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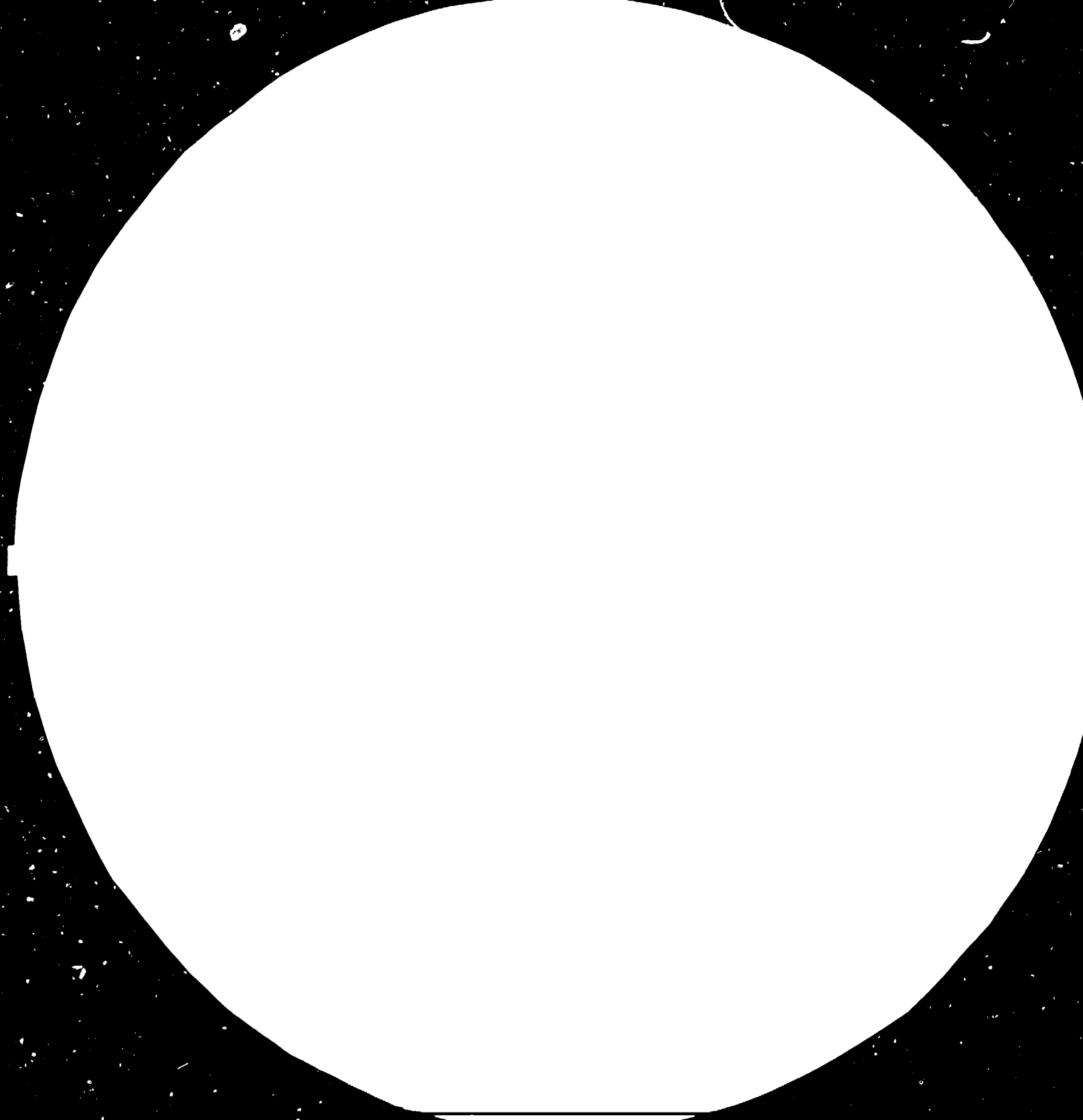

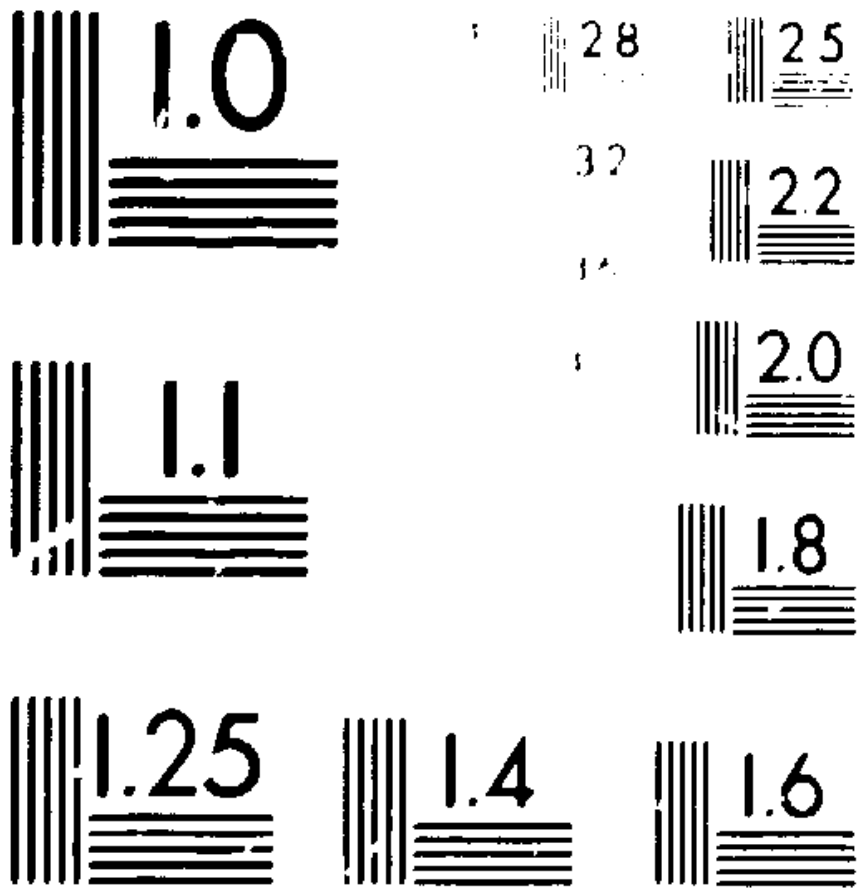

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THE LEATHER AND LEATHER PRODUCTS INDUSTRY: TRENDS, PROSPECTS AND STRATEGIES FOR DEVELOPMENT

Sectoral Studies Series
No.11, Volume I

SECTORAL STUDIES BRANCH
DIVISION FOR INDUSTRIAL STUDIES

Robert Higham
Michael Atkin

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Main results of the study work on industrial sectors are presented in the Sectoral Studies Series. In addition a series of Sectoral Working Papers is issued.

This document presents major results of work under the element Studies on Leather and Leather Products Industries in UNIDO's programme of Industrial Studies 1984/85.

Preface

This study has been prepared by UNIDO's Division for Industrial Studies, Sectoral Studies Branch. The study presents an appraisal of the current production and market situation since 1970 up to the year 2000, concentrating on the situation in the industry since 1977, the year of the First Consultation in the Leather and Leather Products Industry. Specific emphasis is put on the situation in the developing countries. It constitutes the basis for a companion study of the tanning chemicals industry (Strategies for increasing the production of tanning chemicals in developing countries, UNIDO/IS. forthcoming, February 1984).

The study will be a background document to the Third Consultation on the Leather and Leather Products Industry to be held in Innsbruck, Austria, from 16 to 20 April 1984. The statistical material is issued separately (see Volume II of this study, "A Statistical Digest", which is being issued as an Addendum).

The study is based upon the consultant input of Robert Higham, Consultant Editor, Leather, International Journal of the Industry, and Michael Atkin, Research Economist, Laudell Mills Commodities, Studies, London, United Kingdom.

EXPLANATORY NOTES

References to dollars ($) are to United States dollars, unless otherwise stated.

A billion is 1,000 million.

A comma (,) is used to distinguish thousands and millions.

A full stop (.) is used to indicate decimals.

A slash between dates (e.g., 1980/81) indicates a crop year, financial year or academic year.

Use of a hyphen between dates (e.g., 1960-1965) indicates the full period involved, including the beginning and end years.

Metric tons have been used throughout.

The following forms have been used in tables:

Three dots (...) indicate that data is not available or is not separately reported.

A dash (-) indicates that the amount is nil or negligible.

A blank indicates that the item is not applicable.

Totals may not add up precisely because of rounding.

Besides the common abbreviations, symbols and terms and those accepted by the International System of Units (SI), the following abbreviations and contractions have been used in this report:

Economic and technical abbreviations

CPE	Centrally planned economies
GDP	Gross domestic product
GSP	Generalized system preferences
lb	Pound
LDCs	Least developed countries
OMAs	Orderly marketing arrangements
UNITAD	An acronym signifying the mutual development of a model by UNIDO and UNCTAD

Organizational abbreviations

ALALC/LAFTA	Latin American Free Trade Association (Now ALADI: Latin American Integration Association)
CMEA	Council for Mutual Economic Assistance
EEC	European Economic Community
FAO	Food and Agriculture Organization of the United Nations
OECD	Organization for Economic Co-operation and Development
SONIPEC	The Algerian State Leather and Leather Products Organization
UNIDO	United Nations Industrial Development Organization

Definition of regions

Andean Pact: Bolivia, Colombia, Ecuador, Peru and Venezuela

UNITAD Regions:*/

1. North America
2. Western Europe
3. CPE Europe
4. Japan
5. Other developed
6. Latin America
7. Africa, South of Sahara
8. North Africa and Est Asia
9. South Asia
10. South-East Asia
11. CPE Asia

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*/ A full listing of countries by UNITAD regions is given in the Statistical Digest, issued as an addendum to this report.

Contents

Tables

Figures

1. THE LEATHER INDUSTRY IN THE WORLD ECONOMY

The international community has had a long standing interest in the leather and leather products industry, and a large volume of valuable information about this industry has been gathered by several international organizations since the industry was singled out as being of particular importance to developing countries in their attempt to meet the goals of industrial development established by the 1975 Lima Declaration and Plan of Action. Much of this information has been collected and circulated by UNIDO and FAO. Thus, this report builds upon, but does not repeat this information. Nonetheless, it is worth summarizing the results of past UNIDO consultations (in 1977 and 1979) in this field in order to provide a context for the present study.

The leather industry has been of great importance to developing countries for many reasons. In the first place, many developing countries were traditional exporters of rawstock for the tanning industry in the OECD countries, and the expansion of domestic processing of this rawstock into wet-blue, semi-finished or finished leather represented a sensible use of domestic raw materials to increase value-added. Secondly, many developing countries possess a comparativ advantage in different stages of leather processing. This advantage is pronounced in the wet-end stages of tanning, and in shoe manufacturing. Indeed, the shoe industry, in particular, is a labour intensive industry which is not characterized by rapid technological innovation.[1/] Moreover, there are not substantial economies of scale in this industry. All these considerations make the industry well-suited to the economic endowments of many developing countries. (It is true that some of the most successful shoe companies in the OECD countries are large corporations, but a large part of their success has been the result of forward integration into retailing. Shoe manufacturing does not offer economies of scale.) It should be stressed, however, that tanning is capital and water, rather than labour intensive, especially when compared to the manufacture of

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1/ Although in certain segments of the market, the changes in fashion are rapid and significant.

leather products. Tannning is intensive in working capital because the value of the raw material represents between 60 and 70 per cent of the value of the finished leather, and as the sophistication of processing increases, plant requirements increase, therefore increasing the capital requirements of operating.[2/] The developing countries do not have an unambiguous advantage in all stages of processing, therefore. In the third place, the substantial relocation of the leather industry from the developed to the developing world which occurred in the 1960s and early 1970s was not strongly opposed by trade interests in the developed world: indeed, many companies in developed nations actively sought to switch their operations to developing nations, in some cases to take advantage of cheap labour for shoe manufacturing, and in other cases to move the highly polluting wet-end tanning processes from OECD countries, where effluent control measures were imposing mounting cost burdens on tanneries. (Many developing countries have pollution control regulations which are more lax than those in OECD countries.) Rapid economic growth in the OECD nations facilitated the absorption into other industries of those workers displaced by the contracting leather industry.

Table 1.1 provides some indicators of the overall importance of this sector in terms of world trade. Unfortunately, the available data do not permit as complete a summary as would be desirable, but the overall impression left by the data is clear: developing countries are only minor exporters of raw hides and skins, but are large and growing exporters of leather manufactures. In fact, the value of leather exports from the developing countries is nearly three times larger than that of raw hides and skins. In the leather industry at least, the developing world is no longer the exporter of raw materials and the importer of manufactures. The leather industry is, as table 1.1 makes clear, an important source of foreign exchange earnings for the developing world, comparable with some other commodities whose importance is well-established.

2/ Water requirements are high; therefore, where water supplies are low, tanning is relatively expensive.

Table 1.1. Hides, skins, leather and leather footwear: their significance in relation to other commodities

	Annual average export earnings million US dollars 1979-1981		
	Developing countries	Developed countries	World
Hides and skins			
Raw hides and skins from bovine, sheep and goat	359.8	2,428.0	2,787.8
Leather	1,412.0	2,016.4	3,428.4
Footwear with leather uppers	860.2	6,828.6	7,688.3
TOTAL	2,632.0	11,273.0	13,905.0
Meat			
Meat from bovine, sheep and goat	1,454.3	8,386.3	9,840.6
Canned and prepared meat (all types)	674.3	3,059.0	3,733.3
TOTAL	2,128.6	11,445.3	13,573.9
Other commodities			
Rubber	3,860.0	61.7	3,921.7
Cotton	3,216.3	4,094.7	7,311.0
Coffee	10,229.7	492.7	10,722.4
Tea	1,361.3	-	1,361.3
Rice	2,923.0	2,054.0	4,977.0
Tobacco	1,720.0	2,266.0	3,986.0

Source: FAO, World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, Rome, 1983.

Figure 1.1. Developing country export earnings from raw hides and skins, leather and leather footwear

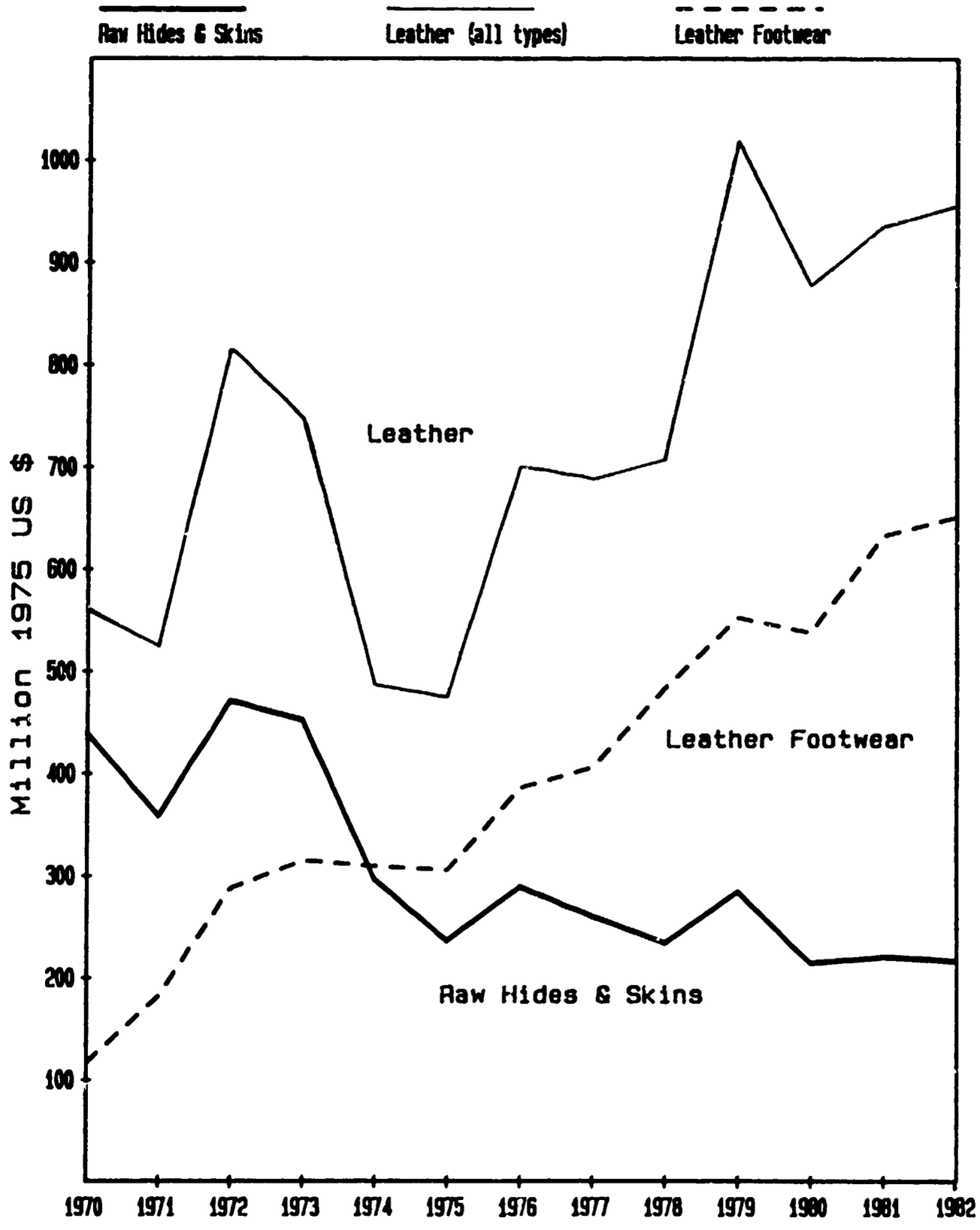

Figure 1.1 accompanying table 1.1 makes plain that the trade position of developing countries has changed quite dramatically over the past decade. Their exports of raw hides and skins have declined, while their exports of processed goods have increased. Although some semi-processed leather is included in leather for the purposes of this diagram, this should not detract from the fact that the most impressive gains have been made in the export of leather footwear, earnings from which show the most consistent increases.

Table 1.1 does not reveal, however, one further feature of the leather industry: the great advances have been made by only a small number of developing countries. The achievements of the developing world in the leather industry over the past 30 years have been far from uniform. The industry in some Latin American countries is as advanced as anywhere in the world, and has much more in common with the industry in OECD nations than with the industry in many countries of Asia, and most countries in Africa. A very few countries, most notably Argentina, Brazil, India, the Republic of Korea and the Taiwan Province of China, have posted remarkable expansions in their leather industries, whereas many other developing nations have made very little progress. Of course, one should not expect all countries to follow the same path at the same speed, and some countries have more potential than others for the successful development of a leather industry.

Nevertheless, too few countries have so far reaped the benefits from entry into the OECD or other markets. Developing countries now account for 40 per cent of the volume of exports of light bovine leather, but two-thirds of this is exported by only Argentina, Hong Kong[3/] and India. Developing countries account for 60 per cent of world exports of bovine and caprine leather, but 80 per cent of this emanates from Brazil, Uruguay, Kenya, Nigeria, India and Pakistan. Developing countries account for 22 per cent of world exports of leather footwear, but three-quarters of this share is held by only four countries, Brazil, India, the Republic of Korea and the People's Republic of China.

3/ Represents re-exports.

One of the reasons underlying these successes has been the policies adopted by governments towards their industries' export development. Fiscal incentives and export subsidies of various kinds have been used and have enabled exporters to compete very keenly on price in OECD markets. In part this explains why the share of developing countries in world markets for leather and leather products has declined in value terms, despite rising in volume terms. Keen price competition and the emergence of a buyers' market in the OECD obliges would-be entrants into the market to follow the same course of export assistance from their respective governments. Improvement in quality would also be necessary to increase the penetration of developed country markets.

One of the themes of this study will be that, in the light of these competitive conditions in the OECD market and the weak growth in the market for footwear there, the largest and most valuable markets lie within the developing countries themselves, where rapid growth in incomes and in urban populations will stimulate demand for footwear and leather products greatly.

Previous UNIDO studies[4/] have identified two major constraints to the continued development of the leather industry in the developing world. These are, first, hide availability and, second, protectionism in the OECD nations. A third constraint will be suggested after these two have been briefly reviewed.

The problem of hide availability has many aspects. In the first place, there is the problem of the quantity of hides available. With a few exceptions, animals are not raised for the value of their hides. The supply of hides is thus constrained by the production of animals for their meat and milk. The period since 1977 has been characterized by reductions in total cattle populations, and a switch in consumer demand away from red meat (the production of which involves the by-production of hides) towards white meat

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4/ UNIDO/ICIS.45 and Corr.1, Draft world-wide study of the leather and leather products industry: 1975-2000, 16 September 1977 and UNIDO/ICIS.134, World-wide study of the leather and leather products industry, 29 November 1979.

(the production of which does not involve the by-production of hides). While there is a debate over the reasons for this (candidates range from the cost advantages of white meat production in many nations to barriers against imports of cheap beef which discourage beef production in nations where it can be produced cheaply), there can be no argument over its extent: in the period 1968-70, bovine meat accounted for 39 per cent of total world meat production, and pig and poultry meat accounted for 51 per cent. By 1978-80, the share of bovine meat had dropped to 35 per cent, and the share of pig and poultry meat had risen to 57 per cent. The global resource base for the hide industry has, therefore, changed from a few years ago. This difficulty has been exacerbated in several countries by government actions which have further reduced hide supply. Since global tanning capacity expanded rapidly in the period up to 1977, the period since then has seen intense competition for the available hides. Global tanning capacity is at present considerably in excess of effective supplies of hides and skins.

In many developing countries, hide recovery is very low, for a variety of reasons. Of more particular importance is the poor quality of many hides which are recovered. Low hide quality, which can be caused by a variety of animal husbandry practices as well as poor post-slaughter treatment, adversely affects the quality of leather produced from the hide, and can even more seriously limit the suitablity of the leather for manufacture (if a large area of uniform quality leather is needed for the production of a given item). Hide recovery and quality have received considerable attention in FAO projects, especially in Africa, and progress is being made.

Protectionism has been a growing problem for the world leather industry. Barriers to trade in hides, leather or leather products exist in almost all countries of the world, and considerable market disruption has occurred when new trade barriers have been introduced. Of greatest concern to the leather industry in the developing world, however, have been the growing restrictions on imports of shoes and other leather products into the OECD nations. Developing countries see these newly created trade restrictions as evidence that developed countries' commitment to free trade is little more than rhetoric; developed countries reply that their industries face severe adjustment problems, and that trade restrictions imposed by developing countries have adversely affected their industries. This argument will be

taken up later: it is sufficient at this point to note that the world leather industry is greatly affected by trade barriers, and that these barriers do seem to have increased in number and severity in recent years.

These two constraints point up a further important factor. The leather manufacturing industry is essentially trapped between two other industries over which it has no control. On the one hand, the quantity and quality of hides available for tanning are determined by the conditions of animal husbandry, which in turn reflect the general agricultural environment and the patterns of demand for meat and other animal products. On the other hand, leather has to be used to manufacture leather goods, and the leather goods industry has to move at the pace of demand for its product. In the case of an industry established, in a developing country, to export to a hard-currency area, the level of profitability the industry achieves will depend on demand in the importing country. Thus tanners are caught between livestock and meat producers and leather goods producers. Recent difficulties in the world tanning industry can be largely attributed to the increase in the number of country customers for hides and skins at a time when there was a decrease in the number of country sources. This induced a lengthening of the time between contract and delivery, and the increase in competition for raw material forced raw material prices up. This demonstrated very clearly what could happen with inelastic supply when insufficient attention is paid to the changes in demand for finished goods fabricated in leather. It is the unavoidable nature of the leather industry that it can never exactly keep in step with the industry by which it is supplied nor with the industry which it supplies.

This illustrates the problem of inelastic supply to the leather sector. The only ways to increase supply of raw hides and skins are to engage in more intensive livestock raising and to improve the quality of the available hides (thereby increasing the amount of leather which can be made from the hide). The leather industry cannot stimulate increased livestock production: hides account for a very small portion of the total value of an animal, and even large swings in hide prices have a negligible impact on farmers' returns. And although the leather industry can support various measures to improve hide quality, those measures are perforce long term in their effect. In present circumstances, therefore, rises in raw material prices cannot be limited by increasing the quantities available on the market.

The gains in the leather industry which have been made by developing countries as an economic group, turn out to be gains made by comparatively few individual nations. This fact could be taken to mean that few countries have high potential in this sector. This is far from the truth. Many developing countries have substantial resources, in the form of hides and skins, which are insufficiently industrialized. But it is even more important to recognize that not all the developing countries which have made great advances with their leather industries have large domestic resources of hides; and it is also important to recognize that, in these developing countries, the leather industry is not unique for the progress it has made. When there is free access to world raw material markets, then such factors as closeness to, and knowledge of, major consuming markets, business acumen and the ability to develop and apply technology for converting heterogeneous raw material into uniformly high quality goods become as important as, if not more important than, an indigenous supply of raw material. It is highly unlikely that, thirty years ago, anyone would have suggested that the Republic of Korea had high potential in the leather sector. Yet, that country now has a strong and dynamic leather industry. While there might be reasons why one would not firmly recommend that other countries start now to follow the Korean example, the example should illustrate that a wide range of government policies and other factors, which have an impact beyond the leather sector, are extremely important in determining a country's potential for development. There is no simple route from a large domestic hide supply to a strong and vigorous leather industry and any internationally co-ordinated action on the leather industry must recognize the broader context in which industrial development takes place. This is an important issue and it will be raised again later.

In sum, the leather industry is important to the developing world for the following reasons. First, it is an industry in which some developing countries have been able to cast off their traditional role as exporters of raw materials and importers of manufactures. The export of manufactured leather goods has become an important source of foreign currency for these developing countries. Second, it is an industry, large parts of which are well suited to the economic conditions of developing countries: this is particularly the case for shoe manufacturing. Third, it is an important source of employment in many countries. Fourth, it is an industry in which a small number of developing countries have been able to achieve a great deal of

success, and this has encouraged others to believe they can follow suit. Fifth, almost all countries possess the raw materials necessary for leather manufacture, at least on some scale, and not to use the raw material is both to waste the raw material and to miss the employment and business opportunities which the resource can represent.

The important economic characteristics of the leather industry have been well described by the studies prepared for the previous UNIDO consultations on the leather industry.[5/] This study proceeds now to consider market developments since 1978, how the position of developing countries has changed in this period, and the implications of this recent experience for the likely future development of the world industry.

5/ UNIDO/ICIS.45 and Corr.1, op. cit. and UNIDO/ICIS.134, op. cit.

2. RECENT TRENDS IN THE LEATHER AND LEATHER PRODUCTS INDUSTRY

2.1 The hides market in recent years

Hides markets in recent years have been turbulent, to say the least. Figure 2.1 shows movements from January 1978 of one frequently quoted hide price; other hide prices show the same pattern of movement over this period. Figure 2.1 is dominated by the spectacular peak reached by price in 1979, at which peak the price was nearly three times the level it reached in early 1980. Since then, the price has fluctuated sharply, albeit in a narrower range, and upward price movements in early 1983 were quite strong. Despite the decline from the price peak of 1979, hides prices have shown much greater resilience in the recent recession than other agricultural commodities. These dramatic price swings reflect the impact of changes in patterns of supply and demand, which will be briefly described. Summary data are presented in table 2.1.

In the hides market as a whole, developed countries are net exporters, and developing countries net importers, although developed countries account for the overwhelming bulk of trade on both the export and import side. Major exporters are the United States and Australia, and major importers are Japan and Italy. Indeed, Italy overtook Japan as the world's largest importer of hides in 1978, and has retained that position since. A great deal of trade is internal to the EFC, however, and the most interesting trade routes are those to the developing country importers. World production of bovine hides is much more evenly distributed, however, between the developed and developing world: it is the fact that almost all hides produced in developing countries are utilized in the country of production which gives developed countries their importance in terms of trade. (The United States is by far the most important exporter, and Chicago is by far the most important market in the United States. This is why a Chicago price is the best available indicator of world market prices: there is no internationally recognized indicator price, because most hides trading is done on an informal telex network, not in an open marketplace. As long as the United States remains the major supplier to the world market, however, its hide prices are the best available indication of world prices.)

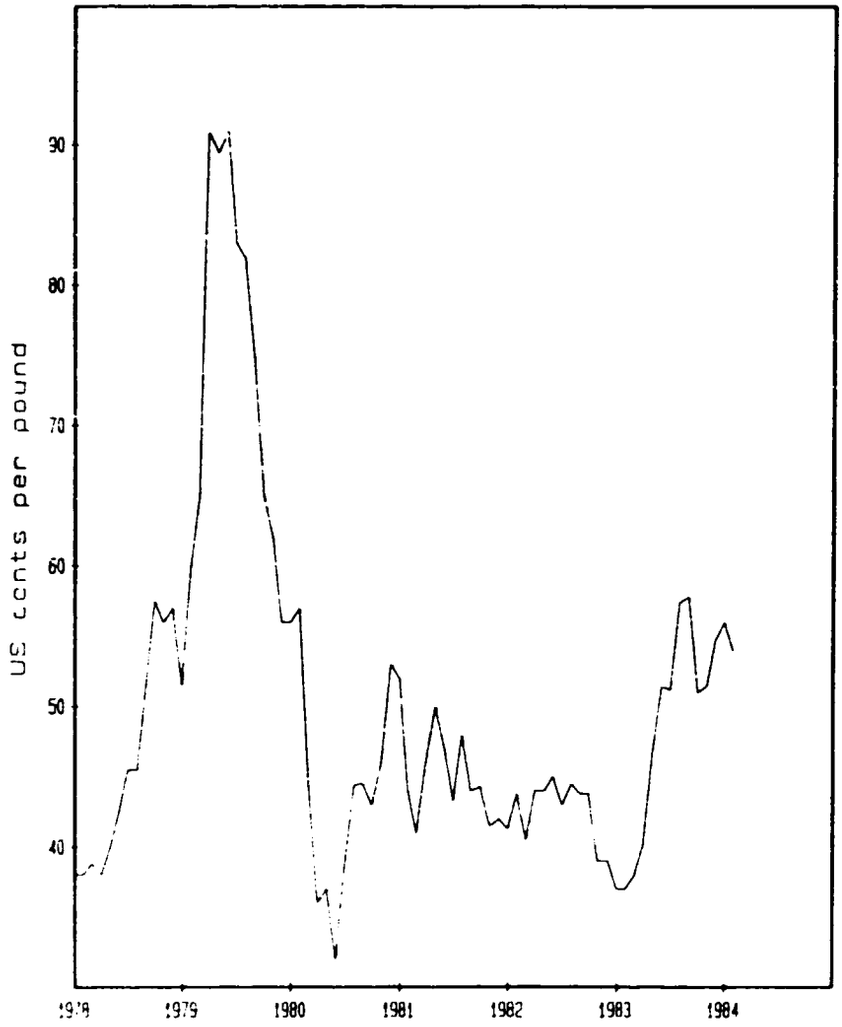
Table 2.1. Production and trade in hides and skins, 1974-1982

	Average 1974-76	1977	1978	1979	1980	1981	1982
	Production in million pieces in thousand tons (within parenthesis)						
Bovine hides	269.5 (4,862.1)	282.0 (5,148.2)	282.2 (5,116.4)	274.0 (4,912.1)	271.2 (4,846.4)	275.2 (4,923.5)	275.2 (4,921.1)
of which: developing countries	114.4 (1,725.2)	122.3 (1,869.1)	124.9 (1,909.9)	125.5 (1,904.2)	124.9 (1,880.8)	128.9 (1,952.4)	129.0 (1,957.7)
Sheep skins	398.4 (311.9)	403.6 (320.0)	413.4 (330.0)	415.1 (326.5)	432.4 (345.4)	441.1 (353.4)	434.8 (347.6)
of which: developing countries	179.0 (111.7)	189.1 (118.1)	195.6 (122.1)	204.4 (127.8)	209.6 (131.4)	213.9 (134.2)	211.1 (132.5)
Goat skins	166.4 (119.9)	173.2 (124.9)	181.2 (130.4)	185.1 (132.6)	187.4 (134.4)	193.5 (138.7)	191.7 (137.1)
of which: developing countries	152.3 (110.0)	158.7 (115.0)	166.4 (120.1)	171.7 (123.5)	173.4 (124.7)	178.4 (128.2)	176.6 (126.7)
	Imports (thousand tons)						
Bovine hides	1,435.4	1,577.1	1,633.2	1,527.9	1,481.9	1,582.0	1,598.8
of which: developing countries	243.6	290.6	329.2	260.9	268.7	369.0	375.5
Sheep skins	142.7	150.3	153.3	164.1	135.6	145.0	143.9
of which: developing countries	17.8	20.6	22.0	21.9	21.2	20.5	19.3
Goat skins	33.7	31.3	37.5	42.0	28.9	29.1	28.1
of which: developing countries	5.8	7.8	7.5	7.2	6.6	7.4	6.8

Source: FAO, World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, Rome, 1983.

Notes: "Developing countries" includes both market and non-market economies. Data for 1981 are preliminary, and for 1982 are FAO estimates. Bovine hide trade data are given in wet salted weight; sheep and goat skin trade data are given in dry weight.

Figure 2.1. Chicago hide price; heavy native steers 58 LB and over



World production of cattlehides and calfskins reached a record level in the first half of 1977, and began to decline thereafter. The declining trend in world production accelerated in 1979, and was almost entirely the result of developments in the United States and Oceania. Production levels in Europe and the developing countries were steady, but the cyclical contraction in cattle numbers occurred at the same time in the United States, Australia and New Zealand.[6/] This reduction in supply occurred at the same time as strong consumer demand for leather products, and hides prices were pushed upwards. Intensive buying by Far Eastern manufacturers was the direct cause of the

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6/ There was no parallel development in the sheepskin market, because drought in Southern Africa led to distress slaughtering of the sheep flock, and global availabilities of sheepskins were, therefore, maintained.

rapidity of the upswing; and their sudden departure from the market caused an equally dramatic price reversal in September and October of that year. Their cessation of importing was the result of rising stock of raw hides at a time when there were the first indications of weakening demand for leather goods. Higher prices for leather goods choked off consumer demand in the second half of the year, but many tanners were squeezed very hard by the run up in raw material costs and consumer demand which was weakening, as a result of leather prices moving up to compensate, and of the start of recession in the OECD countries.

At time of writing, it seems as though some features of the 1979 hide market are being repeated. Despite the steep rise in raw material prices which continued throughout 1983, export buyers, notably in Japan, other East Asian countries and Mexico were still bidding for hides at the beginning of 1984 and were maintaining upward pressure on prices. Purchasers in North America and Europe, on the other hand, were resisting the price levels of January 1984. Demand for European hides, however, was outstripping supply, and the upward pressure on hide prices was continuing. Thr struggle tanners face in trying to secure economic leather prices is forcing some companies into liquidation.

The higher the raw material price rises, the greater is the likelihood of a dramatic collapse, rather than a levelling off of prices at a high level. A collapse could be induced by a variety of factors, including a switch by leather buyers into cheaper, and less volatile alternative materials, or a general weakening of demand for leather manufactures. The consequence of such a collapse, evidenced by the aftermath of the late-1979 raw material price slump, is that leather buyers pressurize tanners to reduce their leather prices to match replacement prices based on the new, lower level of hide prices, and fail to allow sufficient time for in-process and warehouse inventories of comparatively high-value leather to be sold by tanners at economical prices. Being constrained to operate productive capacities, tanners suffer severe price competition and many cannot survive the financial losses incurred through selling leather at below production cost. History may repeat itself only five years after the record peak price crisis of 1979, surely demonstrating that, in the free-market economies, the tanning industry is a perilous business requiring consummate management skills for survival and prosperity.

The possible recurrence of these developments, demonstrating the inability of an inelastic supply base to match diverse and often capricious demand characteristics, must persuade industry, trade and international organizations to study the economics of the sector to discern a mechanism whereby the tanning industry can find a calmer raw material supply and price environment in which to operate.

Hides production stabilized in 1980 as the decline in world cattle numbers halted. Indeed, the beginnings of the drought which affected Australia up until 1983 caused some herd liquidation, but in general output was steady. Demand for hides remained quite weak, however, as the import figures show. This was largely the result of the recession in consumer demand, which caused tanners to cut back on purchases. The reduction in imports by the Far Eastern countries whose sudden withdrawal from the market in 1979 caused the price collapse, however, also acted to depress trading volumes.

Hide production increased slightly in 1981, but trade remained sluggish. This was almost entirely due to the fact that imports into developed countries were low: competition in developed country markets from low-priced leather goods imported from developing countries accentuated the problem of under-utilization of tanning capacity in developed countries. Of course the industry was suffering from two other problems: the recession, which was proving surprisingly severe, and the upward drift in the international value of the dollar. This affected the leather industry in two ways. First, because the United States is the major supplier of raw hides, and because United States hide prices are denominated in dollars, the import cost of hides was rising. Second, the impact of the recession on developing country export earnings was so severe that these countries were anxious to increase foreign exchange earnings from any possible sources, and leather goods were an obvious choice. This, as indicated above, intensified the pressure on developed country tanners. In fact, reductions in European tanning activity led to increased exports of raw hides from European countries, and these increases largely offset the reductions in availability in Southern Africa and Australia where drought conditions were worsening.

On the supply side, therefore, the past four years have seen beef producers hit quite hard by the recession and also, in large areas of the Southern Hemisphere, by drought. This has had the effect of reducing the availability of hides. These supply shortages have put a floor under prices, which, in comparison to prices of other primary commodities, have been quite strong over this period. For tanners, this has caused considerable difficulties. Installed capacity, built up at a time when hide availabilities were increasing steadily, has been underutilized in the period since 1977, when hide production stopped growing. Tanners have been caught between reduced rawstock availability and sluggish demand for leather, and have either gone out of business or grown accustomed to operating at low capacity utilization rates. The recession has held down consumer demand for leather products, however, and the apparent economic recovery, which got underway in early 1983, has led to hide price increases, as tanners have resumed purchasing in the expectation of improved demand. Although there are the first signs now of a slight increase in cattle numbers worldwide, the slaughter rate in key producer countries does not seem likely to increase in the short term: indeed, in Argentina, no increases in hide production are foreseen until 1985.

The pigmeat industry has not suffered as much as the beef and veal industry, but output of pigmeat has declined steadily since 1980. World sheepmeat production has risen slowly but steadily, reflecting the impact of the EEC's introduction of a sheepmeat support regime and expansions in sheep flocks in other West European countries and in parts of the Americas. Adverse weather checked the growth in the Australian and New Zealand sheep flocks.

World production of sheepskins grew steadily, albeit at a declining rate. This reflected the problems faced by Australia and New Zealand as a result of the poor export market for mutton. Oceania and South Africa have remained important sources of raw and semi-processed sheepskins, but the developing countries of Latin America and East Asia have declined considerably as sources. The growing leather industry in the People's Republic of China will not only use more of its small domestic skin availability, but has been increasing its imports of raw hides. Should the policy of this country emphasize the provision of more leather shoes for its massive population, the impact on the world raw material market could be alarming.

Apart from the developed countries with developed livestock industries, the main source areas for raw and semi-processed sheep and goat skins are moving towards Africa and the Near East, where indigenous tanning industries are least developed.

Hopes for a substantial increase in pigskin supplies are not being met. Only in Eastern Europe, People's Republic of China and Japan is pigskin retained and utilized extensively by the leather industry. Special carcase skinning technology is necessary in modern abattoirs, and during the past decade this has been developed in Eastern Europe, Japan and North America.

Because of its distinctive grain character, pigskin is not a ready substitute for other kinds of leathers. Traditional products using it are small leathergoods and briefcases, the market of which is limited, but market scope has been expanded through the acceptability of pig suedes for garments and footwear. Pig leather prices, 20 to 30 per cent lower than more conventional leathers, however, have failed to boost the attraction of pigskin leathers to producers of leather goods.

With a saturated market, pigskin tanners have forced a reduction in raw material prices to below rendering values. Some packers in the United States who had converted from carcase scalding to skinning are re-evaluating the economics of processing and may revert to scalding. Skinning has certain advantages over scalding: the capital cost of a skinning plant is lower, and labour and power requirements are also lower in the case of skinning. But these advantages have to be weighed against the disadvantages, such as 7 per cent lower carcase yield, and the possibility of a disfigured carcase, since fat may be removed with the skin. This fat, incidentally, may not be subsequently classifiable as edible because of its adherence to the skin.

Except for pigs destined for a few specialized end-uses, the skinning of pigs is mandatory in Eastern Europe. In Poland, only the croupons are removed. In the People's Republic of China, the government subsidises abattoirs to skin pigs in order to increase the raw material available for tanning. The subsidy is equivalent to the loss of value resulting from lower carcase yields. Half of the population of Japan prefers to eat pork without the skin, and they are, therefore, willing to pay the premium for skinless pork.

In the United Kingdom, scalded skin can be used in manufactured meat products as a protein additive; consequently it can command prices considerably higher than tannery raw material values. Since skin cannot be directed to human consumption in the United States, it is in this country that the most likely prospect for expanded pig skinning would seem to exist. Growth must depend on the comparative level of tannery and rendering values. There is, however, no market for whole skinned carcases in the United States. In most instances, some portions of carcases are destined for fresh food sales. The best prospect is in the skinning of sausage sows, but this is only a small portion of the total annual kill.

The volume of skins available in the future may be determined in part by the health authorities. There is the belief in the United States that skinning produces a carcase in the most hygienic condition, but against this is the view that the scalded skin serves as the most efficient wrapper for the carcase, especially if it has to be transported. Others consider that skin should not be allowed for consumption, because bristle remnants in the skin are sharp and indigestible, and are liable to cause intestinal damage.

More pork is being eaten and will be eaten in the future. Pigs have a high rate of reproduction, require minimal acreage and are efficient converters of grain into meat, all of which contributes to meat costs which are lower than for beef.

It is estimated[7/] that there will be an increase in pigskin availability for tanning in the period from 1985, from the present 13 per cent of traditional global leather production to 23 to 26 per cent, which would imply tanning utilization of between 387 and 447 million skins per year. Yet even this significant advance would represent the skinning of 38 per cent of all pigs slaughtered. The crucial factor is, clearly, price. Packers and abattoirs need to be offered prices for their pigskins which reflect the skins' value in other uses.

7/ UNIDO/IO.420, Techno-economic considerations for the utilization of pigskins as an alternative source of raw material for leather and leather products, April 1981.

The activities of the new Pigskin Council of America in developing new markets may have some beneficial effects. If pigskin becomes an expanding sector, then more and more skins will be able to be absorbed by the industry without destroying profitability. (Clearly, if all pigs were skinned, the glut of skins would depress prices and, probably, emphasize consumers' perceptions of pigskins as a cheap, less satisfactory material than traditional leather.) Small packers, unable to justify investment in rendering plant, receive low returns for their pigskins at present. Working with specialists who can offer expertise on skinning, curing and marketing, these packers probably could obtain higher returns through skinning.

Tanners of small skins cannot readily substitute sheep and goat skins with pig because of the specialized beamhouse processes required for pigskins. If packers, however, were in a position to process skins to the wet-blue stage, the technical problems for goat and sheep tanners would be avoided, and pigskins could be sold to them. Such a manufacturing structure would avoid the present reliance on a few specialist pigskin tanners to process the skins and, more importantly, to develop the market.

The following table provides some summary data on the present utilization of pigskins in different parts of the world. These data, for 1979, do not show how rapidly pigskin utilization has grown in both, People's Republic of China and Japan. In Japan, pigskin offtake grew at an annual rate of 9.6 per cent between 1952 and 1979, and in the People's Republic of China offtake has grown even more quickly: it was 19 million skins in 1970, and 49.8 million in 1979, implying an annual average growth rate of over 11 per cent.

Table 2.2. Production of pigskins in selected countries (estimated, 1979)

	Livestock	Kill	Skins recovered	Area of raw hide (million sq feet)
	(millions)			
High producers				
Bulgaria	3.5	3.5	2.0	22.0
Czechoslovakia	6.8	7.1	5.7	62.7
German Dem. Rep.	11.3	12.4	12.4	86.8
Hungary	7.9	9.4	3.0	35.4
Poland	16.8	20.2	13.0	91.0
Romania	10.2	9.9	6.0	72.0
USSR	63.1	65.4	35.0	455.0
Yugoslavia	7.5	13.5	1.7	22.1
PR China	300.1	187.0	40.0	408.0
Japan	9.5	19.2	13.6	163.2
Subtotal	436.7	347.6	132.4	1,418.2
Low producers				
USA	56.6	90.0	9.0	76.5
Latin America	75.2	33.4	2.0	20.0
Western Europe	104.9	155.0	1.0	11.0
Subtotal	236.7	278.4	12.0	107.5
GRAND TOTAL	673.4	626.0	144.4	1,525.7

Source: UNIDO/10.420, Techno-economic considerations for the utilization of pigskins as an alternative source of raw material for leather and leather products, April 1981.

2.2 The leather and leather products market in recent years

The available data on this sector of the industry are not as good as for the raw hides sector, but it is possible to develop a reasonable statistical picture of recent developments.

In general terms, developed countries account for about 70 per cent of world leather consumption, but their share is falling slowly. Footwear production accounts for about half of all leather consumption, with the remaining sectors of garments, upholstery, leathergoods and industrial leather accounting for the remaining half of consumption. Given the importance of both the developed countries and the footwear market, the focus in this section will be on the footwear market in the OECD countries, since they are the most important consumers and importers of leather products. We shall first briefly review developments in the leather market, however.

Table 2.3. Earnings from exports of leather from selected developing countries, 1978-1982
($US million)

	1978	1979	1980	1981	1982
Asia	514.1	848.0	841.3	827.8	824.0
India	429.7	550.6	554.5	568.5	555.0
Pakistan	63.0	121.7	116.1	87.0	90.0
Africa	37.7	63.9	67.9	73.3	75.5
Kenya	13.2	21.1	20.4	22.6	22.7
Nigeria	13.1	23.1	24.7	25.0	26.7
Latin America	390.2	497.8	464.8	489.4	490.4
Argentina	243.0	309.7	284.5	289.5	289.6
Brazil	77.5	147.3	90.0	107.3	107.3
Uruguay	37.6	60.8	53.4	54.0	54.2
All developing countries	942.0	1,471.5	1,374.1	1,390.5	1,389.9

Source: FAO, World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, Rome, 1983.

Notes: These data refer to exports of all types of leather.

Table 2.3 presents some data on the leather exports of a small group of developing countries. Export of leathers is almost entirely to developed countries: Argentina exports semi-processed and ready to finish leathers to Brazil and the Republic of Korea, and Ethiopia exports semi-processed leather to Algeria, but these represent the very few developing country leather exporters to have developed trade links with other developing countries. Apart from good quality finished leathers form technically advanced tanneries in Brazil, Argentina, India, Pakistan and small quanitities from other countries, most developed country imports of leathers require at least finishing in the importing country, and often are completely re-tanned, and vary with the fortunes of the hides and leather products markets. Many tanners buy on the world market for semi-finished leathers when demand for finished leathers is strong and they cannot buy hides, but they move out of the market when demand weakens. Thus it is not surprising that the export total given in table 2.3 shows great variation. Many developing countries prefer to retain their leather for domestic processing into manufactures, on the grounds that the additional value added and employment opportunities are considerable. This can be very clearly seen in the case of India, a country which has been successful in creating export markets for its semi-processed leathers. The Indian government has placed quotas on the export of these leathers, in order to encourage further domestic processing, but a variety of factors in recent years have led to exports falling below these quotas. Indeed, some Indian tanners have begun to look to the possibility of importing raw hides from the United States and Australia in order to process them into leather manufactures for export. The point, however, is simply that India, despite its success in exporting semi-finished leathers, is changing its policy in favour of vertical expansion of the industry from semi-finished to finished leather and leather products.

Is is therefore, the state of demand for leather manufactures which is of most concern to developing country exporters, and the footwear market is by far the most important final market for leather. Table 2.4 shows the evolution of footwear consumption in the OECD as a whole, and in some of its component countries and groupings. It can be readily seen that there is considerable variety in levels of footwear consumption, and the fact that the OECD average is much lower than the United States and EEC average implies that consumption in the other members of the OECD is quite low. There are in fact

some interesting differences between certain markets: footwear consumption in Portugal is only one-third of consumption in neighbouring Spain. Consumption of leather footwear in Japan is the lowest in the OECD, as low as in many developing countries, and has been stagnant. This reflects a cultural preference for other types of footwear.

Per capita footwear consumption in the OECD nations as whole fell during the 1970s. As table 2.4 indicates, the decline has not been monotonic, but there is a statistically significant downward trend. There have been temporary surges in demand: in Europe and the United States in 1979, for example, when, as was indicated earlier, strong demand for leather products pushed the hide price to record levels. Per capita consumption figures hide the fact that leather demand in the late 1970s was intensified by the fashion for women's calf-length fashion boots, requiring about three times the quantity of leather of a normal pair of walking shoes. While the leather market is stimulated by increases in unit utilization of leather in footwear, in general, the footwear market has not been strong.

Table 2.4. Footwear consumption in the OECD, 1972-1980
(footwear with leather uppers, pairs per capita)

	1972	1973	1974	1975	1976	1977	1978	1979	1980
EEC	2.05	1.87	1.84	1.67	1.91	1.87	1.92	2.08	2.04
USA	2.68	2.45	2.27	2.32	2.49	2.18	1.81	2.09	1.95
Japan	0.37	0.39	0.37	0.37	0.37	0.34	0.37	0.39	0.36
All OECD	1.90	1.79	1.66	1.66	1.72	1.72	1.59	1.65	1.68

Source: The footwear, raw hides and skins and leather industry in OECD countries, OECD, Paris, annual.

Despite this rather lacklustre picture on the demand side, patterns of production and trade in leather footwear have been changing rapidly throughout the 1970s. This can be seen initially by considering the increased role of imports in OECD consumption, data on which are presented in table 2.5.

Table 2.5. Share of import in shoe consumption in some OECD nations, 1973, 1976 and 1980 (per cent)

	1973	1976	1980
Germany (FR)	45	59	68
Belgium/Luxembourg	74	88	98
Netherlands	63	77	93
United Kingdom	19	33	48
Italy	...	2	7
Spain	...	1	1
Austria	42	90	100
USA	27	34	34
Japan	...	2	4

Source: The footwear, raw hides and skins and leather industry in OECD countries, OECD, Paris, annual.

Notes: Consumption is consumption of shoes with leather uppers.

The level of import penetration varies enormously, from virtually nil in the case of Spain, to 100 per cent in the case of Austria, but the average level is quite high. Of course, some of the countries with high import levels also export shoes: Austria, for example, exports all her production, and the industry in the Netherlands is also dependent on exports. The Italian industry is well known for its export successes, and exports account for about three-quarters of Italian production. Data on the trade balances in leather footwear for some important countries are presented in table 2.6. Many OECD countries have very small net trade surpluses or deficits, and they are excluded from the table.

Table 2.6. Balance of footwear trade in some OECD nations, 1973, 1976 and 1980 (net trade in million pairs)

	1973	1976	1980
Germany (FR)	-58	-77	-101
France	+11	-13	-21
Italy	+140	+173	+195
United Kingdom	-9	-18	-35
Spain	+46	+62	+40
USA	-138	-177	-147

Source: The footwear, raw hides and skins and leather industry in OECD countries, OECD, Paris, annual.

Notes: A minus sign denotes a net deficit, a plus sign a net surplus.

Some of the changes in import penetration represent gains for other OECD producers (especially Spain and Italy), but, on the whole, there has been a substantial net shift in footwear production capacity away from OECD member countries. While those increases in production which have occurred in the world have been very widely distributed, a small number of countries have made large gains, while many others have achieved only modest growth. The gains are analyzed below.

Table 2.7. World leather footwear production, 1970 and 1980

Region and country	Production (million pairs) 1970	1980	Percentage change
North America	473.2	328.3	-30.6
of which:			
USA	442.0	296.0	-33.0
West Europe	790.3	779.3	-1.4
of which:			
Italy	264.7	276.5	+4.5
United Kingdom	99.6	61.7	-38.1
Germany (FR)	116.5	70.1	-39.8
Spain	74.6	117.9	+58.0
CPE Europe	916.6	1,033.8	+12.8
of which:			
USSR	676.0	744.0	+10.1
Romania	40.4	63.6	+57.4
Poland	62.2	74.0	+19.0
Latin America	184.5	396.3	+114.8
of which:			
Brazil	27.1	150.0	+453.5
Mexico	40.4	83.0	+105.4
North Africa and West Asia	93.6	142.2	+51.9
of which:			
Iran	16.0	35.0	+118.8
Turkey	26.0	45.0	+73.1
South and South-East Asia	286.5	410.4	+43.2
of which:			
India	205.5	280.0	+36.3
Republic of Korea	10.7	32.0	+199.1
CPE Asia	103.4	204.9	+98.2
of which:			
PR China	101.6	202.4	+99.2

Source: FAO, World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, Rome, 1983.

Notes: The quality of footwear production data, especially in developing countries, is felt by many to be poor. These data, from FAO, should be regarded as the best available estimates.

Table 2.7 shows that a large number of countries attained quite respectable rates of growth for the shoe industries during the 1970s. Nonetheless, the number of countries which made major gains is few: Brazil, India, Mexico and the Republic of Korea are the only developing countries to have made gains parallel to those of some East European countries.

In terms of shares of world output, Eastern Europe is the leading producer, with slightly more than a third. This represents a noticeable increase over the region's share ten years earlier. The shares held by South and Central America and Africa have increased slightly but the largest beneficiaries from the dramatic reductions in North American and North European production have been East and South Europe and Asia. Interestingly, although output of leather footwear has increased in the Republic of Korea, and other East Asian territories, it is this region's production of non-leather footwear which has posted the most dramatic increases. The shoe industry in the Pacific Rim is therefore much larger than the figures in table 2.7 would suggest.

Although two of the countries which have sustained large reductions in footwear production, Australia and the United States, have been major suppliers of raw hides to the world market for a long time, the major contraction in the shoe industry in the United Kingdom and the Netherlands has resulted in increased hide exports from these countries. Italy remains by far the most important purchaser of surplus European hides but an interesting feature of trade flows in the last five years has been the increase in United Kingdom and Dutch exports to some of those East European and developing countries whose shoe industries are expanding rapidly. For example, in 1977, Poland imported only 59 tonnes of Dutch raw hides but, in 1981, it imported over 2,600 tonnes. Similarly, Egypt's imports of Dutch hides quadrupled over the same period, before difficulties in the Egyptian industry caused a fall in this trade, and some shipments of hides have been made from the United Kingdom to Nigeria.[8/]

8/ Because of the importance of Rotterdam and Amsterdam in world hides trading, many hides which are exported from Holland are, in fact, re-exports of hides from other European countries. The important point is unaffected by this fact, however.

These changes in the location of production of leather footwear have led to changes in prevailing trade patterns. Although East Europe is now the leading producer, its exports to the free-market countries are comparatively low. The bulk of East European trade is with the USSR, a large importer of footwear. Similarly, the dramatic changes in production whithin West Europe have not led to such dramatic changes in the region's overall trade position, since both Italy and Spain are the most important sources of imports for the region's net importers.

Developing country exporters have had most success, in terms of the total volume of footwear shipped, in penetrating the United States market. The greatest success, however, has been in non-leather footwear and in low-priced leather footwear. It is only very recently that the developing country exporters of leather footwear have turned their attention to the European markets, where they have met with some success. The lifting of restrictions on imports of footwear into the United States in 1981 has had a noticeable impact on the United States market: domestic production contracted further, and import penetration has grown considerably beyond the figures given in the table above. Indeed, the history of United States imports of leather footwear provides a fascinating and instructive case study, with many important lessons, and it will be discussed at some length later in this report.

2.3 Developing and developed countries: factors affecting their relative performance

Developing countries, considered as a single economic grouping, have done well in the world leather market over the past five years. Nonetheless, the grouping has not absorbed all the benefit of the contraction in the industry in certain OECD members, since other industrialized countries have expanded their industries; and, what is more, the benefits which have accrued to the developing world have, in fact, accrued to only a few countries. This, and the following section of this report address the reasons for these variations in performance. In this section, the constraints on the development of the industry are discussed in general terms. In the following section, case-studies are considered in some depth in order to assess how the constraints have affected particular industries in practice.

2.3.1 Hide availability and quality

The key constraint on the leather industry is the availablility of its raw material; and the condition of the hides and skins by the time tanners get hold of them is a closely related issue. In terms of both quantity and quality, the production of hides is a function of the patterns of meat demand and supply. Beef and dairy products are expensive to produce, since cattle are poor converters of feed into meat, and have a lengthy reproductive cycle. Goats, sheep and pigs are all better in these respects. (Poultry is better still, but, of course, the production of poultry does not lead to the by-production of skins.) Bovine leathers are by far the most important, however, and thus the health of the leather industry, worldwide, depends on the fortunes of cattle raisers. In many developing countries, meat is not an important part of human diets; sometimes because the pressure on land and grain resources from human food requirements is so great that little is available for animals, and sometimes because cattle are viewed as a store of wealth, not as an item to be exchanged in the market economy. Where animals are raised, hides are sometimes eaten (which is hardly surprising, given their high protein content), or are used for mats, tents, ropes and other local purposes, or are simply not recovered: for any of these reasons, the hide/skin would not enter the market as a tannery raw material. Furthermore, in many developing countries, animal husbandry systems are poor, which leads to the production of small hides, which are often damaged before and after slaughter. (It is certainly true that many developing countries have made great strides in the recovery and preservation of hides and skins, and livestock development projects in many parts of the world have had a beneficial impact on hide availability. These efforts are to be commended, but they must be built upon: it should not be imagined that this job has been done.) In contrast, in many developed nations, animal husbandry systems are efficient, and considerable attention is paid to the quality of the hide. There are great variations in this within the industrialized nations, of course, especially in the organization of sloughtering: the United States, for example, has concentrated, efficient slaughtering plants which produce a large number of reasonably uniform hides each day, the result of well-developed animal breeding, feeding and marketing which produce reasonably uniform animals. The United Kingdom meat industry, on the other hand, has

been based on a profusion of small, local abattoirs requiring special hide marketing techniques. A process of rationalization has been underway in the United Kingdom meat industry for many years, and slaughtering is becoming concentrated in larger efficient units. The United Kingdom hide quality has improved recently as a result of the eradication of the warble fly. Scandinavian hides are widely considered to be of the finest quality, not only because the climatic conditions in the region force farmers to keep cattle indoors longer than most other countries, but also because slaughtering facilities are largely owned by farmer co-operatives, which operate a system of incentives designed to ensure that the farmer presents a clean animal for slaughter. Furthermore, there is little use of barbed wire in the region, and all animals are mechanically flayed.

While the available quantity of hides is certainly a constraint on the industry at a global level, it has few implications for the industry in anyone country, not least since hides are tradable. The United States produces good quality hides in abundance, and boasts an advanced and efficient tanning industry, yet is the largest supplier of hides to the world market. Two examples show that a developing country does not need a sophisticated animal raising and slaughtering industry to have an efficient leather industry: the Republic of Korea and India. The former imports large quantities of United States hides for processing and export as finished manufactures, and the latter has a successful leather industry despite the ban on slaughtering cattle in certain states. The Indian industry owes its success to the supply of good quality hair sheep, goat, buffalo, and buffalo calf skins. The quality of cattle hides is poor.[9/]

The quality of hides certainly is an important consideration for the economics of processing: poor quality hides are expensive to process, and often cannot be used for the highest-value applications. The answer to this often seems obvious: tanners should pay good premia for good quality hides, thus encouraging better care of the hide from slaughter on, and they could

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9/ But it is improving due to an increased ratio of slaughtered to killed animals.

afford to do this since the better quality the hide, the higher the returns from the leather. This is only part of the answer, however, Better prices for hides might encourage slaughterers to take better care of the hide, but an incentive strong enough to do this would not be strong enough to effect any changes in animal husbandry. Post-slaughter defects could be reduced, but ante-slaughter defects would be unaffected. Better care of animals will result from better returns to animal husbandry: and the value of the hide is so small a part of the value of the animal that hide prices cannot have a large enough impact on the total value of the animal. There are, nevertheless, lessons to be learned from the Scandinavian farmer's co-operative slaughtering system. Scandinavian hides typically command premium of about 10 per cent on normal European hide prices.

In general, however, the importance of this question of hide quality has been well recognized by the international community, and FAO livestock projects in many developing countries have begun to pay attention to the impact of livestock development on the leather industry. In this respect, the problems of hide quantity and quality are two aspects of the same problem; or at least can be simultaneously addressed by programmes of livestock development. Despite the recognition of the problem and the formulation of measures to combat it, however, the problem remains severe, because of the lack of financial resources to implement the necessary measures, and because of the unavoidably slow speed at which such improvements take place. The present over-capacity in the world tanning industry, which is causing considerable competition for available hides, should stimulate autonomous moves to hide improvement, but these will be insufficient.

Considerations of hide quality give a competitive advantage to the leather industry in the industrialized nations, but the experience of the world leather market over the past twenty years shows that this advantage can be overcome. This is important because it directs attention to other factors, but it should not induce complacency about the problem of hide quality in developing countries.

2.3.2 Leather processing techniques and costs[10/]

The application of tanning technology has to be allied with a knowledge of raw material characteristics, which can be highly variable, and an ability to adapt technology to the qualitative demands of the market place. It may require major capital investment in machinery to improve productivity and to provide the required finished effect. Most technological developments in the tanning industry in recent years have been in combined sequence wet processing, dyeing, finishing, throughfeed machine processing and the use of electronics in process control, linked into the computerized management systems. The greatest impact on the cost structure of the industry has been the necessity to invest heavily in effluent treatment plant and chemical recovery and recycling systems. Indigenous skills remain extremely important, however. Tanning is viewed by industry members as a mixture of art and science, and although most people involved with most industries tend to emphasize the degree of specialized knowledge required to operate in their industry, good tanning certainly does consist of applying technical knowledge in the light of experience. Tanners operating with a great variety of rawstock need to be careful in adjusting their chemical processes to the requirements of each batch: there is no straightforward equation governing the amount of each chemical, or the time of treatment required per foot of tanned leather. Such skills as these develop locally, of course, but when a large, modern tannery is established in a developing country, there can be a great need for the tanning skills which make for good leather production. The further along the process of tanning one proceeds, the more important this skill becomes. Finishing leather is perhaps the most highly skilled operation in tanning: it more than any other operation, requires a worker with the ability to see how each hide differs from the previous hide, and to adjust the finishing operation accordingly. Developing countries often suffer from a shortage of skilled labour, and this is one reason (though one of limited explanatory power) why they have had limited success in exporting finished leathers to OECD consuming nations.

10/ For the purposes of this section, leather processing is taken to refer both to tanning hides into leather, and to turning leather into articles which satisfy final consumer demands.

Tanning may be technologically simple, but is is a dirty operation (and is carried out by workers of low social status in many countries). A large volume of solid and liquid waste is generated by tanning operations, some of which is toxic, but most of which is merely noxious. Wet-end operations (those which involve the initial part of transforming the hide into leather) in particular are responsible for waste, the disposal of which can cause difficulties for tanneries. Some of the wastes can be marketed for one purpose or another (hair and fleshings sometimes find markets, for example), but many have to be disposed of by the tanner. The question of effluent control is currently an extremely important one in the industry for two reasons. The first is that the need for cost control creates a strong incentive to recover from wastes as much of valuable tanning chemicals as possible. The second is that effluent control regulations imposed by governments are increasingly stringent, especially in developed countries, and the industry is seeking ways of meeting these regulations at least cost.

The straightforward early process technology and the high costs of pollution control in many developed countries give developing countries a competitive edge in wet-end processing. (Tanning is, however, a heavy user of water, a resource which is scarce in many parts of the developing world. Some countries will never develop large tanning industries for this simple reason.) The initial stage of the development of the leather industry in many developing countries consisted of establishing tanneries to tan hides to the wet-blue or dyed crust stage, while tanners in developed countries changed their rawstock from hides to these semi-processed leathers.

Most leather manufacturing industries, and especially shoe manufacturing, have economic characteristics which make them well-suited to the factor endowments of developing countries. Shoe-manufacturing is not characterized by rapid technological innovation, and does not offer major economies of scale in production. Many shoe manufacturers in developed countries have therefore found it difficult to overcome the labour cost advantages of developing country manufacturers.

The manufacture of leather garments and leather goods have similar economic profiles, and it is, therefore, hardly surprising that many developing countries have well-established leather manufacturing industries. It is also the case that the full economic benefits to a country of a leather industry only materialize at the manufacturing stage, since the employment gains in tanning are tiny compared to the workforce which would be employed processing a tannery's output into shoes.

Considered purely from the production point of view, the economics of leather processing favour the continued development of the industry in the developing countries. There is more to an industry than production, however.

2.3.3 Marketing and the demand for leather

With the exception of a small volume of leather used in industrial applications, leather is used to make consumer goods, and the prospects for these goods depend on the currents of fashion as well as on prices and levels of consumer income. Shoes can be well and cheaply manufactured, but they will not sell well if they are of unfashionable colour or style. Moreover, fashion currents move rapidly, especially in those consumer markets where returns to manufacturers are greatest. Exporters in almost all industries are at a disadvantage to domestic producers in the target market when fashion is important, since they are further from the market, and may not understand as well as a domestic producer the vagaries of changing fashions. This is not a problem when the exporter sets the fashion: as is often the case with the Italian shoe indutry; and there are also cases when fashion moves unexpectedly in favour of an exporter: Indian sandals have become very popular in Europe and the United States, to the benefit of Indian producers. Nonetheless, developing country producers trying to export to developed countries often face difficulties in moving quickly enough with fashion.

Consumer tastes in general, especially in the OECD countries, presently work to the advantage of the leather indutry. Leather has a favourable image as a hard-wearing, comfortable and good value material in footwear, and as a luxury, stylish material for garments. This does not imply, however, that any

pair of leather shoes or any leather jacket will find a willing buyer; indeed, the heavier the influence of fashion in a market, the more closely will the consumer check that the purchase is satisfying the urge to conform with fashion.

This provides a further explanation of why tanners in developed countries have been able to retain an important role as leather finishers. Not only is this skilled work in terms of its technical requirements, it is work which requires a good understanding of which colours and finishes will be required for which end-uses. By good marketing techniques, tanners in some developed countries have been able to overcome the cost disadvantages of domestic processing. On the other hand, however, this is essentially a marketing problem, and some developing countries have gone a long way towards solving it. It is by no means an insuperable obstacle to the expansion of the leather industry in developing countries but it is not a negligible one either.

2.3.4 Protectionism

Trade barriers are ubiquitous in the world leather industry. It would be an extremely difficult task to assess what a completely free-trading global leather industry would be like, and it is by no means clear that the elimination of all trade barriers by developed countries would be unambiguously beneficial to developing countries. In the less-than-perfect market in which the leather industry operates, however, trade barriers have an important impact on the relative position of developed and developing countries.

In broad outline, trade barriers in developing countries deny the industry in developed countries access to raw materials (through prohibitions on the export of raw hides; but they also limit access to finished leather and leather goods markets by excessively high traffic walls), whereas barriers in developed countries limit to a lesser degree the access of developing country exporters to markets for leather manufactures. At least, that is how the problem is often presented. Developed country leather manufacturers are becoming more concerned over the barriers developing countries have erected to imports of leather products, in fact, and barriers to developing country

exports are not uniformly high in OECD nations, many of whose consumers are only too happy to take advantage of low priced imports. The impact of liberalizing trade is not always what one would expect, moreover; there are developed countries with efficient leather industries standing ready to absorb the benefit of reduction in tariff and non-tariff trade barriers in other developed nations.

High import barriers and non-convertible currencies in developing countries are also harming the prospects for trade among the developing nations themselves, and encourage developing country exporters to concentrate too narrowly on particular developed country markets rather than developing diversified export outlets. It is difficult to treat this problem on a general level; specific examples of the impact of trade restrictions will be discussed later in this chapter.11/

2.3.5 The trade and economic policy environment

The leather industry does not exist in an economic vacuum. It can be harmed by exogenous shocks, and can be encouraged by a whole range of government policies. This is of crucial importance. In no developing country where the leather industry has become successful is it alone as an example of industrial development, and in no developing country where the industry has fallen short of the hopes held for it is it alone in its difficulties. For example, certain East Asian countries, notably the Republic of Korea, which have higly successful leather industries, have maintained rapid rates of economic growth in many industries which have been contracting in the developed world, and Brazil and India are both major industrial powers. This

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11/ The International Council of Tanners, a confederation of trade associations from both developed and developing countries, favours the proposal of Andreas Colomer, a past president of the Council, that, while recognizing the need of developing countries to protect their nascent industries, advocates that 25 per cent of raw materials be made available for world trade and that 25 per cent of domestic markets be opened to imports. These are proposed minimum access levels, to be observed no matter what tariff or non-tariff barriers are in place, and would be applicable to all countries, developed and developing. However, this proposal has not been endorsed by all developing countries or the centrally planned economies in Europe.

is not simply because the process of industrial development is a virtuous circle, in which growth begets growth: to a certain extent it is because governments have adopted fiscal, monetary and trade policies which encourage investment and growth in the economy as a whole. Macroeconomic policies can have a great effect on the leather industry as well as microeconomic policies aimed at altering the specific circumstances of the industry.

The industry can be helped or hindered by general economic policy: it can also be helped or hindered by exogenous shocks. The recent recession has affected the industry in almost all countries very badly, but at the same time the industry is benefiting from a general switch in consumer preferences, in the OECD nations at least, towards natural products.

General trade policies affect the leather industry quite sharply. In very few countries is the leather industry self-sufficient. Its net contribution to the balance of payments is positive in many developing countries, but even in those nations which do not import rawstock, process chemicals have to be imported.[12/] A similar need for imported producer goods and components exists in leather manufacturing industries. Therefore, many developing countries face quite high import costs to keep their industries operating.

This can affect the leather industry in two ways. In the first place, high tariffs on imported chemicals or components increase the operating costs of an industry, even if those tariffs are refunded when the good, in whose production the imports have been used, is exported. In the second place, even if tariffs are low, these imports usually must be paid for in hard currencies, and in times of recession the squeeze on developing country export earnings can be so severe that foreign exchange is not available to finance imports on the scale or worth the timing the leather industry would choose. In such circumstances, the leather industry often feels aggrieved that it cannot use the foreign exchange its exports generate, but it is a problem related to the general allocation of scarce funds in a national economy.

12/ UNIDO/IS. , Strategies for increasing the production of tanning chemicals in developing countries, February 1984.

These difficulties are exacerbated when one part of the leather industry gets out of step with another: if tanning capacity grows more rapidly than available rawstock supply, hides as well as process chemicals will need to be imported. If the shoe industry expands more rapidly than the domestic tanning industry, then leather as well as components will need to be imported. Such developments affect the net contribution of the industry to the balance of payments, and if the industry demands increased foreign exchange at a time when overall hard currency availability is curtailed, it is likely to run into difficulties. The developed nations, therefore, do have a competitive edge in terms of their ease of access to items required in the production process, in terms of their ability to engage in trade to make up domestic shortfalls of one kind or another.

Rarely has vertical integration within a single enterprise between tanning and leather product manufacturing proved successful. The exceptions are certain Finnish tanners who have been successful in leather garment manufacture, and a few shoe manufacturers, Bata being the most notable example, who have integrated downwards into tanning in few instances. The problem for vertical integration is capital turnover. Tanning is a relatively long process, and extending the period in which capital is tied up by adding product manufacture to company operations requires high liquidity and constant cash flow.

On general grounds, the constraints on the leather industry do not point unambiguously to an advantage for developed or developing countries. In the following section of this report, specific examples are given of successful and unsuccessful leather industries, and the impact of the constraints discussed above is considered.

2.4 Difficulties overcome and problems remaining: some examples of success and failure

2.4.1 Footwear in the United States: the impact of protectionism

The ubiquity of trade barriers affecting the world leather industry makes the issue of protectionism an important one in trade circles. There is no

better case study to take in this context than the United States, which has operated both restrictive and liberal trade regimes with respect to its imports of footwear from developing countries.

In terms of tariffs, the United States is broadly in line with other OECD nations. (By way of comparison, it should be said that ad valorem tariffs on footwear imported to developing countries fare somewhat higher: in India, the tariff is 100 per cent, in the Republic of Korea 60 per cent, and in Brazil 170 per cent.)

Table 2.8. Tariffs on leather footwear in the United States, Japan and the EEC (per cent ad valorem)

	USA	Japan	EEC
Tariff rates on footwear with leather uppers	0-37	0-30	8-20

Source: International Customs Tariff Bureau.

Notes: Tariffs are quoted in ranges, because tariff schedules refer to very detailed classifications of commodities, and because lower tariff rates are available for certain countries under GSP provisions, MFN regulations or other special facilities established by the importer. In the case of the United States, for example, zero tariffs are levied on leather ski-boots, and the highest tariff, of over 30 per cent is reserved for a small number of categories of footwear. (Tariffs of up to 75 per cent are levied on imports from Communist countries which are not eligible for MFN status.) The United States also makes special provisions for exports of thonged sandals from LDCs. Most types of leather footwear entering the United States would not attract a tariff in excess of 15 per cent.

Tariffs are not the whole picture, however, since a variety of other measures ranging from quotas to differential exchange rates can affect the incentives to import and export. Quotas are set in Japan, for example. The most interesting developments in the United States market do not concern tariffs, but other measures used to control imports.

Since the early 1960s, the domestic United States shoe manufacturing industry has seen its position eroded by imported shoes. Since 1966, over 350 shoe factories have closed, representing a loss of over a third of capacity. While certain firms have been able to develop successful strategies to compete with import competition (largely through backward integration into processing raw materials and forward integration into retailing), many others have simply found their profitability being steadily decreased. The evolution of the United States non-rubber shoe market over the last decade is summarized in table 2.9.

Table 2.9. The United States non-rubber shoe market, 1970-1982

	Total US market (thousand pairs)	Domestic (per cent)	Imports (per cent)
1970	803,878	70.0	30.0
1971	804,346	66.6	33.4
1972	823,320	64.0	36.0
1973	805,547	60.8	39.2
1974	719,378	63.0	37.0
1975	699,618	59.0	41.0
1976	792,508	53.3	46.7
1977	786,189	53.2	46.8
1978	732,463	52.9	47.1
1979	803,435	49.6	50.4
1980	752,054	51.4	48.6
1981	755,988	50.3	49.7
1982	804,346	40.4	59.6

Source: Tanners' Council of America.

Note: 1982 data are preliminary.

The United States industry lost ground on two separate fronts. On the one hand, market share in the market for high-fashion expensive shoes was lost to Spain and Italy. The United States industry has lagged behind European producers in design and style, for a variety of reasons, and as the United States shoe market became more fashion conscious, United States producers were largely left behind by the Europeans. Brazil's shoe exporters also captured a part of this market. On the other hand, in the market for cheap shoes, United

States producers were unable to compete against exporters from East Asia, especially the Republic of Korea and the Taiwan Province of China, whose cost advantages in the labour intensive industry were considerable.

In the face of this competition, the industry exerted what pressure it could on the government to impose import restrictions, but the existence of profitable firms in the industry weakened the case. In early 1977, however, a package of financial assistance to the domestic industry to help it adjust was agreed, and so-called Orderly Marketing Arrangements (OMAs) were concluded with the Republic of Korea and the Taiwan Province of China, whereby those countries agreed to limit their exports to the United States market. These selective measures were preferred to tariff increases since it was felt that "free-trade" sentiment was strong enough in Congress to veto tariff increases, whereas OMAs could be agreed by the President without Congressional approval. The OMAs met the political need for action by singling out two developing country exporters to the United States market. They were agreed in mid-1977, and were to run until mid-1981 but has since not been extended.

What was the impact of these unusual trade restrictions, which singled out two developing countries? Table 2.10 presents some data on United States footwear imports. One thing is immediately obvious from these data, and those in table 2.9, and that is that the trade restrictions did not help the United States industry very much. Its share of the total market has continued to decline.

Table 2.10. United States imports of non-rubber footwear
(thousand pairs)

	Total imports	Imports from				
		Italy	Spain	Brazil	Rep. Korea	Taiwan
1978	373,515	62,934	37,458	27,427	30,591	117,237
1979	404,563	97,074	27,292	32,026	24,388	124,865
1980	365,743	46,221	18,017	31,338	37,054	144,032
1981	374,615	50,144	18,850	43,028	43,980	118,521
1982	479,663	57,430	22,229	41,114	90,606	183,202

Source: Tanners' Council of America

The immediate beneficiaries of the OMAs were other exporters: Brazil and Italy increased their market shares noticeably; other exporters who benefited greatly were the Philippines and Hong Kong. What is most interesting, however, is that after the removal of the OMA restrictions in 1981, both of the restrained countries increased their exports to the United States dramatically: shipments from the Republic of Korea in 1982 were double their level in 1981, and shipments from the Taiwan Province of China went up over the same period by over 50 per cent. Other exporters, as well as domestic producers, have lost market share as a result of this explosion in trade.

The conclusions from this are several. First, despite the major inroads made into the United States market by exporters, there remain profitable United States shoe manufacturers, implying there is a ceiling level of market penetration: some producers are able to compete successfully with imports. Nevertheless it must be remembered that some manufacturers in the OECD area, while proving profitable, prefer to increase their profitability by relocating their manufacturing in a developing country to take advantage of lower cost labour. The tariff barrier into the parent country is insufficiently high to eliminate the low labour cost benefit. Second, industries in developed countries can succeed in bringing political pressure to bear to limit imports, although whether restrictions will be effective seems open to doubt. Third, the success of the Italian industry in exporting to the United States shows that the cost advantages enjoyed by the important Asian suppliers are not the only factors at work determining success. Fourth, the fact that import restrictions were allowed to lapse in 1981 shows that the rhetoric of free trade is not empty: powerful political interests in the developed world are prepared to allow domestic industries to sustain a substantial loss of market to foreign competitors. Fifth, developing countries face serious competition from each other in exporting to developed countries.

2.4.2 The successful Italian leather industry

In many respects, Italian industry labours under such disadvantages as high inflation, frequent labour disputes and index linked wage rates. Furthermore, its leather industry has many features which have proved to be serious problems in other countries: it must import large volumes of raw and wet-blue hides and skins, and is divided into a large number of small and medium-sized units. In some centres, many small entrepreneurs specialize in different parts of the leather manufacturing process, often working under contract to a merchanting company.

The Italian industry has many unusual advantages. The first of these is a strong tradition of excellence in design. This capability is not confined to the leather industry: Italian designers are world renowned for the work on items as diverse as clothing, office furniture and washing machines. Italy is a world leader in fashion, and this gives its leather manufacturing industry a major advantage in export markets. The second is a tradition of technical excellence in processing leather, which has allowed a large chemical and leather machinery industry to grow up in the country. Italian leather processing machinery sets technical standards for the rest of the world in many key areas of processing. The third is excellent co-ordination between tanners and leather products manufacturers, allowing tanners to respond rapidly to the style currents established by the shoe designers, and preventing the shoe designers from imposing unrealistic standards on the tanners.

Much of the Italian leather industry is grouped in tanning centres, each containing many small enterprises. Many of them specialize in small parts of the leather-making sequence, often working on contract to a merchant. This adds to the flexibility and excellence of leather production and allows the individuals to turn over their cash more frequently, thus avoiding cash flow problems and vulnerability to demand fluctuations which a large stockholder inevitably suffers.

The Italian industry's dependence on exports, and in particular on exports to other OECD countries, has made it sensitive to fluctuations in demand in the OECD, and the recent recession has certainly had an impact

on the industry. There is no evidence, however, that the recession has damaged the essential advantages which the industry enjoys. Interestingly, other footwear exporters have been able to make some penetration of the domestic Italian footwear market. East Asia exporters have had some success in exporting low-priced slippers, sport shoes and other shoes with textile uppers. Imported leather footwear accounts for only 4 per cent of the total Italian footwear market.

The success of the Italian industry is, therefore, essentially due to effective co-ordination between different sectors of the leather industry, drawing on strengths in the economy as a whole. These aspects of success should be borne in mind in the following discussion of the leather industries in some developing countries.

2.4.3 The leather industry in some developing countries

In the following sections, attention is given to the recent performance of the leather industry in some important developing nations.

Brazil

One developing country which has enjoyed considerable success in the leather industry is Brazil, whose leather footwear industry in particular has become a major earner of foreign exchange for the Brazilian economy. The footwear industry has also held up well in the recent recession, for reasons which will be discussed.

The strength of the Brazilian industry derives from many factors, but a large raw material base is of great importance. The country has a large and well organized meat industry, which produces good quality hides. Although reductions in cattle kill have forced tanners to work at about 60-70 per cent capacity, very few tanners have been forced out of the business by this contraction. Semi-finished leathers are imported from Argentina to help utilization rates. A further domestic resource is a large vegetable tanning extract industry, and a growing chemical industry to supply the tanners. The industry has also developed an excellent training infrastructure, and receives students for technical training from all over Latin America.

The footwear industry in Brazil is extremely large, numbering over 3,500 factories, and with a total production cpacity put at over 500 million pairs. Production in recent years has been about 350 million pairs, of which exports claim a growing share. (Exports were 45 million pairs in 1979, 49 million in 1980 and 61 million in 1981). Important export markets include the United States and United Kingdom, despite the threat of the imposition of countervailing duties by the British to offset the effect of the Brazilian government's 15 per cent export subsidy (which has since ended). Brazilian women's footwear has been particularly successful in Europe, which is interesting because this sector is the most fashion conscious.

The industry has developed its own marketing institutions which are very effective. Trade fairs are held in Brazil to which foreign buyers are invited, and close co-operation is thereby built up between the importers and the manufacturers. In high fashion markets, the industry is able to offer quality, design and styling up to Italian and Spanish standards, but often at a considerable price advantage because of lower costs (especially on labour). However, the importance of government policies in helping the industry must not be underrated. In the past, government assistance has ranged from sponsorship of exporters attending the major overseas trade fairs to export financing and low interest loans to manufacturers. Brazil's recent economic difficulties have affected virtually all government programmes, and the footwear industry is certain to suffer as a result. Nonetheless, there is evidence that Brazil is recovering quite rapidly from these difficulties, and the shoe industry has the technical and marketing expertise to remain a major force in world markets.

Republic of Korea

The recovery of market share in the U.S. footwear market by the producers in the Republic of Korea after the removal of trade barriers against them suggests that an analysis of the recent performance of the Korean industry would provide useful information on the ways in which a

developing country has developed a successful leather industry. The important background to the Korean industry has been presented in earlier UNIDO studies[13/]; here we concentrate on recent developments.

The leather industry in the Republic of Korea has benefited from a whole range of economic policies which have encouraged industrial development and export growth. The industry has a poor domestic resource base, however, and domestically produced hides were estimated in 1982 to be sufficient to keep the industry operating for only 16 days a year. (In fact, tanneries tend to rely on either domestic or imported hides: large, modern tanneries tend to rely almost exclusively on imported hides, with a growing tendency to purchase wet-blue and crust, and most Korean hides are used by the smaller, artisan tanneries. Since 1978, the larger tanneries have been moving towards the purchase of wet-blue and crust rather than raw hides; before 1978, the industry's investment in wet end facilities made tanners reluctant to purchase other than raw hides.) One small, but valuable example of a government policy change which helped the industry, concerns the import duty on hides. Wet salted hides used to be subject to a 30 per cent tariff, but the duty paid was refundable if the hides were exported in processed form. When the government found that virtually all the imported hides were being processed into goods and exported, the import duty was simply abolished, since the imposition and refund of the duty imposed a needless cost on both industry and government. Tanneries which export leather or leather goods are also allowed to import process chemicals free of import duties.

Despite the recession in demand in Korea's export markets, capacity in the leather industry has not been as badly hit as in many other countries: in 1982, most tanneries were operating at between 15 and 30 per cent below their usual levels. This has necessitated continuing high levels of imports, both of hides and semi-processed and, indeed, finished leathers. The question arises, how has the industry been able to maintain output at levels which have kept capacity utilization reasonably high?

13/ UNIDO ID/WG.312/7, Production and marketing of leather products in developing countries: Problems and prospects, 25 October 1979.

The answer lies in the relationship of the leather industry to other sectors of the Korean economy. The footwear industry, for example, which expanded rapidly in the 1970s, is strongly based in both leather and non-leather footwear, drawing on the strength of the Korean textile industry, and giving the industry a flexibility and resilience it would otherwise lack. Secondly, several of the largest tanneries are in large, vertically integrated corporations which make a variety of finished goods in leather and other materials. These corporations, which are large and multi-national, operate sophisticated export strategies with the assistance of the government trade promotion organization, and this permits aggressive and effective export marketing. This co-ordination of production and export activities played a vital role in the rapid development of the Korean leather and leather products industry. It must also be stressed that the Korean leather products industries are also reliant upon a high level of import of finished leather, largely from Japan whose leather industry is equally heavily dependent upon imports of hides from North America and Oceania.

Despite the advantages to the industry of these links, the heavy reliance of the industry on imported rawstock is an increasingly serious weakness. With competition in manufacturing costs from other East Asian suppliers (especially Hong Kong and Singapore), and growing industries in Asian countries with a rawstock base, the strengths of the Korean industry will be put to the test.

India

Despite the unusual raw material base of the Indian industry, and less-than-excellent quality of its raw cattle hides, the industry has become a major contributor to the Indian economy. Export of finished leathers account for about half of total export revenues in the sector, the remainder being evenly divided between exports of semi-finished leathers and leather goods. This high proportion of export of finished leathers is an indication of success, and although the industry had one bad year recently, when the recession was at its worst, export volumes and receipts have begun to increase. Two factors helped the industry

stave off the worst of the recession. The first is the comparatively high level of trade with the USSR, whose leather purchases do not follow the business cycle of the OECD countries. Steady levels of business from the USSR provided valuable business when demand in Europe was weak. Second, the government introduced a variety of short term measures to assist the industry, including liberalising restrictions on the import of wet-blue leather and the export of semi-finished leathers. The more recent recovery in demand in Europe has been of benefit to Indian exporters, who have well-established marketing links with European buyers.

It is often argued that the policy of imposing quotas on the export of semi-processed leathers in the early 1970s without the simultaneous removal of lowering of import duties on necessary finishing chemicals and machinery and without the dissemination of appropriate know-how led to disappointing returns on the finished leathers and goods exported. The situation has, in more recent years, improved.

Pakistan

The leather industry in Pakistan is comparatively young, and until recently has concentrated on the export of wet-blue or crust to European tanners. The proportion of finished leather in production is rising, however, and despite the reduction in export volumes and values in 1981, as a result of the recession in Europe, the industry is optimistic about its prospects. This optimism springs from some changes in government policy from which the industry will benefit. First, import duties on tanning machinery have been abolished, and many tanners have taken advantage of this to upgrade their equipment. The skill level of the industry has improved as a result of a Japanese aid programme which has expanded the capabilities of the National Leather Research Centre. Second, agricultural policy is switching to give increased emphasis to livestock development and marketing, and this seems certain to result in increased availabilities and qualities of hides. Close attention must be paid to the marketing of the product, however, if the industry is to benefit fully from these changes. It is much easier to sell semi-finished leather than finished leather in Europe, because the

European industry prefers to retain the flexibility about colour and finish which comes from buying semi-finished leathers. Satisfying customers for finished leather can be very difficult.

Joint ventures between tanners in Brazil and partners in Spain, who have offered technical and marketing expertise, have contributed to industrial development. Pakistani tanners have also benefited from such liaisons with Spanish and Italian tanners, while in India there have been some joint ventures with Yugoslavian and CMEA enterprises.

The preceding sections have concentrated on the lessons to be drawn from successful countries. It is unfortunate, but true, that many developing countries have not experienced anything like the success enjoyed by the Koreans and Brazilians. In the following sections, the problems which remain in many countries are examined.

2.4.4 Problems in the leather industry in developing countries

There is no country in the world in which the leather industry does not have problems. The industry in many developed countries is passing through a serious crisis, and this section is intended only to provide examples of problems, not to criticize the industries concerned. All too often, the problems faced by an industry are not problems of the industry's making.

In Africa, the leather industry is probably the least developed of anywhere in the world. Installed capacity in tanning is high, but performance is, in general, poor. The most common difficulties facing the industry are the following: poor infrastructure, which adversely affects the collection and marketing of hides; an underdeveloped meat marketing network, which leaves a large proportion of slaughtering in the hands of local slaughtering facilities whose flaying and curing of hides and skins are poor; and a wider economic environment which does not encourage the industry. Some illustrations of these problems are given below.

The Sudan

The industry in the Sudan provides an instructive example of problems generated by poor co-ordination of tanning capacity with rawstock supply. The Sudan has a large cattle population, by African standards (it accounts for 11 per cent of the total African cattle herd), and thus would appear to be an obvious candidate for a leather industry. While conditions of animal husbandry are not good, the problems of the hides industry begin with patterns of slaughtering. There are over 150 slaughterhouses in the country, but despite the existence of a Hides and Skins Improvement Centre in the Ministry of Agriculture, poor flaying and curing practices are causing substantial downgrading of hides.

There are about 300 tanneries in the Sudan, all but three of which are small, rural facilities. The three large tanneries are modern (established in 1962, 1975 and 1976), and have a capacity estimated at 32 million square feet of leather, 20 million of which is bovine leather. Nonetheless, it has been estimated that these tanneries work at less than 40 per cent capacity, and produce leathers of varying quality.14/ About half of the leather output of these tanners is exported at the wet-blue stage, the remainder going to supply the small footwear and leather goods manufacturing industries.

The modern tanneries in the Sudan, which together employ about 1,500 people, face a number of difficulties, such as a shortage of trained personnel, shortage of maintenance service and spare parts, and frequent interruptions in their supply of electricity, but their most important problems is obtaining hides in sufficient number and quality. The problem is not the total availability of hides: only about 20 per cent of the available hide supply is processed by the large tanneries. About 55 per cent is processed by rural tanners, and the balance, some 25 per cent, is exported in the raw state.

14/ Internal report by a UNIDO expert in the Sudan (not published).

The poor domestic transportation network in the Sudan is only partly responsible for this state of affairs. Rather, the structure of slaughtering allows hides to be wasted by poor flaying and curing; moreover, its decentralized nature has encouraged the establishment of trading networks for those raw hides which are produced, and these trading networks, which involved the export of the raw hides, have not been replaced by the modern tanneries. Modern equipment in the three large tanneries is effectively being wasted because procurement strategies have not been tailored to the conditions under which hides are produced.

Ensuring a sufficient volume of raw material to keep tanneries operating at efficient capacity utilization rates is a problem for the leather industry world wide. The Sudanese difficulty of ensuring good quality raw hides is also widespread, especially in Africa. What is unusual about the Sudan's difficulties is the inability to harness the available domestic resources to good effect, and this emphasizes the importance of ensuring that the tanning industry does not get out of step with the industry which provides its raw material.

Egypt

The most important export market for Sudanese hides is Egypt, where the tanning industry suffers from serious overcapacity. Because of Egypt's high population, its limited agricultural land is almost all given over to crops. Its animal population is small, and its large tanning industry relies heavily on imports from neighbouring countries. Hides are also sometimes imported from Western Europe, although this is rarely economic in the present circumstances of the industry. There are plans for large scale livestock developments projects, and there are a number of large abattoirs which produce hides of a reasonable quality. Most slaughtering, however, is done by local butchers, who sell hides to merchants. These hides are usually of poor quality, the direct result of poor flaying. Post-mortem hide defects are a major constraint on the Egyptian industry.

Tanning capacity is considerably in excess of local hide production, and because of shortages of raw materials, the industry has been operating at utilization rates as low as 50 per cent in recent years. But the difficulties of the industry have been compounded by two factors. The first is a shortage of skilled labour. This is the result of the oil boom in Egypt's Arab neighbours, where wage rates are much higher than in Egypt, and where Egyptian workers constitute a large proportion of the labour fource. The second is a set of government regulations constraining the operations of the industry. A substantial portion of the Egyptian leather industry is state-owned: public sector tanneries sell their output at fixed prices to public sector shoe manufacturers, who sell shoes at regulated prices. Although the private sector's prices are not similarly constrained by regulation, private shoe companies must compete with the state factories, and this places an effective constraint on the profit margins of all sections of the industry. Exports of leather were banned in 1979, to ensure that local factories receive adequate supplies.

The only possible solution to the problems caused by these constraints on the local market is to develop export markets for leather manufactures. Egypt has an extremely large shoe industry, and a tradition of exporting to other Arab states. (Exports of leathergoods have been made to Eastern European countries.) More recently, however, markets in West Europe have looked more attractive and have been the focus of export attempts by the Egyptian industry. Some exports, particularly of women's summer shoes, have been made. The problem faced by the industry in exporting is its emphasis on durability at the expense of style, which creates difficulties with fashion-conscious Western Europeans.

One further difficulty experienced by Egyptian tanners also springs from government regulations. Importing into Egypt requires approval, obtained through a lengthy documentation process. Delays in authorization can be as much as four months, and tanners wishing to import new dyes or finishing agents to serve the fashion markets of Western Europe could experience difficulties in adjusting their production quickly enough.

Tanning capacity in Egypt is too large; if the industry is only to serve the domestic market, it must be drastically reduced. The alternative, requiring smaller capacity reductions, is to expand export markets for leather products. These export markets would need to be sufficiently lucrative to allow tanners to import hides from the world market, since local supplies are not adequate in quantity or quality. Improved quality through better flaying and post-mortem care of hides will lead to better utilization of capacity and the domestic resource base, but improvements in design and styling of leather manufactures would need to be made before any major export market penetration could be reasonably expected. Careful consideration would also need to be made of the wisdom of relying heavily on imported hides given likely price prospects in the world market.

Ethiopia

Problems of hide quantity and quality are common throughout Africa, although they arise for different reasons. In Ethopia, for example, tanning capacity is well below the potential production of hides in the country which has about 16 per cent of Africa's total cattle population. Hide recovery, however, though increasing, is still low, and complex, many-tiered trading networks which deliver hides from the producers to the tanners tend to depress producer prices and limit incentives for quality control. Lack of a distribution system for curing salts or bactericidal agents leads to many hides putrefying before they reach tanners, and a large number of hides are exported (to Egypt). Of those hides which reach tanners, most are exported in semi-finished forms. The local leather products industry is small and suffers from a shortage of skilled labour. Improvements in livestock farming and hide recovery and marketing are being made, but progress is slow. An area of recent success in Ethiopia, however, is the establishment of trade links with Algeria. SONIPEC, the Algerian state leather and leather products organization, is purchasing large quantitites of crust hides from the large, mechanized tanneries established in Ethiopia about a decade ago. This has allowed greater utilization of the productive capacity of Ethiopia's National Leather and Shoe Corporation. Futhermore, the trade agreement with SONIPEC recognizes that progress must be made towards increased Ethiopian production

of finished leathers. While Ethiopia and Algeria are not adjacent countries, they serve as an example of countries coming to a mutually advantageous co-operative agreement, similar in many respects to what would be envisageed in regional co-operative development.

Nigeria

In Nigeria, the problem is different again. Growing consumer incomes have stimulated the demand for meat so strongly that almost all animal by-products are used for human consumption. Hides are sold from abattoirs to street traders, who boil the hides in a stew until they become palatable. This has two effects. First, it drives up the price of hides, since the street traders prefer hides to retain some residual flesh and fat, and are unconcerned about flay cuts, whereas both of these features on hides destined for tanning cause problems for the tanner. Interestingly, large scale human consumption of hides appears only to have begun when the export of raw hides from Nigeria was banned in an attempt to encourage the local industry. Before the ban, hide exporters kept hide prices high enough to discourage the use of hides as human food, but since the ban, street traders have been able to outbid tanners for a large proportion of production. Indeed, Nigerian tanners have begun to import some hides from the world market to compensate for the problems of domestic availability.

Regional co-operation

The brief description given above of some of the difficulties faced by the leather industry in some African countries points to a further feature, which stands in contrast to the industry in South America; that is, the lack of regional co-operation. The Egyptian industry is dependent on traditional trade routes which supply it with Ethiopian and Sudanese hides, yet any expansions in tanning capacity in these latter countries will exacerbate the problem of overcapacity in Egypt. The region as a whole has a potentially large hide supply, and a reasonably high level of tanning and leather manufacturing skills, even though no single country in the region boasts all these advantages. Regional co-operation would seem sensible, yet is not advanced.

The Philippines

It is not only in Africa, however, that the industry faces difficulties. Turning attention to Asia, there are many countries whose industries are labouring under similar difficulties. The Philippines, for example, has a small cattle population (in relation to the human population of the country), but had built up a successful leather industry nevertheless. The footwear industry, in particular, had built up export markets, especially in the United States, for leather and non-leather shoes. Recently, however, the domestic base of this shoe industry has weakened considerably as a result of the impact on the tanning industry of hide shortages. High world prices for hides put imported hides beyond the reach of tanners, and, in 1980, the slaughter of the water buffalo (caraboa) was banned, denying the industry one of its most important raw materials. Several tanneries have closed, and the profitability of the remaining, mechanized tanners is threatened by high import duties on process chemicals (20 per cent on tanning extracts, 30 per cent on fatliquoring oils, and 90 per cent on finishing agents). A number of partly mechanized tanners are registered "Cottage Industries" and enjoy a variety of duty and tax exemptions, but they are not producing leathers of high enough quality to support the footwear industry. That industry is now importing finished leathers from the United States and Europe. The Philippines' leather industry, as a whole, thus suffers from poor integration of its several components, with a reasonably successful footwear industry having to import leathers while the tanners who could supply these leathers suffer from high taxes and competition for raw materials from a group of tanners who do not have to pay such high taxes.

Bangladesh

The leather industry in Bangladesh has suffered from the impact of political instability: after the war in which the province of East Pakistan became Bangladesh, many tanners and much skilled labour moved to Pakistan, and the industry had to build up its own expertise. The industry is fortunate, however, in its raw material base, since conditions of animal husbandry in Bangladesh are much better than in many developing countries and good care is taken of hides and skins once they are removed from the animals. Over

80 per cent of the country's output, however, is exported as wet-blue, crust or finished leather, since the domestic leather manufactures industry is small. Wet-blue exports are taxed, to encourage further domestic processing, but the industry faces difficulties in expanding downstream processing, for two reasons. First, process chemicals attract import duties of between 50 and 70 per cent, and a sales tax of 20 per cent. Second, the technical skills of the industry are not sufficiently widespread to permit extensive further processing: one tannery does produce finished leather, but it is a joint venture with a Swiss company, and the Swiss provide both the technical expertise and the marketing skills to sell the leather to the shoe industries in France and Italy.

Nepal

Finally, mention should be made of the industry in Nepal, where a new tannery was opened in 1982. This modern tannery, built with West German assistance, became the largest industrial enterprise in Nepal, a country where hides and skins are one of the most important natural resources, and there were considerable hopes pinned on its performance. The experiences of this tannery over the first year of its operation are of interest to other developing countries considering similar industrial developments.

Unfortunately, the tannery opened when the world economy was very weak, and its performance over the first year of operation has not been very successful. Indeed, the financial position of the enterprise looked so precarious at one point that the government sold most of its interest to a private industrialist, who has launched what amounts to a rescue operation. The tannery processes buffalo hides, and has the capacity to process 750 hides/day, reflecting not a shortage in hide availability, but the poor quality of most available hides: the market for buffalo leather is a more quality conscious market than that for many other leathers, and the tannery experienced great difficulty in the early period of its operation in selling finished buffalo leathers of poor quality. The low quality of those hides available to the industry inevitably affects the quality of the finished output. There appears some prospect that the tannery will find markets for semi-finished leather in Europe, but this will lead to under-utilization of

the finishing machinery in the factory. The tannery has no option but to look for export markets for its product, since the leather goods industry in Nepal is small and incapable of absorbing more than a tiny proportion of the country's leather output.

The leather industry in developing countries faces a great variety of difficulties, ranging from poor hide availability and high import duties on necessary process materials to poor marketing and severe competition in export markets. One feature stands out, however, in distinguishing successful industries from those labouring under serious problems, and that is the degree of effective co-ordination within the industry. A successful industry is characterized by a high level of co-operation among its component parts, from the hide supply to the marketing of the final product, be that product wet-blue leather or shoes. Production processes are successful if they efficiently transform what is available into what is marketable.

In the third chapter, we consider the implications of recent experience for the long term prospects of the industry in developing countries.

3. PROSPECTS IN THE LEATHER AND LEATHER PRODUCTS INDUSTRY

3.1 A simple scenario for 2000

In this chapter, the implications of recent experience for the long term prospects of the leather industry are considered. However, by focussing on the long range prospect, attention is distracted from the very serious problems of short run adjustment which the industry faces in both developed and developing countries. Many people in the industry feel that looking ahead to the year 2000 disguises problems rather than reveals opportunities.

The projections which economists make are conditional projections: they attempt to illuminate what things would be like if other conditions hold. For the purposes of this section, these conditions are of two kinds. First, they are forecasts of national economic growth which are made explicit in an accompanying table. These forecasts are UNIDO forecasts, used in the joint UNIDO/UNCTAD model of the world economy, but they are not cast in stone and different forecasts may be preferred. Second, they are judgements about the continuing validity of the lessons of recent experience in the economies at large. Many things may happen to undermine this validity in a particular industry: genetic engineering may greatly affect the economics of beef production and lead to a dramatic increase in hide supply; major breakthroughs in the technology of shoe manufacturing may greatly affect the competitive position of developed and developing countries in this key industry; fashion trends may move against leather. There are indeed many imponderables, and in the face of them and in the absence of formal econometric modelling, it is possible to develop forecasts only at a level of generality which conceals almost as much as it reveals. It is also true that the bands of confidence around these forecasts are large. Caveat lector.

Table 3.1. Economic growth assumptions: per capita GDP 1980-2000 (average annual growth rate)

UNITAD region	1980-2000
North America	3.16
West Europe	2.58
East Europe	3.48
Japan	6.06
Other developed	3.73
All developed	3.39
Latin America	5.77
Sub-Saharan Africa	4.34
North Africa and West Asia	5.26
South Asia	3.55
South-East Asia	6.29
All developing	5.32

Source: UNIDO. These are the growth rates assumed in the UNITAD model's "Reference Scenario" for forecasting.

These assumptions about economic growth are relatively optimistic.[15/] They exclude the centrally planned nations of Asia. The regional groupings used in tables 3.2 to 3.7 are slightly different from those presented in table 3.5 in the first place, centrally planned Asia is included. In the second place, among developed countries, the only distinction drawn is that between market and non-market economies. The different developing regions, however, are dealt with separately.

These general forecasts determine likely growth rates for the production and consumption of meat and dairy products, and thus the supply of hides and skins. These forecasts are quite conservative, resting as they do on

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15/ In order to maintain consistency among sectoral studies, the same set of basic assumptions regarding general socio-economic conditions are maintained until they are changed for all industrial sectors. However, the industry specific forecasts account for foreseeable events in those industries, for example, improved offtake of hides.

conservative assumptions about the future price ratios between beef and grain, and between beef and competing meats. It appears to be the case, however, that the scope for expanded beef production is quite limited, even though in developing countries there is room for greater intensity in livestock production as well as improved offtake of hides from existing herds. Improved productivity, in fact, accounts for a large part of the forecasted increase in hide production.

The forecasts of production of hides and skins are based upon FAO and World Bank projections of meat production which have then been corrected to equivalent livestock projections. The leather forecast is then constrained to be consistent with the raw hides and skins production. The net trade balance is forecasted based upon a trend line approach, adjusted for the assumed UNITAD model growth rates, and constrained to balance out by the year 2000.

Table 3.2. Production of bovine hides, 1970-2000
(thousand tons, wet salted weight)

	1970	1975	1980	2000
DEVELOPED MARKET ECONOMIES	1,988.5	2,403.5	2,153.4	2,676.1
CPE - EUROPE (incl. USSR)	665.0	797.0	814.9	1,119.2
DEVELOPING MARKET ECONOMIES	1,408.3	1,512.5	1,619.9	1,978.6
Sub-Saharan Africa	126.6	136.1	150.6	230.0
North Africa and West Asia	111.1	129.2	147.8	224.9
South Asia	395.7	430.9	460.3	568.7
South-East Asia	59.1	66.9	75.9	83.4
Latin America	715.8	749.4	785.3	871.6
CPE - ASIA	196.7	207.8	244.4	262.3
WORLD	4,258.5	4,920.8	4,832.6	6,036.2

Source: UNIDO. Calculations based on FAO, World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, Rome, 1983; estimates.

Notes: Detailed data are presented in the companion Statistical Digest of the Leather Industry.

Table 3.3. Production of sheep- and lambskins, 1970-2000
(thousand tons, dry weight)

	1970	1975	1980	2000
DEVELOPED MARKET ECONOMIES	157.2	140.1	160.3	180.6
CPE - EUROPE (incl. USSR)	59.2	61.6	53.9	75.0
DEVELOPING MARKET ECONOMIES	93.9	96.3	115.4	153.5
Sub-Saharan Africa	13.3	13.5	17.5	25.0
North Africa and West Asia	38.9	42.2	51.2	68.8
South Asia	18.4	20.0	24.9	36.4
South-East Asia	0.8	0.9	1.1	1.6
Latin America	22.5	19.7	20.7	21.7
CPE - ASIA	13.5	15.2	15.6	19.1
WORLD	323.8	313.2	345.2	428.2

Source: FAO, world statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, Rome, 1983; estimates.

Notes: Detailed data are presented in the companion Statistical Digest of the Leather Industry.

Table 3.4. Production of goat- and kidskins, 1970-2000
(thousand tons, dry weight)

	1970	1975	1980	2000
DEVELOPED MARKET ECONOMIES	6.7	6.3	6.7	7.0
CPE - EUROPE (incl. USSR)	4.1	3.8	3.2	4.0
DEVELOPING MARKET ECONOMIES	89.7	96.3	109.4	146.4
Sub-Saharan Africa	17.5	17.2	20.1	29.5
North Africa and West Asia	18.5	20.1	21.5	28.5
South Asia	46.1	51.0	59.0	77.8
South-East Asia	1.6	1.9	2.3	3.0
Latin America	6.0	6.1	6.5	7.6
CPE - ASIA	11.1	12.9	14.9	20.1
WORLD	111.7	119.3	134.2	177.5

Source: FAO, world statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, Rome, 1983; estimates.

Notes: Detailed data are presented in the companion Statistical Digest of the Leather Industry.

These tables forecast only modest increases in hides and skins availability, and may err on the side of caution. The share of bovine hide supply which will be accounted for by developing countries will continue to increase. The outlook for herd expansion at the moment is poor, but the resumption of a pattern of strong economic growth should result in sufficient incentives for renewed expansion of cattle herds. Nonetheless, pressure on land and grain resources in developing countries will remain severe, and will impose a tight rein on the possibilities of herd growth. With such pressure on resources, there will be a tendency to meet the demand for meat through intensive cattle raising, rather than expansion of cattle numbers. Although this should be particularly apparent in the USSR and East Europe, where livestock feed conversion rates are generally poor, and there is considerable scope for increased animal productivity, the same considerations apply to developing countries. The only areas where there seems some scope for

considerably increased cattle numbers are Southern Europe and Latin America; although Africa's cattle population could increase greatly if control of the tsetse fly could be achieved. The sheep and goat populations are forecast to increase, but only modestly. Improved animal husbandry and slaughtering practices in developing countries can, of course, increase the yield of hides from a given herd.

The pattern of economic growth which is foreseen for developing countries will certainly result in a greatly expanded demand for meat and animal products, but the economics of beef production are such that it seems highly likely that this demand will be met by increased production of poultry and pig meat. In the past, the prospects for increased pig production have encouraged some interest in the possibilities for tanning represented by the pig population. It is worth stressing, however, that, if resource scarcity exerts upward pressure on food prices, then pig skins, the bulk of which are presently consumed as food, will have an increased opportunity cost as a human protein source. It is only at times of peak raw hide and skin prices, such as occurred in 1979, that tanners will be able to bid pig skins away from their use as a food: it was in 1979 that most interest was shown in the increased production of pigskins in the United States. Had prices stabilized at a high plateau, greater investment in specialized plant may have been made. Confidence in pigskin requires that the value of the skins remain marginally above the value of pork, which in turn requires that, weight for weight, cattle hides remain marginally more valuable than beef. This price ratio obtained around the peak price period in 1979, but has not been seen again since that time. It has already been observed that in Nigeria the demand for hides as a human food has reduced the supply of hides to the tanning industry because tanners could not compete with traders who use hides as food. In centrally planned countries, there certainly will be increased use of pig skins as tanning materials, but in global terms, only high price levels (of both pigskins and finished pig leathers) can divert pigskins from food uses towards the tanning industry.

Table 3.5. Apparent availability of light leather from bovine animals, 1970-2000
(million square feet)

	1970			1975			1980			2000		
	Production	Net trade balance (i)	Availa-bility	Production	Net trade balance (i)	Availa-bility	Production	Net trade balance (i)	Availa-bility	Production	Net trade balance (i)	Availa-bility
DEVELOPED MARKET ECONOMIES	2,883.5	+65.3	2,948.8	2,998.1	-167.3	2,830.8	3,078.7	-222.6	2,856.1	3,653.0	-245.0	3,408.0
CPE - EUROPE (incl. USSR)	1,057.3	+86.9	1,144.2	1,291.0	+110.6	1,401.6	1,470.5	+84.2	1,554.7	2,019.6	+143.0	2,162.6
DEVELOPING MARKET ECONOMIES	2,150.6	-412.0	1,738.6	2,685.3	-69.1	2,616.2	2,883.7	-110.7	2,773.0	4,434.9	-33.0	4,401.9
Sub-Saharan Africa	84.8	-0.2	84.6	85.7	+0.3	86.0	109.7	-12.9	96.8	200.0	-3.0	197.0
North Africa and West Asia	196.0	+5.1	201.1	236.9	+3.0	239.9	255.1	+12.1	267.2	578.0	+10.0	588.0
South Asia	757.8	-83.1	674.7	833.8	-170.0	663.8	872.8	-228.1	644.7	1,247.0	-75.0	1,172.0
South-East Asia	123.0	-20.9	102.1	281.5	+278.6	560.1	297.0	+442.1	739.1	415.6	+60.0	475.6
Latin America	989.0	-312.9	676.1	1,247.4	-181.0	1,066.4	1,349.1	-323.9	1,025.2	1,994.3	-25.0	1,969.3
CPE - ASIA	259.8	+16.0	275.8	302.5	48.9	351.4	429.5	+64.0	493.5	614.4	+135.0	749.4
WORLD	6,351.1	(-243.8)		7,276.9	(-76.9)		7,862.4	(-185.1)		10,721.9	(0)	

Source: FAO, World statistical compendium for raw hides and skins, leather and leather footwear, 1961-1982, Roma, 1983; estimates.

Notes: (i) Net import are positive (they add to availability); net exports are negative. On a global level, re-exports and goods in transit are not included, therefore exports and imports do not tally, and the net balances should be judged in the light of the overall discrepancy which is given in parentheses at the foot of each net trade balance column.

Table 3.6. Apparent availability of light leather from sheep and goats, 1970-2000
(million square feet)

	1970			1975			1980			2000		
	Production	Net trade balance (i)	Availa-bility	Production	Net trade balance (i)	Availa-bility	Production	Net trade balance (i)	Availa-bility	Production	Net trade balance (i)	Availa-bility
DEVELOPED MARKET ECONOMIES	1,408.6	+158.6	1,567.2	1,270.9	+420.3	1,691.2	1,262.0	+438.1	1,700.1	1,160.0	+150.0	1,310.0
CPE - EUROPE (incl. USSR)	502.1	-0.8	501.3	502.8	-0.2	502.6	422.8	-0.2	422.6	480.0	0.0	480.0
DEVELOPING MARKET ECONOMIES	782.9	-389.3	393.6	962.8	-387.1	575.7	1,164.4	-552.3	612.1	1,900.0	-160.0	1,740.0
Sub-Saharan Africa	57.7	-29.2	28.5	73.6	-53.4	20.2	108.5	-78.2	30.3	230.0	-40.0	190.0
North Africa and West Asia	188.2	-15.3	172.9	241.7	-9.6	232.1	294.3	-13.7	280.6	520.0	-8.0	512.0
South Asia	406.9	-334.6	72.3	489.9	-345.2	144.7	564.6	-418.6	146.0	926.4	-105.0	821.4
South-East Asia	5.7	+5.5	11.2	13.0	+46.0	59.0	20.8	19.9	40.7	28.6	+5.0	33.6
Latin America	124.4	-15.7	108.7	144.6	-24.9	119.7	176.2	-61.7	114.5	195.0	-12.0	183.0
CPE - ASIA	145.1	0.0	145.1	173.7	+1.2	174.9	184.1	12.0	196.1	214.0	+10.0	224.0
WORLD	2,838.7	(-231.5)		2,910.2	(+34.2)		3,033.3	(-102.4)		3,753.8	(0)	

Source: FAO, World statistical compendium for raw hides and skins, leather and leather footwear, 1961-1982, Roma, 1983; estimates.

Notes: (i) Net import are positive (they add to availability); net exports are negative. On a global level, re-exports and goods in transit are not included, therefore exports and imports do not tally, and the net balances should be judged in the light of the overall discrepancy which is given in parentheses at the foot of each net trade balance column.

Table 3.7. Apparent availability of heavy leather from bovine animals, 1970-2000
(thousand metres)

	1970			1975			1980			2000		
	Production	Net trade balance (i)	Availa-bility	Production	Net trade balance (i)	Availa-bility	Production	Net trade balance (i)	Availa-bility	Production	Net trade balance (i)	Availa-bility
DEVELOPED MARKET ECONOMIES	145.6	-3.5	142.1	166.7	-1.1	165.6	143.4	+6.5	149.9	123.0	+3.2	126.2
CPE - EUROPE (incl. USSR)	208.2	0.0	208.2	181.6	0.0	181.6	162.1	0.0	162.1	105.0	0.0	105.0
DEVELOPING MARKET ECONOMIES	115.6	-0.3	115.3	142.6	-1.9	140.7	161.4	-4.2	157.2	216.0	-2.2	213.8
Sub-Saharan Africa	1.6	+0.2	1.8	1.7	+0.1	1.8	1.8	0.0	1.8	3.0	0.0	3.0
North Africa and West Asia	20.5	+0.5	21.0	26.3	+0.8	27.1	22.8	+1.1	23.9	30.0	0.0	30.0
South Asia	33.3	-0.1	33.2	47.2	-0.2	47.0	57.3	-2.7	54.6	85.0	-1.7	83.3
South-East Asia	5.4	+0.7	6.1	12.1	+0.4	12.5	17.9	0.0	17.9	28.0	0.0	28.0
Latin America	54.8	-1.6	53.2	55.3	-3.0	52.3	61.6	-2.6	59.0	70.0	-0.5	69.5
CPE - ASIA	34.7	0.0	34.7	37.9	0.0	37.9	37.4	-0.7	36.7	46.0	-1.0	45.0
WORLD	504.1	(-3.8)		528.8	(-2.9)		504.3	(+1.6)		490.0	(0)	

Source: FAO, World statistical compendium for raw hides and skins, leather and leather footwear, 1961-1982, Roma, 1983; estimates.

Notes: (i) Net import are positive (they add to availability); net exports are negative. On a global level, re-exports and goods in transit are not included, therefore exports and imports do not tally, and the net balances should be judged in the light of the overall discrepancy which is given in parentheses at the foot of each net trade balance column.

In tables 3.5, 3.6 and 3.7, production forecasts for leather are presented. These, coupled with forecast trade balances, are used to project availabilities. It must be stressed, however, that these availabilities are not the same as consumption. Consumption has not been forecast, for reasons which are set out in subsequent paragraphs.

Developing countries seem highly likely to increase their share of world production of leather, and this is reflected in the forecast tables. It also seems probable that net export flows of leather from developing countries will fall, increasing the availability of leather for manufacture of leather products in the developing world.

We have not forecast trade flows in leather manufactures, and therefore no estimates of leather consumption have been prepared. This is because government policy in developing countries will be of crucial importance in determining whether the increased manufacturing capacity which is projected will be used to satisfy local demands, or will be used to gain foreign exchange by being exported. In the following paragraphs, the context in which this decision will be taken is described.

With the pattern of economic and population growth which is foreseen, two related factors stand out in their importance for trends in final leather consumption. In the first place, low population growth and static per capita shoe consumption in the OECD will affect footwear demand quite seriously. Conversely, rapid population growth and urbanization in developing countries seems likely to increase demand for footwear within the developing world. If there is a reduction in the importance of the OECD footwear market in terms of total leather utilization, but continued demand for non-footwear leathers, (provided fashion continues to look favourably upon leather garments and upholstery), then the implications for developing countries are clear. First, demand for footwear in developing countries could be met by leather substitutes, freeing leather for the production of export goods; but this will require the development of the production and, more importantly, design and marketing skills to break into the OECD market for non-footwear leather

products. This will be very difficult, but a small number of developing countries have shown it is possible. Second, the growing market for footwear in the developing world will greatly increase the possibilities for regional co-operation and trade among the developing countries. Third, reliance on exports of leather footwear to the OECD, the traditional expansion path followed by many developing countries, will only result in intense competition, often with other developing countries, for a limited market and the net gains to be realized will be few.

There seems little reason to believe that the rapid changes in production, consumption and trade patterns which characterized the 25 years prior to 1977 will continue to occur in the years to 2000. Indeed, there are many reasons to believe that the pattern of change will change considerably. The rapidly rising share of the world leather industry claimed by the developing countries in the 1960s and 1970s was underwritten by a series of factors, described fully in previous UNIDO reports[16/], which by now should seem unusual. These were, in brief:

- rapid expansion of hide supply and consequent low prices;
- steady growth in demand;
- low trade barriers in developed countries; and
- growing environmentalism in developed countries which imposed mounting cost burdens on tanners and encouraged the transfer of wet end processing to developing nations.

The tanning industry in the developed nations has become more efficient to the point, in some cases, of being able to comply with stringent effluent-control regulations and yet retain competitiveness, and will not yield capacity as easily as before to developing country producers, even though they will continue to switch more into the role of finishers of leather

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16/ UNIDO/ICIS.45 and Corr.1, op. cit. and UNIDO/ICIS.134, op. cit.

as upstream tanning operations continue to relocate to the developing world. The fact that some developed country shoe manufacturers have found production and marketing strategies which allow them to resist competition from the developing country producers means that they too will not yield capacity as easily. The OECD market will remain a high-fashion market, and therefore one in which developed country producers have certain advantages. East Asian manufacturers have demonstrated the capacity to produce cheap fashion items, relying on the rapid transfer of market information to the manufacturer, but they have been less successful in penetrating markets for high-value fashion items.

This should not be taken to imply that the world leather industry in 2000 will look the same as it does today. Developing countries' share of production and consumption will continue to increase. Simply extrapolating into the future the changes for the past twenty years, however, would be a serious mistake.

3.2 Prospects for and constraints on developing countries

Nothing has been said in this report which could be taken to mean that the key constraint on the leather industry - the availability of raw hides and skins - identified by previous UNIDO reports[17/] has lessened over the past 5 years. Hide and skin availability remains a serious problem for the industry world wide. Even if one accepts that problems of foreign exchange availability are essentially short run and will be reduced in severity by recovery in the world economy, developing countries still face two constraints on their leather industries in addition to the problem of the quantity and quality of hide availability. The first is the availability of tanning, manufacturing and design skills. Although this is clearly not a problem in some developing countries, the importance of design skills must not be underestimated. The design of shoes, and other leather manufactures, is a crucial element in their success. The second is their distance from those

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17/ UNIDO/ICIS.45 and Corr.1, op. cit. and UNIDO/ICIS.134, op. cit.

markets to which they have sought to export, and the associated difficulties in marketing. The OECD is the most attractive export market because it is the hard currency market, but while it is very easy to sell quality wet-blue or dyed crust leather to Europe, it is very difficult (by comparison) to sell finished leathers or leather manufactures there. Since developing countries have no clear economic advantage in leather finishing, it must be deemed unlikely that much export oriented finishing capacity will move to the developing world as rapidly as wet end processing capacity has.

It has been argued that protectonism is likely to increase in the OECD, and that the principal sufferers as a result of the protection which will be afforded the leather industry in the OECD will be developed countries. It is certainly true that as economic growth in industrialized countries is generated by sectors whose labour requirements are small, labour using industries are less expendable, and the political willingness to allow developing country producers to capture markets held by these labour using industries may be lacking. It is also true that developing countries should be on their guard against protectionist measures, seek to forestall them whenever they threaten to appear, and seek to minimize their impact when they do appear. Free trade has a large constituency in the industrialized nations, and this should not be forgotten. It is equally true, however, that the leather industry that remains in industrialized nations is more efficient, and it retains a comparative advantage in some areas of leather processing. The limits of import penetration in the United States footwear market, for example, may be temporarily affected by protectionist measures, but their long run level will be set by the ability of the United States industry to compete. The economic limit of import penetration may not have been reached yet, but there are profitable United States shoe manufacturers who can compete successfully with imports irrespective of the level of protection.

Developing countries retain a comparative advantage in certain aspects of shoe manufacturing, however. Nonetheless, they are less likely to benefit as much from this in the future as they have in the past, since some developed country manufacturers have developed strategies which enable them to compete successfully with imports, and since the total OECD market for footwear is

unlikely to be as buoyant as in the past. This does not mean, of course, that the OECD market should be regarded as saturated by the products of developing countries; only that the rate of change will be much slower in the future.

The very achievements of a small number of developing countries in the leather industry can be regarded as a constraint in the ability of other developing countries to expand their leather industries rapidly. The established producers are successful, efficient and compete strongly with each other for raw materials and for final markets. The developed world leather market, as it stands, does not have room for another Republic of Korea, or for another Brazil, even if other countries were able to develop the technical and marketing skills which are present in those two countries. Without new marketing strategies, the entry of new developing country competitors into the OECD market will harm those already present, and will hardly yield a proper return to the new manufacturers.

The likely development of the world leather industry presents many opportunities for developing countries, however, most notably in terms of the expansions in their domestic footwear consumption, and it seems likely that developing country footwear industries will continue to expand strongly, even though their output will be proportionally less export oriented.

3.3 Strategies for development and co-operation

The existing development strategy, which emphasizes the expansion of domestic processing (often beyond the limits of raw material supply) and high levels of export to OECD nations has served a number of developing countries well, but real limits have now been reached with this strategy. Those countries which have not yet made advances with their leather industries would encounter difficulties if starting on this path. Overcapacity in the tanning industry, reliance on imported hides and the exposure to the variability of the world hide price which this implies for tanners dependent on imported hides, are serious threats to profitability. Since there is serious

overcapacity in tanning, hide prices are higher, and leather prices lower, than they would be if capacity were better utilized. The profitability of the industry is, therefore, threatened.[18/]

Furthermore, if the OECD market remains a market which developing country suppliers will find difficult to supply with finished leathers (because of the constraints on the availability of skilled labour and on marketing expertise), and if OECD footwear demand stagnates, then the conventional strategy for developing country expansion of the leather industry begins to look weak, and would succeed primarily in benefiting OECD consumers by, effectively, oversupplying that market and depressing prices.

An alternative, and more realistic, strategy would emphasize two things:

1. The development of upstream processing and the export of semi-processed leathers to the world market (in countries which are still exporting raw hides);

2. The recognition of the expanding developing country markets for footwear (in countries with a reasonably well-developed raw material base and with the prospect of rapid economic growth).

One important factor in particular points to a growth in demand for footwear in developing countries: the growing urbanization of the population. Leather footwear may be only a status symbol in a rural area, but in a city, footwear is a necessity. And the rate of urban growth in many

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18/ This is a point about the relative prices of hides and leather, not their absolute prices. It is true that prices for both hides and leather have stood up in the recent recession better than the prices for other agricultural raw materials. However, if there is excess capacity in an industry, then returns to capital invested in that industry are lower than they would be if capacity were better utilized. In the case of tanning, this means that the costs of processing hides into leather are lower than they would be if capital were earning a higher return. Accordingly, given the constellation of competitive forces in the leather industry, the price differential between hides and leather is lower than it would be if capital in the industry were earning a higher return.

developing countries is extremely rapid, to say the least. Footwear manufacture has many benefits for developing countries because it generates employment and it fuels industrial development. These benefits have, in the past, seemed secondary to the foreign exchange benefits of exporting, but international market prospects are finite. Therefore, relying heavily on exporting as much as possible to the OECD is not particularly feasible. What does this imply for international co-operation?

International co-operation in the leather industry is well advanced. The most widespread form of international co-operation is that between a company or state organization from a developed country, and a part of the leather industry in a developing country. In such co-operation, the developed country partner provides technical expertise in processing, and assistance with marketing (usually through guaranteeing to buy the output of the joint venture). Nationals of developing countries often receive training in developed countries under such schemes. These schemes may be implemented because of international political imperatives (e.g. the co-operation between Eastern European leather organizations and parts of the leather industry in India) or because firms in developed countries are looking for profitable investments (e.g. the new Brooke Bond tannery in India, or the many examples of United States companies establishing shoe manufacturing facilities in East Asia to remain competitive on open markets). In this latter instance, co-operation arises autonomously, and the role of international organizations is confined to co-ordinating information about the investment opportunities. As long as developed countries operate liberal capital exporting policies and developing countries welcome foreign investment, this type of international co-operation will be continued, and skills will be transferred to developing countries.

A further kind of international co-operation which is well established but which must be encouraged by those who wish to see the leather industry develop and expand, is co-operation over livestock development in the developing countries. While private capital is involved with this on a small scale, major responsibility lies with national and international aid agencies. Assistance with livestock and meat development programmes has, in recent years, begun to take account of the impact of such programmes on the

hides economy. Improvements in animal husbandry and slaughter practices could have a dramatic impact on the leather industry in many developing countries. Financial constraints on many aid agencies have been so severe in recent years, however, that progress on this, as in many other areas, has been slow.

If developing countries are to take full advantage of the expansion in footwear consumption within the developing world, then co-operation among developing countries themselves must increase. At present, in the leather industry, there is extraordinarily little contact within the developing world, on all levels. Only in Latin America is there some regional co-operation, but this is limited in scope. The different pace at which the leather industry has developed in different parts of the developing world means that there are already valuable skills in developing countries, and co-operation could yield major benefits. The international community can help this by encouraging a regional approach to the problems of an industry in one particular area of the developing world, and using this one area as a pilot scheme to demonstrate the possibilities. One region which stands out in needing regional co-operation is North East Africa, where there is a substantial raw material base, a large part of which is currently being wasted, and where there is an advanced leather manufacturing industry and considerable experience in exporting leather manufactures to other developing countries (see section 2.4.4). A large part of the difficulties of the industry in this region stems from the lack of regional co-operation, and it is therefore a natural candidate. As an example it could be envisaged that Egypt, which is so dependent on Sudanese hides, could engage in hide and skin improvement in co-operation with Sudan. Sudan's primary objective in such a campaign would certainly be utilization of its existing tanning capacity, but a successful scheme to encourage better animal husbandry, slaughter and hide and skin preservation and marketing would provide more than the Sudanese tanners require and would therefore ensure a continued supply for Egyptian tanners. The scope for mutual benefit is clear: the potential in the Sudan for improved recovery is sufficient to double the input to the Sudan's mechanized tanneries without affecting present levels of raw hide and skin exports.

4. CONCLUSIONS AND STRATEGIES FOR DEVELOPMENT

This chapter has three concerns. First, key themes of the study are repeated, and the conclusions are stated. Second, lessons are drawn from the present difficulties of the industry, and, third, the elements of a successful strategy for developing countries over the remaining years of this century are considered.

4.1 Key themes and conclusions

A small number of factors stand out as important themes of the study and features of the industry's likely development over the remaining years of this century. The first is the relative slow growth in footwear consumption in the OECD and the saturation of that market with imports from the industrial non-market economies, the developing countries and from other countries within the OECD grouping. This has been a pronounced theme of the market for leather and leather products since 1977, and there is no reason to expect it to change. The comparative weakness of the OECD shoe market, and the growth of Southern and Eastern Europe as manufacturers and exporters of footwear, have combined to leave developing countries with the residual share of world trade. In 20 years, the volume of production in the developing countries rose by 120 per cent in comparison with only a 19 per cent raise in the developed countries. Their share of world production advanced from 22 to 35 per cent. But the developing countries have concentrated on supplying the low value mass market in the developed countries while the indigenous manufacturers in the developed countries have specialized on high quality high value footwear. The result is that, whereas in the early 1960s the value of a pair of shoes manufactured in the developing countries was two-thirds of the value of a similar pair manufactured in the developed, today it is only half the value of a pair produced in the developed world.

The second is the large leather products market that rapid urbanization in the developing countries is creating. This second feature is underlined by a regional survey of Latin America.[19/] This document, in looking forward to

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19/ UNIDO/WG. forthcoming, Study on the leather and leather products industry in Latin America, March 1984.

the end of the century, gives the example of Peru to illustrate the impact of trends in hide production and leather demand. Peru's capital, Lima, shows very clearly the kind of rapid urban population growth typical of developing countries. The country is mountainous and has only limited prospects of extensive herd and flock expansions. By the year 2000, the study claims, there is every reason to expect that all Peruvian hides and skins will be tanned in indigenous tanneries, and that around 10 per cent of tannery input will be imported from other Latin American countries. Even if 80 per cent of this leather will be used in footwear, the result will only be sufficient to provide leather shoes for the population at the rate of 0.48 pairs per capita per year. Thus Peru by the close of the century will not be in a position to export leather or leather footwear and will probably be either importing leather footwear or relying on a non-leather footwear industry to meet its needs. This example is intended only to illustrate the more important point about the changing face of leather demand.

Of course, there will be countries whose high level of livestock production will allow them to continue to produce leather and leather products for export, while other countries will find domestic demand sufficiently high to prevent a high level of exports. Governments of some countries may continue to encourage the export of leather and its derivative products, despite domestic demand, for the sake of hard currency earnings.

This leads naturally to a third key theme of the study, a feature of the world hides economy which has been pointed out before, but whose importance is great enough that it bears repeating: the industry is supply-constrained. Per capita availability of leather is declining, and there is no reason to expect that the leather industry will be faced with the difficulty of trying to find markets for a glut of leather products. Repeating this point serves to emphasize the great importance of improving the quality of the industry's raw material.

4.2 The lessons of the past

It is possible to identify four conditions which successful leather industries display, and which are also phases of development:

(a) The provision of the available raw material in a well-preserved condition, free of avoidable defects.

(b) The development of the technological and management skills required to produce leather of consistently good quality at each stage in which the leather is to be marketed. This is most easily done when all the inputs required for the industry are available with only minimal hindrance. (This applies to both local inputs, such as water and power, and inputs which may need to be imported, such as water and power, and inputs which may need to be imported, such as machinery and chemicals.) It should be noted at this point that to produce uniformly good quality leather with good appearance and an economical cutting area from poor quality raw material requires a higher degree of technical skill than producing good leather from good raw material.

(c) The development of the technological and management skills required to produce finished leather goods. In this case, however, marketing knowledge and expertise is also important; and it must be remembered that the general commercial environment, free of excessive subsidies and other market interventions, is crucial in allowing these skill to develop.

(d) The effective co-ordination of all stages of production. For example, tanneries must be able to produce the kind of leather in the volumes required to service their customers.

The difficulties, and the successes, of the leather industry in developing countries can be understood in terms of these four conditions.

Without doubt there are many countries where optimum conditions have not been achieved in these phases and yet they have attempted ambitious industrial development. In part this accounts for the widening of the qualitative gap between the developed and developing countries in footwear production.

It is an unfortunate truth that, despite a spate of reports pointing out the advisability of hide and skin improvement and extensive work by FAO and other organizations in the field, some countries still have difficulties in recovering hides and skins and find it difficult to maintain the systems of

husbandry, slaughter, hide and skin preservation and marketing initially installed with international agency co-operation. In such instances, the price mechanism is usually at the root of the difficulties; there is insufficient incentive in prices offered by local industrialized tanneries to stimulate proper curing and collection, and the low prices being offered either divert raw material to artisan tanners of low quality leather or they encourage contraband trade to neighbouring countries where better prices can be obtained, possibly also in a more valuable currency. Competition between tanneries for raw material must bring the price incentive to encourage better care and recovery. Better recovery and qualitative improvement of raw material offer good prospects for improved utilization of installed capacities in the developing countries.

In the past many developing countries have been weak in failing to appreciate the various constraints bearing upon industrial growth in this sector and have yielded to the vested interests of specialized leather industry development companies who have been more concerned to sell machinery than to develop an industry soundly based upon the indigenous raw material and equipped to serve specific end-product manufacturers who can use the types of leather produced. Many governments have invested disproportionately in physical plant and neglected both the human capital represented by technical management and marketing training, and investment in raw material improvement. The high working capital ratio in relation to fixed capital required in tanning should point to the desirability of improving the quality of the raw material, the input which requires the greatest proportion of working capital expenditure.

From the outset, development should be based upon the promising characteristics of the locally available raw material, matching these with what can be realistically achieved in added value in leather and/or footwear and leather goods, bearing in mind real market opportunities. Development projects should proceed recognizing the particular technical and management skills required in industrial development, the limitations imposed by existing industrial services and the level of investment required in both fixed and working capital. Investment in projects which are not well tailored to raw material availabilities nor to domestic and export markets should be avoided.

failing to produce to an economic capacity and requiring high inputs of imported chemicals, spares and expertise, have led many tanneries and shoe factories to founder.

Such projects stand in marked contrast to successful developing country operations, where efficient co-ordination of raw material supply, factory capability and marketing are the essential contributing factors to the success.

4.3 Planning for success - integrated development, bilateral arrangements and regional co-operation

In the light of the above comments, it would seem that the development of the leather industry in each country should be considered from the sectoral point of view. Integrated development plans should take into account the following elements:

(a) The actual requirements for the improvement of raw hides and skins quantitatively and qualitatively in the short and long terms.

(b) The inputs necessary to improve the utilization of existing capacity in tanning and leather products. This would include an appraisal of the technical requirements for advance to the stage of development appropriate to individual national industries, thereby ensuring that unworkable plants are not established.

(c) Requirements in technical, management and marketing training.

(d) Assessment of the potential economic benefit to be derived from sectoral development, taking into account that price competition in a distant market can erode an industry's stability especially if it is substantially committed to high volume exports. The volability of prices at the mass end of the market should spur moves to improve quality of raw material and leather and leather product production in order to move up-market where price levels are not so subject to erosion. Quality limits pure price competition.

(e) Requirements for working capital for the overall plan.

(f) Consideration of the benefit to development that could ensue from a bilateral arrangement with a partner in a developed country.

(g) Assessment of the comparative advantages of graduated development from the production of semi-processed leathers to finished goods; while it is customary and indeed wise to counsel stage by stage progress, acquiring whole ranges of expertise in the process, it is possible to opt for the production of manufactured goods without passing through the intermediate stages if all requirements for such production and marketing are readily accessible, i.e. technology, skilled labour and management, market opportunity and sufficient finance on equitable terms - indeed overseas production by OECD manufacturers in several East Asian locations had proceeded on this basis.

(h) The place of any development within the framework of a plan for regional co-operative development.

In the light of the importance of bilateral arrangements in the development of the leather industry, it is worth reviewing the place of such arrangements in the kind of integrated development which has been discussed. Bilateral agreements have had a major impact on production levels in both the developed and the developing world: with the growth of manufacturing in the developing countries many manufacturers in the developed countries have seen their best business opportunities to lie in marketing and so many have reduced their manufacturing activities to assembling stitched uppers, produced to their specifications in the developing countries, and other components into their own brands of footwear. Some companies supervise the entire overseas production of their footwear and have transformed themselves into trading companies based on their intimate acquaintance with the market and expertise in manoeuvring in the market to their own advantage.

Development through joint venture between partner companies and enterprises in the developing and developed countries offers obvious advantages to the developing country partner in the acquisition of advanced technology and entrance into the more sophisticated developed country markets; the developed country partner can secure a base for his production on otherwise unavailable raw material and can replace expensive processing with

cheaper processing. A host of contractual arrangement options can be studied and the initially most suitable should be selected in the light of those which have succeeded or failed in practice. UNIDO has prepared checklists on contractual arrangements between developing and developed country partners specific to the tanning and footwear industries.20/

It is important that the operational conditions entered into by the developed partner is clarified. He requires information on import regulations, government policies on exports of goods ranging from semi-processed leathers to finished goods, transfer of expatriate incomes, transfer of profits and payment of royalties. At government level a timetable for realistic national development within which the co-operative work of a developed country partner would be integrated would be needed. Co-operation is often withheld because of fears of fundamental disruption through political instability. Investors need to be confident that a long-term plan can be backed by stability, so means should be sought to guarantee continuity irrespective of changes in government.

While such guarantees would bring offers from potential developed country partners, counterparts in the developing countries should be aware that it is safer to work with a manufacturing or retail organization in the developed country. In the manufacture of finished goods there is a greater danger that the bilateral arrangement will favour the developed partner in the market, especially if certain trade marks have gained the ascendancy in the market. The only way to counter this is to engage in independent marketing. Brazil created its own styles of footwear with a marketed Brazilian image. Brazilian companies in the OECD markets now sell over 50 per cent of Brazil's shoe exports. Nevertheless, selling goods through developed country company trade marks enables the consolidation of manufacturing experience without the

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20/ UNIDO ID/WG.411/1, Checklist for contractual agreements in the footwear sector between enterprises from developed and developing countries and UNIDO ID/WG.411/2, Checklist for contractual agreements in the tanning sector between enterprises from developed and developing countries, December 1983.

disruption that sudden changes in market conditions could impose; exports are assured under the technical and commercial surveillance of the developed country partner. Perhaps this is a worthwhile prelude in which to gain confidence for independence in marketing at a later date.

The necessary qualitative improvement in the sector requires a greater degree of transfer of technical, management and marketing expertise to the developing countries. The involvement of developed countries should be with a view to developing production to meet local demand as well as export demand. The state of demand in the OECD may persuade many industrialists and government officials that production may best be oriented towards the local market, the CMEA countries or, given a liberalization of trade between developing countries, the export of finished goods within their own economic grouping.

This conveniently leads to the consideration of the benefits which could result from regional co-operative development. In theory the scope of benefits could include co-operation on a regional basis in the improvement of raw materials. This has been elucidated earlier when discussing the desirability of regional co-operation in North-East Africa. It could include training and to some extent this is already happening, probably most successfully in Latin America where the tannery training school at Estancia Velha, RS, Brazil, receives students from many other Latin American countries; but overseas students also attend courses at Zaria in Nigeria, Gujranwala in Pakistan, Madras in India and Jogjakarta in Indonesia. It has been observed that private industry often tends to prefer their own centres over government established training centres. Effective training schools run by private industry have been established in Mexico and Brazil.

Joint purchasing and warehousing of special chemicals and joint purchasing of machinery could also come under the aegis of regional co-operative schemes, but perhaps the greatest advantages could be derived from regional co-operation in marketing strategy.

Regional agreements on minimum export prices for a wide range of leathers and finished goods would be a measure aimed at breaking ruinous price competition. Manufacturers could find strength in such regional agreements,

but it could not be effected in isolation from other measures, not least of which would be a region-wide concerted drive to improve qualities in raw material, leather and finished goods production.

Recognizing that OECD market opportunities are limited, an agreement to put a floor under export prices should be allied to a move to stimulate the individual home markets within the regionally co-operating countries and within the intra-regional market, given that trade barriers were lowered in the terms of the overall co-operative agreement. Various exigencies vitiate the possibilities of continuous entry into the developed country markets, not least of which is the constraint to deliver on time from a country which has serious infrastructural weaknesses such as poor port facilities, and unreliable electricity supplies. In such circumstances intra-regional trade or, furthermore, the opening up of more trade links within the developing world at large would be preferable.

Within a regional co-operative agreements it could be envisaged that some uniformity in external trade policies covering tariffs, quotas on exports of semi-processed and finished leathers and fiscal and subsidy measures aimed at encouraging further processing could be agreed. Such agreements would reduce the level of contraband raw material trading which is encouraged when neighbouring countries have differing degrees of liberality in export policies.

Where conglomerations of small tanneries exist, integrated development similar to that which has taken place in such centres as Santa Croce in Italy and Leon in Mexico could be contemplated. In such a development individual tanners would agree to specialize in certain parts of the process sequence. Once an integrated approach is adopted the ground is prepared for integration with the requirements of finished goods producers. The approach is also conducive to co-operation in chemicals and machinery purchasing and in developing co-operative effluent treatment techniques. Examination of successful co-operation in microcosm in such existing centres suggests that in theory regional co-operative development should be possible, but this suggestion is not oblivious to the determined political will that would be necessary by all participant countries, nor is it ignorant of the fact that

regional co-operation would have to engage more than one sector of the regional economy, requiring the political environment of a common market in order to have any prospect of viability. There are often wide disparities in prosperity between adjacent developing countries making it difficult to find common cause in co-operative development.

Common political interest may have secured the co-operation in leather industry development between Ethiopia and Algeria already mentioned. It is probable that the existence of active sub-regional organizations has underpinned the successful regional co-operation in the leather sector. Regional training courses, exchange of experts and annual regional meetings, which gather representatives of national technical centres, industrial and scientific associations, have been provided for the leather industries of 13 Latin American countries.

These conclusions are broad ranging but they stem from the basic premises that optimal returns to manufacturing in the developing countries requires a fuller utilization of installed capacities through determined campaigns for quantitative and qualitative improvements in raw material supply and standards of manufacturing with the assistance of partners from other countries under mutually agreed and mutually beneficial terms. Also in the circumstances of continued protectionism in industrialized countries, this process should be allied to a review of overall trade policies by all developing countries with a view to broadening the external market to include South-South trade and with recognition that domestic urban markets offer interesting prospects for growth. In this respect regionally agreed minimum export price levels would begin to bring about the possibility of raising employee real incomes which in turn would fuel domestic demand for all manufactured goods and services. The leather and leather products industry in developing countries would surely benefit from such a diversified market development.

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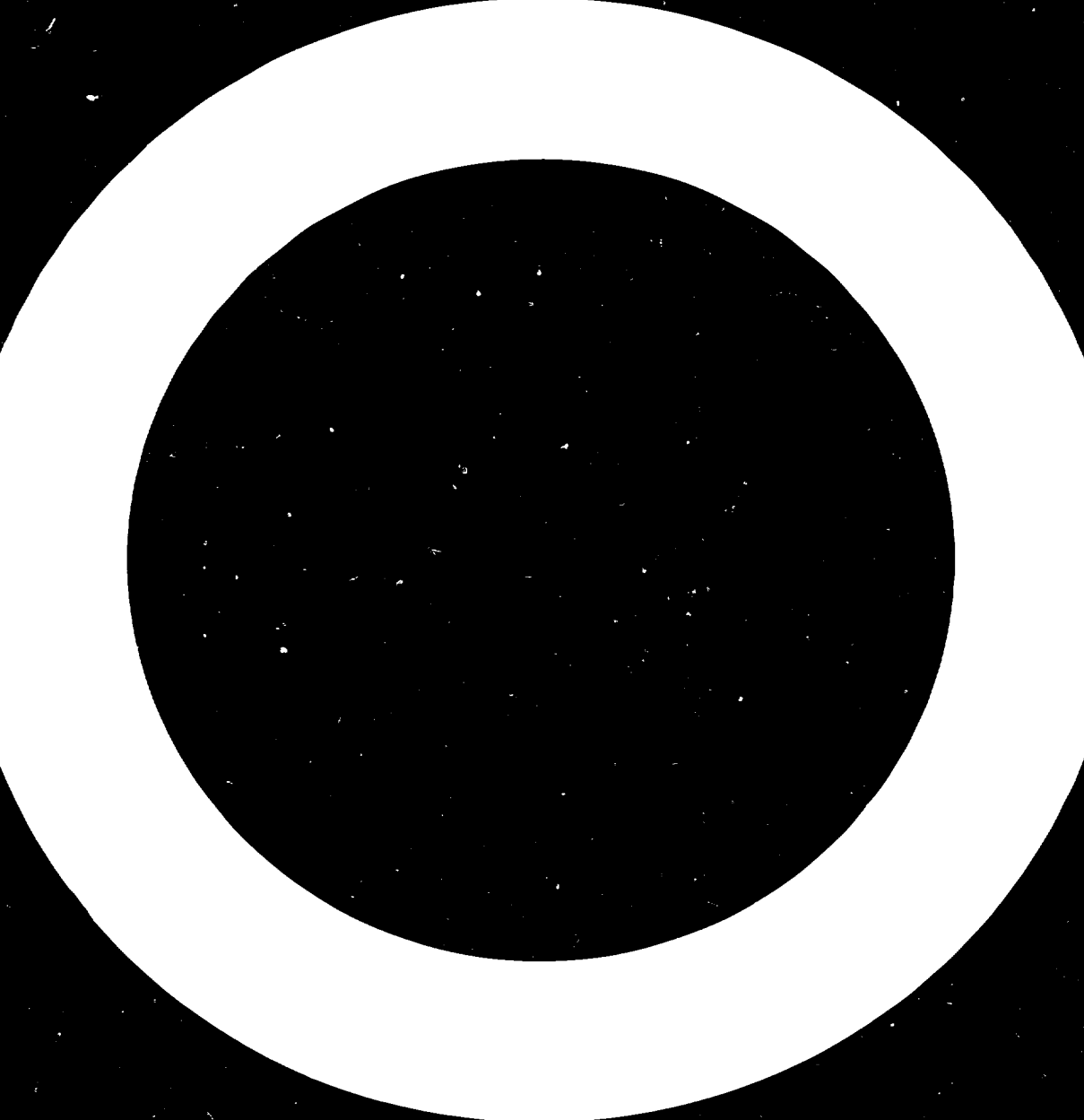
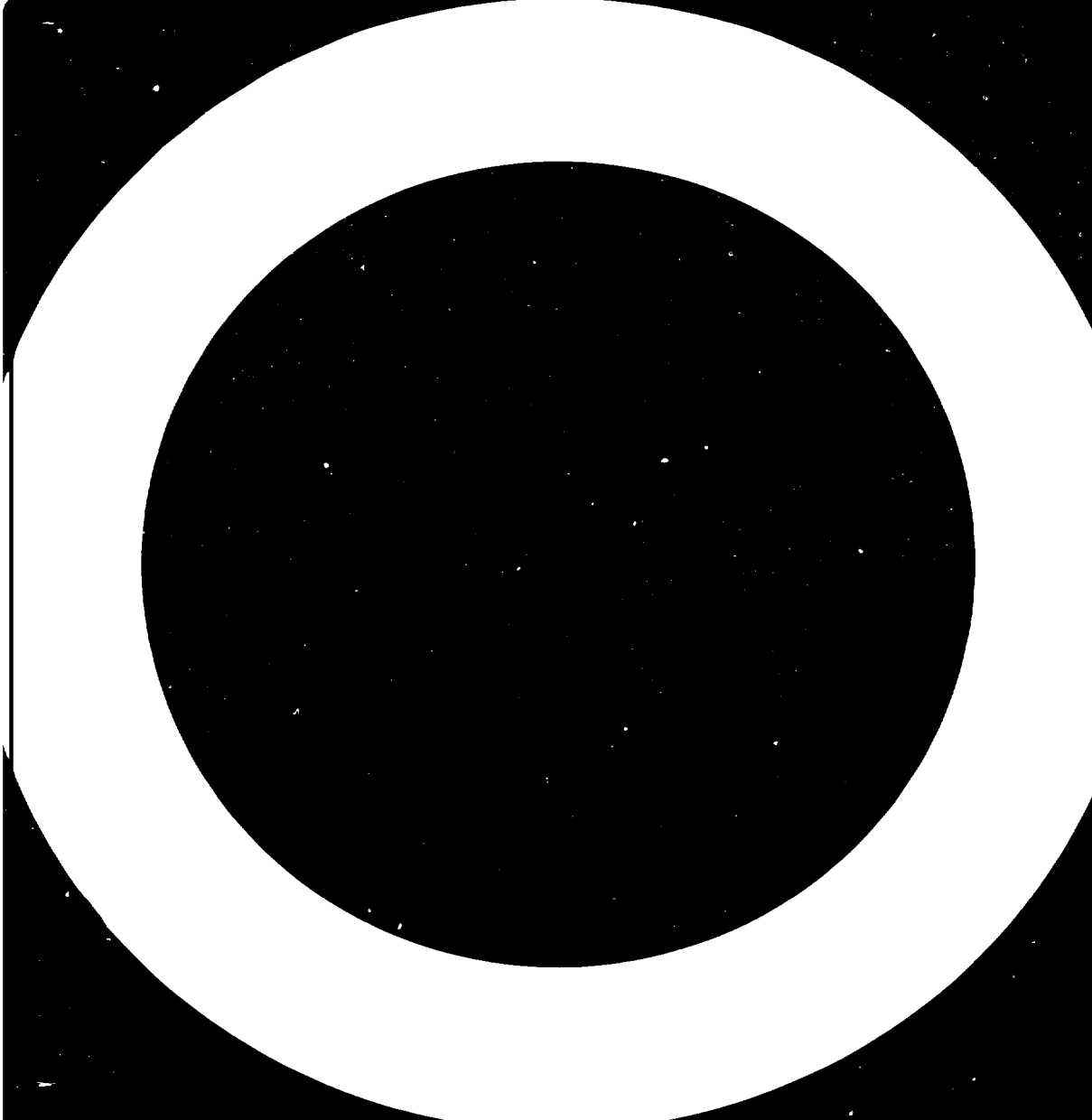


APPENDIX A

Graphs of shares and growth rates in the leather and leather products sector by major country groupings

Figures:



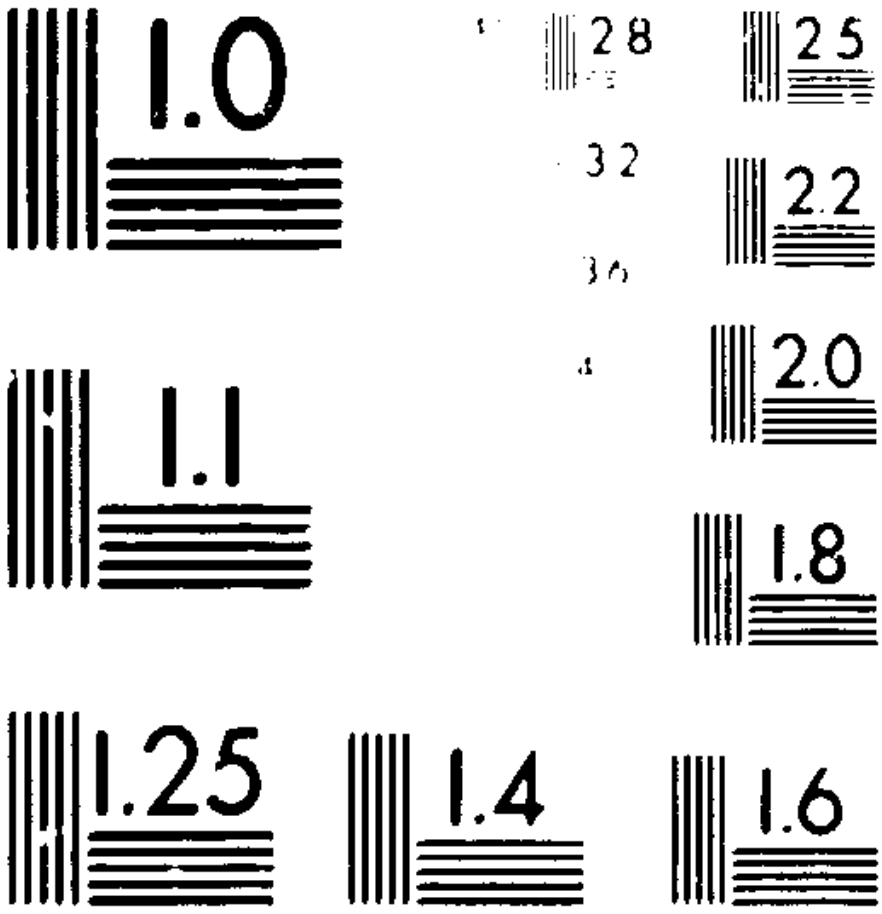


Fig. A1 **Shares** in Production of Hides and Skins, 1970 and 1982

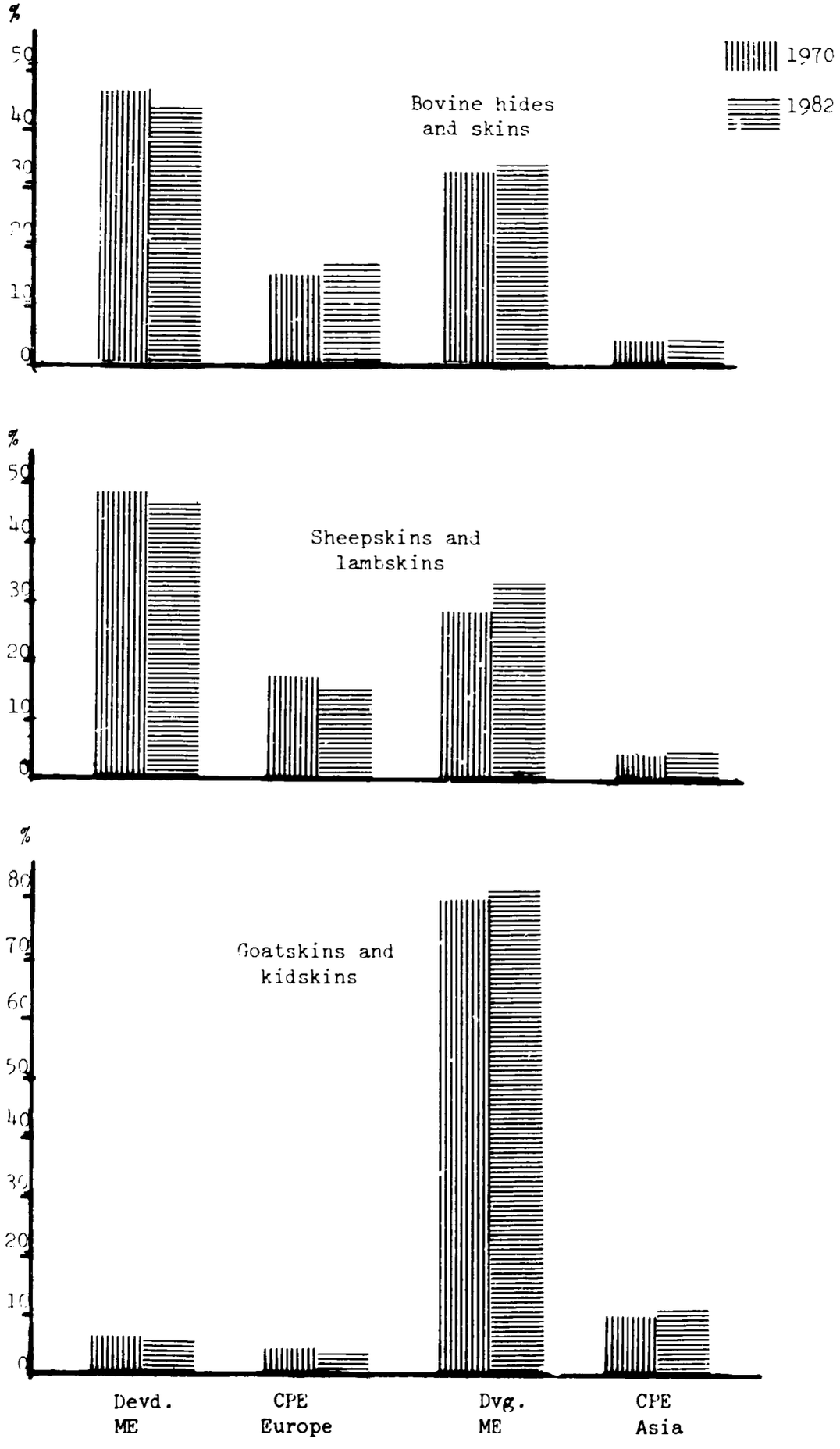


Fig. A2 Shares in Exports of Hides and Skins, 1970 and 1980

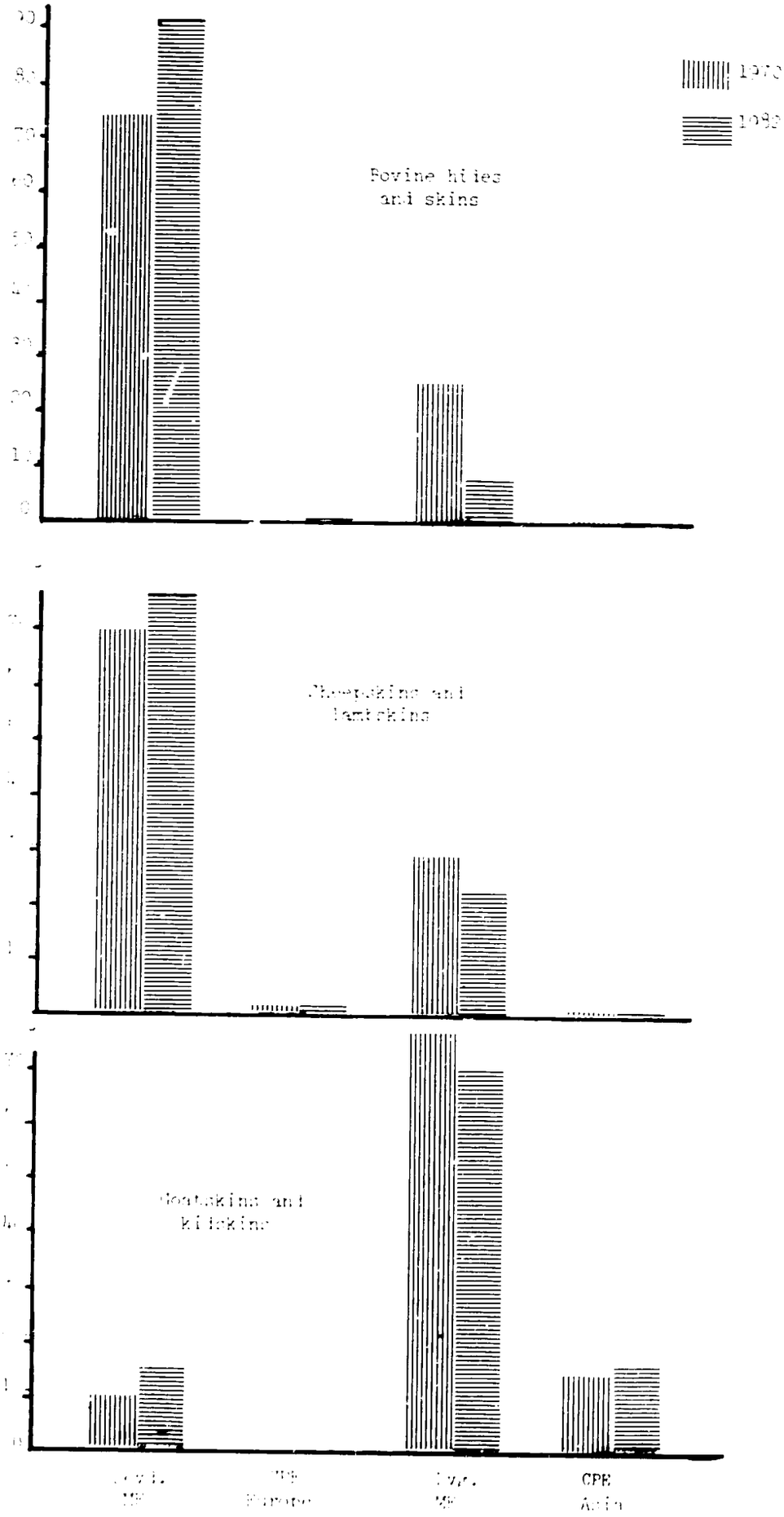


Fig. A3 **Shares** in Imports of Hides and Skins, 1970 and 1982

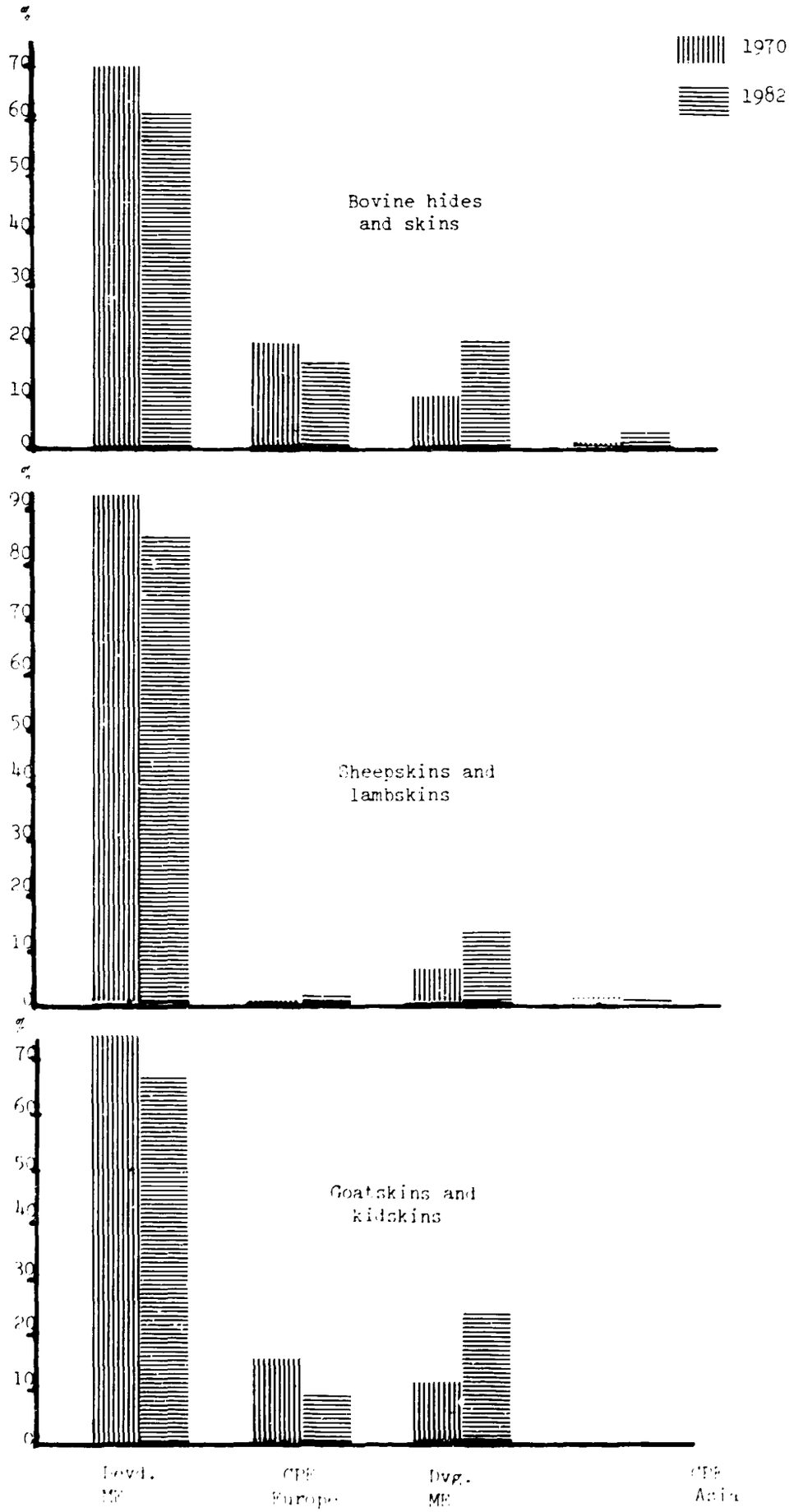


Fig. A4 Shares in Production of Leathers, 1970 and 1982

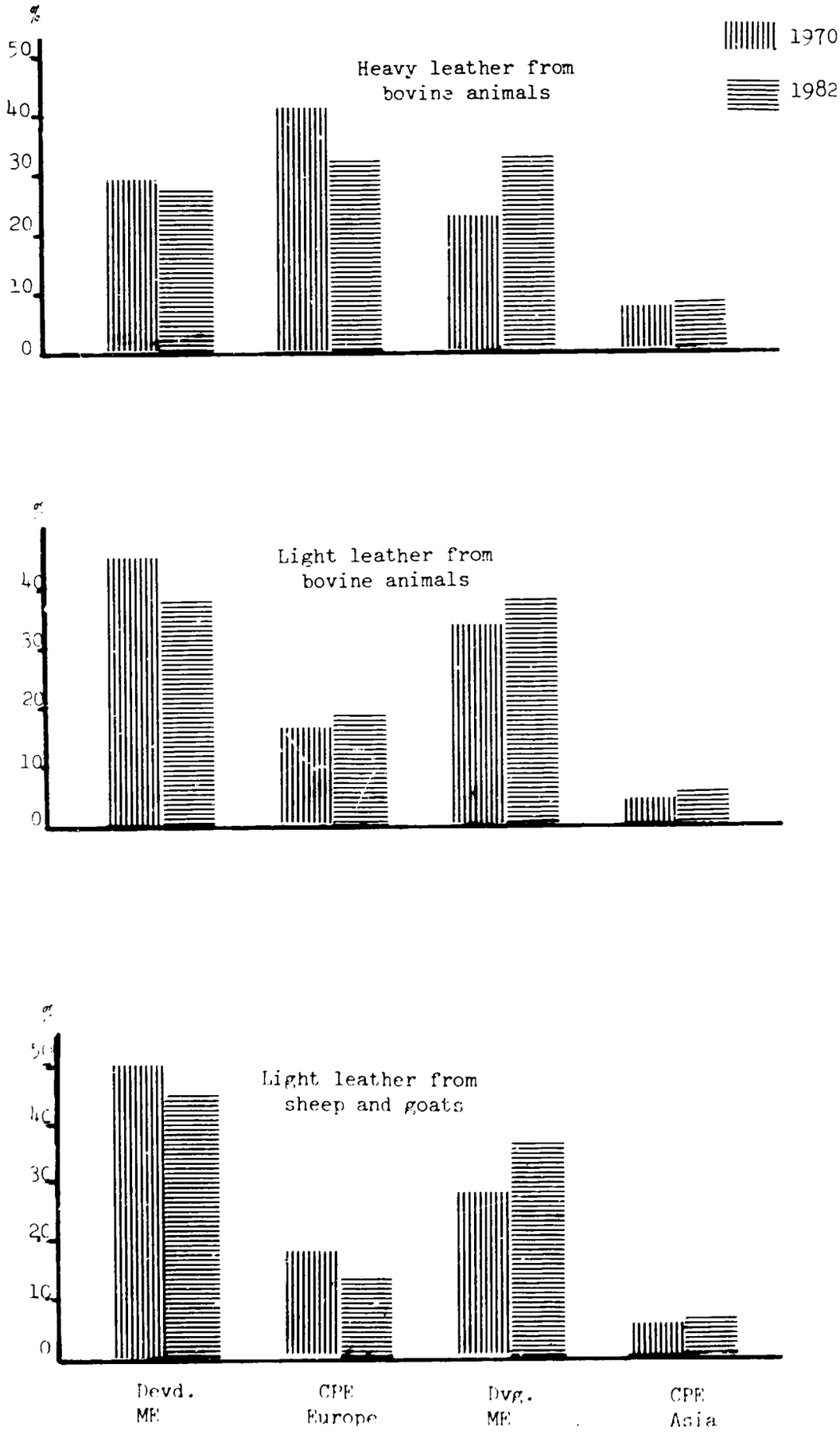


Fig. A5 **Shares** in Exports of Leathers, 1970 and 1982

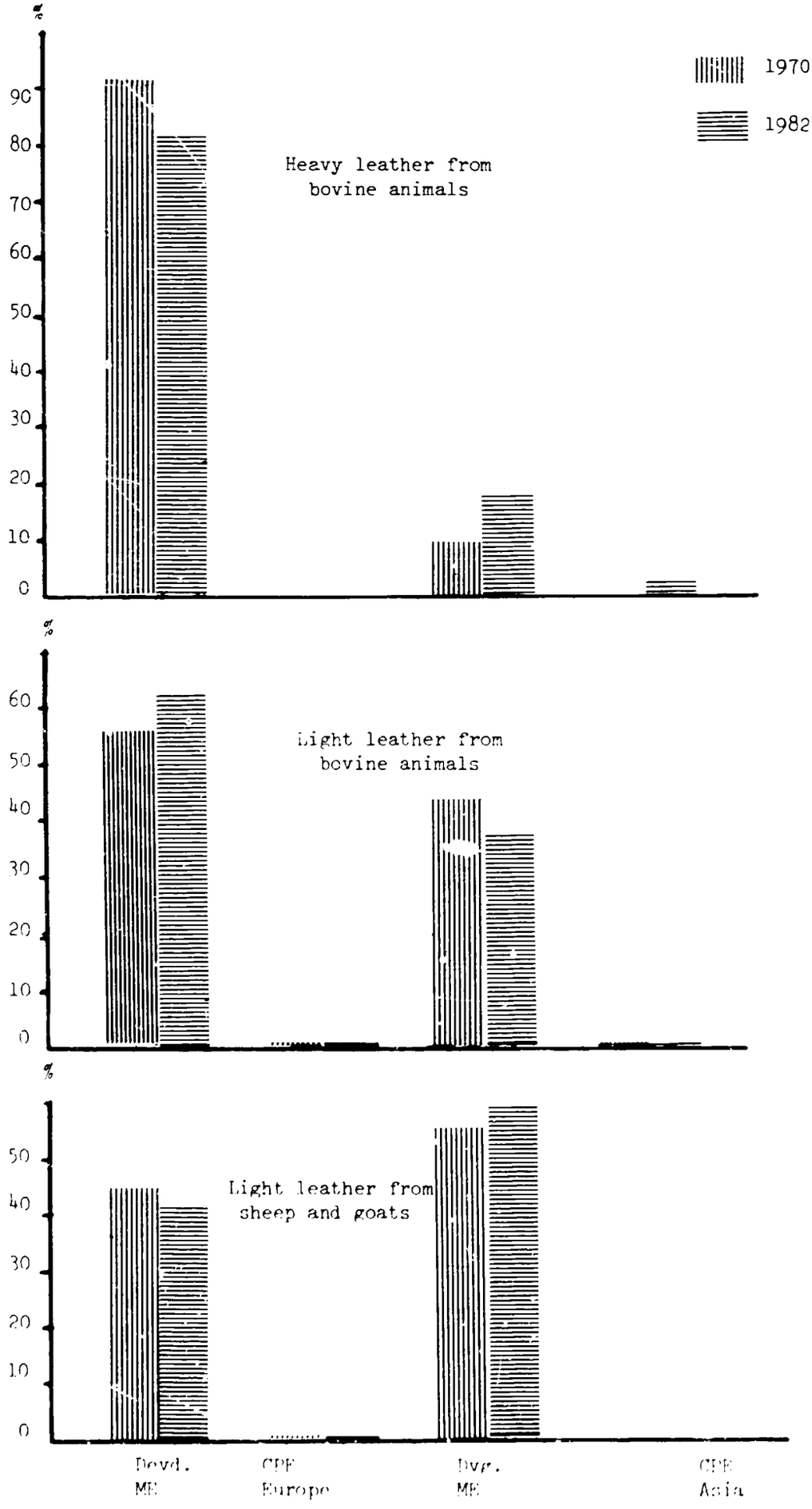


Fig. A6 Shares in Imports of Leathers, 1970 and 1982

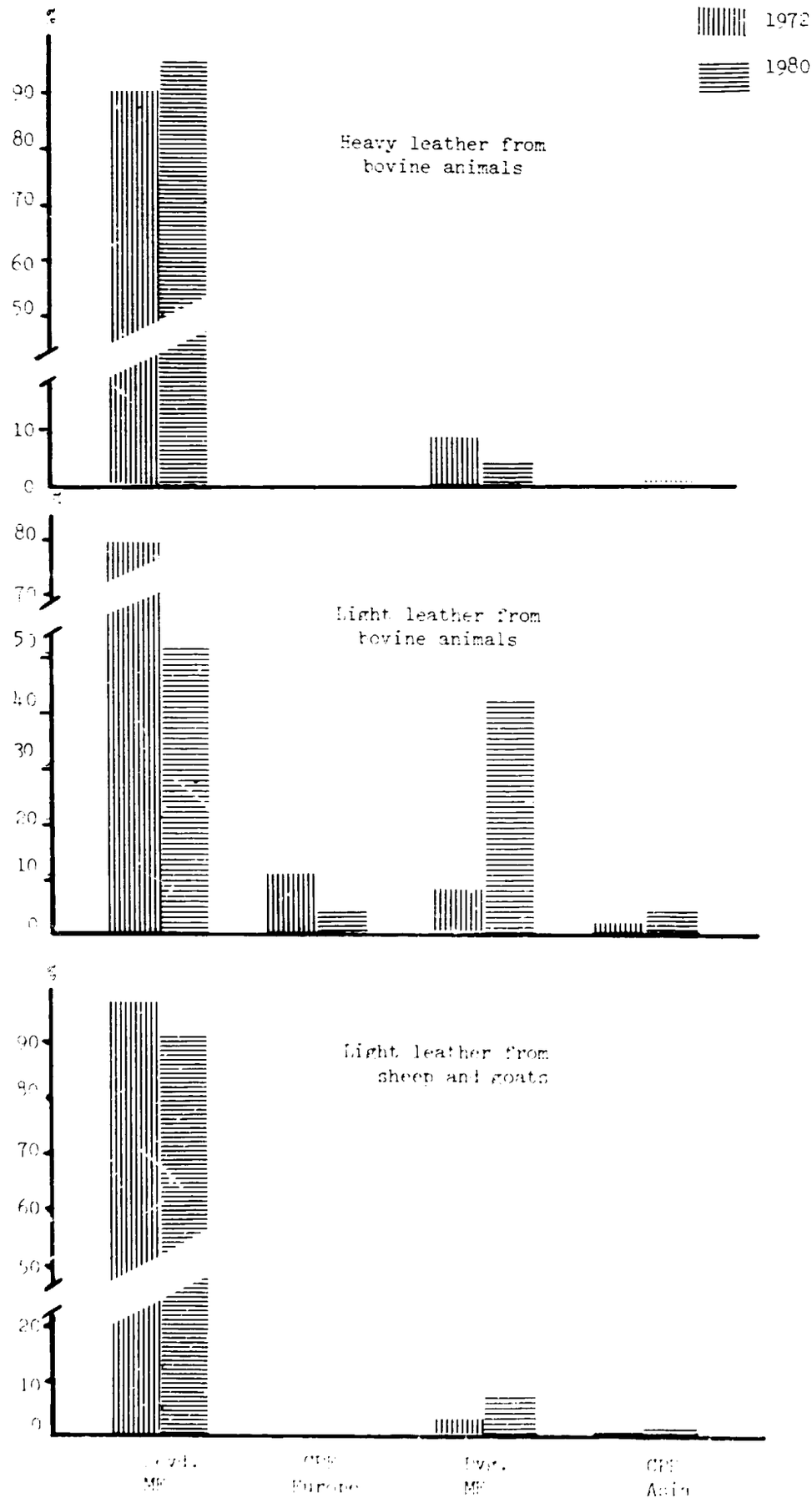


Fig.A7 Shares in Production of and Trade in Leather Shoes

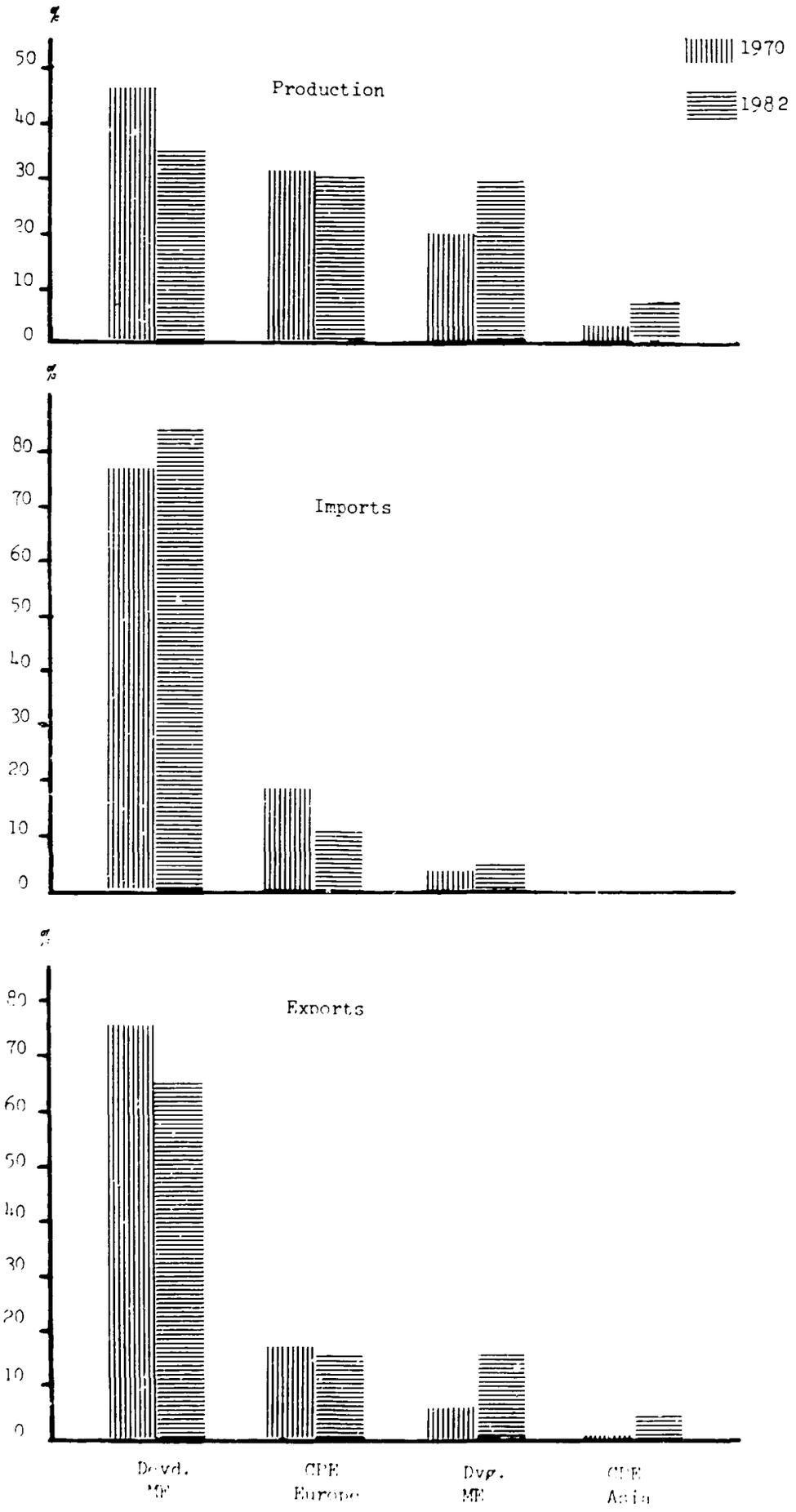


Fig. A8 Production of hides and skins
Average annual growth rates
1970 - 1982

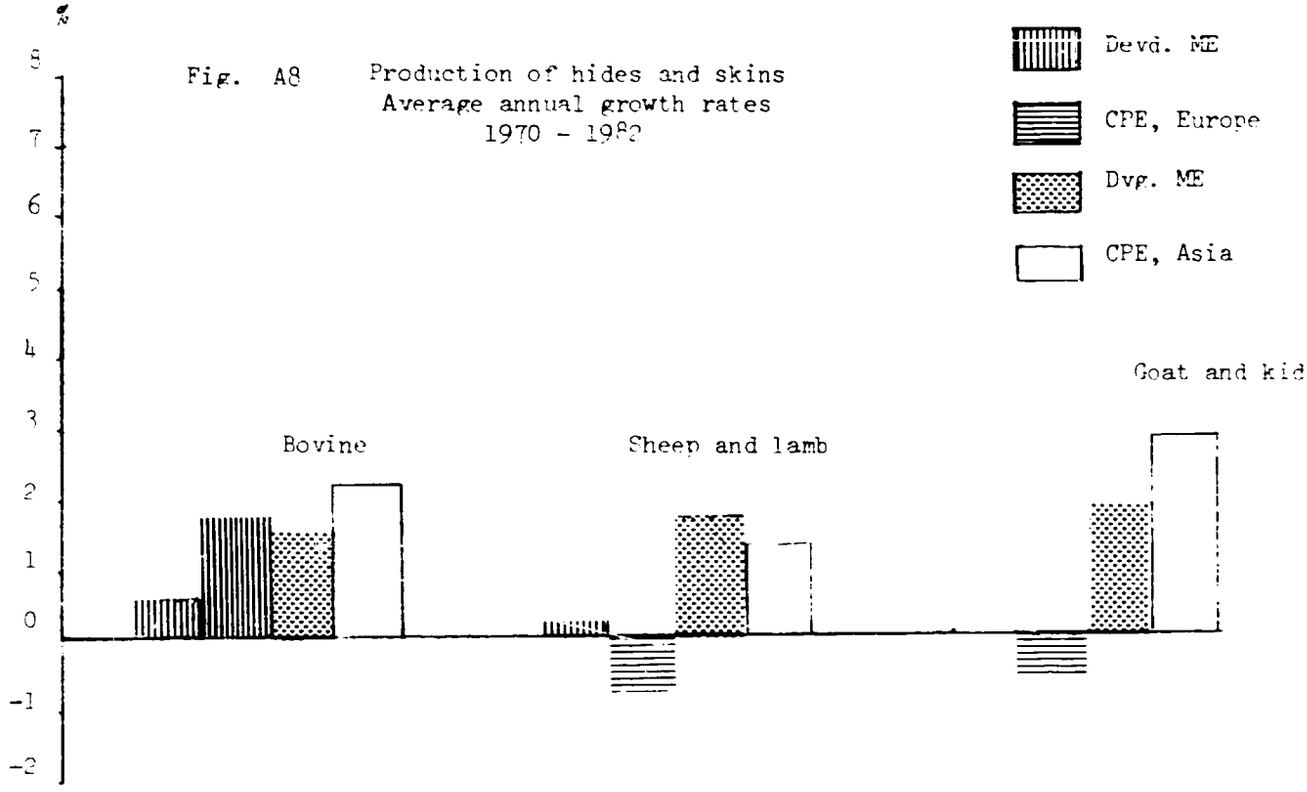


Fig. A9 Exports of hides and skins
Average annual growth rates
1970 - 1982

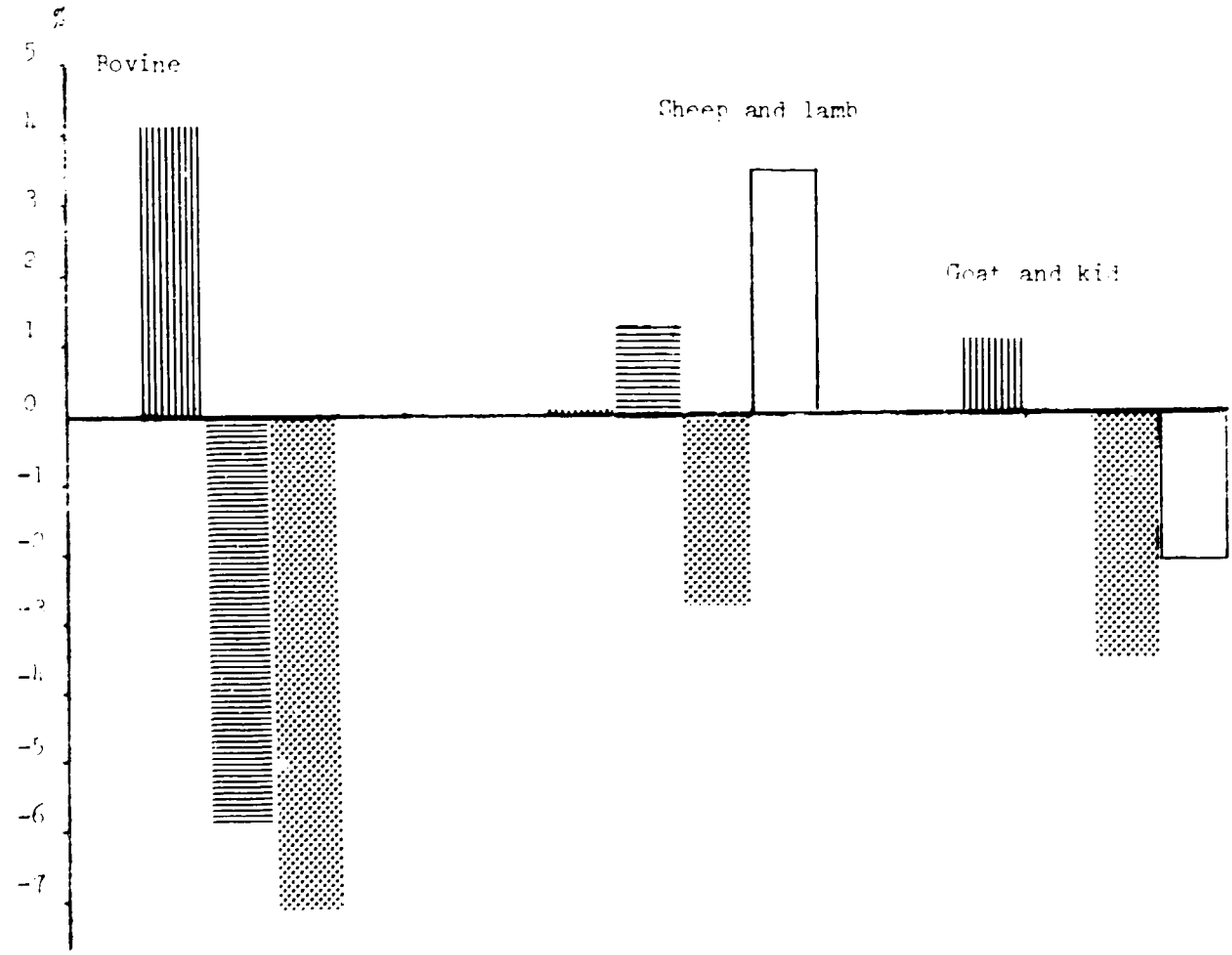


Fig. A10 Imports of hides and skins
Average annual growth rates
1970 - 1982

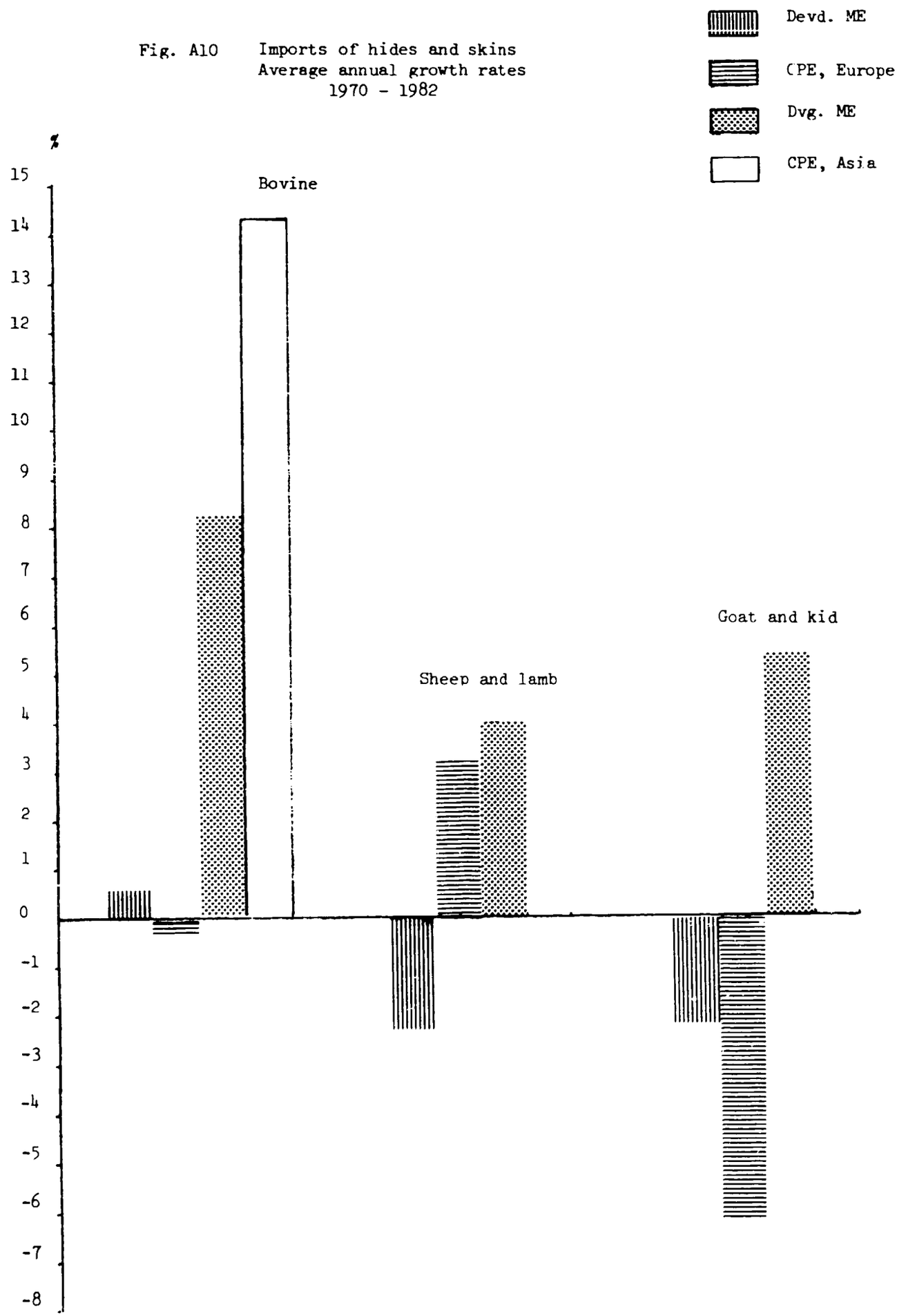


Fig. A 11 Production of leather
Average annual growth rates
1970 - 1982

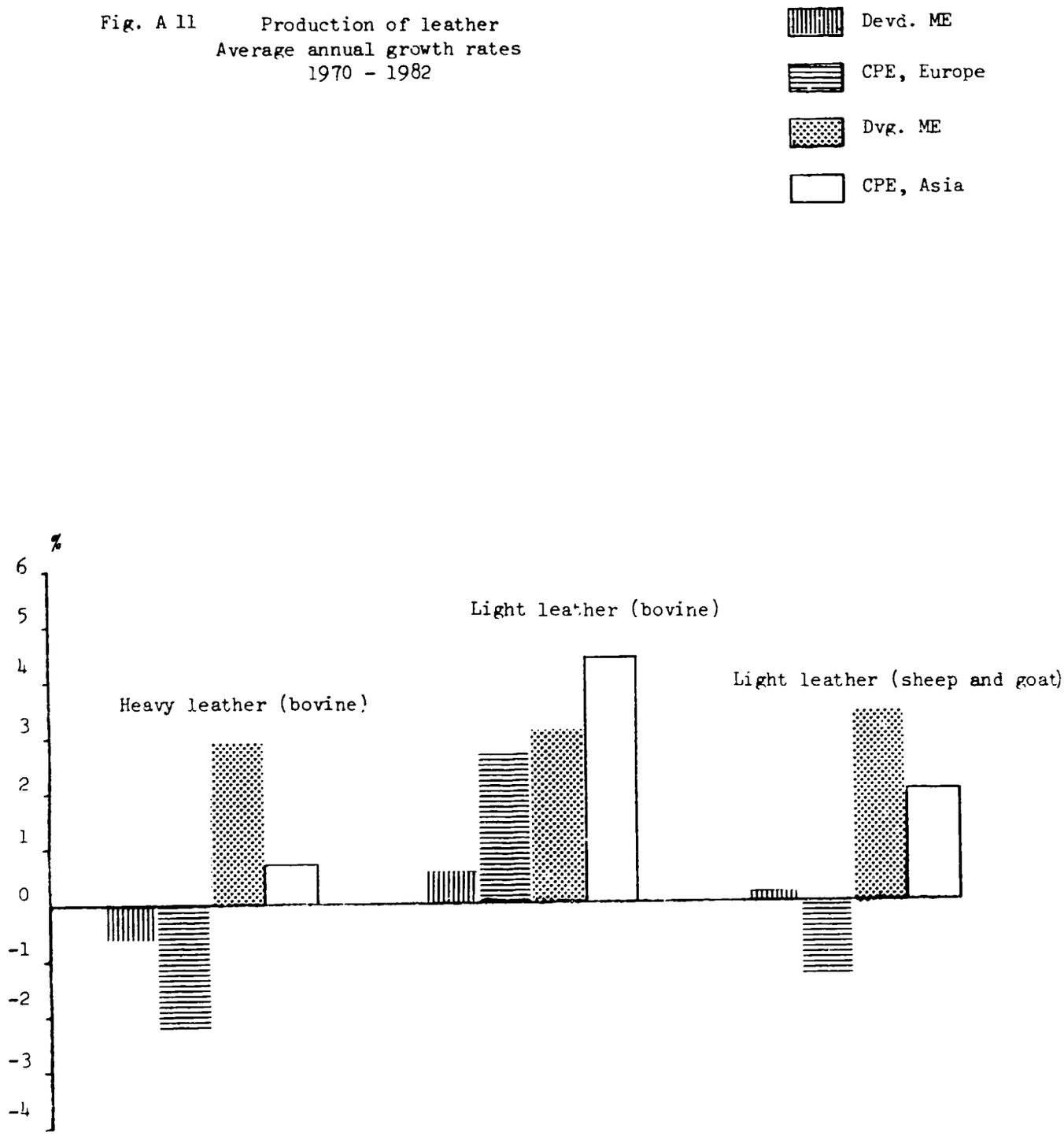


Fig. A12 Exports of leather
Average annual growth rates
1970 - 1982

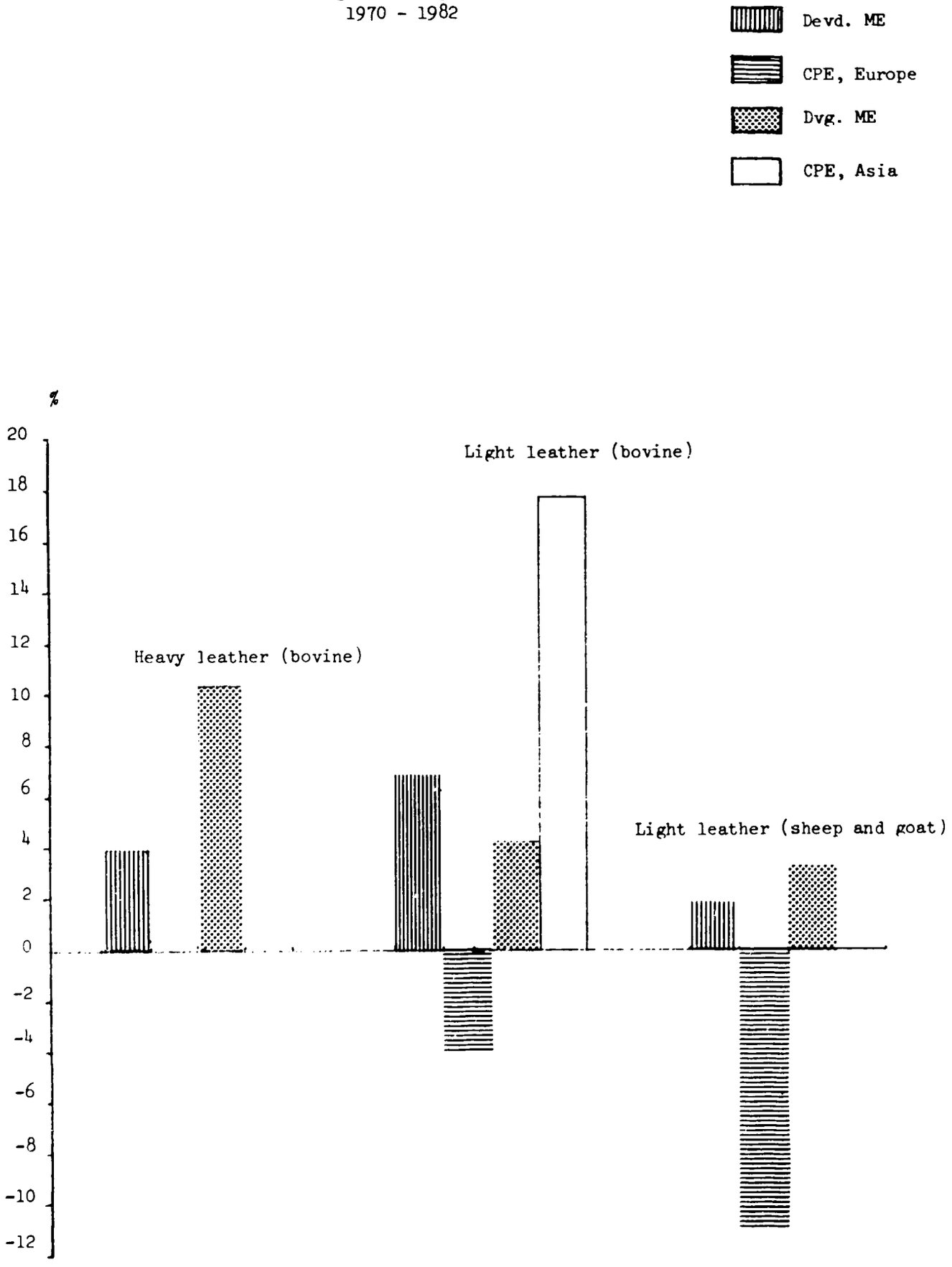


Fig. A13 Imports of leather
Average annual growth rates
1970 - 1982

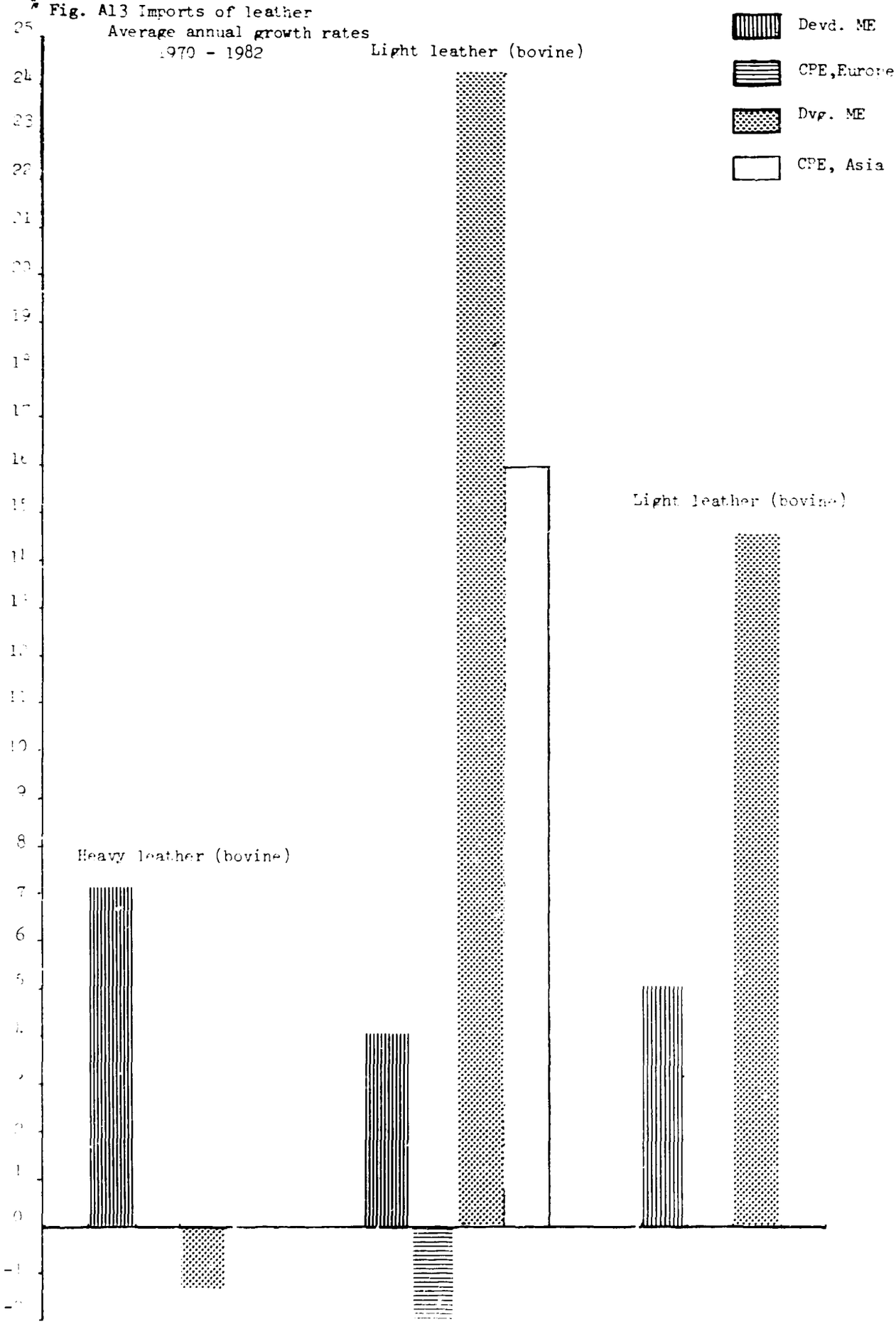
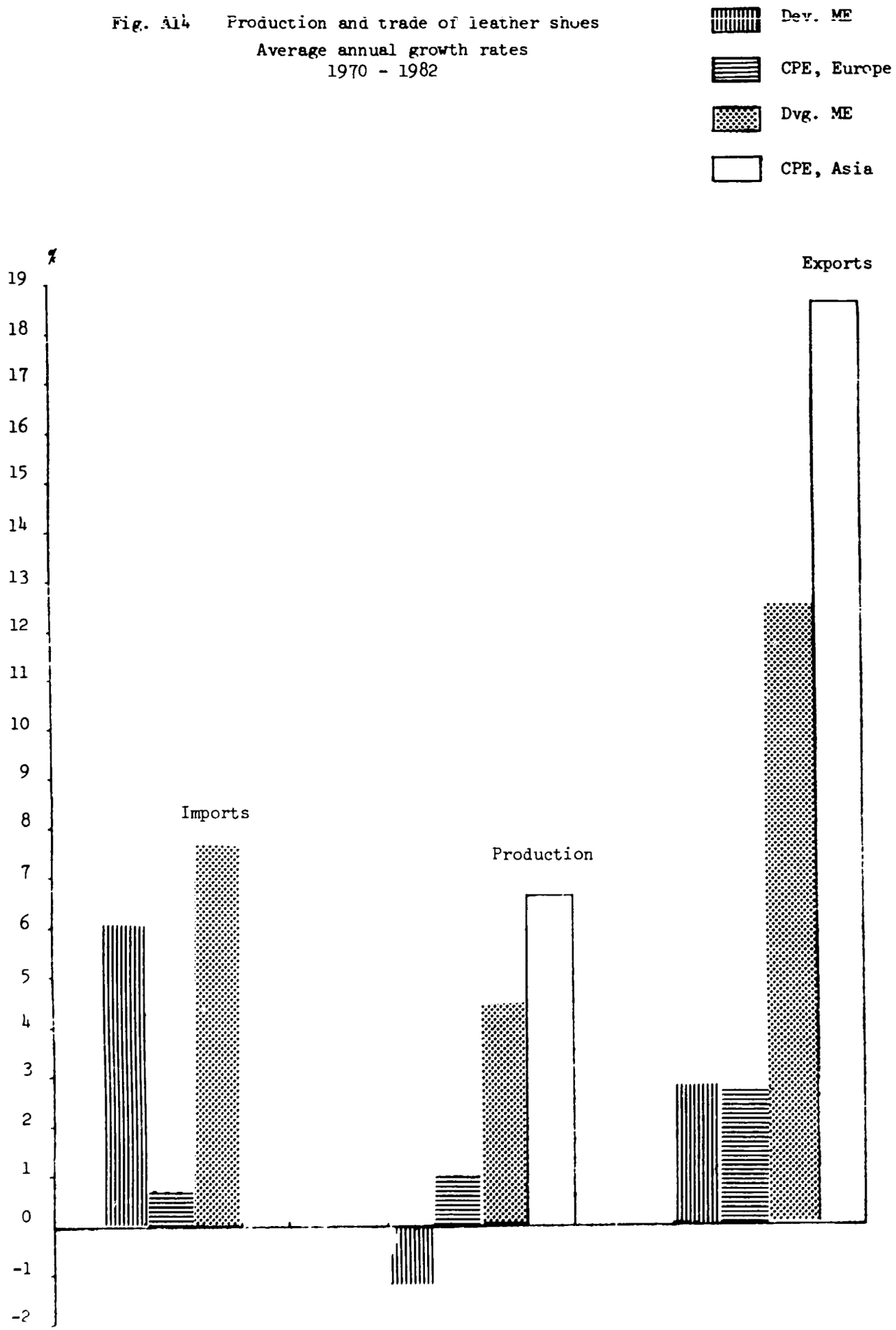
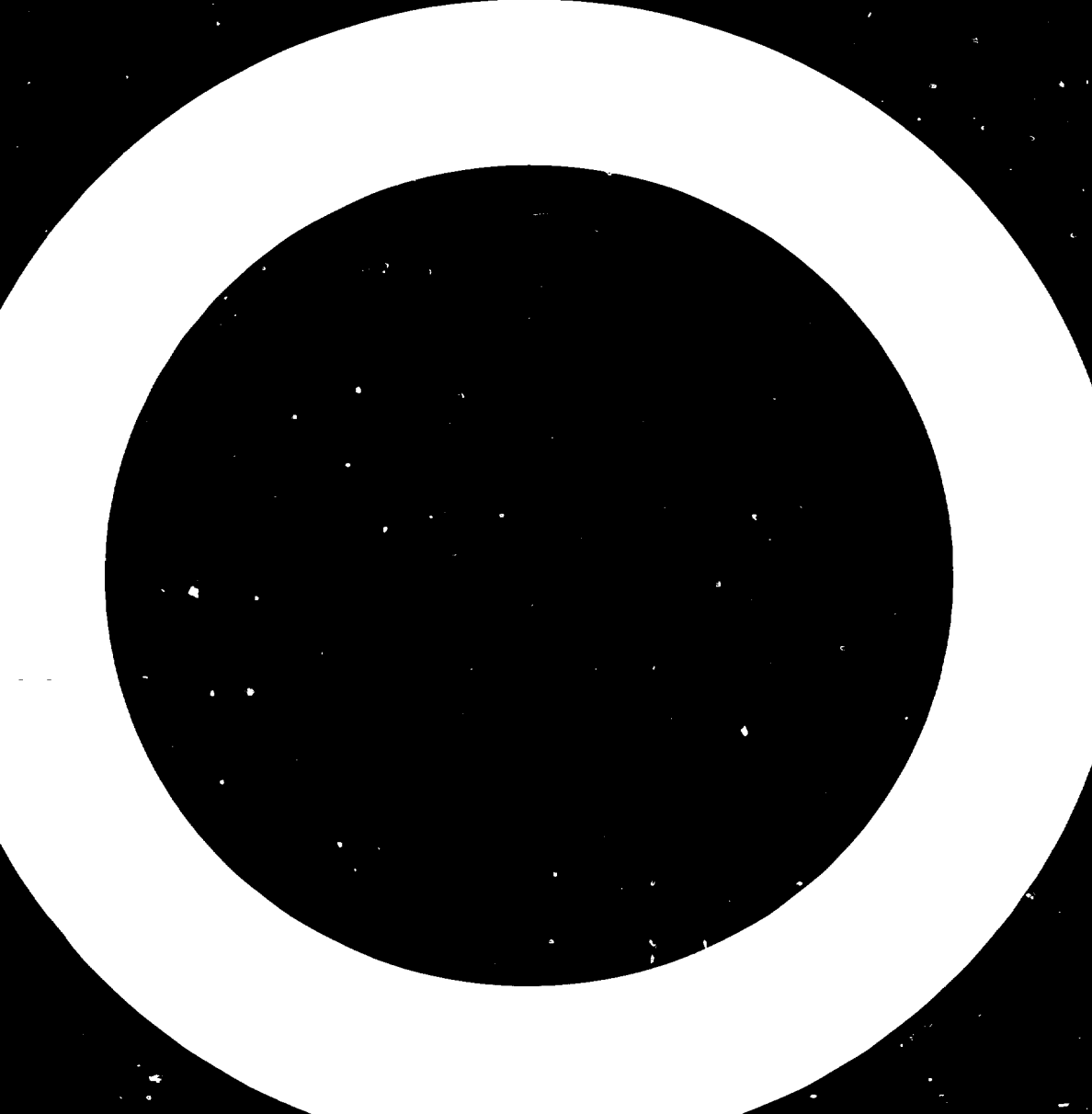


Fig. A14 Production and trade of leather shoes
Average annual growth rates
1970 - 1982





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(2 of 2)

THE LEATHER AND LEATHER PRODUCTS INDUSTRY: TRENDS, PROSPECTS AND STRATEGIES FOR DEVELOPMENT

Addendum
A statistical digest

Sectoral Studies Series
No.11, Volume II

SECTORAL STUDIES BRANCH
DIVISION FOR INDUSTRIAL STUDIES

Main results of the study work on industrial sectors are presented in the Sectoral Studies Series. In addition a series of Sectoral Working Papers is issued.

This document presents major results of work under the element Studies on the Leather and Leather Products Industry in UNIDO's programme of Industrial Studies 1984/85.

Preface

This statistical digest contains the detailed data supporting the volume I of the study entitled "The leather and leather products industry: Trends, prospects and strategies for development", Sectoral Study Series No. 11 (UNIDO/IS.442).

Section A of the digest contains summary tables giving annual growth rates and shares in world total production of and trade in hides and skins, leathers and leather shoes. Section B contains a set of summary tables giving the actual production and trade figures by the commodity group. Section C gives the detailed figures, identifying also the major producers and traders in each region. These tables are all based on the World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983. Section D contains tables giving the value added in the manufacturing of leather and leather products (ISIC 323) and of footwear (ISIC 324) in certain countries, and the corresponding annual growth rates and shares in total manufacturing value added. These data are taken from the UNIDO data base.

The geographical breakdown was done according to the regions of the UNITAD model. This model is a joint UNIDO/UNITAD model for exploring prospective long-term changes in the world economy.

Contents

Section A

Annual growth rates and shares in world production of and trade in hides and skins (bovine and ovine), leathers (light and heavy) and leather footwear by region, 1970 and 1982 (estimate)

These tables are based upon FAO statistics given in the World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983. The growth rates and shares have been computed by the UNIDO secretariat.

The regions used are those employed in the UNITAD global model which is standard usage in the Sectoral Studies Series. The UNITAD model is a joint UNIDO/UNITAD model for exploring prospective long-term changes in the world economy.

Section A - Summary tables: annual growth rates and shares in world total production of and trade in hides and skins, leather and leather shoes, 1970 and 1982

Table A.1. Production of hides and skins

Region	Bovine			Sheep and lamb			Goat and kid		
	Annual average growth rate 1970-1982 (per cent)	Share (per cent)		Annual average growth rate 1970-1982 (per cent)	Share (per cent)		Annual average growth rate 1970-1982 (per cent)	Share (per cent)	
		1970	1982		1970	1982		1970	1982
Developed market economies	0.6	46.7	43.7	0.2	48.5	46.4	-	6.1	5.0
European centrally planned economies	1.7	15.6	16.6	-0.8	18.3	15.5	-0.6	3.7	2.8
Developing market economies	1.5	33.1	34.4	1.8	29.0	33.5	1.8	80.3	81.0
Africa, South of Sahara	1.5	3.0	3.1	2.4	4.1	5.1	1.3	15.6	14.9
North Africa and West Asia	3.2	2.6	3.3	2.6	12.0	15.2	1.5	16.6	16.2
South and South-East Asia	1.4	10.7	10.9	2.4	5.9	7.3	2.3	42.7	45.5
Latin America	1.3	16.8	17.1	-0.8	6.9	5.9	0.1	5.4	4.4
Asian centrally planned economies	2.2	4.6	5.2	1.3	4.2	4.6	2.8	9.9	11.2
World	1.2	100.0	100.0	0.6	100.0	100.0	1.7	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Note: The percentage shares for 1982 are based on estimated figures for that year.

Table A.2. Imports of hides and skins

Region	Bovine			Sheep and lamb			Goat and kid		
	Annual average growth rate 1970-1982 (per cent)	Share (per cent)		Annual average growth rate 1970-1982 (per cent)	Share (per cent)		Annual average growth rate 1970-1982 (per cent)	Share (per cent)	
		1970	1982		1970	1982		1970	1982
Developed market economies	0.6	69.7	61.0	-2.3	92.3	85.1	-2.2	73.8	67.3
European centrally planned economies	-0.3	19.9	15.5	3.2	0.8	1.5	-6.2	15.5	8.5
Developing market economies	8.3	9.6[a/]	20.2[a/]	4.0	6.9	13.4	5.4	10.7	24.2
Africa, South of Sahara	-7.4	-	-	-	-	0.1	-	0.3	0.3
North Africa and West Asia	1.6	2.0	2.0	2.4	6.3	10.1	5.7	9.5	22.1
South and South-East Asia	18.6	2.3	14.3	17.6	0.1	1.0	-	0.3	-
Latin America	-0.7	5.3	3.9	12.2	0.5	2.2	7.9	0.6	1.8
Asian centrally planned economies	14.3	0.8	3.3	-	-	-	-	-	-
World	1.8	100.0	100.0	-1.7	100.0	100.0	-1.5	100.0	100.0

a/ Negligible.

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Note: The percentage shares for 1982 are based on estimated figures for that year.

Table A.3. Exports of hides and skins

Region	Bovine			Sheep and lamb			Goat and kid		
	Annual average growth rate 1970-1982 (per cent)	Share (per cent)		Annual average growth rate 1970-1982 (per cent)	Share (per cent)		Annual average growth rate 1970-1982 (per cent)	Share (per cent)	
		1970	1982		1970	1982		1970	1982
Developed market economies	4.2	73.6	91.5	0.02	70.0	75.9	1.1	9.2	14.6
European centrally planned economies	-5.7	0.6	0.2	1.3	1.1	1.3	-	-	-
Developing market economies	-7.0	25.6	8.2	-2.7	28.8	22.5	-3.5	76.5	69.8
Africa, South of Sahara	-1.6	4.8	3.0	-0.9	4.1	4.0	-2.4	21.8	22.9
North Africa and West Asia	-5.5	0.8	0.3	-1.8	17.1	14.8	-0.9	30.2	37.9
South and South-East Asia	3.0	1.8	2.0	-	1.2	1.4	-9.9	7.3	6.9
Latin America	-12.2	18.2	2.9	-8.7	6.4	2.3	-12.3	7.2	2.1
Asian centrally planned economies	-	0.2	0.1	3.4	0.1	0.2	-2.1	14.3	15.6
World	2.3	100.0	100.0	-0.7	100.0	100.0	-2.8	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Note: The percentage shares for 1982 are based on estimated figures for that year.

Table A.4. Production of leather

Region	Heavy leather (bovine)			Light leather (bovine)			Light leather (sheep and goat)		
	Annual average growth rate 1970-1982 (per cent)	Share (per cent)		Annual average growth rate 1970-1982 (per cent)	Share (per cent)		Annual average growth rate 1970-1982 (per cent)	Share (per cent)	
		1970	1982		1970	1982		1970	1982
Developed market economies	-0.6	28.9	27.4	0.6	45.4	38.4	0.2	49.6	44.6
European centrally planned economies	-2.2	41.3	32.2	2.7	16.6	18.0	-1.3	17.7	13.3
Developing market economies	2.9	22.9	32.8	3.1	33.9	38.2	3.4	27.6	36.3
Africa, South of Sahara	0.5	0.3	0.3	2.9	1.3	1.5	5.1	2 0	3.3
North Africa and West Asia	1.0	4.0	4.6	2.7	3.1	3.3	4.0	6.6	9.4
South and South-East Asia	5.6	7.7	15.0	2.7	13.9	15.0	2.9	14.6	18.1
Latin America	1.3	10.9	12.8	3.5	15.6	18.4	2.9	4.4	5.5
Asian centrally planned economies	0.7	6.9	7.6	4.4	4.1	5.4	2.0	5.1	5.8
World	-0.1	100.0	100.0	2.0	100.0	100.0	1.0	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Note: The percentage shares for 1982 are based on estimated figures for that year.

Table A.5. Imports of leather

Region	Heavy leather (bovine)			Light leather (bovine)			Light leather (sheep and goat)		
	Annual average growth rate 1970-1982 (per cent)	Share (per cent)		Annual average growth rate 1970-1982 (per cent)	Share (per cent)		Annual average growth rate 1970-1982 (per cent)	Share (per cent)	
		1970	1982		1970	1982		1970	1982
Developed market economies	7.2	90.7	95.9	4.1	79.7	51.1	5.1	97.5	91.8
European centrally planned economies	-	-	-	-1.9	11.0	3.5	-	-	-
Developing market economies	-1.3	9.3	3.7	24.3	7.7	41.6	14.6	2.5	6.8
Africa, South of Sahara	-	0.9	-	-6.8	1.5	0.3	-2.1	0.6	0.3
North Africa and West Asia	3.4	2.6	1.8	6.4	0.6	0.5	8.8	0.3	0.3
South and South-East Asia	-5.6	3.5	0.8	29.5	4.3	38.6	17.7	1.5	5.7
Latin America	-	2.2	1.1	13.3	1.3	2.2	18.7	0.1	0.5
Asian centrally planned economies	-	-	0.4	16.0	1.6	3.8	-	-	1.4
World	6.7	100.0	100.0	8.0	100.0	100.0	5.6	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Note: The percentage shares for 1982 are based on estimated figures for that year.

Table A.6. Exports of leather

Region	Heavy leather (bovine)			Light leather (bovine)			Light leather (sheep and goat)		
	Annual average growth rate 1970-1982 (per cent)	Share (per cent)		Annual average growth rate 1970-1982 (per cent)	Share (per cent)		Annual average growth rate 1970-1982 (per cent)	Share (per cent)	
		1970	1982		1970	1982		1970	1982
Developed market economies	4.0	90.6	81.0	6.9	55.5	62.6	1.9	44.8	41.0
European centrally planned economies	-	-	-	-4.2	0.4	0.1	-10.9	0.1	-
Developing market economies	10.4	9.4	17.3	4.3	44.0	37.1	3.3	55.1	59.0
Africa, South of Sahara	-	0.4	-	3.6	1.2	0.9	7.5	44.4	7.7
North Africa and West Asia	-	0.7	-	31.2	-	0.1	-1.1	2.3	1.4
South and South-East Asia	33.1	0.4	6.5	8.8	12.7	17.8	2.1	46.2	43.3
Latin America	7.7	7.9	10.8	1.6	30.1	18.3	12.4	2.2	6.6
Asian centrally planned economies	-	-	1.7	17.8	0.1	0.2	-	-	-
World	5.0	100.0	100.0	5.8	100.0	100.0	2.7	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

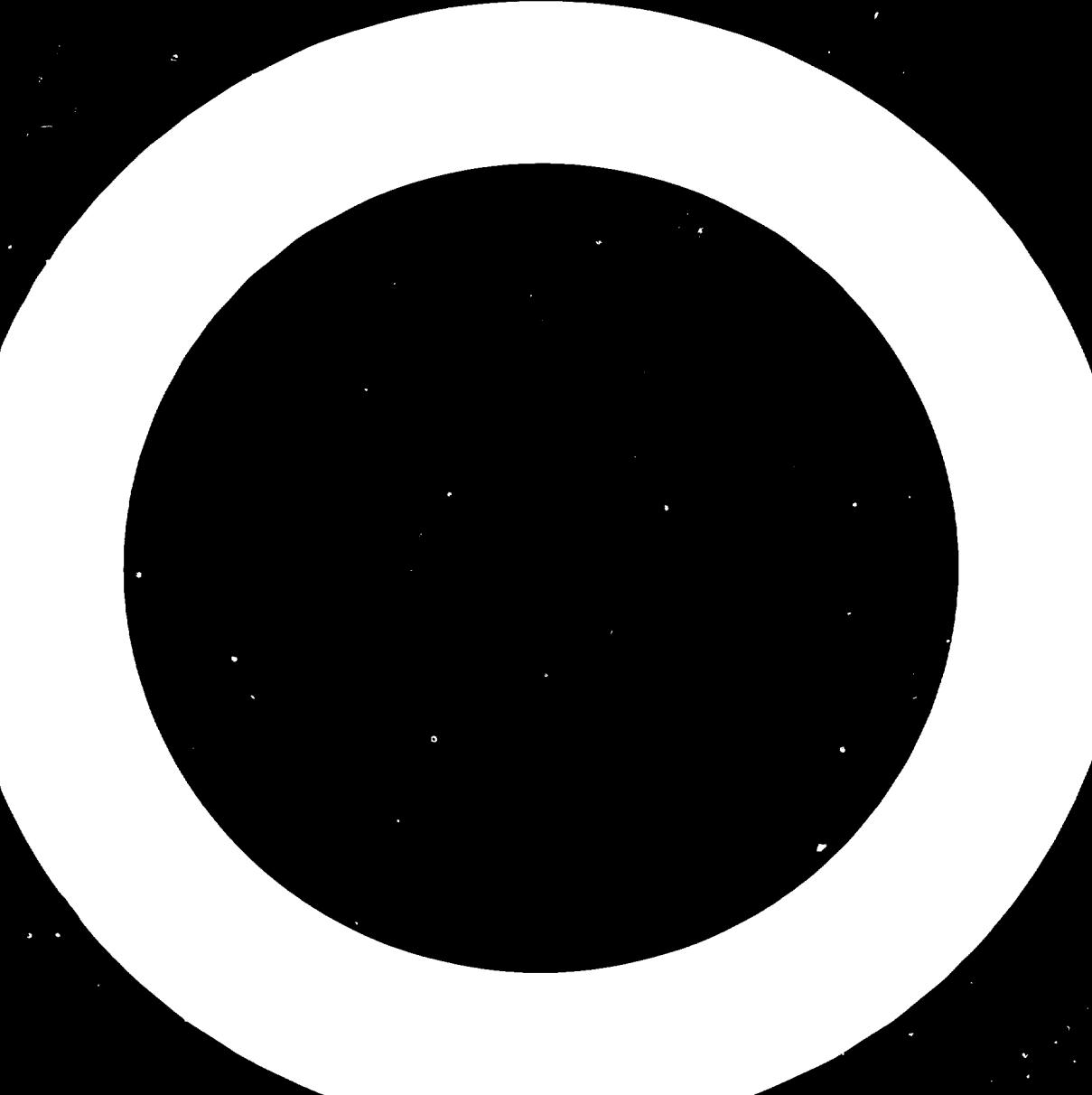
Note: The percentage shares for 1982 are based on estimated figures for that year.

Table A.7. Production and trade of leather shoes

Region	Production			Imports			Exports		
	Annual average growth rate 1970-1982 (per cent)	Share (per cent)		Annual average growth rate 1970-1982 (per cent)	Share (per cent)		Annual average growth rate 1970-1982 (per cent)	Share (per cent)	
		1970	1982		1970	1982		1970	1982
Developed market economies	-1.2	46.4	34.5	6.1	77.4	84.2	2.8	75.5	65.2
European centrally planned economies	1.0	30.6	30.0	0.7	19.0	11.1	2.7	17.4	14.7
Developing market economies	4.5	19.6	28.8	7.7	3.6	4.7	12.5	6.2	15.7
Africa, South of Sahara	3.8	0.7	0.9	4.4	1.4	1.3	1.9	0.3	0.2
North Africa and West Asia	3.5	3.1	4.0	20.7	0.3	1.3	21.4	0.1	0.6
South and South-East Asia	3.2	9.6	12.1	10.2	0.8	1.3	8.4	4.1	6.7
Latin America	6.8	6.2	11.8	2.5	1.1	0.8	18.9	1.7	3.2
Asian centrally planned economies	6.6	3.4	6.5	-	-	-	18.6	0.9	4.4
World	1.2	100.0	100.0	5.3	100.0	100.0	4.1	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Note: The percentage shares for 1982 are based on estimated figures for that year.



Section B

Production of and trade in hides and skins (bovine and ovine), leathers (light and heavy) and leather footwear by region in physical units, 1970 and 1982 (estimate)

These tables are based upon FAO statistics given in the World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983. The growth rates and shares have been computed by the UNIDO secretariat.

The regions used are those employed in the UNITAD global model which is in standard usage in the Sectoral Studies Series. The UNITAD model is a joint UNIDO/UNITAD model for exploring prospective long-term changes in the world economy.

Section B - Summary tables: production of and trade in hides and skins, leathers and leather shoes, by region, physical units, 1970 and 1982

Table B.1. Production of bovine hides and skins (wet salted weight)

Region	Production (thousand metric tons)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	1,988.5	2,150.2	0.6	46.7	43.8
European centrally planned economies	665.0	815.4	1.7	15.6	16.6
Developing market economies	1,408.3	1,687.7	1.5	33.1	34.4
Africa, South of Sahara	126.6	152.3	1.5	3.0	3.1
North Africa and West Asia	111.1	162.4	3.2	2.6	3.3
South and South-East Asia	454.8	535.8	1.4	10.7	10.9
Latin America	715.8	837.2	1.3	16.8	17.1
Asian centrally planned economies	196.7	255.2	2.2	4.6	5.2
World[a/]	4,269.4	4,921.1	1.2	100.0	100.0

a/ Figures for "World" do not add up exactly for computational reasons.

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.2. Production of sheepskins and lambskins (dry weight)

Region	Production (thousand metric tons)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	157.2	161.4	0.2	48.5	46.4
European centrally planned economies	59.2	54.0	-0.8	18.3	15.5
Developing market economies	93.9	116.5	1.8	29.0	33.5
Africa, South of Sahara	13.3	17.6	2.4	4.1	5.1
North Africa and West Asia	38.9	53.0	2.6	12.0	15.2
South and South-East Asia	19.2	25.4	2.4	5.9	7.3
Latin America	22.5	20.5	-0.8	6.9	5.9
Asian centrally planned economies	13.5	15.7	1.3	4.2	4.6
World	323.8	347.6	0.6	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.3. Production of goatskins and kidskins (dry weight)

Region	Production (thousand metric tons)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	6.8	6.8	-	6.1	5.0
European centrally planned economies	4.1	3.8	-0.6	3.7	2.8
Developing market economies	89.8	111.2	1.8	80.3	81.0
Africa, South of Sahara	17.5	20.4	1.3	15.6	14.9
North Africa and West Asia	18.5	22.2	1.5	16.6	16.2
South and South-East Asia	47.7	62.5	2.3	42.7	45.5
Latin America	6.0	6.1	0.1	5.4	4.4
Asian centrally planned economies	11.1	15.4	2.8	9.9	11.2
World	111.7	137.2	1.7	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.4. Imports of bovine hides and skins (wet salted weight)

Region	Imports (thousand metric tons)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	903.3	974.8	0.6	69.7	61.0
European centrally planned economies	257.9	248.5	-0.3	19.9	15.5
Developing market economies	124.5	323.5	8.3	9.6[b/]	20.2[b/]
Africa, South of Sahara	0.5	0.2	-7.4	-	-
North Africa and West Asia	26.3	31.8	1.6	2.0	2.0
South and South-East Asia	29.5	228.8	18.6	2.3	14.3
Latin America	68.2	62.7	-0.7	5.3	3.9
Asian centrally planned economies	10.5	52.0	14.3	0.8	3.3
World[a/]	1,296.8	1,598.8	1.8	100.0	100.0

a/ Figures for "World" do not add up exactly for computational reasons.

b/ Negligible.

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.5. Imports of sheepskins and lambskins (dry weight)

Region	Imports (thousand metric tons)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	162.1	122.4	-2.3	92.3	85.1
European centrally planned economies	1.5	2.2	3.2	0.8	1.5
Developing market economies	12.1	19.3	4.0	6.9	13.4
Africa, South of Sahara	0.1	0.1	-	-	0.1
North Africa and West Asia	11.0	14.6	2.4	6.3	10.1
South and South-East Asia	0.2	1.4	17.6	0.1	1.0
Latin America	0.8	3.2	12.2	0.5	2.2
Asian centrally planned economies	-	-	-	-	-
World	175.7	143.9	-1.7	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.6. Imports of goatskins and kidskins (dry weight)

Region	Imports (thousand metric tons)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	24.8	18.9	-2.2	73.8	67.3
European centrally planned economies	5.2	2.4	-6.2	15.5	8.5
Developing market economies	3.6	6.8	5.4	10.7	24.2
Africa, South of Sahara	0.1	0.1	-	0.3	0.3
North Africa and West Asia	3.2	6.2	5.7	9.5	22.1
South and South-East Asia	0.1	-	-	0.3	-
Latin America	0.2	0.5	7.9	0.6	1.8
Asian centrally planned economies	-	-	-	-	-
World	33.6	28.1	-1.5	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.7. Exports of bovine hides and skins (wet salted weight)

Region	Exports (thousand metric tons)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	887.8	1,453.6	4.2	73.6	91.5
European centrally planned economies	7.1	3.5	-5.7	0.6	0.2
Developing market economies	308.5	130.0	-7.0	25.6	8.2
Africa, South of Sahara	58.1	48.1	-1.6	4.8	3.0
North Africa and West Asia	9.4	4.8	-5.5	0.8	0.3
South and South-East Asia	21.8	31.2	3.0	1.8	2.0
Latin America	219.2	45.9	-12.2	18.2	2.9
Asian centrally planned economies	1.9	1.9	-	0.2	0.1
World[a/]	1,209.3	1,593.1	2.3	100.0	100.0

a/ Figures for "World" do not add up exactly for computational reasons.

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.8. Exports of sheepskins and lambskins (dry weight)

Region	Exports (thousand metric tons)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	117.9	118.2	0.02	70.0	75.9
European centrally planned economies	1.8	2.1	1.3	1.1	1.3
Developing market economies	48.6	35.1	-2.7	28.8	22.5
Africa, South of Sahara	7.0	6.3	-0.9	4.1	4.0
North Africa and West Asia	28.8	23.1	-1.8	17.1	14.8
South and South-East Asia	2.1	2.1	-	1.2	1.4
Latin America	10.7	3.6	-8.7	6.4	2.3
Asian centrally planned economies	0.2	0.3	3.4	0.1	0.2
World	168.5	155.7	-0.7	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.9. Exports of goatskins and kidskins (dry weight)

Region	Exports (thousand metric tons)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	3.7	4.2	1.1	9.2	14.6
European centrally planned economies	-	-	-	-	-
Developing market economies	30.9	20.1	-3.5	76.5	69.8
Africa, South of Sahara	8.8	6.6	-2.4	21.8	22.9
North Africa and West Asia	12.2	10.9	-0.9	30.2	37.9
South and South-East Asia	7.0	2.0	-9.9	17.3	6.9
Latin America	2.9	0.6	-12.3	7.2	2.1
Asian centrally planned economies	5.8	4.5	-2.1	14.3	15.6
World	40.4	28.8	-2.8	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.10. Production of heavy leather from bovine animals

Region	Production (thousand metric tons)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	145.6	136.0	-0.6	28.9	27.4
European centrally planned economies	208.2	159.7	-2.2	41.3	32.2
Developing market economies	115.6	163.1	2.9	22.9	32.8
Africa, South of Sahara	1.6	1.7	0.5	0.3	0.3
North Africa and West Asia	20.5	23.0	1.0	4.0	4.6
South and South-East Asia	38.7	74.7	5.6	7.7	15.0
Latin America	54.8	63.7	1.3	10.9	12.8
Asian centrally planned economies	34.7	37.8	0.7	6.9	7.6
World	504.1	496.6	-0.1	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.11. Production of light leather from bovine animals

Region	Production (million square feet)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	2,883.5	3,115.7	0.6	45.4	38.4
European centrally planned economies	1,057.3	1,455.0	2.7	16.6	18.0
Developing market economies	2,150.6	3,095.8	3.1	33.9	38.2
Africa, South of Sahara	84.8	120.1	2.9	1.3	1.5
North Africa and West Asia	196.0	269.8	2.7	3.1	3.3
South and South-East Asia	880.8	1,217.6	2.7	13.9	15.0
Latin America	989.0	1,488.3	3.5	15.6	18.4
Asian centrally planned economies	259.8	435.6	4.4	4.1	5.4
World	6,351.2	8,102.1	2.0	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.12. Production of light leather from sheep and goats

Region	Production (million square feet)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	1,408.6	1,435.1	0.2	49.6	44.6
European centrally planned economies	502.1	427.9	-1.3	17.7	13.3
Developing market economies	782.9	1,167.1	3.4	27.6	36.3
Africa, South of Sahara	57.7	105.1	5.1	2.0	3.3
North Africa and West Asia	188.2	303.1	4.0	6.6	9.4
South and South-East Asia	412.6	582.6	2.9	14.6	18.1
Latin America	124.4	176.3	2.9	4.4	5.5
Asian centrally planned economies	145.1	185.0	2.0	5.1	5.8
World	2,838.7	3,215.1	1.0	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.13. Imports of heavy leather from bovine animals

Region	Imports (thousand metric tons)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	20.5	47.3	7.2	90.7	95.9
European centrally planned economies	-	-	-	-	-
Developing market economies	2.1	1.8	-1.3	9.3	3.7
Africa, South of Sahara	0.2	-	-	0.9	-
North Africa and West Asia	0.6	0.9	3.4	2.6	1.8
South and South-East Asia	0.8	0.4	-5.6	3.5	0.8
Latin America	0.5	0.5	-	2.2	1.1
Asian centrally planned economies	-	0.2	-	-	0.4
World	22.6	49.3	6.7	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.14. Imports of light leather from bovine animals

Region	Imports (million square feet)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	663.2	1,072.1	4.1	79.7	51.1
European centrally planned economies	91.6	72.7	-1.9	11.0	3.5
Developing market economies	64.2	871.1	24.3	7.7	41.6
Africa, South of Sahara	12.3	5.3	-6.8	1.5	0.3
North Africa and West Asia	5.2	11.0	6.4	0.6	0.5
South and South-East Asia	36.2	808.0	29.5	4.3	38.6
Latin America	10.5	46.8	13.3	1.3	2.2
Asian centrally planned economies	13.4	80.0	16.0	1.6	3.8
World	832.4	2,095.9	8.0	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.15. Imports of light leather from sheep and goats

Region	Imports (million square feet)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	485.1	878.3	5.1	97.5	91.8
European centrally planned economies	-	-	-	-	-
Developing market economies	12.7	65.4	14.6	2.5	6.8
Africa, South of Sahara	3.1	2.4	-2.1	0.6	0.3
North Africa and West Asia	1.2	3.3	8.8	0.3	0.3
South and South-East Asia	7.8	55.0	17.7	1.5	5.7
Latin America	0.6	4.7	18.7	0.1	0.5
Asian centrally planned economies	-	13.0	-	-	1.4
World	497.8	956.7	5.6	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.16. Exports of heavy leather from bovine animals

Region	Exports (thousand meteric tons)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	24.0	38.5	4.0	90.6	81.0
European centrally planned economies	-	-	-	-	-
Developing market economies	2.5	8.2	10.4	9.4	17.3
Africa, South of Sahara	0.1	-	-	0.4	-
North Africa and West Asia	0.2	-	-	0.7	-
South and South-East Asia	0.1	3.1	33.1	0.4	6.5
Latin America	2.1	5.1	7.7	7.9	10.8
Asian centrally planned economies	-	0.8	-	-	1.7
World	26.5	47.5	5.0	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.17. Exports of light leather from bovine animals

Region	Exports (million square feet)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	597.1	1,328.4	6.9	55.5	62.6
European centrally planned economies	4.7	2.8	-4.2	0.4	0.1
Developing market economies	472.8	788.4	4.3	44.0	37.1
Africa, South of Sahara	12.5	19.1	3.6	1.2	0.9
North Africa and West Asia	0.1	2.6	31.2	-	0.1
South and South-East Asia	136.8	377.3	8.8	12.7	17.8
Latin America	323.4	389.4	1.6	30.1	18.3
Asian centrally planned economies	0.7	5.0	17.8	0.1	0.2
World	1,075.3	2,124.6	5.8	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.18. Exports of light leather from sheep and goats

Region	Exports (million square feet)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	326.5	411.0	1.9	44.8	41.0
European centrally planned economies	0.8	0.2	-10.9	0.1	..
Developing market economies	402.0	591.9	3.3	55.1	59.0
Africa, South of Sahara	32.3	77.0	7.5	4.4	7.7
North Africa and West Asia	16.5	14.4	-1.1	2.3	1.4
South and South-East Asia	336.9	434.2	2.1	46.2	43.3
Latin America	16.3	66.3	12.4	2.2	6.6
Asian centrally planned economies	-	-	-	-	..
World	729.3	1,003.1	2.7	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.19. Production of leather shoes (all types)

Region	Production (million pairs)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	1,391.8	1,198.3	-1.2	46.4	34.7
European centrally planned economies	916.6	1,037.0	1.0	30.6	30.0
Developing market economies	585.6	997.8	4.5	19.6	28.8
Africa, South of Sahara	21.0	32.9	3.8	0.7	0.9
North Africa and West Asia	93.6	141.5	3.5	3.1	4.0
South and South-East Asia	286.5	416.8	3.2	9.6	12.1
Latin America	184.5	406.6	6.8	6.2	11.8
Asian centrally planned economies	103.4	222.6	6.6	3.4	6.5
World	2,997.4	3,455.7	1.2	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.20. Import volume of leather shoes (all types)

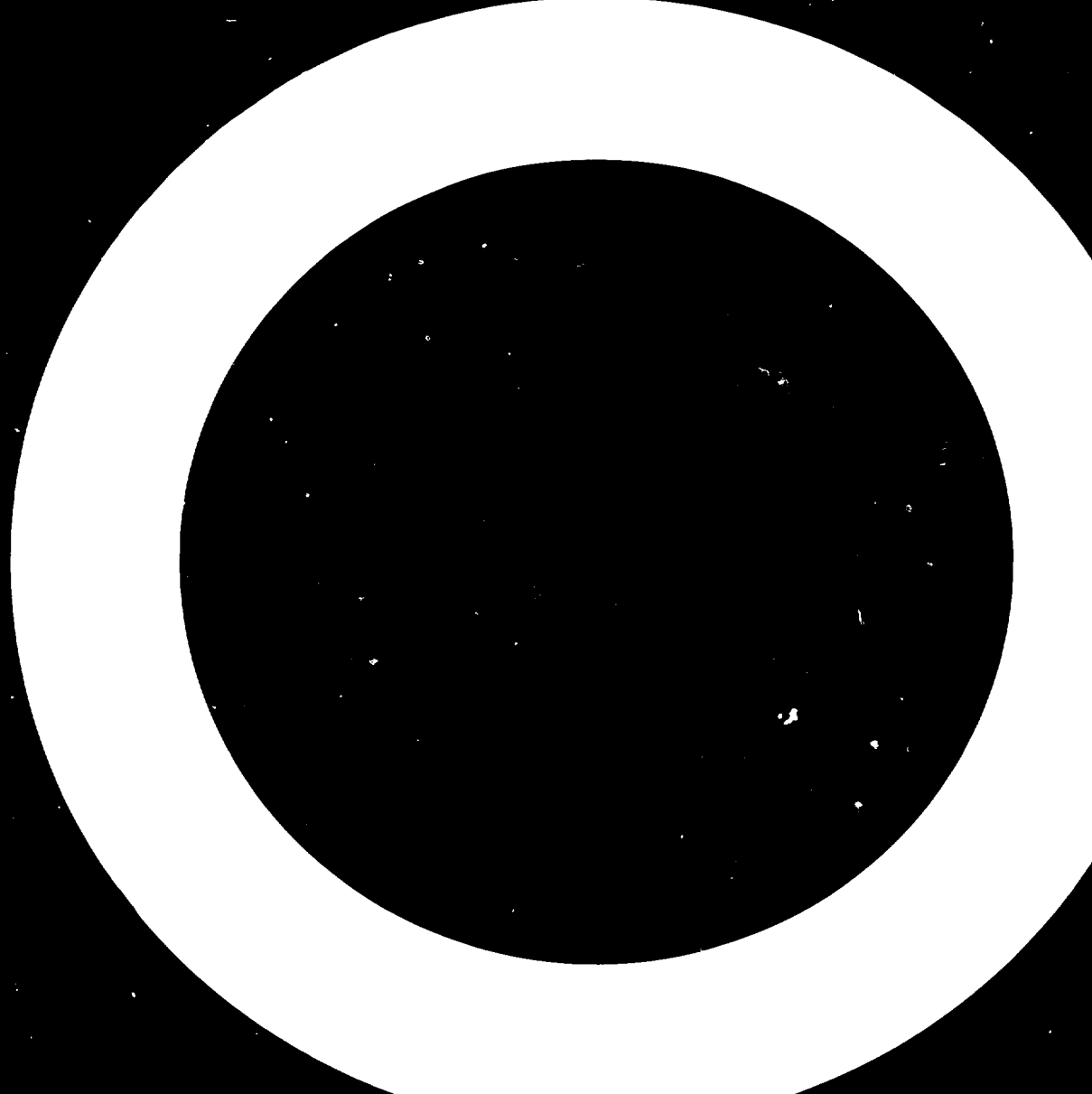
Region	Imports (million pairs)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	278.4	566.7	6.1	77.4	84.2
European centrally planned economies	68.5	74.4	0.7	19.0	11.1
Developing market economies	12.9	31.5	7.7	3.6	4.7
Africa, South of Sahara	5.2	8.7	4.4	1.4	1.3
North Africa and West Asia	0.9	8.6	20.7	0.3	1.3
South and South-East Asia	2.7	8.7	10.2	0.8	1.3
Latin America	4.1	5.5	2.5	1.1	0.8
Asian centrally planned economies	-	-	-	-	-
World	359.8	672.6	5.3	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table B.21. Export volume of leather shoes (all types)

Region	Exports (million.pairs)		Annual average growth rate 1970-82 (per cent)	Share (per cent)	
	1970	1982 estimate		1970	1982
Developed market economies	300.6	421.2	2.8	75.5	65.2
European centrally planned economies	69.3	95.2	2.7	17.4	14.7
Developing market economies	24.7	101.7	12.5	6.2	15.7
Africa, South of Sahara	1.2	1.5	1.9	0.3	0.2
North Africa and West Asia	0.4	4.1	21.4	0.1	0.6
South and South-East Asia	16.5	43.5	8.4	4.1	6.7
Latin America	6.6	52.6	18.9	1.7	8.2
Asian centrally planned economies	3.6	28.0	18.6	0.9	4.4
World	398.2	646.1	4.1	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.



Section C

Production of and trade in hides and skins (bovine and ovine), leathers (light and heavy) and leather footwear by region and by major performing country, 1970, 1975, 1980 and 1982 (estimate)

These tables are based upon FAO statistics given in the World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983. The growth rates and shares have been computed by the UNIDO secretariat. Each table also shows the two major performing countries in 1982 in each region.

The regions used are those employed in the UNITAD global model which is standard usage in the Sectoral Studies Series. The UNITAD model is a joint UNIDO/UNCTAD model for exploring prospective long-term changes in the world economy.

Section C - Detailed tables: production of and trade in hides and skins, leathers and leather shoes, by region and major producers and traders, physical units, 1970 and 1982

Table C.1. Production of bovine hides and skins (wet salted)
(in thousand metric tons)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	992.1	1231.2	974.6	1001.8	4.4	-4.6	1.9	23.3	20.6
Canada	80.4	104.0	89.1	94.6	5.3	-3.1	3.0		
USA	909.8	1124.9	883.1	915.4	4.3	-4.7	1.8		
Western Europe	775.0	874.6	866.1	831.2	2.4	-0.2	-2.0	18.2	16.9
France	161.9	173.2	172.7	164.3	1.4	-0.1	-2.5		
Germany, Fed.	129.8	138.7	159.5	147.1	1.3	2.8	-4.0		
CPE Europe	665.0	797.0	814.9	815.4	3.7	0.4	0.03	15.6	16.6
USSR	483.6	591.8	603.0	610.5	4.1	0.4	0.6		
Poland	72.1	77.8	79.4	70.4	1.5	0.4	-5.8		
Japan	39.0	38.1	36.9	41.9	-0.5	-0.6	6.6	0.9	0.9
Other developed	182.4	259.6	275.8	265.3	7.3	1.2	-1.9	4.3	5.4
Australia	105.5	168.8	177.7	174.0	9.9	1.0	-1.1		
South Africa	39.0	43.8	57.1	47.5	2.3	5.4	-8.8		
Latin America	715.8	749.4	785.3	837.2	0.9	0.9	3.2	16.8	17.1
Argentina	258.5	242.9	281.0	300.0	-1.2	3.0	3.3		
Brazil	191.2	220.0	191.5	200.0	2.8	-2.7	2.2		
Africa, South of Sahara	126.6	136.1	150.6	152.3	1.5	2.1	0.6	3.0	3.1
Kenya	19.6	25.5	22.5	24.8	5.4	2.5	5.0		
Nigeria	12.0	11.8	14.7	14.7	-0.3	4.5	-		
North Africa and West Asia	111.1	129.2	147.8	162.4	3.1	2.7	4.8	2.6	3.3
Egypt	31.9	36.7	37.4	45.3	2.8	0.4	10.1		
Turkey	29.0	29.6	33.2	33.2	0.4	2.3	-		
South Asia	395.7	430.9	460.3	462.3	1.7	1.3	0.2	9.3	9.4
India	298.0	325.0	340.0	344.0	1.7	0.9	0.6		
Pakistan	39.9	44.6	47.8	47.0	2.2	1.4	-0.8		
Southeast Asia	59.1	66.9	75.9	73.5	2.5	2.6	-1.6	1.4	1.5
Thailand	16.9	15.5	16.9	17.3	-1.7	1.7	1.2		
Indonesia	23.5	28.1	32.3	31.5	3.6	2.8	-1.3		
CPE Asia	196.7	207.8	244.4	255.2	1.1	3.3	2.2	4.6	5.2
China	175.0	184.0	220.0	230.0	1.0	3.6	2.2		
Vietnam	8.6	8.1	8.4	9.2	-1.2	0.7	4.6		
World total[a/]	4269.4	4932.5	4846.4	4921.1	2.9	-0.4	0.8	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

a/ Figures for "World total" do not add up exactly for computational reasons.

Table C.2. Production of sheepskins and lambskins (dry weight)
(in thousand metric tons)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	10.0	7.6	5.4	6.1	-5.3	-6.6	6.3	3.1	1.8
Canada	0.3	0.3	0.2	0.4		-7.8	41.4		
USA	9.7	7.2	5.2	5.7	-5.8	-6.3	4.7		
Western Europe	46.9	50.5	55.6	55.2	1.5	1.9	-0.4	14.5	15.9
France	5.4	5.6	7.8	8.2	0.7	6.8	2.5		
United Kingdom	13.8	15.8	17.2	16.9	2.7	1.7	-0.9		
CPE Europe	59.2	61.6	53.9	54.0	0.8	-2.6	0.1	18.3	15.5
USSR	48.7	51.2	43.8	43.8	1.0	-3.1			
Bulgaria	4.5	4.2	3.7	3.6	-1.4	-2.5	-1.4		
Japan	0.0	0.0	0.0	0.0	-	-	-	-	-
Other developed	100.3	82.0	99.3	100.1	-4.0	3.9	0.4	31.0	28.8
Australia	42.2	28.7	36.6	33.8	-7.4	5.0	-3.9		
New Zealand	47.6	44.3	52.8	56.3	-1.4	3.6	3.3		
Latin America	22.5	19.7	20.7	20.5	-2.6	1.0	-0.5	6.9	5.9
Argentina	8.9	7.3	6.3	6.0	-3.9	-2.9	-2.4		
Uruguay	5.4	4.1	5.4	5.4	-5.4	5.7			
Africa, South of Sahara	13.3	13.5	17.5	17.6	0.3	5.3	0.3	4.1	5.1
Ethiopia	3.6	2.5	4.7	4.0	-7.0	13.5	-7.8		
Kenya	1.4	1.8	2.4	2.7	5.1	5.9	6.1		
North Africa and West Asia	38.9	42.2	51.2	53.0	1.6	3.9	1.7	12.0	15.2
Iran	13.3	15.3	17.4	17.4	2.8	2.6	-		
Turkey	8.6	9.1	10.4	10.5	1.1	2.7	0.5		
South Asia	18.4	20.0	24.9	24.2	1.7	4.5	-1.4	5.7	7.0
India	10.5	11.5	12.2	11.4	1.8	1.2	-3.3		
Pakistan	4.2	5.5	8.3	8.4	5.5	8.6	0.6		
Southeast Asia	0.8	0.9	1.1	1.2	2.4	4.1	4.4	0.2	0.3
Indonesia	0.7	0.9	1.1	1.2	5.1	4.1	4.4		
Singapore	0.1	0.0	0.0	0.0		-	-		
CPE Asia	13.5	15.2	15.6	15.7	2.4	0.5	0.3	4.2	4.5
China	11.7	12.7	13.3	13.4	1.6	0.9	0.4		
Mongolia	1.8	2.5	2.3	2.3	6.8	-1.7	-		
World total	323.8	313.2	345.2	347.6	-0.7	2.0	0.3	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table C.3. Production of goatskins and kidskins (dry weight)
(in thousand metric tons)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	1.3	0.7	0.7	0.7	-11.7	-	-	1.2	0.5
Canada	0.0	0.0	0.0	0.0	-	-	-		
USA	1.3	0.7	0.7	0.7	-11.7	-	-		
Western Europe	4.1	4.2	4.4	4.5	0.5	0.9	1.1	3.7	3.3
Greece	1.8	2.1	2.1	2.3	3.1	-	4.6		
Spain	1.0	0.9	0.9	0.9	-2.1				
CPE Europe	4.1	3.8	3.2	3.8	-1.5	-3.4	9.0	3.7	2.8
USSR	2.6	2.7	2.2	2.9	0.7	-4.0	14.8		
Albania	0.4	0.3	0.3	0.3	-5.6	-	-		
Japan	0.1	0.0	0.0	0.0	-	-	-	0.1	-
Other developed	1.3	1.4	1.6	1.6	1.5	2.7	-	1.2	1.2
Australia	0.0	0.0	0.1	0.1.	-	-	-		
South Africa	1.3	1.4	1.5	1.5	1.5	1.4			
Latin America	6.0	6.1	6.5	6.1	0.3	1.3	-3.1	5.4	4.4
Brazil	2.3	2.6	2.8	2.4	2.5	1.5	-7.4		
Mexico	0.6	0.6	0.7	0.7	-	3.1	-		
Africa, South of Sahara	17.5	17.2	20.1	20.4	-0.4	3.2	0.7	15.7	14.9
Ethiopia	2.5	1.8	2.5	2.4	-6.4	6.8	-2.0		
Nigeria	4.9	4.8	5.0	5.3	-0.4	0.8	3.0		
North Africa and West Asia	18.5	20.1	21.5	22.2	1.7	1.4	1.6	16.6	16.2
Iran	5.8	6.7	7.2	7.2	2.9	1.4	-		
Turkey	3.5	3.3	3.3	3.3	-1.2	-	-		
South Asia	46.1	51.0	59.0	59.8	2.0	3.0	0.7	41.3	43.6
India	35.5	38.0	40.0	40.0	1.4	1.0	-		
Pakistan	5.5	8.3	12.5	13.3	8.6	8.5	3.1		
Southeast Asia	1.6	1.9	2.3	2.7	3.5	3.9	8.3	1.4	2.0
Indonesia	1.3	1.6	1.9	2.1	4.2	3.5	5.1		
Philippines	0.2	0.3	0.3	0.4	8.4	-	15.5		
CPE Asia	11.1	12.9	14.9	15.4	3.0	2.9	1.7	9.9	11.2
China	10.4	12.0	14.0	14.4	2.9	3.1	1.4		
Mongolia	0.6	0.8	0.8	0.9	5.9	-	6.1		
World total	111.7	119.3	134.2	137.2	1.3	2.4	1.1	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table C.4. Imports of bovine hides and skins (wet salted weight)
(in thousand metric tons)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	41.8	58.1	57.0	44.1	6.8	-0.4	-12.0	3.2	2.8
Canada	31.1	32.6	33.5	27.2	0.9	0.5	-9.9		
USA	10.8	25.5	23.5	16.9	18.7	-1.6	-15.2		
Western Europe	635.6	656.3	663.4	726.5	0.6	0.2	4.6	49.0	45.4
Germany, Fed.	76.6	46.1	49.6	63.9	-9.7	1.5	13.5		
Italy	222.4	255.8	302.7	346.7	-4.6	3.4	7.0		
CPE Europe	257.9	203.3	251.5	248.5	-4.6	4.3	-0.6	19.9	15.5
Czechoslovakia	42.8	42.0	82.0	90.0	-0.4	14.3	4.8		
Romania	42.7	36.7	42.6	48.4	-3.0	3.0	6.6		
Japan	220.5	259.9	237.4	201.6	3.3	-1.8	-7.9	17.0	12.6
Other developed	5.4	7.3	3.8	2.6	6.2	-12.2	-17.3	0.4	0.2
New Zealand	0.0	0.7	1.9	0.5	-	22.1	-48.7		
South Africa	5.2	6.3	1.9	2.0	3.9	-21.3	2.6		
Latin America	68.2	76.6	57.7	62.7	2.3	-5.5	4.2	5.3	3.9
Mexico	51.5	58.3	49.4	54.6	2.5	-3.3	5.1		
Peru	3.7	4.8	2.6	3.0	5.3	-11.5	7.4		
Africa, South of Sahara	0.5	1.6	0.4	0.2	26.2	-24.2	-29.3	-	-
Nigeria	0.1	0.8	0.1	0.1	51.6	-34.0	-		
Zaire	0.1	0.1	0.2	0.1	-	14.9	-29.3		
North Africa and West Asia	26.3	32.1	30.8	31.8	4.1	-0.8	1.6	2.0	2.0
Egypt	5.4	5.9	6.8	6.8	1.8	2.9	-		
Iran	4.1	6.0	9.4	9.0	7.9	9.4	-2.2		
South Asia	4.0	19.5	9.8	11.2	37.3	-12.9	6.9	0.3	0.7
Afghanistan	0.0	18.1	8.5	10.0	-	-14.0	8.5		
Pakistan	0.0	0.5	1.3	1.2	-	21.1	-3.9		
Southeast Asia	25.5	101.3	116.1	217.6	31.8	2.8	36.9	2.0	13.6
Hong Kong	13.1	17.8	21.4	13.8	6.3	3.7	-19.7		
Korea, Rep. of	9.9	76.1	89.9	200.0	50.4	3.4	49.1		
CPE Asia	10.5	28.4	53.8	52.0	22.0	13.6	-1.7	0.8	3.3
China	10.5	28.4	53.8	52.0	22.0	13.6	-1.7		
World total	1296.6	1444.4	1481.7	1598.8	2.2	0.5	3.9	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table C.5. Imports of sheepskins and lambskins (dry weight)
(in thousand metric tons)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	21.3	15.3	9.6	10.4	-6.4	-8.9	4.1	12.1	7.2
Canada	1.0	1.2	1.5	2.0	3.7	4.6	15.5		
USA	20.3	14.1	8.1	8.5	-7.0	-10.5	2.4		
Western Europe	137.6	102.8	97.9	106.1	-5.7	-1.0	4.1	78.3	73.7
France	41.0	32.1	28.4	29.1	-4.8	-2.4	1.2		
Italy	21.9	21.1	22.6	31.9	-0.7	1.4	18.8		
CPE Europe	1.5	1.4	2.2	2.2	-1.4	9.5	-	0.9	1.5
USSR	0.0	0.0	1.0	1.0	-	-	-		
Hungary	1.5	0.9	0.6	0.8	-9.7	-7.8	15.5		
Japan	2.6	1.8	3.7	5.1	-7.1	15.5	17.4	1.5	3.5
Other developed	0.6	1.4	1.0	0.8	18.5	-6.5	-10.6	0.3	0.6
Australia	0.0	0.3	0.0	0.0	-	-	-		
New Zealand	0.4	1.0	1.0	0.8	20.1	-	-10.6		
Latin America	0.8	2.1	2.0	3.2	21.3	-0.1	26.5	0.5	2.2
Brazil	0.4	1.9	1.4	2.5	36.6	-5.9	33.6		
Venezuela	0.1	0.1	0.4	0.4	-	31.9	-		
Africa, South of Sahara	0.1	0.2	0.1	0.1	14.9	-13.0	-	0.1	0.1
Upper Volta	0.1	0.0	0.1	0.1	-	-	-		
Kenya	0.0	0.2	0.0	0.0	-	-	-		
North Africa and West Asia	11.0	16.2	17.6	14.6	8.0	1.7	-8.9	6.3	10.1
Lebanon	10.1	16.1	17.0	14.0	9.8	1.1	-9.3		
Syria	0.3	0.1	0.5	0.5	-19.7	38.0	-		
South Asia	0.1	0.1	0.3	0.3	-	24.6	-	0.1	0.2
India	0.1	0.1	0.2	0.2	-	14 9	-		
Pakistan	0.0	0.0	0.1	0.1	-	-	-		
Southeast Asia	0.1	0.3	1.0	1.1	24.6	27.2	4.9	0.1	0.8
Korea, Rep. of	0.0	0.2	0.6	1.0	-	24.6	29.1		
Singapore	0.1	0.1	0.1	0.1	-	-	-		
CPE Asia	0.0	0.0	0.0	0.0	-	-	-	-	-
World total	175.7	141.6	135.5	143.9	-4.2	-0.9	3.0	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table C.6. Imports of goatskins and kidskins (dry weight)
(in thousand metric tons)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	1.8	1.0	0.6	0.8	-11.1	-9.7	15.5	5.4	2.8
USA	1.8	1.0	0.6	0.8	-11.1	-9.7	-15.5		
Western Europe	22.3	22.6	17.9	17.4	0.3	-4.6	-1.4	66.4	61.9
Italy	12.6	12.7	11.0	11.6	0.2	-2.8	2.7		
Spain	1.7	3.5	2.0	2.0	15.5	-10.6	-		
CPE Europe	5.2	3.9	2.4	2.4	-5.6	-9.3	-	15.5	8.5
USSR	4.2	3.3	2.0	2.0	-4.7	-9.5	-		
Poland	1.0	0.6	0.4	0.4	-9.7	-7.8	-		
Japan	0.5	0.3	0.8	0.4	-9.7	21.7	-29.3	1.5	1.4
Other developed	0.2	0.3	0.6	0.3	8.4	14.9	-29.3	0.6	1.1
Australia	0.0	0.1	0.6	0.3	-	43.1	-29.3		
New Zealand	0.1	0.1	0.0	0.0	-	-	-		
Latin America	0.2	0.3	0.2	0.5	8.4	-7.8	58.1	0.6	1.8
Mexico	0.2	0.1	0.1	0.3	-12.9	-	73.2		
Venezuela	0.0	0.2	0.1	0.2	-	-12.9	41.4		
Africa, South of Sahara	0.1	0.5	0.1	0.1	38.0	-27.5	-	0.3	0.4
Kenya	0.1	0.5	0.0	0.0	38.0	-	-		
Ghana	0.0	0.0	0.1	0.1	-	-	-		
North Africa and West Asia	3.2	5.6	6.2	6.2	11.8	2.1	-	9.5	22.1
Lebanon	3.0	5.5	6.0	6.0	12.9	1.7	-		
Syria	0.2	0.1	0.1	0.1	-13.0	-	-		
South Asia	0.0	0.0	0.0	0.0	-	-	-	-	-
Southeast Asia	0.1	0.0	0.1	0.0	-	-	-	0.3	-
Singapore	0.1	0.0	0.0	0.0	-	-	-		
Hong Kong	0.0	0.0	0.1	0.0	-	-	-		
CPE Asia	-	-	-	-	-	-	-	-	-
World total	33.6	34.5	28.9	28.1	0.5	-3.5	-1.4	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table C.7. Exports of bovine hides and skins (wet salted weight)
(in thousand metric tons)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	436.8	644.1	594.0	694.7	8.1	-1.6	8.1	36.2	43.7
Canada	50.7	87.2	75.6	91.0	11.5	-2.8	9.7		
USA	386.0	556.8	518.4	603.7	7.6	-1.4	7.9		
Western Europe	334.5	511.5	556.5	596.0	8.9	1.7	3.5	27.8	37.5
France	71.1	124.8	133.9	170.0	11.9	1.4	12.7		
Germany, Fed.	64.2	83.3	100.1	105.4	5.3	3.7	2.6		
CPE Europe	7.1	5.4	7.9	3.5	5.3	7.9	-33.4	0.6	0.2
USSR	4.6	2.2	7.4	3.0	-13.7	27.5	-36.3		
Poland	2.6	1.9	0.5	0.5	-6.1	-23.4	-		
Japan	0.0	0.0	0.1	0.1	-	-	-	-	-
Other developed	116.5	170.1	177.4	162.8	7.9	0.8	-4.2	9.7	10.3
Australia	63.6	119.9	133.7	125.3	13.5	2.2	-3.2		
New Zealand	31.8	32.6	18.7	23.0	0.5	-10.5	10.9		
Latin America	219.2	33.7	48.0	45.9	-31.2	7.3	-2.2	18.2	2.9
Argentina	163.2	16.1	34.0	36.0	-37.1	16.1	2.9		
Honduras	1.3	1.1	5.6	5.0	-3.3	38.5	-5.5		
Africa, South of Sahara	58.1	61.1	59.8	48.1	1.0	-0.4	-10.3	4.8	3.1
Kenya	4.5	16.3	11.0	10.0	29.4	-7.6	-4.7		
Tanzania	6.9	9.6	7.4	7.3	6.8	-5.1	-0.7		
North Africa and West Asia	9.4	8.1	5.5	4.8	-2.9	-7.5	-6.6	0.8	0.3
Sudan	3.9	3.5	2.6	2.3	-2.1	-5.8	-6.0		
Yemen	1.5	1.5	1.5	1.2	-	-	-10.6		
South Asia	9.9	28.3	23.0	24.4	23.4	-4.1	3.0	0.8	1.5
Nepal	9.0	9.9	10.9	10.1	1.9	1.9	-3.7		
Afghanistan	0.0	17.3	11.3	13.5	-	-8.2	9.3		
Southeast Asia	11.9	3.4	7.9	6.8	-22.2	18.4	-7.2	1.0	0.4
Hong Kong	1.5	0.9	5.7	4.9	-9.7	44.6	-7.3		
Malaysia	0.9	1.0	1.1	0.9	2.1	1.9	-9.6		
CPE Asia	1.9	2.2	2.5	1.9	3.0	2.6	-12.8	0.1	0.1
Kampuchea Dem.	0.8	0.6	0.4	0.3	-5.6	-7.8	-13.4		
Mongolia	1.1	1.5	1.9	1.5	6.4	4.8	-11.2		
World total	1209.3	1471.6	1486.7	1593.1	4.0	0.2	3.5	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.
Note: Figures for "World total" do not add up exactly for computational reasons.

Table C.8. Exports of sheepskins and lambskins (dry weight)
(in thousand metric tons)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	3.8	4.4	2.9	4.4	3.0	-8.0	23.2	2.3	2.8
Canada	0.3	0.3	0.2	0.3	-	-7.8	22.5		
USA	3.4	4.1	2.7	4.1	3.8	-8.0	23.2		
Western Europe	25.1	38.8	40.8	45.5	9.1	1.0	5.6	14.9	29.2
France	3.9	10.8	4.8	6.5	22.6	-15.0	16.4		
United Kingdom	7.4	6.8	16.8	20.6	-1.7	19.8	10.7		
CPE Europe	1.8	0.8	2.3	2.1	-15.0	23.5	-4.5	1.1	1.3
USSR	1.4	0.2	1.7	1.6	-32.2	53.4	-3.0		
Bulgaria	0.0	0.3	0.3	0.2	-	-	-18.4		
Japan	0.0	0.0	0.0	0.0	-	-	-	-	-
Other developed	89.0	62.0	67.5	68.3	-7.0	1.7	0.6	52.8	43.9
Australia	39.3	21.8	29.7	25.1	-11.1	6.4	-8.1		
New Zealand	41.2	34.2	33.0	39.0	-3.7	-0.7	8.7		
Latin America	10.7	5.0	3.1	3.6	-14.1	-9.1	7.8	6.3	2.3
Argentina	4.6	3.3	2.4	3.0	-6.4	-6.2	11.8		
Uruguay	3.6	0.8	0.3	0.3	-26.0	-17.8	-		
Africa, South of Sahara	7.0	6.1	7.2	6.3	-2.7	3.4	-6.5	4.1	4.1
Ethiopia	3.3	2.5	3.6	3.0	-5.4	7.6	-8.7		
Somalia	1.3	0.6	1.1	0.9	-14.3	12.9	-9.6		
North Africa and West Asia	28.8	29.5	27.6	23.1	0.5	-1.3	-8.5	17.1	14.8
Iran	12.1	13.9	11.0	10.0	2.8	-4.6	-4.7		
Lebanon	6.8	8.9	9.0	6.0	5.5	0.2	-18.4		
South Asia	1.5	1.2	1.7	1.8	-4.4	7.2	2.9	0.9	1.2
Afghanistan	0.9	0.8	1.2	1.4	-2.3	8.4	8.0		
Nepal	0.3	0.3	0.3	0.3	-	-	-		
Southeast Asia	0.6	0.6	0.5	0.3	-	3.6	-22.5	0.4	0.2
Indonesia	0.5	0.5	0.2	0.2	-	-16.7	-		
Singapore	0.1	0.1	0.1	0.1	-	-	-		
CPE Asia	0.2	0.3	0.4	0.3	8.4	5.9	-13.4	0.1	0.2
Mongolia	0.2	0.3	0.4	0.3	8.4	5.9	-13.4		
World total	168.5	148.8	154.0	155.7	-2.5	0.7	0.6	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table C.9. Exports of goatskins and kidskins (dry weight)
(in thousand metric tons)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	0.8	1.6	0.3	0.4	14.9	-28.5	15.5	2.0	1.4
USA	0.8	1.6	0.3	0.4	14.9	-28.5	15.5		
Western Europe	1.7	4.4	2.9	2.9	20.9	-8.0	-	4.2	10.1
France	0.3	1.3	1.2	1.2	34.1	-1.6	-		
Greece	0.6	2.2	0.6	0.7	29.7	-22.9	8.0		
CPE Europe	-	-	-	-	-	-	-	-	-
Japan	0.0	0.0	0.0	0.0	-	-	-	0.0	0.0
Other developed	1.2	1.1	1.3	0.9	1.7	3.4	-16.8	3.0	3.1
Australia	0.0	0.1	0.7	0.4	-	47.6	-24.4		
South Africa	1.1	0.9	0.6	0.5	-3.9	-7.8	-8.7		
Latin America	2.9	1.6	0.6	0.6	-11.2	-17.8	-	7.2	2.1
Chile	0.0	0.2	0.2	0.1	-	-	-29.3		
Haiti	0.2	0.3	0.3	0.4	8.4	-	15.5		
Africa, South of Sahara	8.8	7.4	6.9	6.6	-3.4	-1.4	-2.2	21.8	22.9
Ethiopia	2.2	1.8	1.6	1.5	-3.9	-2.3	-3.2		
Somalia	1.5	0.6	1.6	1.2	-16.7	21.7	-13.4		
North Africa and West Asia	12.2	14.6	12.4	10.9	3.7	-3.2	-6.2	30.2	37.8
Iran	5.3	6.1	6.0	5.0	2.8	-0.3	-8.7		
Yemen	1.8	2.5	2.5	2.5	6.8	-	-		
South Asia	6.0	0.9	1.2	1.0	-31.6	5.9	-8.7	14.8	3.5
Afghanistan	0.5	0.3	0.5	0.3	-9.7	10.8	-22.5		
Nepal	0.6	0.6	0.6	0.6	-	-	-		
Southeast Asia	1.0	0.8	1.2	1.0	-4.4	8.4	-8.7	2.5	3.5
Indonesia	1.0	0.8	1.1	1.0	-4.4	6.6	-4.7		
Hong Kong	0.0	0.0	0.1	0.0	-	-	-		
CPE Asia	5.8	1.9	3.0	4.5	-20.0	9.6	22.5	14.3	15.6
China	5.8	1.9	3.0	4.5	-20.0	9.6	22.5		
World total	40.4	34.3	29.8	28.8	-3.2	-2.8	-1.7	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table C.10. Production of heavy leather from bovine animals (in thousand metric tons)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	53.9	47.9	25.8	21.5	-2.1	-11.6	-8.7	10.7	4.3
Canada	1.9	1.3	7.4	4.0	-7.3	41.6	-26.5		
USA	52.0	46.6	18.4	17.5	-2.2	-17.0	-2.5		
Western Europe	76.6	101.7	86.0	83.8	5.8	-3.3	-1.3	15.2	16.9
Italy	26.2	44.4	48.0	49.0	11.1	1.6	1.0		
Spain	9.3	26.7	10.0	12.0	23.5	-17.8	9.5		
CPE Europe	208.2	181.6	162.1	159.7	-2.7	-2.3	-0.7	41.3	32.3
USSR	166.0	146.9	131.7	131.0	-2.4	-2.2	-0.3		
Romania	11.0	8.7	9.5	9.0	-4.6	1.8	2.7		
Japan	6.0	10.0	8.3	8.5	10.8	-3.7	1.2	1.2	1.7
Other developed	9.1	7.1	23.3	22.2	-4.8	26.8	-2.4	1.8	4.5
Australia	5.5	4.1	2.3	2.0	-5.7	-10.9	-6.8		
New Zealand	1.2	1.5	19.8	19.0	4.6	67.5	-2.0		
Latin America	54.8	55.3	61.6	63.7	0.2	2.2	1.7	10.9	12.8
Argentina	12.2	10.7	8.5	10.5	-2.6	-4.5	11.1		
Brazil	9.3	22.4	33.0	34.0	19.2	8.1	1.5		
Africa, South of Sahara	1.6	1.7	1.8	1.7	1.2	1.1	-2.8	0.3	0.3
Ethiopia	0.3	0.2	0.3	0.4	-7.8	8.4	15.5		
Madagascar	0.5	0.7	0.7	0.7	7.0	-	-		
North Africa and West Asia	20.5	26.3	22.8	23.0	5.1	-2.8	0.4	4.0	4.6
Egypt	5.9	6.8	7.0	7.0	2.9	0.6	-		
Iran	6.8	9.5	6.0	6.0	6.9	-8.8	-		
South Asia	33.3	47.2	57.3	55.8	7.2	3.9	-1.3	6.6	11.2
India	28.0	36.9	45.0	43.0	5.7	4.0	-2.3		
Pakistan	5.0	10.0	12.0	12.5	14.9	3.7	2.1		
Southeast Asia	5.4	12.1	17.9	18.9	17.5	8.1	2.7	1.1	3.8
Indonesia	4.0	3.5	2.0	2.5	-2.6	-10.6	11.8		
Korea, Rep. of	0.7	7.6	14.5	15.0	1.7	13.8	1.7		
CPE Asia	34.7	37.9	37.4	37.8	1.8	-0.3	0.5	6.9	7.6
China	33.4	36.8	36.0	36.5	2.0	-0.4	0.7		
Mongolia	1.3	1.1	1.4	1.3	-3.3	4.9	-3.6		
World total	504.1	528.8	504.3	496.6	1.0	-0.9	-0.8	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table C.11. Production of light leather from bovine animals (in million square feet)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	835.7	710.6	740.0	703.0	-3.2	0.8	-2.5	13.2	8.7
Canada	108.1	111.2	120.4	100.0	0.6	1.6	-8.9		
USA	725.0	596.0	616.0	600.0	-3.8	0.7	-1.3		
Western Europe	1732.5	1918.2	1959.5	2047.2	2.1	0.4	2.2	27.3	25.3
Germany, Fed.	298.7	216.5	236.0	260.0	-6.2	1.7	5.0		
Italy	280.0	548.0	781.0	900.0	14.4	7.3	7.3		
CPE Europe	1057.3	1291.0	1470.5	1455.0	4.1	2.6	-0.5	16.6	18.0
USSR	525.5	699.0	761.5	780.0	5.9	1.7	1.2		
Czechoslovakia	113.9	120.0	194.4	205.0	1.0	10.1	2.7		
Japan	200.6	250.0	234.3	230.0	4.5	-1.3	-0.9	3.2	2.8
Other developed	114.7	119.3	144.9	135.5	0.8	4.0	-3.3	1.8	1.7
Australia	66.0	63.1	89.0	80.0	-0.9	7.1	-5.2		
South Africa	39.4	45.7	43.9	44.0	3.0	-0.8	0.1		
Latin America	989.0	1247.4	1349.1	1488.3	4.7	1.6	5.0	15.6	18.3
Argentina	245.3	306.4	469.3	543.6	4.5	8.9	7.6		
Mexico	207.0	265.0	256.0	285.0	5.1	-0.7	5.5		
Africa, South of Sahara	84.8	85.7	109.7	120.1	0.2	5.1	4.6	1.3	1.5
Kenya	27.6	16.6	20.8	22.5	-9.7	4.6	4.0		
Nigeria	10.5	19.0	23.7	23.5	12.6	4.5	-0.4		
North Africa and West Asia	196.0	236.9	255.1	269.8	3.9	1.5	2.8	3.1	3.3
Egypt	47.7	54.6	56.6	65.0	2.7	0.7	7.2		
Iran	34.7	57.3	65.0	65.0	10.5	2.5	-		
South Asia	757.8	833.8	872.8	867.7	1.9	0.9	-0.3	11.9	10.7
India	596.0	650.0	665.0	660.0	1.7	0.5	-0.4		
Pakistan	89.8	101.4	110.4	110.0	2.5	1.7	-0.2		
Southeast Asia	123.0	281.5	297.0	349.9	18.0	1.1	8.5	1.9	4.3
Korea, Rep. of	25.5	139.5	146.8	200.0	40.5	1.0	16.7		
Thailand	32.3	47.1	57.1	57.0	7.8	3.9	-0.1		
CPE Asia	259.8	302.5	429.5	435.6	3.1	7.3	0.7	4.1	5.4
China	251.0	292.4	417.6	424.0	3.1	7.4	0.8		
Mongolia	5.5	6.8	8.5	8.0	4.3	4.6	-3.0		
World total	6351.2	7276.9	7862.4	8102.1	2.8	1.6	1.5	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table C.12. Production of light leather from sheep and goats (in million square feet)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	138.1	64.3	86.6	86.1	-14.2	6.1	-0.3	4.9	2.7
Canada	4.0	5.7	5.7	6.0	7.3	-	2.6		
USA	134.0	58.5	80.8	80.0	-15.3	6.7	-0.5		
Western Europe	1236.2	1154.5	1099.1	1263.5	-1.4	-1.0	7.2	43.6	39.3
Italy	380.0	424.0	416.0	600.0	2.2	-0.4	20.1		
Spain	151.4	213.7	250.0	250.0	7.1	3.2	-		
CPE Europe	502.1	502.8	422.8	427.9	7.1	-3.4	0.9	17.7	13.3
USSR	403.4	416.5	343.8	350.0	0.6	-3.8	0.9		
Bulgaria	34.5	32.2	28.3	27.0	-1.4	-2.6	-2.3		
Japan	25.7	16.6	36.0	46.0	-8.4	16.7	13.0	0.9	1.4
Other developed	8.6	35.5	40.3	39.5	32.8	2.6	-1.0	0.3	1.2
Australia	4.8	6.5	5.3	6.5	6.2	-4.0	10.7		
New Zealand	3.8	29.0	35.0	33.0	50.1	3.8	-2.9		
Latin America	124.4	144.6	176.2	176.3	3.0	4.0	-	4.4	5.5
Brazil	34.4	48.8	62.3	68.0	7.2	5.0	4.5		
Uruguay	10.8	19.4	30.7	31.2	12.4	9.6	0.8		
Africa, South of Sahara	57.7	73.6	108.5	105.1	5.0	8.1	-1.6	2.0	3.3
Kenya	8.0	17.0	21.0	17.0	16.2	4.3	-10.0		
Nigeria	32.0	37.5	51.4	52.5	3.2	6.5	1.1		
North Africa and West Asia	188.2	241.7	294.3	303.1	5.1	4.0	1.5	6.6	9.4
Lebanon	26.9	51.0	57.0	57.0	13.6	2.2	-		
Turkey	62.3	89.9	108.8	110.0	7.6	3.9	0.5		
South Asia	406.7	489.9	564.6	557.1	3.8	2.9	-0.3	14.3	17.3
India	310.6	374.0	390.0	385.0	3.8	0.8	-0.6		
Pakistan	56.8	81.9	124.4	123.0	7.6	8.7	-0.6		
Southeast Asia	5.9	13.0	20.8	25.5	17.1	9.9	10.7	0.2	0.8
Indonesia	3.4	9.0	12.2	13.0	21.5	6.3	3.2		
Korea, Rep. of	0.3	1.6	5.0	9.0	39.8	25.6	34.2		
CPE Asia	145.1	173.7	184.1	185.0	3.7	1.2	0.2	5.1	5.8
China	132.4	157.8	162.1	164.0	3.6	0.5	0.6		
Mongolia	12.7	15.9	22.0	21.0	4.6	6.7	-2.3		
World total	2838.7	2910.2	3033.3	3215.1	0.5	0.8	3.0	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table C.13. Imports of heavy leather from bovine animals (in thousand metric tons)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	0.7	0.5	1.3	1.6	-6.5	21.1	10.9	3.1	3.3
Canada	0.1	0.1	0.1	0.1	-	-	-		
USA	0.6	0.4	1.2	1.5	-7.8	24.6	11.8		
Western Europe	19.7	25.5	40.4	45.2	5.3	9.6	5.8	87.2	91.7
Germany, Fed.	5.0	5.3	5.5	9.3	1.1	0.7	30.0		
United Kingdom	3.5	8.0	7.6	10.0	18.0	-1.0	14.7		
CPE Europe	-	-	-	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-	-	-
Other developed	0.1	0.3	0.8	0.5	24.6	21.7	-20.9	0.5	1.0
Australia	0.0	0.1	0.6	0.3	-	43.1	-29.3		
New Zealand	0.1	0.2	0.2	0.2	14.9	-	-		
Latin America	0.5	0.3	0.5	0.5	-9.7	10.8	-	2.2	1.0
El Salvador	0.2	0.1	0.1	0.2	-13.0	-	41.4		
Honduras	0.3	0.1	0.4	0.2	-19.7	31.9	-29.3		
Africa, South of Sahara	0.2	0.1	0.0	0.0	-13.0	-	-	0.9	-
Ghana	0.2	0.1	0.0	0.0	-13.0	-	-		
North Africa and West Asia	0.6	0.9	1.0	0.9	8.4	2.1	-5.1	2.6	1.8
Iran	0.4	0.9	1.0	0.9	17.6	2.1	-5.1		
Syria	0.2	0.0	0.0	0.0	-	-	-		
South Asia	-	-	-	-	-	-	-	-	-
Southeast Asia	0.8	0.5	0.3	0.4	-9.0	-9.7	15.5	3.5	0.8
Hong Kong	0.7	0.2	0.2	0.3	-22.2	-	22.5		
Philippines	0.0	0.1	0.1	0.1	-	-			
CPE Asia	0.0	0.0	0.1	0.2	-	-	41.4	-	0.4
China	0.0	0.0	0.1	0.2	-	-	41.4		
World total	22.6	28.1	44.4	49.3	4.5	9.6	5.4	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table C.14. Imports of light leather from bovine animals (in million square feet)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	184.3	93.3	117.0	199.3	-12.7	4.6	30.5	22.1	9.5
Canada	25.3	11.1	7.1	10.1	-15.2	-8.6	19.3		
USA	158.2	82.0	109.9	189.2	-12.3	6.0	31.2		
Western Europe	454.1	581.7	805.1	839.2	5.1	6.7	2.1	54.6	40.1
Germany, Fed.	112.0	126.6	175.9	189.0	2.5	6.8	3.7		
Italy	82.9	76.9	172.7	190.4	-1.5	17.6	5.0		
CPE Europe	91.6	121.0	87.4	72.7	5.7	-6.3	-8.8	11.0	3.5
USSR	45.7	92.8	47.2	40.0	15.2	-12.7	-7.9		
Poland	6.8	13.7	12.0	9.0	15.0	-2.6	-13.4		
Japan	0.8	2.8	4.4	5.5	28.5	9.5	11.8	0.1	0.3
Other developed	24.0	22.9	27.0	28.1	-0.9	3.3	2.0	2.9	1.3
Australia	6.0	6.8	7.4	8.0	2.5	1.7	4.0		
South Africa	17.9	15.8	19.5	20.0	-2.5	4.3	1.3		
Latin America	10.5	41.4	48.5	46.8	31.6	3.2	-1.8	1.3	2.2
Brazil	0.3	3.9	6.5	6.0	67.0	10.8	-3.9		
Mexico	1.1	30.0	30.0	30.0	93.7	-	-		
Africa, South of Sahara	12.3	9.8	6.2	5.3	-4.4	-8.8	-7.5	1.5	0.3
Cameroon	0.7	0.7	1.1	1.1	-	9.5	-		
Nigeria	9.5	7.4	3.8	3.0	-4.9	-12.5	-11.2		
North Africa and West Asia	5.2	5.0	13.6	11.0	-0.8	22.2	-10.1	0.6	0.5
Iran	0.4	1.0	4.0	4.0	20.1	31.9	-		
Tunesia	1.4	1.0	6.1	4.0	-6.5	43.6	-19.0		
South Asia	5.9	10.1	4.3	3.0	11.3	-15.7	-16.5	0.7	0.1
India	4.7	9.6	2.5	2.0	15.4	-23.6	-10.6		
Afghanistan	1.2	0.5	1.8	1.0	-16.1	29.2	-25.5		
Southeast Asia	30.3	287.2	530.4	805.0	56.8	13.0	23.2	3.6	38.4
Hong Kong	23.3	169.8	260.0	295.0	48.8	8.9	6.5		
Korea, Rep. of	3.3	108.7	255.9	495.4	101.2	18.7	39.1		
CPE Asia	13.4	51.8	70.0	80.0	31.0	6.2	6.9	1.6	3.8
China	13.4	51.8	70.0	80.0	31.0	6.2	6.9		
World total	832.4	1227.1	1713.9	2095.9	8.1	6.9	10.6	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983.

Table C.15. Imports of light leather from sheep and goats (in million square feet)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	67.7	162.3	72.8	96.5	19.1	-14.8	15.1	13.6	10.1
Canada	33.1	126.5	44.7	52.5	30.7	-18.8	8.4		
USA	34.6	35.8	28.1	44.0	0.7	-4.7	25.1		
Western Europe	390.1	579.7	628.4	712.0	8.2	1.6	6.4	78.4	74.4
France	100.5	162.6	104.5	115.0	10.1	-8.5	4.9		
Italy	69.8	106.7	195.1	201.6	8.9	12.8	1.6		
CPE Europe	-	-	-	-		-	-	-	-
Japan	14.6	31.1	101.4	61.2	16.3	26.7	-22.3	2.9	6.4
Other developed	12./	13.9	15.3	8.6	1.8	1.9	-25.0	2.6	0.9
Australia	3.7	8.4	8.2	5.0	17.8	-0.5	-21.9		
South Africa	4.8	4.4	2.7	2.5	-1.7	-9.3	-3.8		
Latin America	0.6	1.4	5.1	4.7	18.5	29.5	-4.0	0.1	0.5
Dominican Rep.	0.0	0.0	0.5	0.5	-	-	-		
Uruguay	0.0	0.0	3.3	3.0	-	-	-4.7		
Africa, South of Sahara	3.1	3.0	2.2	2.4	-0.7	-6.0	4.4	0.6	0.2
Kenya	0.2	0.3	0.6	0.7	8.4	14.9	8.0		
Nigeria	2.6	2.1	1.0	1.1	-4.2	-13.8	4.9		
North Africa and West Asia	1.2	1.0	4.1	3.3	-3.6	32.6	-10.3	0.2	0.3
Iran	0.0	0.3	0.8	0.4	-	21.7	-29.3		
Tunesia	0.0	0.4	2.7	2.5	-	46.5	-3.8		
South Asia	0.0	1.6	1.0	0.9	-	-9.0	-5.1	0.0	0.1
Afghanistan	0.0	1.6	1.0	0.9	-	-9.0	-5.1		
Southeast Asia	7.8	47.1	31.0	54.1	43.3	-8.0	32.1	1.6	5.6
Hong Kong	6.5	5.1	12.9	15.9	-4.7	20.4	11.0		
Korea, Rep. of	0.1	41.0	15.0	33.4	233.1	-18.2	49.2		
CPE Asia	0.0	1.2	12.0	13.0	-	58.5	4.1	0.0	1.4
China	0.0	1.2	12.0	13.0	-	58.5	4.1		
World total	497.8	842.2	873.3	956.7	11.1	0.7	4.7	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983

Table C.16. Exports of heavy leather from bovine animals
(in thousand metric tons)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	3.5	10.2	2.0	1.6	23.8	-27.8	-10.6	13.2	3.4
Canada	0.4	0.6	0.0	0.0	8.4	-	-		
USA	3.1	9.6	2.0	1.6	25.4	-26.9	-10.6		
Western Europe	17.7	14.8	16.3	19.5	-3.5	1.9	9.4	66.8	41.0
Germany, Fed.	2.1	3.6	3.2	4.7	11.4	-2.3	21.2		
United Kingdom	3.8	1.6	4.5	4.6	-15.9	23.0	1.1		
CPE Europe	-	-	-	-		-	-	-	-
Japan	-	-	-	-	-	-	-	-	-
Other developed	2.8	2.4	17.6	17.4	-3.0	49.0	-0.6	10.6	36.6
Australia	2.5	2.1	0.3	0.4	-3.4	-32.2	15.5		
New Zealand	0.2	0.3	17.2	17.0	8.4	124.7	-0.6		
Latin America	2.1	3.2	5.1	5.1	8.8	9.8	-	7.9	10.7
Argentina	0.0	0.4	1.4	1.8	-	28.5	13.4		
Colombia	1.0	1.1	1.4	1.3	1.9	4.9	-3.6		
Africa, South of Sahara	0.1	0.0	0.0	0.0	-	-	-	0.4	-
Senegal	0.1	0.0	0.0	0.0	-	-	-		
North Africa and West Asia	0.2	0.1	0.0	0.0	-13.0	-	-	0.7	-
Morocco	0.2	0.1	0.0	0.0	-13.0	-	-		
South Asia	0.1	0.2	2.7	2.8	14.9	68.3	1.8	0.4	5.9
India	0.1	0.2	2.7	2.8	14.9	68.3	1.8		
Southeast Asia	0.0	0.1	0.2	0.3	-	14.9	22.5	-	0.6
Hong Kong	0.0	0.0	0.1	0.2	-	-	14.9		
Thailand	0.0	0.1	0.1	0.1	-	-	-		
CPE Asia	0.0	0.0	0.8	0.8	-	-	-	-	1.7
China	0.0	0.0	0.8	0.8	-	-	-	-	
World total	26.5	31.0	44.7	47.5	3.2	7.6	3.1	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983

Table C.17. Exports of light leather from bovine animals (in million square feet)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	57.1	123.2	234.7	278.1	16.6	13.8	8.8	5.3	13.1
Canada	15.8	10.9	8.0	8.1	-7.2	-6.0	-0.6		
USA	41.3	112.3	226.8	270.0	22.1	15.1	9.3		
Western Europe	474.2	555.7	719.3	816.8	3.2	5.3	6.6	44.1	38.5
Germany Fed.	79.1	68.2	83.5	106.5	-2.9	4.1	12.9		
Italy	83.2	122.5	256.0	316.0	8.0	15.9	11.1		
CPE Europe	4.7	10.4	3.2	2.8	17.2	-21.0	-6.5	0.4	0.1
Hungary	4.3	9.8	2.6	2.2	17.9	-23.3	-8.0		
Poland	0.4	0.6	0.6	0.6	8.4	-	-		
Japan	56.6	174.8	176.3	185.5	25.3	0.2	2.6	5.3	8.7
Other developed	9.2	14.3	45.4	48.0	9.2	26.0	2.8	0.9	2.3
Australia	7.6	7.1	37.2	38.0	-1.4	39.3	1.1		
South Africa	1.3	5.4	7.0	8.0	32.9	5.3	6.9		
Latin America	323.4	222.4	372.4	389.4	-7.2	10.9	2.3	30.0	18.3
Argentina	236.1	119.8	250.0	250.0	-12.7	15.8	-		
Brazil	32.9	51.6	60.1	80.0	9.4	3.1	15.4		
Africa, South of Sahara	12.5	9.5	19.1	19.1	-5.3	15.0	-	1.2	0.9
Kenya	4.9	3.5	11.9	10.0	-6.5	27.7	-8.3		
Madagascar	3.6	3.8	3.5	3.8	1.1	-1.6	4.2		
North Africa and West Asia	0.1	2.0	1.5	2.6	82.1	-5.6	31.7	-	0.1
Sudan	0.0	0.1	0.8	1.4	-	51.6	32.3		
Syria	0.0	1.3	0.6	1.0	-	-14.3	29.1		
South Asia	131.4	180.1	232.4	212.7	6.5	5.2	-4.3	12.2	10.0
India	66.5	112.8	140.0	135.0	11.1	4.4	-1.8		
Bangladesh	41.2	45.1	55.0	55.0	1.8	4.0	-		
Southeast Asia	5.4	8.6	88.3	164.6	9.7	59.3	36.5	0.5	7.7
Hong Kong	1.6	3.7	72.6	150.0	18.2	81.4	43.7		
Thailand	3.1	3.5	8.0	9.0	2.5	18.0	6.1		
CPE Asia	0.7	2.9	6.0	5.0	32.9	15.6	-8.7	0.1	0.2
China	0.7	2.9	6.0	5.0	32.9	15.6	-8.7		
World total	1075.3	1303.9	1898.6	2124.6	3.9	7.8	5.8	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983

Table C.18. Exports of light leather from sheep and goats (in million square feet)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	39.7	70.8	33.2	26.3	12.3	-14.1	-11.0	5.5	2.6
Canada	3.1	1.6	2.2	1.3	-12.4	6.6	-23.1		
USA	36.7	69.2	30.9	25.0	13.5	-14.9	-10.1		
Western Europe	285.0	266.9	305.0	346.2	-1.3	2.7	6.5	39.1	34.5
France	124.0	107.2	113.4	125.0	-2.9	1.1	5.0		
United Kingdom	72.2	50.9	66.9	75.0	-6.8	5.6	5.9		
CPE Europe	0.8	0.2	0.2	0.2	-24.2	-	-	0.1	0.0
Hungary	0.8	0.2	0.2	0.2	-24.2	-	-		
Japan	0.3	2.2	2.1	2.6	-	-	-	-	0.3
Other developed	1.5	26.8	39.5	35.9	78.0	8.1	-4.7	0.2	3.6
Australia	0.4	1.2	2.6	1.9	24.6	16.7	-14.5		
New Zealand	1.0	25.4	36.5	34.0	91.0	7.5	-3.5		
Latin America	16.3	26.3	66.8	66.3	10.0	20.5	-0.4	2.2	6.6
Brazil	3.1	8.8	30.3	30.0	23.2	28.0	-0.5		
Uruguay	8.6	15.5	24.5	25.0	12.5	9.6	1.0		
Africa, South of Sahara	32.3	56.4	80.4	77.0	11.8	7.3	-2.1	4.4	7.7
Kenya	6.6	16.8	20.2	16.0	20.5	3.7	-11.1		
Nigeria	22.6	35.6	44.0	44.0	9.5	4.3	-		
North Africa and West Asia	16.5	10.6	17.8	14.4	-9.0	10.9	-10.1	2.3	1.4
Algeria	4.8	8.8	4.0	4.0	12.9	-14.6	-		
Syria	0.0	0.0	10.2	7.0	-	-	-17.2		
South Asia	334.6	346.8	419.6	418.5	0.7	3.9	-0.1	45.9	41.7
India	267.1	284.1	315.0	310.0	1.2	2.1	-0.8		
Pakistan	38.4	38.0	66.2	70.0	-0.2	11.7	2.8		
Southeast Asia	2.3	1.1	11.1	15.7	-13.7	58.8	18.9	0.3	1.6
Hong Kong	0.0	0.2	2.2	5.5	-	61.5	58.1		
Indonesia	2.0	0.9	7.5	7.5	-14.8	52.8	-		
CPE Asia	-	-	-	-	-	-	-	-	-
World total	729.3	808.1	975.7	1003.1	2.1	3.8	1.4	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983

Table C.19. Production of leather shoes (all types)
(in million pairs)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	473.2	376.5	328.3	279.5	-4.5	-2.7	-7.7	15.8	8.0
Canada	27.7	21.3	25.9	23.0	-5.1	4.0	-5.8		
USA	442.0	350.2	296.0	250.0	-4.6	-3.3	-8.1		
Western Europe	790.3	703.7	779.3	821.5	-2.4	2.1	2.7	26.4	23.8
Italy	264.7	207.6	276.5	335.0	-4.7	5.9	10.1		
Spain	74.6	129.7	117.9	118.0	11.7	-1.9	-		
CPE Europe	916.6	974.4	1033.8	1037.0	1.2	1.2	0.1	30.6	30.0
USSR	676.0	698.0	744.0	750.0	0.6	1.3	0.4		
Poland	62.2	73.0	74.0	68.0	3.2	0.3	-4.1		
Japan	54.1	41.8	41.1	41.0	-5.0	-0.3	-0.1	1.8	1.2
Other developed	74.2	54.5	56.4	56.3	-6.0	0.7	-0.1	2.5	1.6
Australia	39.1	13.3	16.1	16.0	-19.4	3.9	-0.3		
South Africa	29.9	36.3	35.0	35.0	3.9	-0.7	-		
Latin America	184.5	327.9	396.3	406.6	12.2	3.9	1.3	6.1	11.8
Brazil	27.1	101.9	150.0	155.0	30.3	8.0	1.6		
Mexico	40.4	79.0	83.0	83.0	14.3	1.0	-		
Africa, South of Sahara	21.0	28.5	34.6	32.9	6.3	3.9	-2.5	0.7	1.0
Nigeria	5.4	6.3	7.5	6.5	3.1	3.5	-6.9		
Zimbabwe	1.5	2.5	4.0	4.0	10.8	9.9	-		
North Africa and West Asia	93.6	109.8	142.2	141.5	3.2	5.3	-0.3	3.1	4.1
Iran	16.0	25.0	35.0	30.0	9.3	7.0	-7.4		
Turkey	26.0	32.0	45.0	46.0	4.2	7.1	1.1		
South Asia	259.1	308.1	344.2	348.3	3.5	2.2	0.6	8.6	10.1
India	205.5	249.1	280.0	285.0	3.9	2.4	0.9		
Pakistan	35.0	38.5	40.0	39.0	1.9	0.8	-1.3		
Southeast Asia	27.4	41.8	66.2	68.5	8.8	9.6	1.7	0.9	2.0
Korea, Rep. of	10.7	16.0	32.0	33.0	8.4	14.9	1.5		
Thailand	5.4	9.0	12.0	12.0	10.8	5.9	-		
CPE Asia	103.4	108.5	204.9	222.6	1.0	13.6	4.2	3.5	6.4
China	101.6	106.3	202.4	220.0	0.9	13.7	4.3		
Mongolia	1.6	1.8	2.0	2.1	2.4	2.1	2.5		
World total	2997.4	3075.5	3427.3	3455.7	0.5	2.2	0.4	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983

Table C.20. Import volume of leather shoes (all types)
(in million pairs)

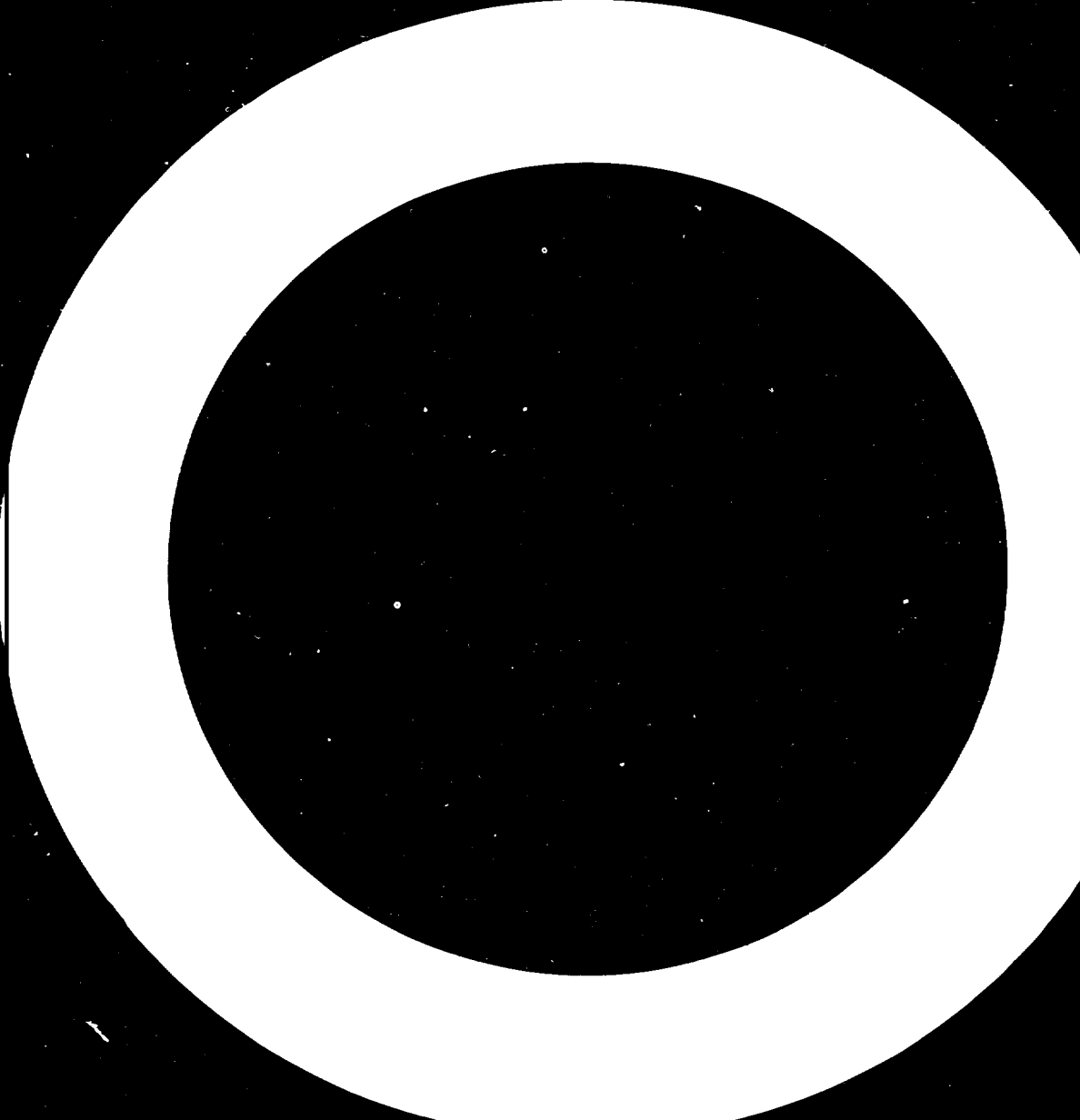
Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	132.3	157.1	157.6	226.2	3.5	0.1	19.8	36.8	33.6
Canada	11.9	8.5	6.3	8.1	-6.5	-5.8	13.4		
USA	120.4	148.6	151.3	218.1	4.3	0.4	20.1		
Western Europe	142.3	204.8	329.8	334.3	7.5	10.0	0.7	39.6	49.7
Germany Fed.	51.1	77.4	116.5	116.0	8.7	8.5	-0.2		
United Kingdom	15.4	23.7	47.4	49.5	9.0	14.9	2.2		
CPE Europe	68.5	78.3	76.3	74.4	2.7	-0.5	-1.3	19.0	11.1
USSR	60.7	69.7	66.1	65.0	2.8	-1.1	-0.8		
Hungary	1.0	2.4	3.0	3.0	19.1	4.6	-		
Japan	0.4	0.7	1.5	1.0	11.8	16.5	-18.4	0.1	0.1
Other developed	3.4	7.0	5.1	5.2	15.5	-6.1	1.0	0.9	0.8
Australia	1.9	4.2	3.4	2.9	17.2	-4.1	-7.7		
South Africa	1.1	2.2	0.9	1.6	14.9	-16.4	33.3		
Latin America	4.1	4.4	5.3	5.5	1.4	3.8	1.9	1.1	0.8
Costa Rica	0.7	0.8	1.2	1.0	2.7	8.4	-8.7		
Venezuela	0.0	0.2	1.5	1.8	-	49.6	9.5		
Africa, South of Sahara	5.2	6.6	8.6	8.7	4.9	5.4	0.6	1.4	1.3
Ivory Coast	0.7	0.6	2.0	3.0	-3.0	27.2	22.5		
Nigeria	0.6	2.4	3.0	2.0	31.9	4.6	-18.4		
North Africa and West Asia	0.9	3.6	6.8	8.6	31.9	13.6	12.5	0.3	1.3
Libyan Ar.Jam.	0.9	3.5	6.0	8.0	31.2	11.4	15.5		
Tunisia	0.0	0.1	0.4	0.3	-	31.9	-13.4		
South Asia	-	-	-	-	-	-	-	-	-
Southeast Asia	2.7	3.3	8.9	8.7	4.1	21.9	-1.1	0.8	1.3
Hong Kong	1.6	1.8	5.8	6.0	2.4	26.4	1.7		
Singapore	0.6	0.6	1.7	1.7	-	23.2			
CPE Asia	-	-	-	-	-	-	-	-	-
World total	359.8	465.8	599.9	672.6	5.3	5.2	5.9	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983

Table C.21. Export volume of leather shoes (all types)
(in million pairs)

Region/country	Year				Annual average growth rate (per cent)			Share (per cent)	
	1970	1975	1980	1982 estimate	1970-1975	1975-1980	1980-1982	1970	1982
North America	3.5	3.1	5.5	4.7	-2.4	12.1	-7.6	0.9	0.7
Canada	2.1	0.7	1.2	1.4	-19.7	11.4	8.0		
USA	1.4	2.4	4.3	3.3	11.4	12.4	-12.4		
Western Europe	294.1	305.8	371.1	414.9	0.8	3.9	5.7	73.8	64.3
Italy	173.0	149.4	200.4	249.1	-2.9	6.0	11.5		
Spain	36.1	57.9	40.7	40.0	9.9	-6.8	-0.9		
CPE Europe	69.3	92.2	100.0	95.2	5.9	1.6	-2.4	17.4	14.7
Czechoslovakia	28.3	27.8	27.5	28.0	-0.4	-0.2	0.9		
Romania	12.3	16.6	24.0	24.0	6.2	7.6	-		
Japan	2.7	1.3	1.1	1.3	-13.6	-3.3	8.7	0.7	0.2
Other developed	0.3	0.2	0.4	0.3	-7.8	14.9	-13.4	0.1	0.0
Australia	0.2	0.2	0.2	0.1	-	-	-29.3		
South Africa	0.1	0.0	0.2	0.2	-	-	-		
Latin America	6.6	38.8	53.3	52.6	42.5	6.6	-0.7	1.7	8.2
Brazil	2.0	32.1	43.3	43.0	74.2	6.2	-0.4		
Mexico	0.7	1.7	3.0	3.0	19.4	12.0	-		
Africa, South of Sahara	1.2	1.8	1.5	1.5	9.6	-3.6	-	0.3	0.2
Senegal	0.8	1.2	0.6	0.7	8.4	-13.0	8.0		
Zimbabwe	0.3	0.4	0.5	0.5	5.9	4.6	-		
North Africa and West Asia	0.4	1.0	3.7	4.1	20.1	29.9	5.3	0.1	0.6
Morocco	0.2	0.7	2.0	2.5	28.5	23.4	11.8		
Tunisia	0.1	0.1	1.6	1.5	-	74.1	-3.2		
South Asia	6.9	11.3	13.9	13.7	10.4	4.2	-0.7	1.7	2.1
India	6.7	9.7	12.5	12.0	7.7	5.2	-2.0		
Sri Lanka	0.1	1.0	0.9	1.0	-	-2.1	5.4		
Southeast Asia	9.6	9.6	19.3	29.8	-	15.0	24.3	2.4	4.6
Hong Kong	1.2	1.5	2.9	5.0	4.6	14.1	31.3		
Korea, Rep. of	7.6	6.4	10.3	18.0	-3.4	10.0	32.2		
CPE Asia	3.6	11.4	25.0	28.0	25.9	17.0	5.8	0.9	4.3
China	3.6	11.4	25.0	28.0	25.9	17.0	5.8		
World total	398.2	476.7	594.9	646.1	3.7	4.5	4.2	100.0	100.0

Source: World statistical compendium for raw hides and skins, leather and leather footwear 1961-1982, FAO, Rome, 1983



Section D

Value added in leather and leather products (ISIC 323) and footwear (ISIC 324) manufacturing, in constant 1975 $US million and as percentage of total manufacturing (ISIC 300), annual growth rates (%) and shares (%) in world total, by region and major performing country 1970, 1975 and 1980

These tables are based on data from the UNIDO data base. The growth rates and shares have been computed by the UNIDO secretariat. The regions used are those employed in the UNITAD global model, which is standard usage in the Sectoral Studies Series. The UNITAD model is a joint UNIDO/UNCTAD model for exploring prospective long-term changes in the world economy.

The coverage of these data vary considerably from region to region, and from year to year. Therefore, the growth rate and share statistics may be substantially influenced by changes in statistical reporting rather than in actual manufacturing. Moreover, the ISIC codes 323 and 324 contain many non-leather products as well which has made it impossible to ascertain, with a resonable degree of certainty what proportion of the actual leather and leather production is covered by the reported statistics.

Section D - Value added in leather and leather products (ISIC 323) and footwear (ISIC 324) manufacturing, in constant 1975 $US million and as percentage of total manufacturing (ISIC 300), annual growth rates (%) and shares (%) in world total, by region and major performing country 1970, 1975 and 1980

Table D.1 Value added in leather and leather products manufacturing (ISIC 323), in constant 1975 $US million, as percentage of total manufacturing (ISIC 300), and annual growth rates (%), by region and major producer

Table D.2 Value added in footwear manufacturing (ISIC 324), in constant 1975 $US million, as percentage of total manufacturing (ISIC 300) and annual growth rate (%) by region and major producer

Table D.3 Value added in leather and leather products manufacturing (ISIC 323), regional shares (%) in world total

Table D.4 Value added in footwear manufacturing (ISIC 324), regional shares (%) in world total

Table D.1. Value added in leather and leather products manufacturing (ISIC 323), in constant 1975 $US million, as percentage of total manufacturing (ISIC 300), and annual growth rates (%), by region and major producer,[a/] 1970, 1975 and 1980

UNITAD region and two largest producers	Value added, $ million			% of total manufacturing			Annual growth rate %	
	1970	1975	1980	1970	1975	1980	1970-75	1975-80
North America	966.9	987.5	959.6	0.3	0.3	0.2	0.4	-0.6
USA	882.0	900.0	873.0	0.3	0.3	0.2	0.4	-0.6
Canada	84.9	87.5	86.6	0.3	0.3	0.2	0.6	-0.2
Western Europe	2,943.7	2,925.7	2,837.7	0.7	0.6	0.5	-0.1	-0.6
Italy	640.2	744.4	803.9	1.4	1.5	1.4	3.1	1.5
Germany, FR	629.7	499.8	469.8	0.5	0.4	0.3	-4.5	-1.2
CPE Europe	2,067.5	2,569.7	3,094.1	0.8	0.7	0.6	4.4	3.8
USSR	1,362.2	1,584.0	1,805.7	0.8	0.6	0.5	3.1	2.7
Romania	110.6	197.5	351.5	1.3	1.2	1.4	12.3	12.2
Japan	310.7	353.1	356.6	0.3	0.3	0.2	2.6	0.2
Other developed	104.4	121.1	52.3	0.4	0.4	0.2	3.0	-15.5
South Africa	28.4	35.5	29.1	0.5	0.5	0.3	4.6	-3.9
New Zealand	14.8	23.2	23.2	0.7	0.8	0.8	9.4	-
Latin America	449.8	516.1	455.4	0.7	0.6	0.4	2.8	-2.5
Brazil	120.9	155.0	193.7	0.7	0.5	0.4	5.1	4.6
Venezuela	18.4	23.9	39.9	0.4	0.5	0.4	5.4	10.8
Africa, South of Sahara	36.7	57.0	15.6	0.6	0.8	0.2	9.2	-22.8
Nigeria	8.0	14.9	14.9	0.8	0.9	0.9	13.2	-
Ivory Coast	7.1	10.0	10.0	2.7	2.3	2.3	7.1	-
North Africa and West Asia	88.4	134.3	96.6	0.6	0.5	0.4	8.7	-6.4
Algeria	12.2	17.4	38.8	2.1	2.0	4.0	7.4	17.4
Syrian AR	5.6	11.4	17.6	1.4	2.0	2.4	15.3	9.1
South Asia	75.4	98.2	59.7	0.6	0.6	0.3	5.4	-9.5
India	52.8	68.6	59.7	0.5	0.6	0.4	5.4	-2.7
Nepal	...	...	...	...	...	...	...	...
South and South-East Asia	19.8	104.6	123.5	0.2	0.6	0.5	39.5	3.4
Korea, Rep. of	1.4	70.2	115.8	0.1	1.6	1.2	118.8	10.5
Philippines	7.7	5.2	6.3	0.3	0.2	0.2	-7.6	3.9
CPE Asia	28.0	34.8	46.2	9.1	8.9	10.6	4.4	5.8
China	...	34.2	...	...	13.2	...	...	...
Mongolia	28.0	...	46.2	16.8	...	11.9		5.1[b/]
World total	7,091.3	7,902.1	8,097.3	0.6	0.5	0.4	2.2	0.5

a/ Major producing countries listed in order of 1980 performance.
b/ Refers to the period 1970-1980.

Source: UNIDO data base.

Table D.2. Value added in footwear manufacturing (ISIC 324), in constant 1975 $US million, as percentage of total manufacturing (ISIC 300), and annual growth rates (%), by region and major producer,[a/] 1970, 1975 and 1980

UNITAD region and two largest producers	Value added, $ million			% of total manufacturing			Annual growth rate %	
	1970	1975	1980	1970	1975	1980	1970-75	1975-80
North America	1,940.5	1,548.5	1,441.8	0.6	0.4	0.3	-4.4	-1.4
USA	1,792.0	1,400.0	1,274.0	0.6	0.4	0.5	-4.8	-1.9
Canada	148.5	148.5	167.8	0.6	0.5	0.3	-	2.5
Western Europe	4,427.8	4,380.1	4,810.5	1.0	0.9	0.9	-0.2	1.9
Spain	545.7	620.3	1,679.3	2.9	2.3	3.5	2.6	11.7
Italy	745.5	955.8	1,070.5	1.8	2.0	1.9	5.1	2.3
CPE Europe	6,658.4	5,596.9	6,690.2	1.8	1.4	1.3	-3.4	3.6
USSR	3,478.6	3,953.0	4,743.6	1.9	1.5	1.3	2.6	3.7
Poland	451.0	653.6	777.8	2.1	1.8	1.7	7.7	3.5
Japan	231.4	257.1	262.2	0.2	0.2	0.2	2.1	0.4
Other developed	230.7	224.2	262.2	1.0	0.8	0.9	-0.6	3.2
Australia	128.5	101.2	121.4	0.8	0.6	0.7	-4.7	3.7
South Africa	74.0	90.2	104.6	1.2	1.2	1.2	4.0	3.0
Latin America	785.4	885.9	876.7	1.2	1.0	0.8	2.4	-0.2
Brazil	241.7	309.9	387.4	1.8	1.0	0.9	5.1	4.6
Mexico	98.0	142.1	174.8	0.9	0.9	0.9	7.7	4.2
Africa, South of Sahara	113.7	122.7	150.3	2.0	1.6	2.0	1.5	4.1
Nigeria	34.3	39.4	52.0	3.4	2.5	2.2	2.8	5.7
Cameroon UR	15.5	10.3	32.3	8.4	4.8	11.0	-7.8	25.7
North Africa and West Asia	175.5	194.7	196.4	0.9	0.8	0.7	7.5	0.2
Egypt	10.8	23.0	51.8	0.6	1.1	1.8	16.3	17.6
Syrian AR	10.6	21.6	33.3	2.6	3.8	4.5	15.3	9.0
South Asia	145.0	150.8	111.8	1.1	1.0	0.6	0.8	-5.8
India	138.0	140.8	109.8	1.3	1.2	0.7	0.4	-4.9
Nepal	1.6	1.6	2.0	2.0	1.3	1.9	-	4.6
South and South-East Asia	62.9	138.7	94.1	0.6	0.9	0.4	17.1	-7.5
Indonesia	11.5	44.6	58.0	0.6	1.9	1.2	31.1	5.4
Korea, Rep. of	3.9	16.9	31.6	0.2	0.4	0.3	34.1	13.3
CPE Asia	...	2.9	...	...	0.7	...	...	...
China	...	...	...	...	...	...	...	...
World total	14,731.3	13,502.5	14,896.2	1.2	0.9	0.8	-1.7	2.0

a/ Major producing countries listed in order of 1980 performance.

Source: UNIDO data base.

Table D.3. Value added in leather and leather products manufacturing (ISIC 323), regional shares (%) in world total 1970, 1975, and 1980

Region	Regional shares (per cent) 1970	1975	1980	Change in share 1970-75	1975-80
North America	13.6	12.5	11.9	-1.1	-0.6
Western Europe	41.5	37.0	35.0	-4.5	-2.0
CPE Europe	29.1	32.5	38.2	3.4	5.7
Japan	4.4	4.5	4.4	0.1	-0.1
Other developed	1.5	1.5	0.6	-	-0.9
Latin America	6.3	6.5	5.6	0.2	-0.9
Africa, South of Sahara	0.5	0.7	0.2	0.2	-0.5
North Africa and West Asia	1.2	1.7	1.2	0.5	-0.5
South Asia	1.1	1.2	0.7	0.1	-0.5
South and South-East Asia	0.3	1.4	1.5	1.1	0.1
CPE Asia	0.5	0.4	0.6	0.1	0.2
World total	100.0	100.0	100.0	n.a.	n.a.

Source: UNIDO data base.

Table D.4. Value added in footwear manufacturing (ISIC 324), regional shares (%) in world total 1970, 1975, and 1980

Region	Regional shares (per cent) 1970	1975	1980	Change in share 1970-75	1975-80
North America	13.2	11.5	9.7	-1.7	-1.8
Western Europe	30.0	32.4	32.3	2.4	-0.1
CPE Europe	45.2	41.5	44.9	-3.7	3.4
Japan	1.6	1.9	1.8	0.3	-0.1
Other developed	1.6	1.7	1.8	0.1	0.1
Latin America	5.3	6.6	5.9	1.3	-0.7
Africa, South of Sahara	0.8	0.9	1.0	0.1	0.1
North Africa and West Asia	0.9	1.4	1.3	0.5	-0.1
South Asia	1.0	1.1	0.7	0.1	-0.4
South and South-East Asia	0.4	1.0	0.6	0.6	-0.4
CPE Asia	...	0.02	...	...	...
World total	100.0	100.0	100.0	n.a.	n.a.

Source: UNIDO data base.

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