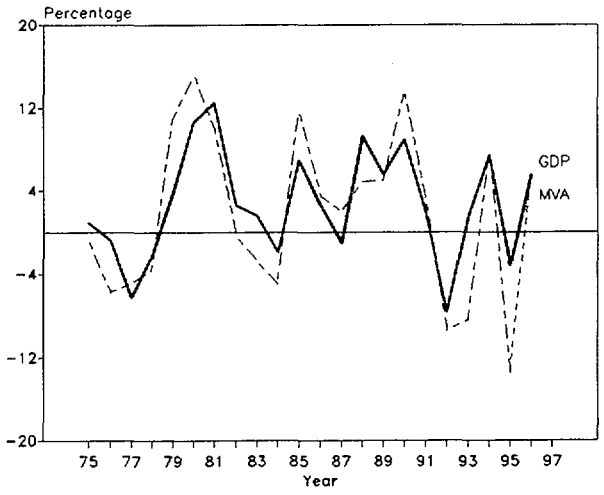


ZIMBABWE

Average sectoral shares in total Value Added and average annual sectoral growth rates, 1990–1996 (Percentage)



Annual growth rates of GDP and MVA (Constant 1990 prices)

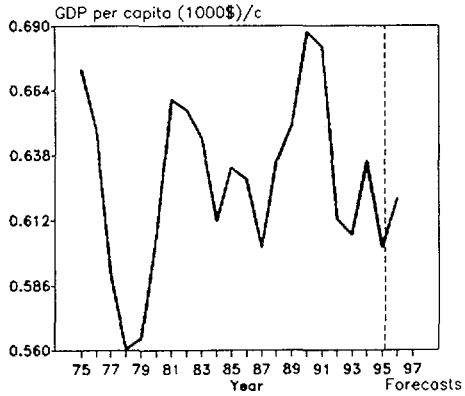


Source: National Accounts Statistics from UN/UNSO.
Estimated by UNIDO/IRD/RES.

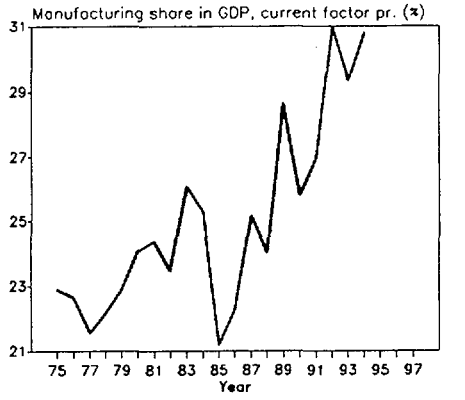
	1980	1985	1990	1995
GDP: [na] (millions of 1990-dollars)	4 315	5 311	6 776	6 727
Per capita [na] (1990-dollars)	606	633	688	601
Manufacturing share [na] (%) (current factor prices)	24.1	21.2	25.8	..
MANUFACTURING:				
Value added [na] (millions of 1990-dollars)	1 068	1 201	1 578	1 245
Industrial production index (1990=100)	75	83	100	83
Value added (millions of dollars)	1 480	1 278	2 229	*1 670*
Gross output (millions of dollars)	3 579	3 020	4 738	*3 804*
Employment (thousands)	161	163	184	*170*
-PROFITABILITY: (in percent of gross output)				
Intermediate input (%)	59	58	53	*56*
Wages and salaries including supplements (%)	17	18	15	*12*
Gross operating surplus (%)	24	25	32	*32*
-PRODUCTIVITY: (dollars)				
Gross output per worker	22 265	18 449	25 711	*22 211*
Value added per worker	9 205	7 808	12 095	*9 755*
Average wage (including supplements)	3 848	3 241	3 959	*2 639*
-STRUCTURAL INDICES:				
Structural change indicator (5-year period, %)	8.14	12.49	11.83	*11.53*
as a percentage of 1970-1975 structural change	100	153	145	*142*
MVA growth rate perer unit of structural change	4.79	0.79	2.22	1.03
Degree of specialization	13.4	13.3	13.4	18.2
-VALUE ADDED: (millions of dollars)				
311/2 Food products	193	130	237	*373*
313 Beverages	92	189	302	*216*
314 Tobacco products	55	72	76	*78*
321 Textiles	147	114	255	*136*
322 Wearing apparel	70	55	102	*51*
323 Leather and fur products	4	4	7	*7*
324 Footwear	34	42	66	*32*
331 Wood and wood products	38	17	43	*45*
332 Furniture and fixtures	26	15	32	*16*
341 Paper and paper products	30	37	64	*43*
342 Printing and publishing	59	45	94	*55*
351 Industrial chemicals	58	67	*98*	*56*
352 Other chemical products	80	78	127	*49*
353 Petroleum refineries	-	1	*1*	-
354 Miscellaneous petroleum and coal products	7	8	*16*	*10*
355 Rubber products	30	24	37	*37*
356 Plastic products	25	37	47	*21*
361 Pottery, china and earthenware	3	2	3	*1*
362 Glass and glass products	9	5	9	*9*
369 Other non-metal mineral products	44	28	54	*39*
371 Iron and steel	194	105	184	*155*
372 Non-ferrous metals	10	9	13	*9*
381 Metal products	132	78	135	*80*
382 Non-electrical machinery	39	22	43	*16*
383 Electrical machinery	44	36	88	*52*
384 Transport equipment	38	48	81	*77*
385 Professional and scientific equipment	2	1	2	*2*
390 Other manufacturing industries	17	9	13	*6*

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

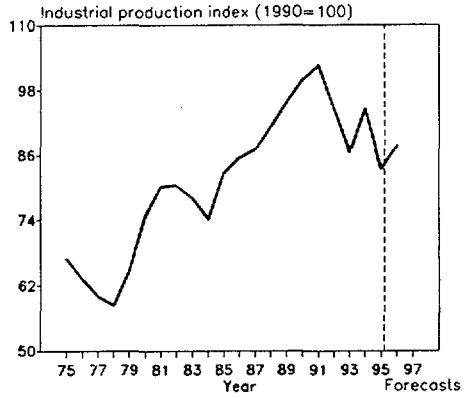
GDP per capita (1000$)/c



Manufacturing share in GDP, current factor pr. (%)



Industrial production index (1990=100)



AFGHANISTAN	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	573	639	488	462	467	*467*
Growth rate (%)[na,c]	-3.72	0.27	-3.12	2.59	1.00	*0.00*
Per capita (in 1990-dollars)[na,c]	35.6	44.0	33.1	26.7	25.3	*23.7*
MVA:[na,c] (in million 1990-dollars)	144	156	103	88	*86*	*88*
Growth rate (%)[na,c]	-6.06	3.32	-10.34	-2.45	*-1.41*	*1.55*
Manufacturing share (%)[na]	18.5	19.2	21.2	..	..	..

AZERBAIJAN	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	10 644	14 321	13 878	6 720	5 241	4 340
Growth rate (%)[na,c]	10.13	4.61	-9.79	-13.30	-22.01	-17.20
Per capita (in 1990-dollars)[na,c]	1 728.7	2 150.6	1 941.0	908.7	702.2	576.2
MVA:[na,c] (in million 1990-dollars)	1 982	2 511	2 361	1 583	1 187	*1 038*
Growth rate (%)[na,c]	..	6.51	-16.49	-12.63	-24.98	*-12.58*
Manufacturing share (%)[na]	..	..	*17.0*	*22.5*	*22.5*	..

BAHAMAS	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	1 981	2 566	3 042	3 054	3 063	3 093
Growth rate (%)[na,c]	-3.56	13.53	4.82	2.68	0.30	1.00
Per capita (in 1990-dollars)[na,c]	9 433.7	11 062.0	11 929.4	11 351.8	11 178.1	11 087.6
MVA:[na,c] (in million 1990-dollars)	..	..	..	..	..	..
Growth rate (%)[na,c]	..	..	..	..	..	..
Manufacturing share (%)[na]	7.6	..	3.3	*3.4*	..	..

BAHRAIN	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	3 739	3 607	4 032	4 624	4 601	4 702
Growth rate (%)[na,c]	2.58	-2.01	1.24	4.60	-0.50	2.20
Per capita (in 1990-dollars)[na,c]	10 773.9	8 732.9	8 229.5	8 707.7	8 457.1	8 441.4
MVA:[na,c] (in million 1990-dollars)	580	532	672	783	792	*804*
Growth rate (%)[na,c]	26.25	-16.14	5.23	5.39	1.17	*1.55*
Manufacturing share (%)[na]	14.8	8.5	15.4	16.5	*16.5*	..

BELARUS	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	26 100	34 192	39 708	31 919	25 535	22 981
Growth rate (%)[na,c]	4.17	3.97	-1.40	-10.00	-20.00	-10.00
Per capita (in 1990-dollars)[na,c]	2 711.1	3 433.6	3 870.2	3 087.8	2 467.6	2 220.0
MVA:[na,c] (in million 1990-dollars)	5 439	7 207	10 340	10 258	8 279	*7 901*
Growth rate (%)[na,c]	..	5.09	7.54	0.36	-19.30	*-4.56*
Manufacturing share (%)[na]	..	..	36.2	29.8	*11.4*	..

BELIZE	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	249	254	396	461	469	486
Growth rate (%)[na,c]	4.37	0.99	9.23	4.18	1.60	3.73
Per capita (in 1990-dollars)[na,c]	1 708.7	1 529.9	2 120.1	2 273.1	2 254.0	2 283.1
MVA:[na,c] (in million 1990-dollars)	44	42	53	58	59	*60*
Growth rate (%)[na,c]	14.91	0.93	5.60	-1.29	1.93	*1.93*
Manufacturing share (%)[na]	23.1	16.0	15.0	13.4	*11.4*	..

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

BENIN	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	1 340	1 740	1 845	2 079	2 179	2 316
Growth rate (%)[na,c]	9.42	7.53	3.00	3.24	4.80	6.30
Per capita (in 1990-dollars)[na,c]	387.3	432.3	393.9	406.8	414.3	428.2
MVA:[na,c] (in million 1990-dollars)	128	115	145	156	161	*166*
Growth rate (%)[na,c]	-4.38	11.84	0.57	2.69	3.04	*3.62*
Manufacturing share (%)[na]	9.6	8.2	8.2	8.2	*7.8*	..

BERMUDA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	1 556	1 563	1 635	1 635	1 676	1 709
Growth rate (%)[na,c]	2.51	6.69	-3.54	2.44	2.50	2.00
Per capita (in 1990-dollars)[na,c]	28 813.1	27 909.0	26 801.6	25 950.8	26 599.6	27 131.5
MVA:[na,c] (in million 1990-dollars)	161	156	163	163	167	*170*
Growth rate (%)[na,c]	4.52	2.80	-3.79	2.60	2.24	*1.93*
Manufacturing share (%)[na]	..	..	..	..	..	..

BHUTAN	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	141	196	283	327	344	*371*
Growth rate (%)[na,c]	17.63	3.69	5.28	4.89	5.10	*7.91*
Per capita (in 1990-dollars)[na,c]	109.3	135.1	172.3	191.1	198.0	*209.8*
MVA:[na,c] (in million 1990-dollars)	5	11	23	31	32	*36*
Growth rate (%)[na,c]	35.25	12.19	15.98	4.07	2.90	*12.22*
Manufacturing share (%)[na]	3.2	5.3	8.1	10.8	*10.8*	..

BOSNIA AND HERZEGOVINA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	7 611	8 376	6 523	4 317	3 454	*3 580*
Growth rate (%)[na,c]	1.15	1.51	-23.20	-14.10	-20.00	*3.67*
Per capita (in 1990-dollars)[na,c]	1 944.5	2 031.9	1 459.2	1 140.6	952.0	*1 003.2*
MVA:[na,c] (in million 1990-dollars)	..	..	..	..	..	..
Growth rate (%)[na,c]	..	..	..	..	..	..
Manufacturing share (%)[na]	..	..	..	..	..	..

BRUNEI DARUSSALAM	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	4 248	3 526	3 596	3 539	3 645	3 736
Growth rate (%)[na,c]	-7.00	-1.48	2.75	-4.06	3.00	2.50
Per capita (in 1990-dollars)[na,c]	22 009.3	15 813.0	13 991.9	12 684.6	12 745.4	12 751.9
MVA:[na,c] (in million 1990-dollars)	430	254	323	234	241	*246*
Growth rate (%)[na,c]	-8.35	-5.41	5.31	1.76	3.01	*1.80*
Manufacturing share (%)[na]	11.7	10.0	8.8	*7.6*	..	..

CAPE VERDE	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	210	285	368	418	437	*455*
Growth rate (%)[na,c]	3.32	8.54	3.70	2.51	4.60	*4.24*
Per capita (in 1990-dollars)[na,c]	727.6	918.1	1 079.8	1 137.8	1 158.6	*1 179.5*
MVA:[na,c] (in million 1990-dollars)	12	18	21	38	40	*43*
Growth rate (%)[na,c]	7.14	36.12	6.21	32.59	5.96	*7.26*
Manufacturing share (%)[na]	4.8	5.8	6.1	*5.8*	..	..

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

CHAD	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	722	1 106	1 213	1 162	1 220	1 277
Growth rate (%)[na,c]	-7.40	21.90	-2.60	-2.90	5.00	4.70
Per capita (in 1990-dollars)[na,c]	161.2	220.3	218.5	193.8	198.0	201.6
MVA:[na,c] (in million 1990-dollars)	180	343	250	224	235	*245*
Growth rate (%)[na,c]	-12.00	-6.65	-38.78	-3.04	4.76	*4.12*
Manufacturing share (%)[na]	*15.4*	15.9	22.1	14.1	*13.4*	..

DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	11 014	17 622	21 000	19 251	18 674	17 889
Growth rate (%)[na,c]	9.89	9.59	-3.70	-3.50	-3.00	-4.20
Per capita (in 1990-dollars)[na,c]	623.4	930.3	1 031.3	900.6	859.2	809.6
MVA:[na,c] (in million 1990-dollars)	..	..	..	..	..	..
Growth rate (%)[na,c]	..	..	..	..	..	..
Manufacturing share (%)[na]	..	..	..	..	..	..

DJIBOUTI	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	353	346	418	437	439	434
Growth rate (%)[na,c]	4.72	1.59	4.03	2.75	0.50	-1.30
Per capita (in 1990-dollars)[na,c]	1 255.3	884.6	807.6	766.9	750.9	721.4
MVA:[na,c] (in million 1990-dollars)	15	14	17	18	18	*19*
Growth rate (%)[na,c]	4.08	1.51	6.78	2.54	2.35	*1.72*
Manufacturing share (%)[na]	..	4.7	4.8	4.5	..	..

DOMINICAN REPUBLIC	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	5 946	6 419	7 080	7 953	8 298	8 694
Growth rate (%)[na,c]	6.05	-2.59	-5.41	2.99	4.34	4.77
Per capita (in 1990-dollars)[na,c]	1 043.7	1 006.8	995.8	1 054.4	1 079.9	1 111.3
MVA:[na,c] (in million 1990-dollars)	775	779	955	1 107	1 152	*1 220*
Growth rate (%)[na,c]	5.03	-5.21	-4.16	2.30	4.00	*5.93*
Manufacturing share (%)[na]	15.3	13.6	13.5	*14.2*	..	..

EQUATORIAL GUINEA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	116	131	145	159	173	192
Growth rate (%)[na,c]	-9.94	7.31	4.45	2.75	8.90	11.10
Per capita (in 1990-dollars)[na,c]	534.5	420.6	412.2	418.6	444.1	479.9
MVA:[na,c] (in million 1990-dollars)	2	3	2	3	3	*3*
Growth rate (%)[na,c]	-9.20	95.57	1.55	9.94	4.60	*12.63*
Manufacturing share (%)[na]	..	*1.9*	1.5	9.9	*9.3*	..

ESTONIA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	6 547	6 641	7 455	5 201	5 060	5 207
Growth rate (%)[na,c]	..	-8.70	-6.47	-7.80	-2.70	2.89
Per capita (in 1990-dollars)[na,c]	4 423.5	4 323.6	4 748.5	3 403.7	3 357.9	3 499.2
MVA:[na,c] (in million 1990-dollars)	2 621	2 937	2 985	2 097	2 040	*2 069*
Growth rate (%)[na,c]	..	0.38	-5.09	-7.80	-2.70	*1.42*
Manufacturing share (%)[na]	41.7	39.0	39.6	24.0	*22.5*	..

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

FRENCH GUIANA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	353	629	1 103	1 130	1 139	*1 199*
Growth rate (%)[na,c]	0.00	14.78	10.74	0.00	0.82	*5.25*
Per capita (in 1990-dollars)[na,c]	5 184.8	6 909.2	9 427.3	8 372.2	8 081.5	*8 158.8*
MVA:[na,c] (in million 1990-dollars)	59	57	63	67	68	*71*
Growth rate (%)[na,c]	4.52	2.81	0.43	1.67	2.44	*3.05*
Manufacturing share (%)[na]	..	..	..	..	..	..

FRENCH POLYNESIA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	1 684	2 361	3 007	3 238	3 410	*3 522*
Growth rate (%)[na,c]	0.48	5.35	3.97	2.02	5.33	*3.28*
Per capita (in 1990-dollars)[na,c]	11 151.2	13 570.9	15 266.3	15 416.8	15 860.7	*16 081.4*
MVA:[na,c] (in million 1990-dollars)	120	202	219	250	263	*273*
Growth rate (%)[na,c]	1.77	8.27	5.22	5.72	5.35	*3.61*
Manufacturing share (%)[na]	6.6	8.5	7.3	..	..	..

GEORGIA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	9 775	14 421	14 132	3 732	2 612	2 675
Growth rate (%)[na,c]	4.56	12.66	-0.34	-39.10	-30.00	2.40
Per capita (in 1990-dollars)[na,c]	1 936.4	2 745.8	2 588.3	682.7	478.6	490.8
MVA:[na,c] (in million 1990-dollars)	2 121	3 317	2 706	757	492	*500*
Growth rate (%)[na,c]	..	15.67	-15.92	-39.92	-35.00	*1.69*
Manufacturing share (%)[na]	..	..	*19.2*	*11.0*	*11.0*	..

GHANA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	5 030	4 923	6 226	7 125	7 396	7 729
Growth rate (%)[na,c]	0.46	5.08	3.34	4.60	3.80	4.50
Per capita (in 1990-dollars)[na,c]	465.4	383.5	414.6	434.8	438.8	445.8
MVA:[na,c] (in million 1990-dollars)	541	433	575	566	583	*612*
Growth rate (%)[na,c]	-1.44	24.29	-3.84	2.30	3.00	*5.06*
Manufacturing share (%)[na]	7.8	11.5	9.3	8.8	*8.8*	..

GUADELOUPE	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	1 676	1 706	2 200	2 208	2 273	*2 363*
Growth rate (%)[na,c]	-4.66	-0.76	3.14	2.69	2.94	*3.97*
Per capita (in 1990-dollars)[na,c]	5 125.0	4 805.7	5 626.6	5 371.7	5 436.8	*5 572.6*
MVA:[na,c] (in million 1990-dollars)	113	89	129	131	134	*139*
Growth rate (%)[na,c]	-5.16	11.54	3.22	3.83	2.45	*3.58*
Manufacturing share (%)[na]	6.3	4.9	*5.4*	..	..	..

GUINEA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	2 296	2 188	2 818	3 194	3 321	3 471
Growth rate (%)[na,c]	5.60	3.89	4.69	3.00	4.00	4.50
Per capita (in 1990-dollars)[na,c]	514.8	438.7	489.7	472.2	468.3	472.3
MVA:[na,c] (in million 1990-dollars)	61	62	100	116	122	*130*
Growth rate (%)[na,c]	2.70	3.33	5.07	5.03	5.90	*6.34*
Manufacturing share (%)[na]	..	..	3.6	4.7	*4.6*	..

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

GUINEA-BISSAU	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	39	43	55	60	64	67
Growth rate (%)[na,c]	-4.19	-3.50	3.30	2.85	6.90	4.40
Per capita (in 1990-dollars)[na,c]	48.7	49.1	56.7	58.1	60.9	62.3
MVA:[na,c] (in million 1990-dollars)	25	24	17	17	17	*16*
Growth rate (%)[na,c]	-5.09	-7.11	-1.53	3.95	-1.19	*-1.15*
Manufacturing share (%)[na]	17.7	16.2	30.3	8.0	*8.0*	..

GUYANA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	561	469	396	490	531	555
Growth rate (%)[na,c]	1.66	1.02	-10.10	8.23	8.50	4.50
Per capita (in 1990-dollars)[na,c]	739.6	591.1	498.4	602.5	647.4	669.2
MVA:[na,c] (in million 1990-dollars)	40	28	18	25	28	*29*
Growth rate (%)[na,c]	0.76	-3.13	-16.67	3.49	12.13	*6.11*
Manufacturing share (%)[na]	12.1	9.8	5.2	*3.8*	..	..

HAITI	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	2 381	2 270	2 281	1 829	1 588	1 657
Growth rate (%)[na,c]	7.39	0.59	-0.14	-5.24	-13.19	4.38
Per capita (in 1990-dollars)[na,c]	444.7	387.3	352.4	266.6	227.1	232.6
MVA:[na,c] (in million 1990-dollars)	506	429	417	250	191	*203*
Growth rate (%)[na,c]	14.81	-0.84	2.41	-6.39	-23.61	*5.99*
Manufacturing share (%)[na]	19.1	17.6	19.5	10.8	*10.8*	..

KAZAKHSTAN	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	21 683	28 636	39 831	27 591	20 693	18 852
Growth rate (%)[na,c]	3.76	6.15	15.53	-12.90	-25.00	-8.90
Per capita (in 1990-dollars)[na,c]	1 454.5	1 814.7	2 389.4	1 638.6	1 230.0	1 121.0
MVA:[na,c] (in million 1990-dollars)	3 882	5 107	5 497	4 382	3 155	*2 886*
Growth rate (%)[na,c]	..	6.15	-3.20	-14.80	-28.00	*-8.52*
Manufacturing share (%)[na]	..	..	*13.8*	*17.0*	..	..

KYRGYZSTAN	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	6 524	8 750	11 173	7 341	5 432	5 068
Growth rate (%)[na,c]	2.96	-5.31	1.20	-16.00	-26.00	-6.70
Per capita (in 1990-dollars)[na,c]	1 803.8	2 192.9	2 545.2	1 648.6	1 219.4	1 136.4
MVA:[na,c] (in million 1990-dollars)	..	..	2 588	1 511	1 133	991
Growth rate (%)[na,c]	..	..	..	-24.93	-25.02	-12.50
Manufacturing share (%)[na]	..	..	*23.2*	24.9	..	..

LAO PEOPLE'S DEMOCRATIC REPUBLIC	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	515	705	869	1 035	1 122	1 201
Growth rate (%)[na,c]	1.70	5.06	7.61	6.00	8.40	7.04
Per capita (in 1990-dollars)[na,c]	160.8	196.2	206.8	225.1	236.9	246.0
MVA:[na,c] (in million 1975-dollars)	23	31	37	49	*53*	*57*
Growth rate (%)[na,c]	7.94	3.85	9.96	8.10	*8.50*	*7.66*
Manufacturing share (%)[na]	..	..	..	13.4	*13.4*	..

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

LIBERIA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	846	779	805	824	824	824
Growth rate (%)[na,c]	-6.29	-2.02	-1.99	0.00	0.00	0.00
Per capita (in 1990-dollars)[na,c]	451.2	354.1	312.6	372.2	389.1	388.3
MVA:[na,c] (in million 1990-dollars)	57	55	59	64	66	*67*
Growth rate (%)[na,c]	-21.21	-1.61	-2.98	2.01	3.60	*1.76*
Manufacturing share (%)[na]	9.5	6.6	7.9	..	..	..

LITHUANIA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	6 892	8 497	12 179	5 476	5 530	5 694
Growth rate (%)[na,c]	..	0.00	5.74	-17.14	0.99	2.97
Per capita (in 1990-dollars)[na,c]	2 007.5	2 368.8	3 281.8	1 459.8	1 477.0	1 524.1
MVA:[na,c] (in million 1990-dollars)	..	..	4 490	2 446	2 470	*2 522*
Growth rate (%)[na,c]	..	..	..	-16.98	0.99	*2.10*
Manufacturing share (%)[na]	37.8	35.2	35.4	*46.8*	..	..

MALI	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	1 748	2 006	2 510	2 853	2 921	3 097
Growth rate (%)[na,c]	4.01	8.50	2.41	3.83	2.40	6.00
Per capita (in 1990-dollars)[na,c]	254.6	253.4	272.4	281.5	279.2	286.9
MVA:[na,c] (in million 1990-dollars)	86	160	196	222	233	*248*
Growth rate (%)[na,c]	1.58	4.37	-2.35	6.38	4.70	*6.46*
Manufacturing share (%)[na]	4.9	7.5	8.2	*9.2*	*8.8*	..

MARTINIQUE	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	1 734	2 159	2 800	2 810	2 998	*3 155*
Growth rate (%)[na,c]	2.80	4.50	2.94	2.69	6.68	*5.26*
Per capita (in 1990-dollars)[na,c]	5 320.2	6 330.6	7 777.8	7 553.3	7 972.2	*8 302.8*
MVA:[na,c] (in million 1990-dollars)	113	159	256	153	167	*177*
Growth rate (%)[na,c]	-9.91	26.89	2.95	5.43	8.98	*6.29*
Manufacturing share (%)[na]	5.1	..	..	..	..	..

MAURITANIA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	878	875	1 052	1 161	1 215	1 271
Growth rate (%)[na,c]	0.70	3.35	3.50	3.00	4.60	4.60
Per capita (in 1990-dollars)[na,c]	566.4	495.2	525.1	537.4	548.0	558.8
MVA:[na,c] (in million 1990-dollars)	64	103	119	150	160	*170*
Growth rate (%)[na,c]	-1.43	22.44	18.98	6.19	6.51	*6.36*
Manufacturing share (%)[na]	5.6	12.8	12.9	*11.1*	..	..

MAURITIUS	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	1 409	1 769	2 559	2 985	3 128	3 265
Growth rate (%)[na,c]	-10.06	6.88	7.15	5.50	4.80	4.39
Per capita (in 1990-dollars)[na,c]	1 458.8	1 741.6	2 421.0	2 735.8	2 833.3	2 923.3
MVA:[na,c] (in million 1990-dollars)	200	299	502	614	659	*705*
Growth rate (%)[na,c]	-7.03	15.27	7.72	10.00	7.29	*7.01*
Manufacturing share (%)[na]	15.0	20.3	23.1	20.8	*20.8*	..

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

MONGOLIA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	1 139	1 587	1 869	1 476	1 525	1 618
Growth rate (%)[na,c]	3.43	6.19	-2.07	-1.60	3.30	6.10
Per capita (in 1990-dollars)[na,c]	684.7	831.3	843.3	623.8	631.6	656.8
MVA:[na,c] (in million 1990-dollars)	288	428	521	369	379	*403*
Growth rate (%)[na,c]	8.03	3.07	2.43	-4.61	2.82	*6.20*
Manufacturing share (%)[na]	24.2	26.6	27.9	..	..	..

MONTSERRAT	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	48	54	71	72	76	*81*
Growth rate (%)[na,c]	10.22	4.61	-10.89	2.84	6.62	*6.62*
Per capita (in 1990-dollars)[na,c]	4 016.4	4 884.3	6 464.6	6 500.5	6 931.2	*7 390.4*
MVA:[na,c] (in million 1990-dollars)	3	3	4	4	5	*5*
Growth rate (%)[na,c]	10.71	-0.12	-10.48	11.78	8.07	*8.04*
Manufacturing share (%)[na]	5.7	5.5	*4.6*	..	..	..

MOZAMBIQUE	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	1 386	1 102	1 318	1 501	1 576	1 647
Growth rate (%)[na,c]	2.46	-8.82	1.90	8.84	5.00	4.50
Per capita (in 1990-dollars)[na,c]	114.6	81.4	92.9	94.1	94.7	95.4
MVA:[na,c] (in million 1990-dollars)	561	256	325	325	370	*402*
Growth rate (%)[na,c]	3.25	-13.87	-2.19	-0.11	13.84	*8.75*
Manufacturing share (%)[na]	*33.1*	*14.9*	..	..	..	..

MYANMAR	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	21 156	26 701	23 969	27 889	29 789	32 701
Growth rate (%)[na,c]	7.91	2.85	2.82	6.00	6.81	9.78
Per capita (in 1990-dollars)[na,c]	625.5	711.2	579.6	640.1	672.1	725.0
MVA:[na,c] (in million 1990-dollars)	1 733	2 275	1 865	2 176	2 371	*2 637*
Growth rate (%)[na,c]	6.86	2.92	0.11	9.75	8.94	*11.21*
Manufacturing share (%)[na]	9.5	9.9	7.8	7.0	*7.0*	..

NAMIBIA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	1 944	1 891	2 129	2 390	2 519	2 585
Growth rate (%)[na,c]	0.18	0.19	0.01	-1.53	5.41	2.62
Per capita (in 1990-dollars)[na,c]	1 887.1	1 603.5	1 574.5	1 635.7	1 680.5	1 683.0
MVA:[na,c] (in million 1990-dollars)	63	80	113	125	128	*133*
Growth rate (%)[na,c]	-14.65	3.72	15.63	17.17	2.10	*4.27*
Manufacturing share (%)[na]	4.6	4.6	6.1	8.8	*8.8*	..

NEW CALEDONIA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	1 079	1 070	1 600	1 722	1 776	*1 824*
Growth rate (%)[na,c]	-0.40	4.51	-4.27	2.02	3.11	*2.71*
Per capita (in 1990-dollars)[na,c]	7 542.8	6 900.2	9 523.8	9 842.6	9 977.7	*10 077.9*
MVA:[na,c] (in million 1990-dollars)	98	79	112	124	125	*127*
Growth rate (%)[na,c]	-4.64	-1.05	-4.27	-0.75	1.31	*1.36*
Manufacturing share (%)[na]	5.8	4.7	..	..	..	..

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

OMAN	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	4 478	8 999	10 521	12 757	12 630	13 211
Growth rate (%)[na,c]	6.05	13.76	7.54	4.00	-1.00	4.60
Per capita (in 1990-dollars)[na,c]	3 962.5	6 315.3	5 894.3	6 287.6	5 968.8	5 985.9
MVA:[na,c] (in million 1990-dollars)	49	265	396	477	484	..
Growth rate (%)[na,c]	19.05	20.39	14.60	4.63	1.50	..
Manufacturing share (%)[na]	0.8	2.4	3.7	*4.3*	..	..

PAPUA NEW GUINEA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	2 826	3 016	3 221	4 514	4 672	4 448
Growth rate (%)[na,c]	-2.29	3.60	-3.00	14.44	3.50	-4.80
Per capita (in 1990-dollars)[na,c]	915.8	876.1	839.0	1 098.6	1 111.4	1 034.1
MVA:[na,c] (in million 1990-dollars)	411	458	388	531	589	*593*
Growth rate (%)[na,c]	-0.42	3.01	-22.77	9.34	10.94	*0.58*
Manufacturing share (%)[na]	7.5	11.0	12.4	8.8	*8.8*	..

QATAR	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	6 006	6 221	7 360	8 012	7 971	8 035
Growth rate (%)[na,c]	7.10	-2.24	2.67	0.01	-0.50	0.80
Per capita (in 1990-dollars)[na,c]	26 227.3	17 376.7	15 176.2	15 173.4	14 816.9	14 662.9
MVA:[na,c] (in million 1990-dollars)	462	692	948	984	1 060	*1 123*
Growth rate (%)[na,c]	-12.51	2.96	4.17	0.44	7.79	*5.88*
Manufacturing share (%)[na]	3.3	7.8	12.7	11.0	*11.2*	..

REPUBLIC OF MOLDOVA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	7 206	8 506	11 975	7 018	4 913	4 765
Growth rate (%)[na,c]	1.48	-9.76	8.17	-14.80	-30.00	-3.00
Per capita (in 1990-dollars)[na,c]	1 796.5	2 018.5	2 746.4	1 588.8	1 109.5	1 074.0
MVA:[na,c] (in million 1990-dollars)	1 909	2 344	3 263	2 240	1 570	*1 545*
Growth rate (%)[na,c]	..	-4.60	19.59	-10.22	-29.92	*-1.55*
Manufacturing share (%)[na]	..	..	*27.2*	*31.4*	*31.9*	..

REUNION	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	3 295	4 040	4 959	5 429	5 695	*5 905*
Growth rate (%)[na,c]	4.20	3.45	3.95	2.78	4.89	*3.70*
Per capita (in 1990-dollars)[na,c]	6 512.2	7 279.9	8 209.7	8 549.8	8 829.0	*9 015.9*
MVA:[na,c] (in million 1990-dollars)	329	409	520	520	542	*563*
Growth rate (%)[na,c]	13.91	11.41	12.79	3.81	4.32	*3.86*
Manufacturing share (%)[na]	*9.0*	*8.3*	..	..	..	..

RWANDA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	1 853	2 206	2 337	2 131	1 066	1 332
Growth rate (%)[na,c]	6.01	4.41	-2.00	-11.00	-50.00	25.00
Per capita (in 1990-dollars)[na,c]	359.0	364.5	336.0	375.4	201.2	257.0
MVA:[na,c] (in million 1990-dollars)	269	289	316	332	133	*151*
Growth rate (%)[na,c]	26.49	6.96	2.86	-0.02	-60.01	*14.14*
Manufacturing share (%)[na]	15.8	14.2	13.9	12.7	*12.7*	..

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

SAMOA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	93	91	89	107	100	*98*
Growth rate (%)[na,c]	3.00	6.06	-4.63	3.33	-7.10	*-1.84*
Per capita (in 1990-dollars)[na,c]	597.8	579.2	557.5	662.9	612.0	*593.5*
MVA:[na,c] (in million 1990-dollars)	15	15	14	13	13	*13*
Growth rate (%)[na,c]	3.00	4.64	-4.69	2.86	-3.06	*-1.42*
Manufacturing share (%)[na]	4.8	14.0	..	..	..	..

SAO TOME AND PRINCIPE	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	64	48	51	55	56	57
Growth rate (%)[na,c]	2.59	-1.60	3.80	2.75	1.30	2.60
Per capita (in 1990-dollars)[na,c]	686.1	448.8	427.4	434.6	430.1	431.3
MVA:[na,c] (in million 1990-dollars)	4	3	3	3	3	*4*
Growth rate (%)[na,c]	0.00	-8.70	5.18	12.02	1.31	*3.41*
Manufacturing share (%)[na]	9.1	*9.9*	6.2	*6.7*	..	..

SEYCHELLES	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	260	279	369	410	398	401
Growth rate (%)[na,c]	-2.55	10.28	7.43	5.60	-3.00	1.00
Per capita (in 1990-dollars)[na,c]	4 119.5	4 298.3	5 265.5	5 691.8	5 445.4	5 499.9
MVA:[na,c] (in million 1990-dollars)	19	20	34	39	41	*44*
Growth rate (%)[na,c]	18.21	8.43	14.76	12.37	5.69	*7.43*
Manufacturing share (%)[na]	9.7	*13.6*	10.2	12.0	..	..

SIERRA LEONE	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	445	487	547	497	498	484
Growth rate (%)[na,c]	2.91	8.53	2.50	-2.80	0.20	-2.80
Per capita (in 1990-dollars)[na,c]	137.6	135.8	136.8	121.6	120.7	115.4
MVA:[na,c] (in million 1990-dollars)	59	55	38	29	28	*27*
Growth rate (%)[na,c]	-4.88	-14.71	-7.06	-2.40	-2.77	*-4.52*
Manufacturing share (%)[na]	7.5	4.8	7.1	..	..	..

SOMALIA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	922	1 007	1 062	801	822	*825*
Growth rate (%)[na,c]	1.79	9.53	-2.22	-11.00	2.68	*0.32*
Per capita (in 1990-dollars)[na,c]	137.4	127.9	123.2	88.6	89.1	*86.9*
MVA:[na,c] (in million 1990-dollars)	39	32	41	40	42	*42*
Growth rate (%)[na,c]	9.17	7.56	-5.83	-5.00	3.66	*1.68*
Manufacturing share (%)[na]	4.7	4.9	3.8	..	..	..

SUDAN	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	4 291	4 506	4 895	5 267	5 372	5 560
Growth rate (%)[na,c]	-3.41	-5.30	-1.51	-4.00	2.00	3.50
Per capita (in 1990-dollars)[na,c]	229.7	210.0	203.4	205.7	205.4	208.2
MVA:[na,c] (in million 1990-dollars)	441	429	438	511	519	*532*
Growth rate (%)[na,c]	-4.09	-2.73	-7.89	1.46	1.59	*2.54*
Manufacturing share (%)[na]	8.9	8.8	9.2	*9.1*	..	..

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

SURINAME	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	1 649	1 627	1 728	1 863	1 848	*1 877*
Growth rate (%)[na,c]	-8.57	2.00	0.03	0.00	-0.80	*1.56*
Per capita (in 1990-dollars)[na,c]	4 644.8	4 315.8	4 321.1	4 478.2	4 379.2	*4 395.4*
MVA:[na,c] (in million 1990-dollars)	275	220	208	206	207	*204*
Growth rate (%)[na,c]	-10.52	6.48	0.86	1.47	0.50	*-1.53*
Manufacturing share (%)[na]	17.6	12.5	12.3	14.2	..	..

TAJIKISTAN	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	4 785	6 338	6 938	3 394	2 986	2 616
Growth rate (%)[na,c]	6.68	7.24	4.41	-27.61	-12.02	-12.40
Per capita (in 1990-dollars)[na,c]	1 210.2	1 390.5	1 309.0	602.9	521.5	448.8
MVA:[na,c] (in million 1990-dollars)	..	..	1 028	599	414	358
Growth rate (%)[na,c]	..	..	..	-19.29	-30.78	-13.50
Manufacturing share (%)[na]	..	..	*14.8*	*17.6*	..	..

TONGA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	80	120	124	133	140	*145*
Growth rate (%)[na,c]	15.81	5.00	-3.70	2.19	4.70	*3.95*
Per capita (in 1990-dollars)[na,c]	869.1	1 318.0	1 289.0	1 359.8	1 423.8	*1 480.0*
MVA:[na,c] (in million 1990-dollars)	8	8	10	9	9	*9*
Growth rate (%)[na,c]	21.42	5.89	-7.06	5.74	0.30	*3.25*
Manufacturing share (%)[na]	6.1	8.2	..	..	..	..

TURKMENISTAN	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	3 410	4 453	5 558	4 809	4 809	4 362
Growth rate (%)[na,c]	-2.31	1.33	5.38	-7.60	0.00	-9.30
Per capita (in 1990-dollars)[na,c]	1 190.8	1 380.9	1 514.5	1 228.5	1 203.9	1 070.5
MVA:[na,c] (in million 1990-dollars)	..	..	628	730	547	*547*
Growth rate (%)[na,c]	..	..	..	-4.94	-24.98	*0.00*
Manufacturing share (%)[na]	..	..	*11.3*	..	..	..

TUVALU	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	7	5	6	7	7	*7*
Growth rate (%)[na,c]	..	0.00	0.00	0.00	2.60	*2.36*
Per capita (in 1990-dollars)[na,c]	878.1	683.0	693.9	780.6	800.9	*737.8*
MVA:[na,c] (in million 1990-dollars)	..	..	..	..	..	..
Growth rate (%)[na,c]	..	..	..	..	..	..
Manufacturing share (%)[na]	..	..	..	..	..	..

UGANDA	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	2 092	2 498	3 253	3 832	4 234	4 656
Growth rate (%)[na,c]	-3.40	0.04	4.06	7.15	10.49	9.98
Per capita (in 1990-dollars)[na,c]	159.4	169.2	195.4	207.8	221.9	236.5
MVA:[na,c] (in million 1990-dollars)	113	117	164	223	263	*303*
Growth rate (%)[na,c]	6.10	-6.59	1.61	12.51	17.95	*15.34*
Manufacturing share (%)[na]	4.2	2.9	5.0	5.0	*5.0*	..

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

UNITED ARAB EMIRATES	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	32 826	29 954	33 653	35 331	34 978	35 608
Growth rate (%)[na,c]	26.42	-2.39	17.75	1.00	-1.00	1.80
Per capita (in 1990-dollars)[na,c]	32 340.7	19 299.9	17 518.6	16 808.5	16 216.1	16 112.1
MVA:[na,c] (in million 1990-dollars)	1 186	2 672	2 518	2 614	2 812	*3 044*
Growth rate (%)[na,c]	64.87	-2.20	5.38	1.50	7.55	*8.24*
Manufacturing share (%)[na]	3.7	9.0	7.3	8.4	*8.4*	..

UZBEKISTAN	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	15 329	19 717	22 615	17 914	17 202	17 030
Growth rate (%)[na,c]	7.45	4.04	4.74	-2.40	-3.97	-1.00
Per capita (in 1990-dollars)[na,c]	961.9	1 088.6	1 101.6	819.1	770.8	748.2
MVA:[na,c] (in million 1990-dollars)	2 673	3 563	4 623	4 085	4 126	4 134
Growth rate (%)[na,c]	..	10.92	1.86	3.55	1.00	0.20
Manufacturing share (%)[na]	..	..	*20.2*	*19.4*	..	..

VANUATU	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	93	141	154	167	171	*177*
Growth rate (%)[na,c]	-11.46	1.11	5.20	3.83	2.00	*3.57*
Per capita (in 1990-dollars)[na,c]	798.5	1 069.0	1 030.5	1 038.7	1 033.8	*1 045.3*
MVA:[na,c] (in million 1990-dollars)	2	5	9	12	13	*14*
Growth rate (%)[na,c]	-11.45	11.21	3.30	9.09	10.55	*8.95*
Manufacturing share (%)[na]	4.2	3.8	5.9	..	..	..

VIET NAM	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	3 842	5 317	6 360	7 846	8 536	9 347
Growth rate (%)[na,c]	-4.81	6.20	5.05	7.50	8.80	9.50
Per capita (in 1990-dollars)[na,c]	71.5	88.8	95.4	110.6	117.9	126.7
MVA:[na,c] (in million 1990-dollars)	..	..	..	..	..	..
Growth rate (%)[na,c]	..	..	..	..	..	..
Manufacturing share (%)[na]	..	..	18.5	21.5	*21.5*	..

ZAIRE	1980	1985	1990	1993	1994	1995
GDP:[na,c] (in million 1990-dollars)	7 555	8 165	8 491	5 977	5 535	5 501
Growth rate (%)[na,c]	2.37	1.13	-2.44	-10.40	-7.40	-0.60
Per capita (in 1990-dollars)[na,c]	279.7	257.6	227.0	141.4	126.0	121.0
MVA:[na,c] (in million 1990-dollars)	900	1 058	955	630	565	*559*
Growth rate (%)[na,c]	3.52	5.80	-2.45	-11.49	-10.31	*-1.07*
Manufacturing share (%)[na]	14.5	9.9	*11.2*	..	..	..

For sources, footnotes and comments see "Technical notes" at the beginning of this Annex.

Industrial Development

GLOBAL REPORT 1997

The vigour of global economic expansion has been slowly diminishing in recent years. For many developing countries and economies in transition, per capita income has continued to fall, and poverty remains the single most important concern. Poverty eradication and the revitalization of world economic and industrial growth therefore require a renewed commitment and sense of urgency from policy planners. *Industrial Development Global Report 1997* addresses the challenge by focusing on the long-term dynamics of investment and economic growth. It thus emphasizes, as its central message, the crucial importance of economic growth, for which investment is a necessary condition.

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