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Policy Design and Price Reform in Developing Countries

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Guidelines with special reference to industry

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HARVESTER WHEATSHEAF

New York London Toronto Sydney Tokyo Singapore

First published 1990 by
Harvester Wheatsheaf
66 Wood Lane End, Hemel Hempstead
Hertfordshire HP2 4RG
A division of
Simon & Schuster International Group

Typeset in 10/12 pt Times
by MHL Typesetting, Coventry

Printed and bound in Great Britain by
Billing and Sons Ltd, Worcester

British Library Cataloguing in Publication Data

Cody, John, *1942–*
Policy design and price reform in developing countries.
1. Developing countries. Prices. Control. Policies of governments
I. Title II. Kitchen, Richard III. Weiss, John
338.526091724

ISBN 0-7450-0795-3
ISBN 0-7450-0796-1 pbk

1 2 3 4 5 94 93 92 91 90

Acknowledgements

This publication has been prepared for the United Nations Industrial Development Organization (UNIDO) by John Cody, Richard Kitchen and John Weiss. John Cody, Industrial Development Officer in UNIDO's Global Issues and Policy Analysis Branch, co-edited *Policies for Industrial Progress in Developing Countries* (Oxford University Press, 1980) and has been involved in the producion of a number of UNIDO studies and the journal *Industry and Development*.

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It should be noted that Chapter 2 of this book was first published, with some slight variations, in the UNIDO journal *Industry and Development*, no. 20 (February 1987). The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO), nor do they commit UNIDO to any particular course of action. The book has not been formally edited by the Secretariat of UNIDO.

Contents

Introduction

Many economists, at least those advising governments of developing countries, have tended over the past decade or so to become somewhat less sure than previously that they have the right answers to the complex problems of development, especially in quantitative terms, even though economic methodologies have greatly improved. The authors of this study continue that trend, taking as a starting point Nicholas Stern's definition of the relationship between policy-maker and economic adviser:

> The selection of a particular policy . . . usually involves the selection of a particular welfare function, and that selection is the task of policy makers. The economist may, however, be able to assist in the choice of the social welfare function, since he can show the policy makers in simple contexts the consequences of different specifications of that function. This may help them to make value judgements with respect to more complicated problems.[1]

This study puts together a number of known ideas in somewhat novel ways. Its purpose is to provide a guide to decision-makers in developing countries, and particularly their advisers, on practicable ways to improve and to reform, but not necessarily to optimize, the set of policies affecting the development of the manufacturing sector specifically and the economy in general. The emphasis is on the design of policies which will help rationalize the structure of prices, to ensure that prices at least roughly reflect social costs and benefits. It will be argued that to get prices right, so that they reflect their proper role as a means of providing incentives and disincentives in production, consumption and trade, is of major

importance as an ingredient, although of course not the only one, of development policy.[2]

The study represents a continuation of thinking reflected in two earlier books sponsored by UNIDO.[3] In both, the emphasis was on practical policy alternatives reflecting objectives of and constraints on policy change which might go beyond the realm of 'pure economics', rather than theoretical models of optimizing behaviour. Those books could well be read in conjunction with the present study.

It also reflects a concern with the use of cost–benefit analysis in project evaluation.[4] Apart from various theoretical and empirical questions, the use of 'shadow' prices, i.e. those thought to reflect social rather than market value, in making public investment decisions, while using market prices for other aspects of economic decision-making (such as in project operation, and private investment decisions), raises a problem related to the theory of 'second-best'; namely that first-best policy applied to one aspect of the economy but not to others may lead to a decline in general economic welfare. In principle, all market prices should reflect shadow prices, which leads directly to the conclusion that in practice shadow pricing is likely to be more useful if applied at the overall policy level rather than for evaluating individual projects, i.e. it should be used directly to improve the actual price structure.[5]

This study is concerned specifically with the manufacturing sector in developing countries, but several macro-economic variables are dealt with as forming an essential aspect of policy for industrialization. In particular, the prices of foreign exchange, capital and labour are considered crucial to the analysis, in that if these are far out of line with realistic opportunity costs, industrial development will be greatly hindered.

The focus on manufacturing allows several highly useful simplifications, the principle ones being that manufactures can generally be considered as tradeable goods, that for all but the largest developing countries' prices at the border depend on foreign, not domestic, demand and supply, and that they are private rather than public goods. Thus we are able to suggest methods, using actual border prices as a 'benchmark', which would not be applicable, for example, to the educational system (largely a public good), non-tradeables such as many services, or agriculture (where variations in land tenure systems, etc., make for special considerations). Furthermore, as noted above, our interest in macro-economic policy is limited to essential connections with manufacturing, and our concern with policy is limited by focusing on

the use of indirect taxes and subsidies on production, consumption and trade.[6] On the other hand, the focus on manufactures means that various dynamic effects and infant industry arguments assume special importance.

The study consists of five chapters. Chapter 1 provides some background discussion and a brief description of the methods used in the study. The cost–benefit-based concept of the 'policy hierarchy' as a means of organizing such thinking on policy problems is introduced.

Chapter 2 examines the types of government interventions in price structure and markets of developing countries, the types of market distortions which may arise and their implications. In particular it covers traded goods, labour, capital and foreign exchange.

Chapter 3 assesses the alternative types of policies which governments may use to achieve national goals relating to efficiency, revenue-raising, dynamic considerations, self-sufficiency requirements and income distribution. It is generally recommended, as a starting point for decisions on price interventions, that world market prices provide a basis for comparing the cost-effectiveness of government interventions. It is also recommended that quantitative restrictions, such as quotas and licences, on goods and their factor inputs gradually be replaced by indirect taxes and subsidies, and that revenue taxes on intermediates be replaced by taxes on final consumer goods, including imports, so as to eliminate protection on all production activities except those deserving special incentives. This very important proposal would shift the tax base from a trade orientation to one focused on final consumption, with policy intervention in the economy largely taking the form of price 'wedges'. The foreign exchange rate would be altered accordingly.

Chapter 4 outlines a five-stage procedure for determining cost-effectiveness of policy measures and for making made-to-measure interventions in the price system. The five stages reflect the national goals mentioned in the preceding paragraph.

Finally, Chapter 5 introduces institutional considerations. It stresses the need for a 'policy dialogue' as a means of allowing coordination among the various governmental institutions which play a role in the setting of policies affecting the structure of prices in the industrial sector. It includes a discussion of non-economic constraints on policy change.

In short, this is a study of the development impact, particularly in the manufacturing sector, of government policies, through their influence on prices and thus on incentives and market decisions of producers, consumers and traders, i.e. the relationships between policies, prices, incentives, decisions and development.

Some major themes of the study are summarized as follows:

1. Governments of developing countries should pay attention to getting market prices 'right', or moving market prices towards 'shadow' prices. Although there are other, perhaps equally important aspects of development policy (e.g. interventions in education, technology and assets distribution), recent socio-economic problems of a large number of developing countries seem to have arisen to a great extent through neglect or the misguided use of the price structure as a means of achieving national goals through its impact on incentives.

2. For most developing countries, a gradual replacement of quantitative restrictions, administrative controls, licenses, etc., by more 'transparent', simple and flexible measures, such as indirect commodity and factor taxes and subsidies, is an essential aspect of price reform, without which prices fail in their role as a mechanism for signalling market valuations and changes in values.[7] And such measures should be seen to be understandable and fair by the population they affect.

3. For policy decisions, cost–benefit analysis, although generally unable to generate neat quantitative solutions, provides a highly useful way of organizing thinking on alternative choices.

4. The policy formulation process needs to be based on methods which will allow coordinated consideration of the various goals of decision-makers, particularly those related to economic efficiency, public revenue requirements, dynamic externalities (particularly important for manufacturing), self-sufficiency aims and income distribution. Traditional economic models emphasizing first-best solutions are not suitable for this purpose, which explains, at least in part, why the reality of actual policies differs so often from that recommended in economic theory.

5. Nevertheless, while not advocating that policies aim at simply equating domestic prices with world (i.e. border) prices, the latter provide for tradeable goods, a category which generally includes manufactures, a useful benchmark from which to assess the cost of interventions implying deviation of domestic prices from border prices.

6. Institutional arrangements, and the relationships between 'actors' are of critical importance for deciding on national policy goals and instruments. Governments are not homogeneous organizations, but rather are made up of many, often conflicting, parts. Close coordination

between those parts (actors), labelled in this study as the policy dialogue, will allow implementation of policies most closely reflecting what is sometimes called the social welfare function, and thus help to improve the structure of prices.

7. When dealing with the manufacturing sector of developing countries a number of important simplifying assumptions (previously mentioned) will allow a practical framework for policy formulation and analysis.

8. If policy interventions can be made to get the price structure right, the need for shadow pricing in project evaluation disappears (i.e. becomes redundant), thus greatly simplifying the decision-making process at the project (investment) level.

In these times of sudden and largely unpredictable changes in the world economy, more and more countries at all levels of development and of all political persuasions are finding that to pay attention to prices (to get them right), and their role in creating incentives, pays off in socio-economic gains.[8] Thus it is to be hoped that this study will be seen as timely, relevant and useful in a changing environment (as have the recommendations contained in this book become, so unexpectedly, highly relevant for the countries of Eastern Europe).

Nevertheless, the reader should not expect to find all the relevant answers here. As another analyst says: 'Policy analysis will always be a process that is at least as intuitive as it is quantitative. To treat it exclusively as one or the other is to miss both the strength of the underlying economic models of resource allocation for illuminating important social choices and the necessity for society, rather than analysis, to make those choices.'[9]

Notes

1. N. Stern, *Optimum Taxation and Tax Policy*, International Monetary Fund Staff Papers (Washington DC: International Monetary Fund, 1984), vol. 31.
2. According to one writer: 'The evidence of the 1960s and 1970s strongly suggests that nothing is more critical for economic progress than the skillful management of [the] interconnected system of prices and incentives.' See R. Agarwala, 'Planning in developing countries', *Finance and Development*, vol. 22, March 1985.
3. *Industrial Priorities in Development Countries. The selection process in Brazil,*

India, Mexico, Republic of Korea and Turkey (United Nations publication, Sales No. E.78.II.B.12); and *Policies for Industrial Progress in Developing Countries* (Oxford: Oxford University Press, 1980).

4. In addition to P. Dasgupta, J. Marglin and A. Sen, *Guidelines for Project Evaluation* (United Nations publication, Sales No. E.72.II.B.11), which provides a lucid introduction to the application of welfare economics to the problem of project evaluation in developing countries, and is recommended to readers of the present study, UNIDO has sponsored numerous other studies on this subject (see *Industry and Development*, No. 5 United Nations publication, Sales No. E80.II.B.4) Addendum.
5. According to one of the founders of project-level cost–benefit analysis for developing countries: 'One of the greatest challenges that faces the economics profession today and in the coming decades is that of developing the subdiscipline of cost–benefit analysis to the point where it can more adequately guide and inform policy in the macro-economic area.' (A.C. Harberger, 'The cost–benefit approach to development economics', *World Development*, vol. 11, no. 10 (1983).) Similar views have been expressed by other authors of major books on project-level cost–benefit analysis: 'A rigorous analysis of macro-policy issues is essential and the shadow pricing framework, although usually confined to project analysis, is the most useful form of applied welfare economics currently available for the analysis of such issues.' (L. Squire, I. Little and M. Durdag, 'Shadow pricing and macroeconomic analysis: Some illustrations from Pakistan', *Pakistan Development Review*, vol. XVIII, Summer 1979).
6. Taxes on international trade tend to be a major source of public revenue in countries at a low level of development, whereas in more developed market economies income and consumption taxes play the dominant role in raising revenue. Most member countries of the Organization for Economic Cooperation and Development (OECD) adopted the value added tax (VAT) in the late 1960s and 1970s – see OECD, *Taxing Consumption* (Paris, 1988), Tables 1.1 and 1.2.
7. An indirect tax is defined in the taxation literature as being levied on a commodity (or factor) rather than an income. Such 'indirect' taxes should be 'direct', in that they apply directly to the prices of commodities (or factors) which they are intended to affect (so as to minimize by-product distortions).
8. The World Bank, for example, has argued (see *World Development Report 1987* (Washington, DC: World Bank, 1987), Chapter 3 and Figure 3.5) that a strong positive correlation exists in developing countries between high economic growth rates and policies designed to achieve market prices based on real economic costs.
9. C. Peter Trimmer, *Getting Prices Right: The scope and limits of agricultural price policy* (Ithaca, New York: Cornell University Press, 1986), p. 132.

1

Policies and prices: some basic principles

1.1 Cost–benefit as a basis for policies and prices

This study should not be construed as a manual, or cookbook, which would provide definitive answers to any and all problems which policy-makers may face. Because the policy problems of any one country are unlikely to be precisely the same as those of other countries, the policy regime of each country should be designed within the context of the economic, technological, social and political conditions existing in that country. Here we are concerned with the more general issues which may need to be considered when taking policy decisions affecting prices and industrial development. We would hope that country-specific studies based on the analysis presented here might be undertaken in the future.

Our concern is primarily with the manufacturing sector and its linkages with other sectors rather than with the economy as a whole, and our analysis is limited to the national policies of developing countries acting individually. The policies of developing countries acting in groups and those of developed countries remain outside the scope of this study.

It is important to distinguish between policy objectives, which are usually determined by the political leadership of a country, and policy measures, i.e. the ways and means by which objectives may be accomplished. Although objectives must be considered in order to assess policy measures, it is the measures which are the main concern of this study. Although certain objectives such as rapid economic growth and

equitable distribution of income are generally accepted goals of industrial development, priorities among such objectives should be established by each developing country on the basis of its particular needs and socio-economic system.

Although grey areas exist, it will be useful to distinguish between three general levels of government intervention in the industrial sector: planning, policy and project evaluation. This book is not about planning or project evaluation, but a very brief review is provided below.

Planning, which may be for consistent or for 'optimal' resource allocation, usually involves m cro-economic, input–output and linear programming models, often taking a fixed-time horizon of five years. Command planning, as practised in socialist countries, involves direct physical allocation of resources, whereas indicative planning, such as practised in France, allows resource allocation through the market mechanism.[1] India, in the 1950s, was one of the first developing countries to introduce planning.

Project evaluation aims at quantifying the net national gain, discounted to a present value, to be derived from a particular investment project. A project is acceptable if net gain is positive. Project evaluation is usually based on cost–benefit analysis, a type of applied welfare economics. As will be seen later in this chapter, much of our analysis of policies will be based on techniques similar to those developed for project evaluation in the late 1960s and 1970s.[2]

Government polic[illegible] may be seen as providing the linkage between planning and project evaluation. Moreover, most developing countries continue to rely on policies, rather than planning and project evaluation, as the primary method of government control over the industrial sector. Thus it is of great importance to examine, as in the present study, the role of policies in industrial development.[3]

In this study we distinguish between four broad categories of policy intervention in the industrial sector. First, there are policy measures intended to influence commodity and factor prices. Taxes, tariffs and minimum wage legislation are examples of such measures. Second, there are those intended to exert quantitative control over levels of inputs and outputs. Import quotas and investment licensing are important examples. Third, there are those intended to provide control through public ownership of industrial activities. In practice, this means establishment of public enterprises. Fourth, there are policy measures designed to influence the general investment climate in industry. Examples might

be statements welcoming foreign investment or the establishment of institutions promoting transfer of technology.

A major consideration in the study is interdependence between policy objectives and between policy instruments. Policy instruments which are 'best' in terms of goal achievement are often not feasible because of political, institutional, administrative or information constraints. The impact of one instrument may cancel that of another, as when, for example, the protective effect of a tariff is offset by exchange rate overvaluation.[4] Such interrelationships are often complex and difficult to analyze – which is why much of the previous literature on industrial-development policy has tended to ignore them, but because they are clearly of great significance we try to take them into account.

Although rarely made explicit in the literature on policy analysis, the industrial-development policy-making process reflects the institutional framework within which decisions are reached.[5] In practice the political and economic decision-making framework is vastly more complex than economic theorists generally care to admit. Questions of power and control, institutional relationships and conflicting objectives matter more, in terms of their practical significance, than, for example, specification of the social welfare function or the 'optimal' growth path. We argue that policy decisions must be analyzed in terms of vested interests and political and economic power, as well as social welfare.

The institutional framework is usually complex, even in small countries. Ministries or similar organizations concerned with industry and development, commerce and trade, finance, the central bank and regional development banks, small-scale industry, labour, project evaluation, central planning, etc., as well as their many sub-units, all influence the course of industrial-development policy. Public enterprises, private firms and organizations such as labour unions and chambers of commerce will also be involved, as will political parties, legislative committees and foreign aid donors.

Each institution attempts as best as it can to achieve internal objectives according to its functions within an environment of constraints imposed by other institutions attempting to achieve conflicting objectives. For example, the trade ministry may aim at maximizing the trade surplus, given interest and foreign exchange rates controlled by the finance ministry which is concerned with public debt and inflation; while the commerce and agriculture ministries aim at maximizing their respective shares of scarce national resources, and the small scale industries ministry

seeks the development of traditional industries, given minimum wage rates in the modern industrial sector set by the labour ministry.

The trouble is that the 'public invisible hand' guiding the resolution of such institutional conflicts is very imperfect. Usually this is thought of as a job for the central planning organization under the general leadership of the political executive, the head of government. In practice, however, the central planning organization becomes overwhelmed by the problems involved, including internal conflicts of its own, so that guidance is often inconsistent, irrational or lacking. Within this power vacuum corrupting influences may breed, with industrial development policy decisions coming to reflect the aims of special interest groups vested with political and economic power, rather than those of the nation as a whole.

Policy analysis must take such institutional factors into account as much as possible. Only then are recommendations for policy change likely to prove to be the best possible.

From this discussion it may be seen that policy analysis rests ideally on the existence of two preconditions, that policy-makers (and policy-making institutions) are benevolent and that they are powerful. Otherwise, policy analysis may be misused or useless. Benevolence and power are of course subjective concepts, but in 'analyzing the analysis' it may be argued that some assessment, however personal, of whether policy-makers are insufficiently concerned with improving social welfare or lack control of policy instruments is justified.

The principles of cost–benefit analysis have been refined considerably in recent years and now provide the foundation for project evaluation methodologies (see note 2). These principles are the basis for the approach to industrial-development policy analysis taken here.

In project evaluation all inputs and outputs, direct and indirect, of an investment project are 'shadow'-priced in terms of social costs (in the case of consumption of inputs) and benefits (in the case of production of outputs),[6] with costs and benefits reflecting their contribution to the attainment of development goals, such as rapid economic growth and equitable income distribution. Projects are accepted if the time stream of net benefits, discounted to present value using a 'shadow' interest rate, is positive.[7]

Quite apart from the difficulty in applying cost–benefit analysis to all projects, especially those in the private sector, an inherent inconsistency arises because in the course of operation, success or the lack of it will usually be assessed on the basis of commercial profit

reflecting market prices. Thus socially, but not commercially, profitable projects will require subsidies, and operational decisions regarding input mix and production scale may differ from those upon which the decision to invest was based.

The problems discussed above lead to the specification of a 'second-best' cost–benefit methodological frame in which there may be a hierarchy of policy alternatives, ranging from first-best to *n*th best. Policy reform will consist of movement up this hierarchy towards first-best. First-best may not be feasible, however, because of the existence of political, institutional and administrative constraints on policy change. In other words, after a point, further progress towards first-best policies becomes impracticable unless binding constraints are relaxed, either due to reduction in the costs or increase in the benefits of policy reforms. In terms of the Corden–Bhagwati–Johnson analysis, policy intervention should be as direct as possible, so as to avoid 'by-product' distortions.[8] This concept is discussed in more detail in Section 1.3 of this chapter.

1.2 On making policies: some simple guidelines

Economic policies, in both developed and developing countries, in both sector-specific and macro-economic areas, are often made on an *ad hoc* basis and are heavily influenced by lobbying, rent-seeking and other practices which tend to create inconsistencies among them and deviations from what might generally be considered the best (or near-best) public choice in terms of national welfare. A few simple rules which might be applied to achieve an improved policy-making framework are briefly discussed below.

Consider first the institutional framework under which policies are formulated. The most basic question, apart from that of justice, is power, i.e. who are to make policies? Who are the decision-makers, the essential actors, whether they be institutions or individuals? What are their areas of policy control and how do they interrelate? In a well-functioning policy-making system there must be a 'dialogue' among the actors. Governments are not monolithic, all-powerful bodies. The various parts will tend to have different, often conflicting, aims and will effectively control overlapping areas of policy. Institutions must be organized in recognition of these facts, and ways must be found, if not to entirely harmonize them, at least to co-ordinate and resolve conflicts within the

policy-making system; the actors must at least talk to one another, even though they may not always agree.

A major aspect of this 'talking shop' will consist in expressing views on goals, and particularly on trade-offs between goals, i.e. the relative importance attached by different actors to possibly conflicting goals. Typical trade-offs of major policy significance will include, for example, the relative importance attached to long-run growth and short-term employment or income distribution (the Kuznets curve) or to short-run growth and inflation (the Philips curve).

Constraints on policy change need to be identified and, if possible, removed (which means assessing their root causes). First-best policies are often considered impracticable for political reasons, because implementation would mean unacceptably high administrative costs or revenue losses, or because they would require information and computational facilities which are unavailable or too costly to obtain. Recognition of irremovable policy constraints implies that only second-best policies can be implemented.

The policy formulation process will need to be made as consistent as possible with other aspects of government economic intervention, particularly at the overall planning and project investment levels. Clearly, different methodologies will be used at each of these levels, but the basic assumptions regarding economic behaviour, national goals and trade-offs and possibilities for government control should coincide.

Regarding the types of policy instruments (measures), these should meet four requirements. First, they should be aimed as directly as possible at the heart of the problem they are intended to resolve. This will minimize 'by-product' distortions, that is, unintended (and generally undesired) effects. For example, if a particular industry is considered worthy of special encouragement, or if industrial employment is to be increased, a per-unit subsidy on output or on labour usage would be superior to, for example, the imposition in either case of a tariff or import quota (a detailed discussion of this is given in Section 1.3).

Second, policies should be 'transparent', i.e. their effects should be easily identifiable and, to the extent possible, costs and benefits should be easily quantifiable. For example, the effects of a tariff are more easily identified and quantified than those of an import quota, so that its economic impact is more easily assessed. Non-transparent policy measures are often deliberately adopted within policy-making systems (based on lobbying and corrupt practices), as a means of disguising the true nature of the impact of the policy.

Third, policies should be flexible, so that they do not hinder economic adjustments to dynamic changes or reaction to an uncertain environment. This seems especially important in today's rapidly changing world. Thus *ad valorem* indirect taxes (e.g. a tariff) would be considered generally superior to quantitative controls (e.g. an import quota) which physically restrict adaptation to changing conditions.

Fourth, policies should be as simple as possible. Simplicity will tend to minimize administrative and information costs and possibilities for corruption, as well as make them more understandable (and thus acceptable) to those affected by them.

This last point is also significant in terms of 'public relations'. A policy will tend to be successful the more it is seen to be both fair and understandable by the producers, consumers and traders it affects. Also, a policy needs to be perceived by the public as having a degree of 'permanence'; for example, if the general public expects a foreign exchange rate devaluation to be soon reversed, the expectation is likely to become reality. A favourable public response is important.

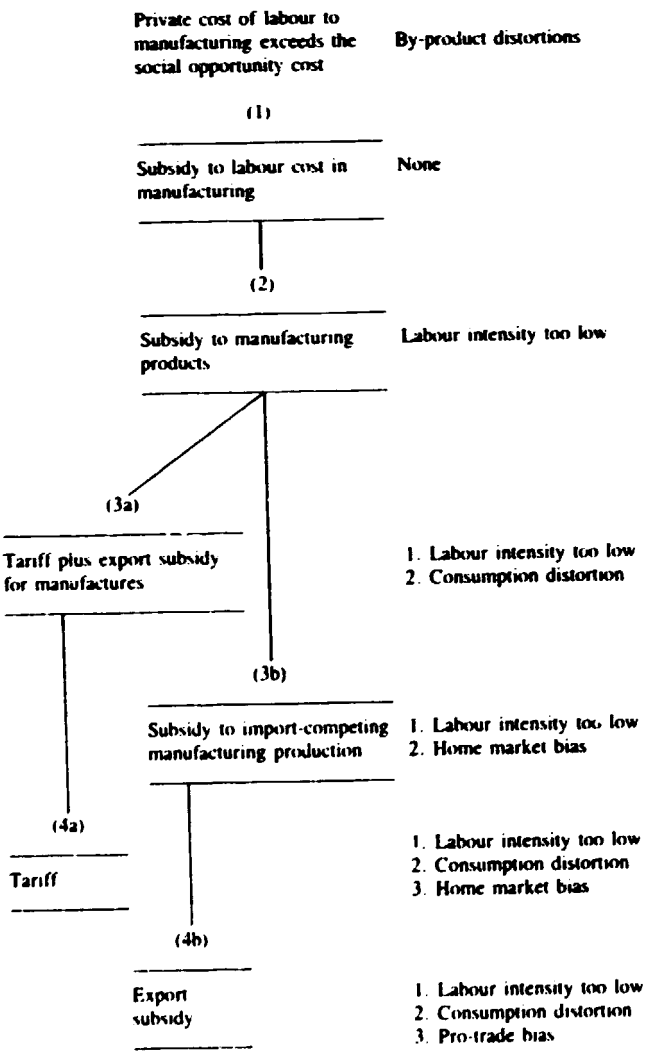
In this respect policy reform consistent over time, rather than sudden, unexpected great shifts in policy, helps to maintain confidence. Those affected by policy change should be allowed a gradual period of adjustment, with compensation for major losers.

1.3 The policy hierarchy

In his classic book *Trade Policy and Economic Welfare*, Max Corden produced a diagram (see Figure 1.1) and brief discussion of the hierarchy of policies. The basic idea is simple but potentially very powerful: when there is something about your economy (you being the policy-maker) which you do not like and which you want to change, aim your policy as directly as possible at that something, so that you do not upset things (create distortions) in other aspects of the economy. The idea goes back at least as far as Meade, Tinbergen, Johnson and Bhagwati.

Corden explains that

> for any given marginal divergence, or set of divergences, there is a first-best optimal policy or set of policies. Essentially this policy involves making the appropriate correction as close as possible to the point of the divergence. But many policies may be conceivable, and one should be able to order them in a hierarchy of policies, from first-best to second-best, and so on. This is an interesting exercise, for it brings



Source: W.M. Corden, *Trade Policy and Economic Welfare*, p. 29 (Clarendon Press: Oxford, 1974).

Figure 1.1 Corden's example of the policy hierarchy

> out the logic of the general approach, and especially the effects of imposing constraints on the choice of policies which compel a movement down the hierarchy.
>
> At each step down the hierarchy an additional by-product distortion is imposed, and the welfare level attainable with the appropriate optimal policy declines. Furthermore, given the appropriate optimal policy, the extent of the correction to the basic divergence will normally decline (p. 28)

In Corden's example, the wage rate in manufacturing exceeds the opportunity cost of labour, i.e. its cost when used in activities, such as agriculture, from which the industrial labour force is drawn (plus additional costs such as those involved in providing the industrial labour force with social services). This may be due to a minimum industrial wage law, trade unionism, etc.; it creates a bias towards imports rather than domestic production and a further bias towards capital rather than labour usage. Assuming that the underlying structural reason for the high industrial wage cannot be directly eliminated, first-best policy would be to provide a wage subsidy, since this would eliminate the wage distortion without creating other distortions in the economy. In most developing countries, however, a wage subsidy may be considered unfeasible because of government budgetary constraints. Thus we see why policy instruments such as tariffs (4a in Figure 1.1) are in such common usage, even though they create several types of economic distortion.

The tariff also serves to provide protection for domestic industry and balance of payments gain, as well as government revenue, although, as shown later in this book, there are more desirable policy instruments (creating fewer distortions) for achieving each of these objectives.

Although the usefulness of Corden's approach can be (and is later in Chapter 4) questioned, it provides, at least, a systematic way of thinking about policy alternatives. It underlines much of the discussion contained in this book.

1.4 Prices, trade and policy

In most economic texts the price of a given good is simply defined as the point of equilibrium between demand and supply in competitive markets, ignoring possibilities for trade and government policy interventions.

When international trade and taxes and subsidies on production, consumption and trade are included, the concept of price becomes less clear. National policy-makers will need to consider several different definitions of 'price' in order to make correct decisions. The differences among these are of great importance for policy analysis, since they reflect a wide variety of possible economic outcomes and choices. Six definitions of price besides domestic supply–demand equilibrium, are specified below.

The existence of middlemen (wholesalers, etc.) and domestic transport costs will be ignored. The good is homogeneous (imports, exports and the product supplied or demanded domestically are identical), with zero cross-elasticities in demand and supply with other goods (no substitution). Import supply and export demand are infinitely elastic (the small-country assumption). A moment in time is being considered (prices being time-dated). Only true *ad valorem* taxes and subsidies are considered, since quotas, etc., cannot be equivalent in all respects. Markets clear, in the sense that supply equals demand.

The seven prices are defined as follows:*

1. P_e = domestic equilibrium price without trade or policy interventions.
2. P_m = price of imports, at border (c.i.f.).
3. P_x = price of exports, at border (f.o.b.).
4. P_{mt} = P_m plus import tariff.
5. P_{xt} = P_x minus export tax.
6. BP_{xt} = base price (being one of the previous five prices, to be explained below), adjusted for domestic consumer tax.
7. BP_{st} = base price, adjusted for domestic supplier tax.

Figure 1.2 illustrates the relation between P_e, P_m and P_x, with taxes ignored. D and X represent domestic and foreign demand elasticities, S and M the respective supply elasticities. A single good is considered, and P_m is always higher than P_x because the export price received must be adjusted downward from the import price paid by the cost of shipping. The position of P_e relative to P_m and P_x determines whether the good is imported, exported or non-traded; if P_e is above P_m the good is imported; if it is below P_x, it is exported; if it is between P_m and P_x, it is non-traded. In Figure 1.2(a) the good is non-traded since the cost of imports exceeds the local supply price, and the price received for

*Subsidy = negative tax

exports is less than that received for local sales. Q_e is the quantity demanded and supplied, and P_e is the actual market price. In Figure 1.2(b) imports are relatively cheap, forcing local suppliers to lower their price and sales to P_m and Q_s respectively. Consumption increases, with

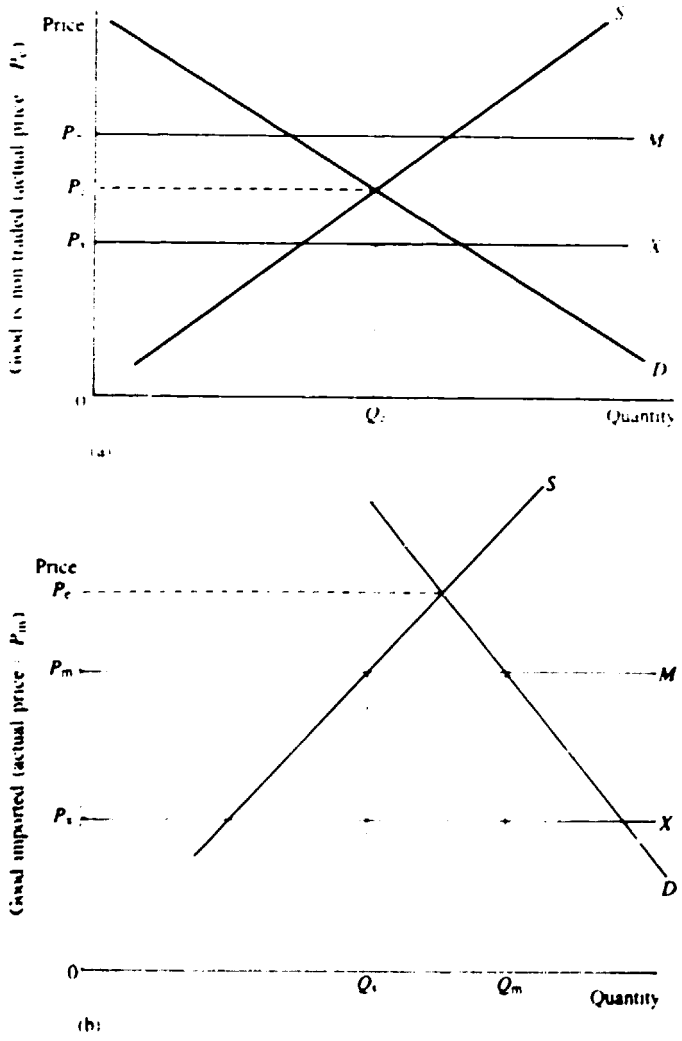
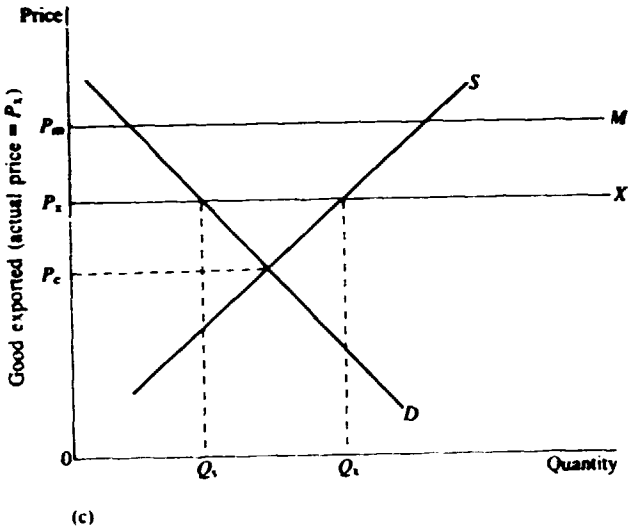


Figure 1.2 Relationships between domestic equilibrium price (P_e), price of imports (P_m) and prices of exports (P_x)



(c)

Figure 1.2 continued

$Q_m - Q_c$ being supplied by imports. In Figure 1.2(c) the price received for exports is relatively high, so supply to the local market is reduced to Q_c but, through exports ($Q_x - Q_c$), total production increases. It should be noted that, in each case given, the actual price is also the static efficiency price, and that the chances of a good being non-traded are greater when the differential between P_m and P_x is great, indicating high external transport (shipping) cost.

In Figure 1.3 trade taxes are introduced, perhaps for protecting or promoting industry, for raising government revenue or improving the trade balance. In Figure 1.3(a) a tariff raises the price of imports from P_m to P_{mt}. Local consumption drops to Q_m, local supply increases to Q_c and imports drop to Q_m minus Q_c. Government revenue equals ($P_{mt} - P_m$) times ($Q_m - Q_c$). Similarly, an export tax lowers the price received for exports, lowering domestic production and exports and increasing local consumption (Figure 1.3(b)). It can be seen that there is a limit on such taxation possibilities, fixed by the difference between P_m (or P_x) and P_c. For example, if the tariff raises P_{mt} above P_c, imports cease and the good becomes non-traded (as in Figure 1.2(a)),

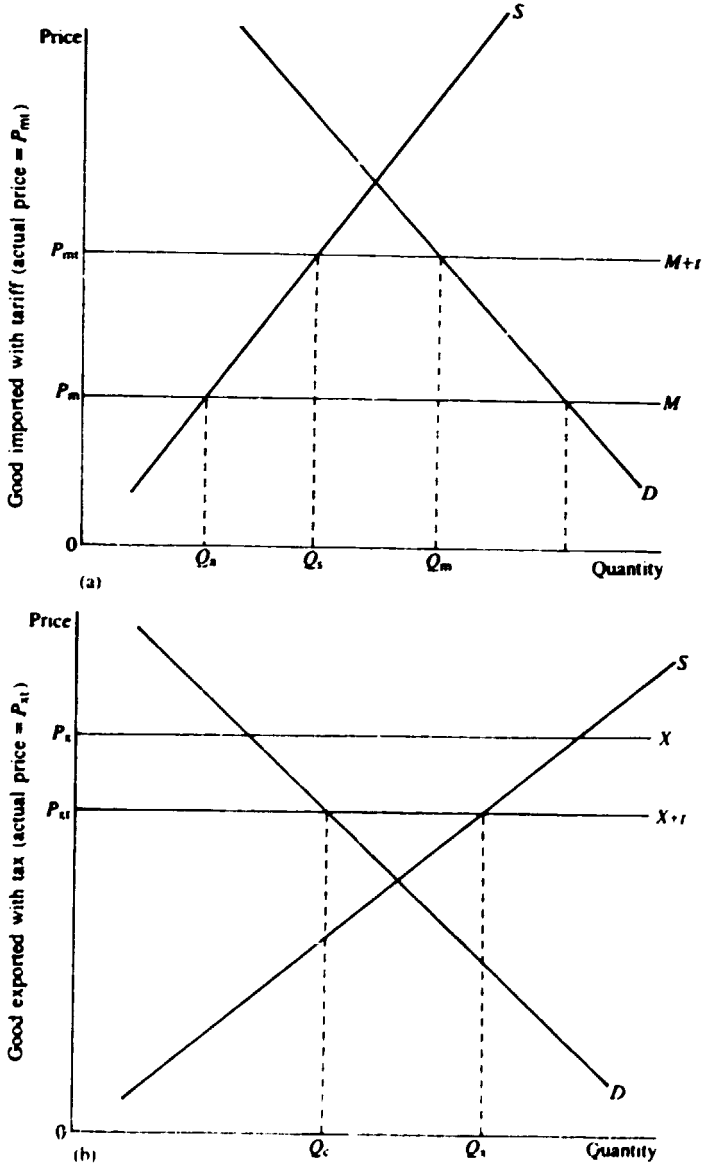


Figure 1.3 The impact of trade taxes on price relationships

the part of the tariff above P_e becomes redundant and government revenue ceases. It is therefore important to realize that an increase in the tariff will, only to a certain point, also increase government revenue (which is often, especially in the poorest countries, a major reason for imposing tariffs).

Now consider domestic consumption and production taxes, which affect BP_{ct} and BP_{st}. The case of a negative production tax (i.e. subsidy) combined with a tariff, shown in Figure 1.4, illustrates the impact on traded goods. In this case P_{mt} is the base price,[9] *which remains* the price faced by consumers. Domestic producers receive this amount *plus* the subsidy, so they get BP_{st}. Consumption is therefore unaffected (at Q_m) but domestic supply increases (to Q_s), thus decreasing imports.

Various other combinations could be worked out, but a main point of the illustration is that domestic taxes on traded goods create a wedge between the price paid by consumers and that received by producers. Second, there can be no shifting of the incidence of the tax, e.g. a tax on producers cannot be shifted to consumers (because of the assumption that import supply and demand for exports are infinitely elastic). Third, the government revenue effects may be quite significant. For example, Figure 1.4 shows that government expenditure rises by the area shaded in vertical lines, but also revenue (import duty) declines by the cross-hatched area, leaving only the area shaded in horizontal lines.

If the base price is P_e, i.e. the good is non-traded, the impact on domestic producer and consumer taxes is somewhat different, because the incidence of such taxes will now be shared between suppliers and users, depending on the relative elasticity of the supply and demand curves. Trade no longer separates demand from supply, and taxes on consumers and producers become equivalent in the sense that it is the incidence which matters.

This is illustrated in Figure 1.5, which assumes a production subsidy equal to s minus P_e; s cannot be the new equilibrium price, however, since supply would exceed demand. Producers will share the subsidy by lowering the price charged to consumers to BP_{ct}; that plus the subsidy brings the price they actually receive up to BP_{st}. Supply and demand are again in equilibrium, but at the higher level Q_s. The share of the subsidy gained by producers is shown by the vertically lined area, and the share gained by consumers is shown by the cross-hatched area; since the two elasticities have been drawn to be equal, so is the division of gains from the subsidy. The subsidy should be calculated on Q_s, not the smaller amount Q_1.

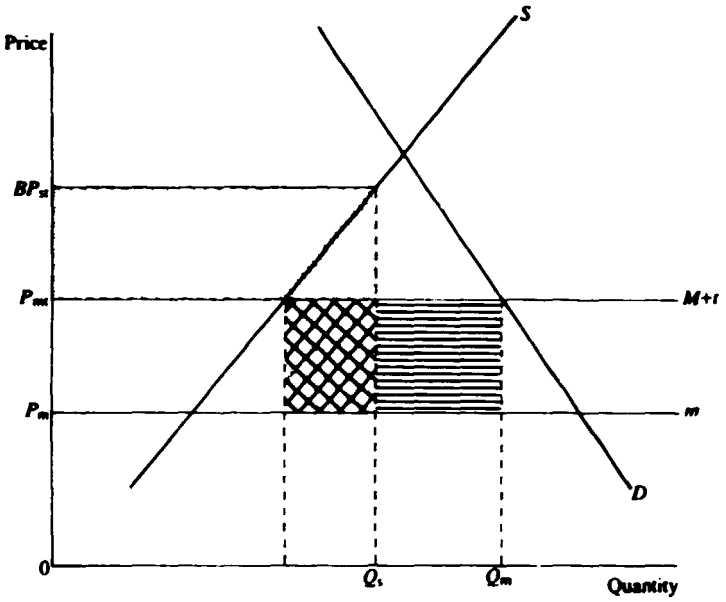


Figure 1.4 The impacts of domestic consumption and production taxes on price relationships

This section has aimed at identifying and showing the relationships between the seven types of price, and showing how production, consumption, trade and government revenue may be affected. Further interesting combinations could be thought of, ways of transforming an imported good into an export, for example, but this is left to the reader. The main point to be made is that when considering the concept of 'price', careful definition is required. These different price levels should be borne in mind in later discussions.

1.5 Structural adjustment policies

The principles and concepts discussed in preceding sections may appear to some readers as being 'mere theory', having no practical relevance. Governments intent on policy reform require guidelines, however, and following a series of exogenous shocks reforms aimed primarily at

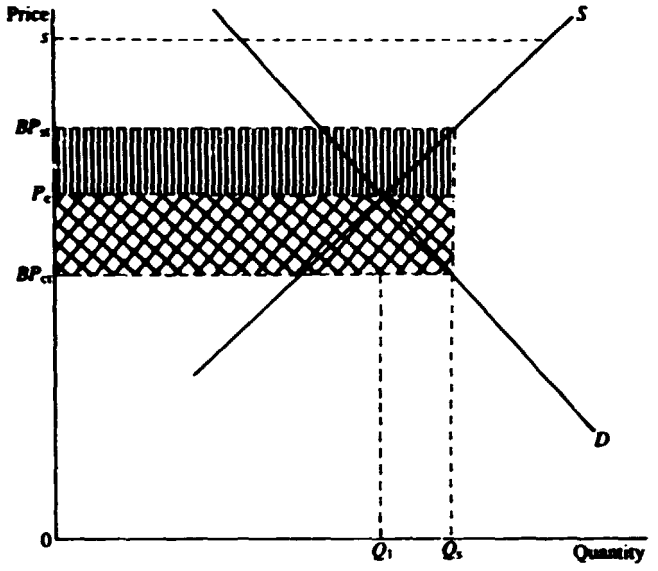


Figure 1.5 The impact of taxes on the price of a non-traded good

promoting structural adjustment have become, in the 1980s, a major issue for most developing countries.

After the second oil price jump of 1979–80 most developed market economy countries adopted deflationary monetary and fiscal policies. These reduced inflation rates, but they also led to the 1982 US recession, a drop in world trade, a sharp jump in real interest rates and a sudden drying-up of commercial lending by the international banking system to the more industrialized developing countries, which had relied heavily on such loans in the late 1970s. Oil-importing developing countries became caught in a foreign exchange squeeze. Financial repayments (capital plus interest) rose while earnings from commodity exports declined (a result of the recession followed by only weak recovery in the developed market economy countries plus technological changes tending to reduce raw material content of final products and to provide substitutes for traditional materials). Moreover, exports of manufactures by developing countries stagnated as a result of factors such as the recession, the related increase (mainly in the United States and the

European Economic Community (EEC)) in selective protection and threatened protection and increased automation (cost-reducing) in the developed market economy countries. Also, fluctuations in the value of the US dollar *vis-à-vis* the yen and the German mark and the US trade and government budget deficits contributed towards uncertainty in world trade. The late 1985 drop in oil prices provided some relief for oil importers, but further reduced capital inflows as development aid provided by the Organization of Petroleum Exporting Countries (OPEC) and commercial bank deposits declined.[10]

Developing countries with previously healthy foreign account balances suddenly went into deficit, and the many with foreign exchange difficulties found the new situation much worse. Imports had to be sharply curtailed, and since for many countries there was little 'fat' left, manufacturing industry bore the brunt, with drastic cuts in its ability to purchase intermediate and capital goods for which they were (and are) dependent on foreign suppliers; output, employment and capacity utilization declined. What was to be done?[11]

The World Bank and International Monetary Fund (IMF) stepped up their lending, offering hard currency to at least temporarily bridge the foreign exchange gap, but on condition that recipient countries undertake policy reforms, particularly regarding trade, but also relating to financial and labour markets, tax systems and government expenditure and relationships between public and private enterprise.[12] The remedies imposed (e.g. devaluation and exchange rate unification, removal of quantitative trade restrictions, reduction in average tariff and tariff range, removal of price controls, interest rate increases, government deficit and money supply reduction, privatization or liquidation of inefficient public enterprises) led in some countries to social unrest and, in a few, to withdrawal from agreed reforms.

It is too soon to judge whether the policy reforms under way will ultimately be successful. We hope so, partly because the ideas developed in this book are related to the World Bank approach (although different in some major respects such as our emphasis on objectives which are not purely economic, the need to consider comparative advantage in its dynamic sense, and acceptance of certain constraints on policy reform, such as revenue requirements).[13]

The World Bank (1987) proposes an industrial policy reform programme which contains some of the elements of our programme. The World Bank proposes as top priority an outward-looking trade strategy, replacing quotas with tariffs, reducing the level and variation of tariffs

and 'adopting realistic exchange rates'. Among complementary policies it states that '... prices should reflect the true cost of production'. It then proposes the reduction and eventual elimination of price controls, and reform of minimum wage legislation so that it acts as a safety net for only the lowest-paid workers. However, the World Bank appears to give scant attention to public revenue effects, the infant-industry case for protection, self-sufficiency considerations and income distribution aims (our stages 2–5, see Chapter 3). Therefore, although the direction of the proposed reforms is similar, we believe that we offer a more reasoned and realistic approach.

The World Bank's proposals, and indeed many of our own, are frequently found in the World Bank's structural adjustment loan packages. Therefore, some countries have been introducing some of these reforms since the early 1980s. The medium- and long-term nature of the reforms means that some five to eight years may need to elapse before any systematic evaluation of their impact can be made. The World Bank (1988) gives details of countries in which such reforms are in progress, and attempts a preliminary assessment of their effectiveness. It comes to fairly optimistic conclusions, arguing that the performance of thirty countries with adjustment programmes was moderately better than that of countries without such programmes. However, this optimistic assessment is qualified by reference to a lack of improvement in sub-Saharan Africa and other highly indebted countries.

More critical surveys of experience with structural adjustment are also becoming available, for example Taylor (1988), van Arkadie (1986), Bacha and Feinberg (1986) and Mosley and Smith (1989). Examples of country studies are Kydd and Hewitt (1986) on Malawi, and Davies (1986) on Jamaica. Mosley (1989) gives a useful survey of alternative views on such programmes. Much of the disagreement relates to timing and sequencing of reforms, and the extent to which demand deflation through major reductions in public expenditure is required for the success of the type of price reforms that are discussed in this book.

This general background should be borne in mind in considering the subsequent discussion of policy reforms.

Notes

1. On command and indicative planning, see S. Marglin, 'Information in price and command systems of planning', in J. Margolis and H. G. .itton (eds.)

Public Economics (London: Macmillan, 1969). For what is perhaps the classic paper on planning theory, first published in 1936–7, see O. Lange, 'On the economic theory of socialism', in O. Lange and F. Taylor, *On the Economic Theory of Socialism* (New York: McGraw-Hill, 1964). For a general review of development planning techniques see C. Blitzer, P. Clark and L. Taylor (eds.) *Economy-wide Models and Development Planning* (London: Oxford University Press, 1975).

2. See UNIDO, P. Dasgupta, S. Marglin and A. Sen, *Guidelines for Project Evaluation* (1972); I. Little and J. Mirrlees, *Project Appraisal and Planning for Developing Countries* (London: Heinemann, 1974); L. Squire and H. van der Tak, *Economic Analysis of Projects World Bank* (1975); UNIDO, *Guide to Practical Project Appraisal* (1979).
3. One of the earliest and most influential studies was I. Little, T. Scitovsky and M. Scott, *Industry and Trade in Some Developing Countries* (London: Oxford University Press, 1970).
4. See, for example, Little, Scitovsky and Scott, *op. cit.*; B. Balassa *et al.*, *The Structure of Protection in Developing Countries* (Baltimore and London: Johns Hopkins University Press, 1971); W.M. Corden, *The Theory of Protection* (London: Oxford University Press, 1971) and *Trade Policy and Economic Welfare* (Oxford: Clarendon Press, 1974); J. Bhagwati, A. Krueger *et al.*, *Foreign Trade Regimes and Economic Development*, 12 vols. (Cambridge, Mass.: Ballinger, for NBER, 1975–8).
5. These paragraphs draw on evidence contained in *Industrial Priorities in Developing Countries: The selection process in Brazil, India, Mexico, Republic of Korea and Turkey* (UNIDO, 1979). Also see A.K. Sen, 'Control areas and accounting prices: An approach to project evaluation', *Economic Journal* (March, 1972).
6. 'Bad' outputs such as pollution will of course have negative value and should be regarded as a cost.
7. The basic formula is

$$V = \sum_{t=0}^{n} \frac{(B_t - C_t)}{(1+i)^t}$$

where V = net present value, B and C are the benefits and costs, i is the discount rate and t represents time. In practice, non-economic costs and benefits are often excluded from the calculation because of measurement difficulties and the fact that they imply value judgements.
8. See W.M. Corden, *Trade Policy and Economic Welfare* (1974), Chapters 2–3. Also J. Bhagwati, 'The generalized theory of distortion and welfare', in Bhagwati *et al.* (eds), *Trade, Balance of Payments and Growth* (1971).
9. The term base price was used in defining BP_{xt} and BP_{mt} because any one of the five previously defined prices could provide the basis for adjusting for domestic taxes, depending on whether the good is non-traded, imported (free), imported (taxed), exported (free) or exported (taxed).
10. For a more detailed analysis see UNIDO (1987).

11. Chapter 3 of UNIDO (1987) examines this question.
12. See World Bank, *World Development Report 1987*, Box 2.6 (Washington, DC: 1987).
13. A number of bilateral aid agencies have also adopted similar policies.

2

Prices and government interventions in developing countries

This chapter makes a case for the importance of price reform by examining both theoretical arguments and empirical evidence on the functioning of markets in developing countries. After considering government interventions in markets in general terms, it discusses in turn theoretical arguments relating to a number of specific types of markets – those for traded commodities, foreign exchange, labour and capital. The latter part of the chapter surveys the empirical evidence on the significance of the malfunctioning of markets in developing countries.[1]

There is a common view in the literature on economic development that prices in developing countries are highly 'distorted', and cannot therefore fulfil their appropriate role as a resource allocation mechanism. This view has become increasingly influential in recent years. The consensus of opinion among development economists is now probably that earlier writings in the 1950s and 1960s, which assumed that demand and supply conditions in developing countries are so inelastic or unresponsive to price changes that 'prices do not matter', greatly overstated their case. Before examining this argument it may be helpful to clarify the meaning of some of the terms used.

Here a distortion refers to the deviation between actual prices and opportunity costs to the economy of the items concerned.[2] Opportunity costs are defined as the value of a commodity or resource in its most likely alternative use and this value in alternative use is what is meant by an economic value. The term shadow price also arises at several

points. Although first used in the programming literature, it has been adopted by cost–benefit analysis to refer to a price that reflects opportunity costs to the economy.[3] Shadow prices may also be defined in a broader sense, in that they may reflect other factors of a dynamic or of a 'non-economic' nature (e.g. income distribution); this broader view is central to much of the present study.

The argument concerning the economic significance of distortions is that governments intervene in the functioning of markets in developing countries for a variety of reasons, for example to conserve foreign exchange, to protect local producers from foreign competition, to guarantee a minimum wage, to encourage investment and to raise government revenue. These interventions will involve a range of policy instruments – including quantitative import restrictions, tariffs, minimum wage legislation, credit subsidies, controlled interest rates and indirect taxes. In practice, the neat matching of one target (for example, the balance of payments position) with one policy variable or instrument (for example, the exchange rate), which is seen as the sole means of achieving the target concerned, is very rarely present. Government objectives are normally sought through a variety of instruments, often with the relative weights placed on the instruments varying over time.[4] While the basic objectives of government policy can be taken as given, the argument is that interventions in the operation of markets will force prices away from opportunity costs. Thus it is argued that significant losses in economic efficiency will be created if producers and consumers respond to 'distorted' rather than 'efficient' market prices.[5] Initially many market prices may not themselves reflect economic values, so that this original distortion is the reason for government intervention. However, it is argued that, in many cases, intervention to remove one distortion is carried out in such a way as to create fresh distortions elsewhere in the economy. These 'by-product distortions', or side-effects, may be both unanticipated and undesirable, and, theoretically at least, could negate the beneficial effect of the removal of the initial distortion.

This argument will be explored further below, but a simple and obvious example can be given at this point. Consumption of certain luxury goods may be judged to be socially undesirable and therefore their import may be severely restricted by the imposition of a high import tariff.[6] However, the tariff may now make domestic production of the good commercially profitable, since its domestic price can be set equal to or just below the tariff-inclusive world price. If consumption of the good is to be discouraged, it will require either the imposition of a high rate

of indirect taxation on domestic sales, or the outright prohibition of domestic production in addition to restraint on imports. The initial intervention through the import tariff will not on its own be sufficient to discourage consumption if domestic production becomes a viable alternative.

One of the major strands of the argument in favour of overall reform of the price system in many developing countries is what is seen as the chaotic set of forces working to determine relative prices in these economies. Often, it is suggested, governments cannot foresee the implications for prices of various policies, and if they could they would feel unhappy with the consequences of many of their interventions in the functioning of markets. It should be noted that this type of argument has often been used as a justification for leaving many crucial decisions to the outcome of market forces. However, the logic of the argument does not preclude government intervention. It simply suggests that if markets do not give the signals that governments wish, intervention will be necessary. However, the implications of this intervention should be examined to ensure that desirable effects in one direction are not offset by undesirable effects in another.

Over the last fifteen years or so a large number of empirical studies have identified significant divergences between market prices and shadow prices.[7] In addition, work on the systems of protection in developing countries has focused more narrowly upon the relative incentives which have been created by various forms of protection, and implications of these incentives for economic efficiency.[8] For a large number of countries the general picture is of economies where the price system has been highly distorted through government intervention. The discussion here focuses on what have been termed 'macro prices': that is, prices for the main macro parameters – foreign exchange, labour and capital.[9] The discussion is simplified in that it ignores the segmentation of labour and capital markets and proceeds as if there is a single price for these factors. Also, each of the three markets – those for foreign exchange, labour and capital – is considered in isolation even though these macro prices are interrelated. These interrelations can be complex, however, with the direction of causation varying with circumstances. For example, the exchange rate may influence wage rates strongly in some circumstances, and be influenced by them in others. The exchange rate is crucial in determining the relative costs of traded and non-traded goods, and if wages are determined by the cost of labour's consumption, any change in the exchange rate will alter money wages. On the other

hand, in a situation of cost–push inflation arising from an independent growth in money wages, it will be wage increases that determine the market-clearing exchange rate through their effect on domestic *vis-à-vis* international inflation. A similar two-way causation can exist between the exchange rate and interest rates. If an economy is prone to short-run capital movements in response to interest rate changes, the latter can be an important influence on the exchange rate. On the other hand, if the exchange rate is fixed and monetary policy is used to reduce a trade imbalance it will be interest rates that are determined by the exchange rate, and not vice versa. Although the discussion that follows is in terms of markets viewed in isolation, these various interrelations should be borne in mind.

Prior to a discussion of the exchange rate it is necessary to consider markets for traded commodities, since conditions in these markets will be a key influence on the demand for and supply of foreign exchange.

2.1 Markets for traded commodities

It is well established in the literature on shadow pricing that for internationally traded commodities, for which an economy participates in world trade, economic opportunity costs will be given by the world prices, c.i.f. for imports and f.o.b. for exports, of the commodities concerned. In an economy with protection from the world market – and most economies will be protected in some way – domestic and world prices will not be equal.[10] If import tariffs are imposed, once an import reaches its port of entry, its price will be raised immediately by the tariff. Quotas will also work to raise domestic prices above world levels, even if no tariffs are involved, since they restrict the supply of an import. The price of such a good in the domestic market will rise until demand is equated with the limited supply available under the quota. The excess of the domestic selling price above the import price is termed the scarcity premium arising from the imposition of a quota. The ratio of the scarcity premium to the world price is sometimes referred to as the tariff equivalent premium, since a tariff of this rate would create the same domestic price as the quota; however, as is discussed further below, the effects of tariffs and quotas need not be the same.

On the export side similar effects will be at work. An export tax on a commodity which can be sold domestically as well as abroad will create a domestic price equal to the export price minus the export tax. This

follows since, other things being equal, producers will only sell abroad if they can obtain a net price, after tax payments, equal to that in the domestic market.[11] Export subsidies have the opposite effect, however, since the domestic price must now equal the export price plus the subsidy.

These trade interventions will normally be introduced for a number of reasons and, as noted earlier, in practice, one policy instrument often serves more than one purpose. Import tariffs may be imposed for revenue reasons, for example; however, in many countries they may have an important role in either restricting the overall demand for imports, or raising the profitability of local import-competing producers. Import quotas are often introduced for short-run balance of payments considerations to restrict demand for the limited amount of foreign exchange that is available. However, it has been argued that, frequently, quotas introduced under such circumstances have been retained for protection after the original foreign exchange crisis has passed. While, theoretically, quota restrictions and import tariffs can be shown to have identical effects on resource use, this argument rests on the assumption of competitive production conditions in the domestic economy.[12] Under monopolistic domestic production, for example, supply and demand curves may be affected differently by the quota as opposed to a tariff. Of more practical importance is likely to be the fact that tariffs provide a known rate of protection given by the percentage tariff rate. The effect of quotas on domestic prices is more uncertain, however, and will change with domestic supply and demand conditions. Therefore with tariff protection, the domestic price is normally set by the world price plus the tariff, so that domestic prices alter in response to changes in world prices, with domestic demand and supply having little or no influence on domestic prices. With a fixed quota, however, the reverse will hold and it will be shifts in domestic demand and supply which determine domestic prices. The distributional effects of tariffs and quotas will differ also. Tariffs are a major source of government revenue, while the scarcity premium created by quotas will go to those traders or producers who obtain import licences under the quota system. Although in principle governments can auction import licences and thus capture this premium for themselves, in practice this policy is rarely followed.[13]

Export taxes are used chiefly to raise government revenue and are normally applied to primary or mineral exports. They could be imposed, for example, to tax windfall gains due to sudden fluctuations in the world price for a commodity. In theory, export taxes could also be imposed by an individual country for terms of trade reasons – what is described

as the 'optimal tariff' case – the aim being to restrict supply and thus raise the export prices of goods with inelastic world demand. In practice this has not been a major motivation for most developing countries, who are generally price-takers for their exports, especially of manufactures. In some circumstances, export taxes may also be used to protect domestic users of the commodity. This follows because, as we have noted, export taxes work to lower the domestic prices at which exportable goods are sold. Finally, it should be noted that export subsidies can take various forms, which will be discussed in more detail below. They are a means of raising the profitability of exporting, often as a counter to the level of the official exchange rate, which may provide an unattractive rate of return for exporters.

The extent to which many developing countries have used these interventions in markets for traded commodities is now well documented, and the undesirable consequences for economic efficiency of many protective measures are stressed frequently. The three following separate strands of the argument can be distinguished:

(a) the varied and often unanticipated effect of protective measures in terms of the incentives created for different branches of the industrial sector; in other words not all branches will benefit equally and the relative levels of incentive may be unplanned and, in some cases, undesired;
(b) the general encouragement protection from import competition gives to high-cost domestic production, and the lack of stimulus it provides to reduce costs to international levels;
(c) the harmful impact of industrial protection on other parts of the economy, particularly agriculture and exports in general.

Considering the relative impact of protection on different industrial branches, the essential point is that the final degree of incentive will generally not be known in advance, when the protective measures involved are being planned. This may be either because of the uncertain impact of quotas, or because of the effect of imposing different rates of tariffs, taxes or subsidies on inputs as compared with outputs. The observed or nominal rate of protection is given by the ratio of the domestic price to the world price for a comparable commodity.[14] However, the full effect of a protective system can only be estimated by comparing the tariff or tariff equivalents on the output of a producer with those on the inputs he must purchase. The logic of this is that if in absolute terms

a producer's input prices are raised above international levels by more than his output prices, he is being penalized rather than encouraged by the protective system, even though his own output may have a positive tariff. A comparison of the output tariff of a producer with a weighted average of the tariffs on his inputs, with the weights determined by the share of inputs in the value of the output, gives what is termed the 'effective rate of protection' (ERP). This measures the extent to which value added of a producer, or the aggregate of all producers in a branch, at domestic, i.e. protected, prices, exceeds what it would be in a free-trade situation, where world and domestic prices are assumed to be equalized.[15]

In other words, to assess the full impact of a protective system it is necessary to know the degree to which value added, not simply the output price, is raised above international levels. Higher value added will normally, although not inevitably, imply higher profitability, and if one is interested in gauging the impact of the incentives resulting from protection, one must have some idea of how relative profitability between industrial branches is affected.[16]

ERP measures have been used extensively in applied work on industrial development in developing countries, although they are not without both empirical and conceptual problems. Empirically there are difficulties in obtaining comparable world and domestic price data, and in achieving a sufficient degree of disaggregation to estimate separate ERPs for a large number of branches, and time series are usually not available, so ERP estimates are commonly limited to a single year. Conceptually also there are difficulties in the treatment of non-traded goods, in the need to assume fixed input coefficients, and with the appropriate exchange rate to use in the calculations. None the less, given these limitations, it is generally felt that the ERP measure is useful for analyzing the extent to which protectionist policies create incentives for resources to shift in different directions.

Table 2.1, taken from Krueger (1984), gives both the average level of ERP in manufacturing and the range of ERPs between branches within manufacturing, for a number of countries in the 1960s and early 1970s.

While it is acknowledged that ERPs will give a more accurate picture of the relative incentives to resource shifts than will nominal rates, a major problem is that ERP estimates are both technically complex and require detailed information. Where they can be produced they will normally only be available with a lag of several years, during which time economic conditions and policies may have changed. However,

Table 2.1 Mean and range of ERP for manufacturing in some developing countries

Country	Year	Average ERP manufacturing	Range of ERPs
Brazil	1958	106	17 to 502
	1963	184	60 to 687
	1967	63	4 to 252
Chile	1967	175	−23 to 1,.40
Colombia	1969	19	−8 to 1,040
Indonesia	1971	119	−19 to 5,400
Côte d'Ivoire	1973	41	−25 to 278
Pakistan	1963–4	356	−6 to 595
	1970–1	200	36 to 595
Republic of Korea	1968	−1	−15 to 82
Thailand	1973	27	−43 to 236
Tunisia	1972	250	1 to 737

Source A.O. Krueger (1984), Table 3.1.

where nominal and effective rates are highly correlated, and this appears to be the case in some countries, one can argue that nominal rates alone will give at least a rough guide to relative resource-pulls created by protection.[17]

A point of particular concern often raised in discussions of the unanticipated effects of protection is that the degree of bias against local production of capital goods and in favour of consumer goods may be far greater than indicated by nominal protection. While there is a clear tendency in many countries for nominal tariffs to be higher for consumer, as compared with producer or intermediate, goods, the tariff structure often magnifies this into a much greater effect in terms of value added. The point is simply that while some governments may list capital goods as one of their priority areas, and encourage their production through various incentives, the protection system may be creating a major bias against their domestic production through its impact on the relative profitability of different manufacturing branches.[18]

The second strand in the attack on the use of tariffs and quotas in developing countries is that they provide a shelter for inefficient domestic producers who have no incentive to lower their costs to international levels. It is argued that local production at costs above world levels imposes economic losses since, with the abolition of protection, resources would be reallocated to more internationally competitive activities. The

ERP measure discussed above must be seen primarily as an indicator of the relative degree of incentive received by producers in particular activities from the protective system. It is not strictly a measure of the efficiency with which resources are employed. A measure often used to indicate the relative efficiency of different branches or sectors is the domestic resource cost (DRC) ratio, which compares the value of domestic resources used per unit of foreign exchange earned if output is exported, or saved if it is an import substitute.[19] Large numbers of studies have estimated DRC ratios for developing countries.[20] A common finding is that for many activities:

1. The DRC ratio is substantially above the official exchange rate, so that the costs of earning or saving foreign exchange exceed the official price at which foreign currency is bought and sold.
2. There is a significant variation in DRC ratios between different branches and sectors.

The DRC ratio can be interpreted as an exchange rate for particular investments. However, if it is to be used as a measure of the economic desirability of an investment, domestic costs at shadow prices must be compared with the economic cost of foreign exchange, not with the official exchange rate where there is a divergence between the actual exchange rate and the value of additional foreign exchange to the economy. In other words, if one is to use the DRC ratio for either *ex-ante* decision taking, or for *ex-post* reappraisals, one must compare the DRC for the investment concerned with the shadow exchange rate.[21] Investments with DRCs above the shadow exchange rate are interpreted as economically unjustifiable, unless they involve dynamic or external benefits which have not been allowed for in the calculations.

The wide variations between DRCs for different activities is often interpreted as evidence of resource misallocation – the case is stronger where the DRCs are above the shadow exchange rate, but even where they are not it can still be argued that efficiency in resource use would be improved by expanding activities with low DRCs at the expense of those with high DRCs. The common sense of this is that if it costs x per cent more to save foreign exchange in activity i as compared with activity j, it will be desirable to expand j relative to i. Theoretically, the case is not as clear as this but, in general, wide variations in DRC between different activities can be taken as evidence of a misallocation of resources, which is likely to have been made possible by the differential

set of incentives created by the import protection system.[22] Protection therefore allows firms with high costs in both economic and commercial terms to survive, and in the absence of reforms to the protective system they will have little incentive to lower these costs.

Turning to the effect of trade controls on sectors of the economy other than import-substituting manufacturing, two important biases may be created by a protective system, one relating to exports, and the other to agriculture. It is argued that by restricting the demand for imports, tariffs and quotas allow the maintenance of an exchange rate well above that which would obtain in the absence of such controls. This means that exporters receive less local currency for every unit of foreign exchange earned than in a free-trade situation, where a lower exchange rate would prevail. Further biases against exports can arise from the effect of import controls in raising the price of tradeable goods sold in the home market, relative to those sold abroad, and in requiring exporters to use domestically produced inputs more expensive than, and perhaps inferior to, the alternatives available on the world market. Also recent work by Greenaway and Milner (1985) has drawn attention to the impact of import protection on the prices of non-traded goods, since higher prices for these goods are an implicit tax on exporters. It is recognized that subsidies to exporters, for example in the form of access to low-cost credit, or reductions in tax, can be used to offset these biases, and in theory there will be a rate of uniform import tariffs and export subsidies which can create the same incentive effect as any level of the exchange rate. The argument is, however, that in many of the countries which adopted inward-looking industrialization strategies in the 1960s and 1970s, export subsidies were no more than a partial offset to the biases against exports created by the protective system. Some empirical attempts to substantiate this view have used an extension of the ERP measure – what is termed the effective rate of subsidy (ERS). The ERS allows for the fact that profitability can be effected by subsidies, as well as tariffs and quotas, and incorporates their impact on domestic value added.[23] A bias against exports can be said to exist when the ERS on domestic sales exceeds that on exports. However, Balassa (1982) has also shown that in some countries which adopted an export-orientated growth strategy the bias swung in the other direction, with exports having a higher ERS than domestic sales.[24]

Finally, considering the case of a bias against agriculture, this may arise from the fact that agriculture is still the major export sector in many developing countries, so that it naturally suffers most from any anti-export

bias. However, it is also suggested that this stems from the lack of protection afforded agriculture relative to other sectors. Cases of negative ERP for agriculture can arise if domestic prices for crops and livestock are broadly comparable with world levels, while the locally produced or imported inputs used in agriculture are protected or taxed, and thus have domestic prices above world levels. In some instances this discrimination against agriculture may have been the unanticipated result of the separate policies of keeping down food prices for urban consumers, while at the same time protecting local manufacturing.[25]

To summarize, therefore, in many countries where interventions in the market for traded commodities are still widespread, it is frequently suggested that a number of harmful side-effects have been created. These include unanticipated effective levels of protection and profit incentives to particular sectors, a shelter to high-cost producers, a bias against exporting in general, and in some countries, a bias against agriculture in particular. Therefore, while there may be a strong theoretical case for protection of manufacturing in developing countries, there is a substantial amount of evidence, from a range of countries, that in practice the way in which protection has been implemented has created a number of significant negative effects both within manufacturing itself and in other parts of the economy.

2.2 Market for foreign exchange

The type of trade control policy summarized above will have significant implications for the market for foreign exchange. Both imports and exports will be at lower levels than in the absence of controls, and any excess demand for foreign exchange will be suppressed. Where, as is common in such situations, the government maintains a fixed value for the official exchange rate this will be above a market-clearing level. In other words, when there is a suppressed demand for foreign exchange (dollars) the local currency (e.g. rupee) price of a dollar will be below the free-market level, and with the removal of trade controls and the freeing of the exchange rate, the rupee price of dollars will rise, implying a rupee devaluation.

A number of shadow pricing studies have illustrated the magnitude of divergence between official exchange rates and market-clearing rates, where the latter are termed a shadow exchange rate. However, it should be noted that the concept of a shadow exchange rate is not free from

ambiguity, since it must be defined in the context of a given level of domestic expenditure and set of trade control policies. The approach to the measurement of the shadow exchange rate will differ, for example, whether one assumes the introduction of free trade or the continuation of the existing controls.[26]

Overvaluation of domestic relative to foreign currency is generally undesirable because of the distorted set of relative prices that it creates. This is another variant of the anti-export bias argument referred to above. Overvaluation, however, penalizes the production of tradeable goods in general in comparison with non-tradeables, since all goods whose domestic prices are determined by world prices will receive less domestic currency per unit of output when the exchange rate is overvalued. As we have seen, the protection of tradeables in the home market normally allows producers to set prices well above world levels, often more than compensating for overvaluation. However, exporters often receive only limited compensation through export subsidies, so that in these circumstances the chief burden of overvaluation falls on exportables, not on the production of traded goods in general.

Devaluation of the local currency combined with reform of the trade controls system is seen as the remedy for this situation, and this policy prescription is in line with many of the recommendations of this study. The argument is that reform of the trade control system is desirable because of the differential and often unanticipated incentives and biases the system creates. However, to allow even a gradual reform of the system, it is likely to be necessary to lower the exchange rate. Devaluation is seen as essential as follows:

1. To remove any underlying deficit in the balance of payments. This, it is argued, will occur through a switching effect as the prices of tradeables rise relative to non-tradeables, and as production for the export market expands in response to this price incentive.
2. To protect import competing production for which tariffs will be lowered and quotas relaxed. Thus while the prices of imports in the domestic market will be reduced by trade reforms, devaluation will work in the opposite direction to raise all domestic prices for goods priced originally in foreign currency. Unlike tariffs and quotas, however, in its effect on prices, devaluation does not distinguish between traded goods.

It must be stressed, however, that devaluation *per se* is not an

immediate economic panacea for developing countries, and that its success depends upon certain key conditions being met.[27] Several points should be stressed, as follows:

(1) For the relative price effect of a devaluation to improve the trade balance requires that the price elasticities for a country's traded goods be greater than a certain minimum, the size of which will depend upon the initial trade deficit. However, there seems to be agreement that, beyond the short term, for most developing countries the size of their trade elasticities is not itself a problem.

(2) Much more critical appears to be the extent to which the relative price effect of devaluation is eroded by an increase in the domestic price of non-traded goods. It is for this reason that most discussions of devaluation stress the need to combine the switching policy of devaluation with general restraint of internal demand to prevent excess demand for non-traded goods emerging, and thus putting up their prices, until the original pre-devaluation relative prices are restored.

Successful devaluations generally require a fall in real expenditure, or absorption as it is termed in the trade literature, and in particular a fall in real wages. The response of money wages to the immediate inflationary impact of devaluation where cost-plus pricing is used will be a critical parameter. At one extreme, if money wages rise by the same rate as domestic prices – the case of real wage rigidity – the relative price effect of devaluation will be removed completely.

(3) An improvement in an underlying balance-of-payments deficit requires devaluation of the real as opposed to the nominal exchange rate, where the former is the nominal rate adjusted by the ratio of a price index for the country concerned to that for its trading partners. In other words, international competitiveness is determined not just by nominal exchange rates, but also by differential rates of inflation. Devaluations inevitably have an inflationary impact through the rise in import prices they create, and if this initial impetus is built on by wage settlements, credit expansion or inflationary expectations, the inflation rate can accelerate, thus weakening and perhaps offsetting the initial real devaluation.

(4) The need for devaluation to be accompanied by a fall in real expenditure has already been noted. However, devaluation itself can have a significant short-run deflationary impact. This can arise through a

number of mechanisms. For example, if the demand for imports is inelastic a rise in their domestic currency prices following devaluation will lead to a higher expenditure in domestic currency on imports. If the level of overall expenditure is constrained by monetary policy this will leave a smaller expenditure for all home produced goods. This deflationary effect will be greater the higher the average propensity to import, and the lower the price elasticity of demand for imports. Another possibility, important for highly indebted countries, arises through the increase in the domestic currency value of external debt servicing. However, whether or not devaluation on its own is sufficiently deflationary to permit the required resource shifts into tradeables and out of non-tradeables clearly varies with circumstances. The assessment of the overall deflationary consequences of devaluation rests largely on one's view of export supply responses. If exports grow rapidly, rising expenditure from the export sector may counterbalance the short-run deflationary consequences noted above.[28]

To summarize, therefore, devaluation must be seen as part of a macro-economic package that aims at both expenditure-switching and restraint, and attempts to control wages and counter the undesirable short-run distributional consequences of devaluation. Some of the empirical evidence on devaluation will be surveyed briefly in a later section. It must be stressed, however, that devaluation is likely to be essential for the trade and price reform strategy considered here. The issue is one of identifying and applying appropriate macro-economic policies that will allow devaluation to work effectively, and limit the short-run costs in terms of output loss, inflation and redistribution that may be involved.

2.3 Market for labour

The third market intervention which will be considered concerns the functioning of markets for labour in developing countries. A common pattern is for there to be a major divergence between rural wages for unskilled workers, and wages paid to unskilled or semi-skilled workers on new development projects in urban areas. In so far as these wages simply reflect differences in quality of labour or costs of training, no market imperfection need be present. However, where these factors account for only a small part of observed wage differences, the latter are normally put down to interventions in the operation of labour markets.

In other words, in a smooth-functioning labour market, workers could shift from rural to urban areas until the wage rates for similar skills are equalized. Nominal differences might remain due to variations in the cost of living in different areas, or to costs of movement, but after money wages have been deflated by the relevant cost indices, real differences should be removed.

The picture which is normally painted in shadow price studies is one of relatively competitive rural labour markets for unskilled labour, so that daily wages for hired agricultural labour can be taken as broadly equal to the productivity of the workers concerned. The competitive nature of these rural markets can be taken to stem from their possession of the following characteristics: large numbers of employers (chiefly small farmers), large numbers of potential workers normally poorly organized in terms of trade union activity, reasonably good information on prevailing wage rates, and geographical mobility of labour, at least on a regional basis.

On the other hand, it is often argued that in urban labour markets for unskilled or semi-skilled workers conditions are non-competitive due particularly to trade union organization and government intervention in the form of minimum wage legislation. These factors, it is suggested, raise urban wages in the formal or organized sector significantly above rural wage rates. However, it is the latter which are normally taken to define the economic cost of unskilled labour. In other words, if one adopts a view of the rural areas of developing countries as characterized by a surplus of underemployed workers, and assumes that the creation of new urban-based jobs draws additional workers out of agriculture, the opportunity cost of employing these workers on new projects will be measured by a drop in agricultural output. This is the output forgone, or the opportunity cost, associated with their new employment. If one further assumes that rural labour markets are competitive, the productivity of agricultural labour can be approximated by their earnings from wage employment.

The divergence between market wages paid to unskilled workers on new projects and their economic cost or shadow wage is often found to be substantial. A common result of shadow price studies, for example, is that the output forgone in agriculture may be less than half the urban wage.[29] The point of central importance for the present discussion relates to the role of government intervention. Governments may intervene in the functioning of labour markets to establish minimum wages, to guarantee a certain minimum income level, or to support trade

union activity to prevent the exploitation of workers by powerful employers. In some countries these interventions may be significant in raising urban wages above the levels they would otherwise reach. Many would accept these interventions as highly desirable in their own right, but none the less argue that they introduce major distortions in urban labour markets, and create a number of serious side-effects.

The three following arguments are normally put forward in discussions of the harmful impact of labour market distortions:

(1) If the market wage paid to unskilled labour is substantially above the economic cost of employing these workers, the commercial profitability of new investment will be understated relative to its economic profitability. In other words, firms will pay a wage bill determined by market wage rates and, other things being equal, their commercial or private profitability will be less than the economic returns they generate, to the extent that the shadow wage is below the market wage. If investment decisions are based on commercial criteria, too little investment will be made. In addition, labour-intensive activities will be particularly penalized, so that the composition of output in the economy will contain a lower share of labour-intensive commodities than if market and shadow wages were equal. This argument, concerning the divergence between market wages and the economic costs of employing unskilled labour, provided a major part of the initial theoretical rationale for protection of new industrial activity in developing countries, and was the clearest example of the need to introduce shadow price estimates into calculations of investment viability.[30]

(2) In addition to a problem of insufficient investment, it is suggested that labour market distortions will have a harmful effect on the technology embodied in new investment. Therefore provided there is the possibility of substitution of capital or materials for labour, it is argued that urban wages above the economic cost of labour will encourage a shift in factor intensity in a labour-saving, rather than a labour-using direction. This will have undesirable effects in terms of both income distribution – since it is now recognized that the provision of employment is the most effective means of raising the living standards of low-income groups in developing countries – and economic efficiency. In economic terms the argument is that there will be a loss of efficiency, since specialization on the basis of developing countries' abundant resource, labour, will not be carried far enough.[31] The impact

of labour market distortions on technological choice will be compounded by additional factors operative in capital markets, which work to lower the market cost of capital below its economic level. These capital market distortions will be discussed in the next section. However, the important point to stress is that the overall significance of both sets of distortions for the technology used in developing countries depends critically on the possibility of significant substitution between factors in the production of different commodities in response to changes in factor prices. This is an issue on which much has been written. In general there is now agreement that in a wide range of industries there is significant scope for factor substitution. What is more in dispute is the importance of the relative prices of factors as an influence on technology choice. It must be recognized that they are likely to be a more significant influence in some branches than in others, and that other influences will include the availability and cost of information on alternative technologies, market size and concentration, product quality and the availability of complementary inputs.[12]

(3) Finally, the third argument regarding the harmful effects of distorted urban wages refers to their impact on rural–urban migration. It is suggested that the creation of new urban-based jobs can lead to an outflow of migrants from rural areas in excess of the number of new jobs available. Such a situation can arise if migrants balance expected earnings in the formal urban sector against their present average income in the countryside. Where the wage differential between urban and rural areas is both significant and fixed, it is suggested that the level of urban employment will act as the equilibrating mechanism in the labour market. When excessive numbers of migrants leave the rural areas, urban unemployment will rise until the expectation of obtaining a job is reduced to the extent required to equate expected urban earnings with average rural incomes. In this view, institutionally fixed high urban wages comprise the key factor inducing high migration, and are seen as creating problems, not only because of the excessive loss of agricultural output involved, but also because of the growth of unemployment or underemployment in the casual or informal urban sectors, as migrants who fail to obtain permanent jobs none the less remain in urban areas.

In terms of the functioning of urban markets, the arguments discussed above focus primarily on the markets for unskilled labour. A common assumption is that for skilled workers demand in many developing

countries is high relative to their availability, and that it is this demand rather than minimum wage legislation or trade union bargaining strength which determines market wages. If such excess demand in fact exists, it is likely that most skilled workers will be able to find employment at roughly comparable levels of earnings and productivity, should they leave their existing activity. This is the justification for the assumption, common in many empirical studies of shadow prices, that for skilled workers the market and the shadow wage are roughly equal.[13] In the case of unskilled labour, however, the basic argument is that government interventions either directly through minimum-wage legislation, or indirectly through their support for trade union activism or wage-setting policy within the public sector itself, create institutional rigidities in the functioning of urban labour markets which prevent wages from falling to their market-clearing levels. The distorted urban wages in turn, it is argued, create the undesirable side-effects discussed above – chiefly excessive capital-intensity, reductions in investment and employment growth, and excessive rural–urban migration.

However, before ending the discussion of labour markets it is important to stress that despite the frequent repetition of the view of government intervention in urban labour markets set out above, it has now come to be challenged as a generalization valid for all developing countries. Squire (1981), for example, in a survey of evidence on the operation of labour markets in developing countries argues that government intervention is often not in support of a high-wage policy; minimum-wage legislation is seen as ineffective in many countries, and in others government intervention is to keep down urban wages rather than to increase them. A number of countries where a high-wage policy has been pursued are identified, but Squire suggests that not only is experience varied, but that only a limited number of countries would have much to gain from a major change in government policy towards the labour market.[14] This type of argument does not necessarily invalidate the view that market and shadow wage rates can differ substantially for many categories of workers, but it does question the economic significance of government-induced labour market distortions.

2.4 Capital markets

Many developing countries do not have free capital markets. Rather, they are characterized by what has become known as 'financial

repression', which is generally equated with controls which result in negative or very low real interest rates on deposits. These controls are normally imposed by the government, although they can occasionally arise from agreements between private sector financial institutions to restrict interest rates. The main consequences are that actual interest rates are distorted from the equilibrium interest rates which would prevail in a competitive market for money, wide interest rate differentials arise, and funds may be rationed, leading to delays and possible corruption. Repression may also be extended to refer to government restrictions which discourage the development of financial institutions and instruments, leading to incomplete, or fragmented, financial markets. Repression theories originated with McKinnon (1973) and Shaw (1973), based on the earlier work of Gurley and Shaw (1960) and Goldsmith (1969). Subsequent theoretical refinements have been conveniently summarized by Fry (1982). Numerous attempts have been made to estimate the impact of financial repression on growth, and the major studies are summarized later in the chapter. In both the theoretical and empirical review of repression theory, we have drawn extensively on Kitchen (1986).

The importance of the banking sector is central to theories of financial repression. In most developing countries, bank deposits (or deposits in quasi-banks, such as post office savings banks, savings and loan associations and credit unions) provide by far the most important vehicle for savings. Other savings instruments, such as marketable securities (share and bonds), life insurance policies and pensions schemes, tend to be limited in availability. On the other side of the coin we see that banks and quasi-banks dominate the sources of funds for investment. Firms or individuals may save and invest their own funds, but apart from that the main source of capital will be bank loans (from commercial or development banks). They are unlikely to be able to issue equity capital or debentures as the stock market, if there is one, is likely to be narrow. Nor can they turn to pension funds, insurance companies or venture capital companies for loans or equity. Therefore, investors are dependent on the banking system. In a country with underdeveloped financial institutions and instruments, the willingness of savers to hold money in the form of bank deposits is therefore crucial to the saving–intermediation–investment process (sometimes called debt intermediation). Repression theories have identified the level of real interest rates as being the crucial determinant of the willingness of savers to hold money in the form of bank deposits.

2.5 Instruments of financial repression

The main instrument of repression is generally interest rate controls, although exchange rate controls and high reserve requirements of commercial banks can also play a significant role. The literature tends to concentrate on the impact of interest rate controls, often referring to them as a proxy for financial repression. As price reform is concerned with the level of interest rates as representing the price of capital, we will concentrate here on interest rate controls.

Interest rate controls

Three main forms of administered interest rate control may be identified: ceilings on deposit rates; ceilings on loan rates; and ceilings on both deposit and loan rates.[15]

Interest rate floors on deposit and loan rates are also possible, but as they appear to be much less commonly found, we will concentrate on the other controls.

Interest rate controls generally seem to be imposed with the worthy aim of encouraging investment. If interest rates to borrowers are kept low, the authorities believe that this will increase the number of projects which have a positive net present value (NPV) when discounted at the borrowing rate, and will therefore increase the rate of investment. Ceilings on loan rates will produce this effect directly, while ceilings on deposit rates are thought to produce the same effect indirectly, for banks which obtain their funds cheaply will be able to lend them cheaply. Ceilings on both together may eliminate any possibility of anything going wrong with the above analysis.[16]

This line of argument, though, assumes that adequate funds will still be forthcoming from savers to meet the demands of investors, in spite of the ceilings (direct or indirect) on the deposit rate. However, if the supply of savings and the demand for investible funds are both functions of the real rate of interest, the effect may be to raise the demand for funds above, and to depress the supply of funds below, the equilibrium level.

Figure 2.1 illustrates the savings (S) and investment (I) functions, both being determined by the real rate of interest (r).

In the absence of interest rate controls, the market is in equilibrium at e, where $I_e = S_e$ and r_e is the equilibrium rate of interest which clears

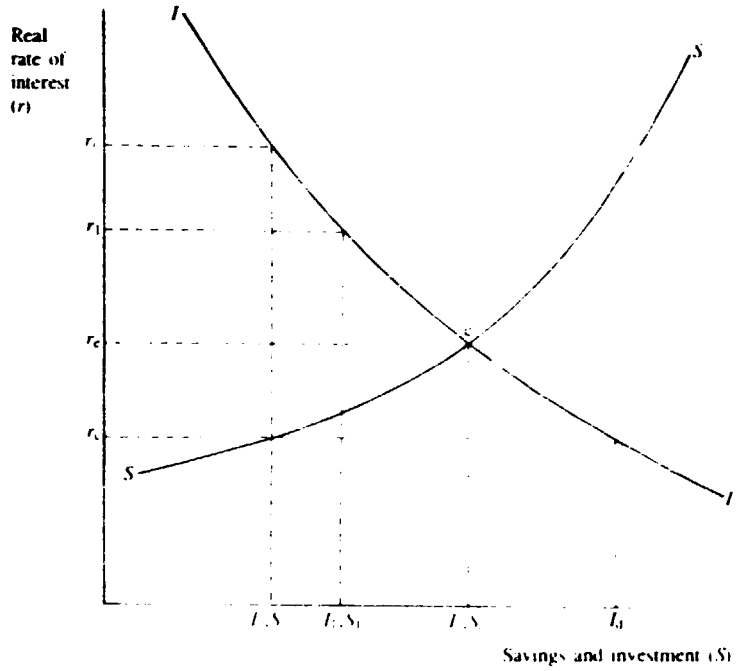


Figure 2.1 Savings and investment under controlled interest rates

the market.[47] Now, if the deposit rate of interest is fixed by government below r_e, say at r_s, then the amount of savings deposited in institutions will fall to S_s. Thus the amount available for investment is I_s and the rate of interest charged to borrowers which clears the market is r_c. The effect of the control is to lower both savings and investment by an amount $(I_e - I_s)$. As investment is an important determinant of the rate of growth, the effect of the controlled interest rate is to restrict the rate of growth. The difference between lending and borrowing rates, $r_c - r_s$, will result in higher margins to the financial intermediaries, although the *volume* of their business will be lower than it would be in equilibrium.

If in addition the lending rate is controlled at a level r_1 below r_s, then the financial intermediaries will have insufficient deposits to meet the borrowing demand at interest rate r_1. Demand for borrowing for investment will be I_1 and unsatisfied demand $(I_1 - I_s)$. The extreme case is that the lending rate should be fixed so that it is equal to the

borrowing rate, r_c (or, in practice, slightly above to cover banks' administration costs). Under these circumstances the unsatisfied demand for investible funds would be $I_d - I_c$. With controlled lending rates, financial intermediaries must ration credit by means other than the interest rate. They will therefore tend to favour borrowers with substantial security or an established reputation, which may mean projects with foreign capital, technology or management. Second, they will tend to favour low-risk projects, with relatively low rates of return, as they will not be able to charge a risk premium commensurate with the risk of the project. The consequence is that higher-return, higher-risk projects, projects promoted by younger (and possibly more enterprising) entrepreneurs and small projects may be starved of capital. In short, the venture capital element of financing may have disappeared and the overall quality of investment may have been reduced. Again, the effect may be to restrict the rate of economic growth, because the quality of investment may be reduced, as well as the quantity.

It should be noted that a repressed interest rate system impinges on the current assets of enterprises, as well as on investment in fixed assets. If credit is scarce or rationed, then a firm's level of capital utilization may be restricted, for example because it cannot obtain credit to finance its working capital, which may restrict its output and sales. Liberalization of interest rates, leading to greater availability of short-term credit, may have the effect of increasing the utilization of the existing capital stock.

Figure 2.1 represents a static equilibrium analysis of saving, investment and the interest rate. If, in period 1, the interest rate on deposits is raised to the equilibrium level, saving and investment will increase. This will increase growth in the next period, which in turn will increase saving and investment in that period. Therefore, the implication of repression theory is that liberalizing the interest rate will have the effect of moving a country into a virtuous circle of increasing saving, investment and growth.

Other measures of financial repression

Bank deposit requirements

It is normal for central banks to impose reserve requirements on commercial banks. Historically, reserve requirements were intended to provide some stability to the banking system. Typically, in industrialized

countries, total reserve requirements may be of the order of 10–15 per cent of bank deposits. However, in some developing countries, the figure may become as high as 50 per cent. These reserves are placed with the central bank at low (or even zero) rates of interest, or are invested in low-interest government bonds. Thus the government uses the banking system as a source of finance, and becomes the principal borrower, pre-empting other potential borrowers.

The effect on the banking system is twofold. First, a substantial amount of the available funds is directed away from potential borrowers. Second, the bank's interest rate structure will be distorted. If banks are to make profits, they must maintain a wide margin between borrowing and lending rates in order to compensate themselves for the low income they receive on their reserves. This is done by depressing interest on deposits, or by raising the rate charged to borrowers (or both) relative to what would otherwise be the equilibrium rate.

Direction of investment

Some governments order their financial institutions to direct a certain proportion of their loans to a specific sector, often agriculture, at low rates of interest. An alternative practice is for governments to set up specialized lending agencies, financed by taxation or cheap government borrowing, to lend to specific sectors. Again, agriculture is often a beneficiary. Such policies may restrict the funds available to the industrial sector, and at the same time raise the cost of those funds which are available. However, the intention is usually to correct a bias among lenders which favours industrial rather than agricultural borrowers. This bias is itself often a consequence of financial repression, which curtails the volume of lending and the charging of risk premiums for high-risk projects, such as agricultural loans.

Assessment of repression theories

The assumptions underlying repression theories, outlined above, together with the heavy emphasis in the literature on the role of real interest rates, suggests that it might not tell the whole story. The keystone of the theory is a presentation of the relationship between saving, investment and real interest rates. However, in any economy, this is likely to be a substantial simplification of determinants of saving and investment. First, the theory starts with the relationships

Demand for money = private sector financial savings
= bank + quasi-bank deposits
= credit availability + reserve requirements

Private sector financial savings is a function of the real rate of interest.

The next step is to equate

Investment = credit availability, which is a function of the real rate of interest

This, of course, even if correct, explains only private sector investment and only that part which is financed by domestically mobilized resources. Government investment is, in the main in developing countries, financed by taxation, and aid and borrowings from abroad, neither of which is dependent upon the domestic rate of interest. Borrowing by government on the domestic capital market may be a function of the rate on interest, but in many developing countries the issue of government bonds provides only a small proportion of government income. Therefore government investment, which usually provides a substantial proportion of total investment (even in industrialized countries) can be excluded from repression theory.[38]

Likewise, much private sector investment which is financed from abroad can also be excluded. The volume of direct foreign investment and export credits is not a function of domestic interest rates. On the other hand, shortages of domestic credit may force the local private sector to seek foreign capital. The availability of foreign capital, whether to government or the private sector, may also discourage domestic saving.[39]

Repression theories tend to assume, at least implicitly, that investment (we are now down to domestically financed private sector investment) is financed entirely by borrowing. This, of course, is a substantial simplification. In any country, however well-developed its financial sector, a substantial proportion of investment is financed by retained earnings, which are not dependent on the intermediation mechanism. In many instances, the constraint on new investment may not be the unavailability (or the cost) of credit, but, rather, the unavailability of equity capital, whether retained earnings or funds raised by issuing new shares. The debt-shareholders' funds ratio and security requirements may in many cases be the restraint on lending, rather than the availability of credit. Therefore, financial repression can only restrict that proportion

of investment which is financed by borrowing on the domestic market and this, in some countries, may be a fairly small proportion of total investment, even at 'liberalized' interest rates.

Although the impact of financial repression on total investment may be less than indicated by the simplified neoclassical model, it may still reduce the quality of investment. First, financial repression is still likely to encourage self-financed investment at the expense of intermediation and borrowing. Second, the credit rationing process will still tend to discriminate against new entrepreneurs, new technologies and products not previously produced in the country. Lenders will tend to favour borrowers with security and a track record. This may squeeze out some highly profitable, but more risky, ventures. However, this problem is encountered also in industrialized countries with advanced financial sectors; most lenders like to have good security. These arguments have been presented formally by Galbis (1977 and 1982). Repression theories further assume that, given liberalized interest rates, maturity transformation (borrowing short and lending long) by financial institutions will permit the medium- and long-term borrowing needed for investment purposes. If institutions are reluctant to lend long term, then an increase in deposits may not have the beneficial effects on investment and growth that are presumed, unless both lenders and borrowers are prepared to use short-term funds to finance long-term assets. In some countries governments may need to encourage longer-term lending, for example by partially guaranteeing or re-discounting the more distant debt service payments.

Galbis (1982) has further pointed out that the effects of financial repression on investment may be mitigated by the development of alternative channels of intermediation, at least to some extent. Unorganized money markets will be encouraged, foreign finance may be substituted for domestic finance, and self-financing may substitute for borrowing in enterprises which are squeezed out of financial markets. These mechanisms may be less efficient and more expensive than the alternative of liberalized money markets, but none the less they may compensate to some extent.

Repression theory also places great stress on the banking system as an essential financial intermediary in the saving–investment process. While this may be justified in many countries, others with a wider range of financial instruments and institutions offer investment opportunities in which capital gain, rather than interest on deposits, provides the incentive to save. Furthermore, the theory appears to assume that if funds

are available for investment, then there will be a demand for it, assuming that the price (that is, the interest rate) is right. It is likely that investment is determined by a range of factors, of which the interest rate is but one. Other loan conditions, notably the maturity of the loan and the security required, are another. Businessmen, at least in the industrialized countries, would place considerable emphasis on the elusive but none the less important 'confidence', which to some extent depends on macro-economic expectations (see also note 36).

A further cause of criticism lies in the assumption which repression theory makes about the credit allocation procedures of lenders (generally banks) Fry (1978b) stated that under repression, '. . . non-price rationing of investible funds must occur. This typically takes place on the basis of quality of collateral, political pressures, "name", loan size and covert benefits to responsible loan officers. These criteria can be counted on to discriminate inefficiently between investment opportunities.

Of course, all this takes place to some extent whether or not interest rates are controlled by government. In countries where no such controls exist, banks still rely heavily on their assessment of the creditworthiness of the borrowers, and the security available, and charging risk premiums on higher-risk loans may be a secondary rather than a primary rationing device. Such credit rationing by banks has the effect of restraining the demand for funds, and in itself helps to maintain equilibrium interest rates below what they would otherwise be in the absence of credit rationing. Arndt (1982) has pointed out that credit rationing by banks tends to exclude the less privileged loan applicants, and may justify government inspired concessional credit schemes, for example for small farmers, for house purchase, for small-scale enterprises, or others who may be identified as priority borrowers. Concessions do not necessarily imply interest rate 'subsidies'; they may come in the form of funds tied to certain specific uses, or in the guarantee or refinancing of commercial bank credit to certain categories of borrowers. A case for a government concessional credit scheme is made by Bolnick (1982), in the context of Indonesia's special concessional credit programmes designed to promote the development of indigenous small-scale enterprises.

Although repression theory has emphasized the effects of interest rate controls on investment, there are also further possible effects on technology choice and distribution. The relative cheapening of capital through controlled interest rates will tend to encourage the use of capital-intensive technologies and the selection of capital-intensive industries, while the maintenance of artificially low rates of interest means that

borrowers pay less, and savers receive less than they would in a freely competitive market. One economic effect is to encourage consumption at the expense of saving. However, the major effect is distributional, since savers (i.e. lenders) are implicitly subsidizing borrowers, a subsidy which becomes more apparent when real interest rates are negative. *A priori*, there appears to be no justification for such a subsidization of borrowers by lenders, and the onus is on the supporters of financial repression to justify it. In some cases (for example, when saving is excessive) it may be readily justifiable, but these cases probably arise in only a small number of developing countries.

The case for liberalization of financial markets, therefore, appears fairly strong generally. However, in some countries we recognize that it may not be feasible to remove interest rate controls, at least in the short run, for institutional, political or legal reasons. In such cases, the question arises as to whether there exists a feasible 'second-best' policy which alleviates many, if not all, the undesirable effects of interest rate controls. Nellor (1985) has looked at tax policy options which might reduce the distortions to savings in repressed financial markets. He comes to the conclusion that consumption (or sales) taxes can be designed to make saving relatively more attractive, and can be adjusted so that the real return on saving approximates to the free-market interest rate. In order to implement such a 'second-best' policy, it is necessary to have a broadly based consumption tax. Many developing countries do not have such a system of taxation, of course, but its introduction is one of the principal recommendations of this study.

This concludes our summary of the theoretical impact of financial repression on saving, investment and growth. While we find in favour of liberalized interest rates, it seems that interest rate liberalization is not likely to be a sufficient condition for the development of the financial sector to the extent that it exerts a substantial influence on investment and economic growth. In particular, it needs to be accompanied by institutional development and strengthening so that alternative competitive markets for savings, such as equities, unit trusts, life assurance and pension funds, are created. It is important, too, that financial institutions should perform the function of maturity transformation, making long-term credit available for capital investment. The theoretical conclusions, therefore, tend to give qualified support to what is currently regarded as the accepted position succinctly put by van Wijnbergen (1982, p. 3): 'Establishing high time deposit rates (high compared to anticipated inflation) has become a standard part of the policy advice given to

(developing countries) by external experts, ranging from the visiting academic economist via the World Bank to emissaries of the IMF.' However, in our view the strongest argument against repressed interest rates remains intact: why should savers be expected to subsidize borrowers? The case needs to be made before repressed interest rates are accepted.

2.6 Subsidies

To conclude our review of distortions, we add a brief review of subsidies not already discussed under traded goods. The definition of a subsidy is not straightforward. At the simplest level it is a cash payment by the government to a consumer or producer. However, many subsidies do not take the form of cash payments. For example, 'incentives' such as government encouragement to industry through tax concessions, special depreciation allowances or physcial facilities such as rent-free premises are, in fact, subsidies. The provision of free educational or medical services are subsidies. Permitting a manufacturer to obtain higher prices on the domestic market because he is protected from imports is a subsidy. At another level, governments which absorb the losses of state enterprises are subsidizing either the consumer of the output or the resources employed by the enterprises, often labour. The control of investment licenses can enable existing manufacturers to earn a rent because capacity or production is restricted. Thus a subsidy may be described as any device which permits consumers to purchase goods at a price below that which would obtain in a competitive market, or which enables producers to obtain an economic rent. A subsidy has the effect of transferring resources from one group to another. The key point to remember is that one group must pay for another's subsidy.

At the level of resource allocation, the presence of subsidies affects the prices used in investment appraisal and leads therefore to different decisions than would be made if competitive market prices were used. The use of shadow prices in principle can correct the use of 'distorted' market prices. However, in practice the extent to which world prices are used in investment appraisal is limited. Moreover, even when used in appraisals, shadow prices may not be able to catch and offset all the effects of subsidies, especially in countries where subsidies are widespread.

Although the presence of subsidies may 'distort' prices and resource

allocation, none the less they reflect government policies. The subsidized price, given perfect government decision-taking, is the price which the government wants to exist. In particular, subsidies are an important device for transferring resources to the poor. The provision of subsidized health, education and food are obvious examples. Likewise, governments may protect or subsidize infant industries because of their growth potential. Similarly, governments may subsidize state enterprises or private sector enterprises because they are assisting government policies of employment creation or regional development, for example. There is undoubtedly a rational basis for subsidies, which we discuss in Chapter 4. However, our concern is that in practice in many countries subsidies may not have been applied logically and consistently, leading in some instances to undesired prices and other effects which no longer reflect government policies and which may lead to significant misallocation of resources.

Apart from protection from competing imports and low interest rates, which have already been discussed, most industrial subsidies come in the form of incentives. Public sector industrial enterprises may, in addition, have losses financed by the government. However, cases of cash subsidies, especially to the private sector, are not plentiful. The most widespread form of incentive is the tax concession, which may take the form of tax holidays, accelerated depreciation allowances, tax deduction for expansion, reinvestment and tax exemption on imported capital equipment. In several instances, the object of these subsidies is to compensate manufacturers for the anti-export bias of import tariffs. However, they also have the effect of lowering the after-tax cost of capital relative to the cost of labour and may therefore introduce a further distortion in that the use of capital is encouraged at the expense of labour. That distortion will influence both the selection of industry (e.g. oil-refining may appear relatively more attractive than shoe-making), and the choice of technology within an industry.

The effects of the provision of indirect subsidies through protective tariffs and capital market controls have already been discussed. A few words should be said about three other specific types of subsidy, namely export subsidies, consumer subsidies and subsidies provided by losses of state corporations.

(1) *Export subsidies.* Direct subsidies on exports are contrary to GATT regulations. However, the prevalence of high tariffs in many countries means that prices of some inputs of exporting industries are well above world prices, and some form of export subsidy is needed

to compensate exporters for the anti-export bias of tariffs. Therefore, it is not uncommon for governments to offer some form of incentives package to exporters. This may take the form of rebates on import duties, tax credits or other fiscal incentives, or even direct cash payments. Alternatively, the exchange rate may be held down to assist exporters. These 'subsidies' are generally not in themselves distortionary; rather they are intended to correct for other distortions.

(2) *Consumer subsidies*. Subsidies to consumers usually apply to foodstuffs and, in some countries, to petroleum products and other consumer products such as textile goods. They are generally introduced for welfare reasons. The distortionary impact of such subsidies depends upon how they are operated. The least distortionary method would be a cash hand-out to consumers, such as a welfare payment. A price subsidized by the government may lead to 'excessive' consumption (e.g. of petroleum products) leading to effects such as a diversion of exports and a preference for private transport rather than public transport. A subsidy to producers, with the intention of keeping prices low, may encourage excess production of the subsidized good rather than other goods. Finally, subsidized imports (for example, of foodstuffs) may lower domestic prices and thereby discourage local production. This problem has been experienced as a result of low-priced food aid (Jackson and Eade, 1982).

(3) *Losses of state corporations*. The extent to which losses incurred by state corporations arise from deliberate subsidies rather than bad planning or management is largely a matter for conjecture. None the less, losses of state corporations in some countries are substantial and represent a notable drain on the government budget. Ghana, Senegal, United Republic of Tanzania and Zambia are four countries for which the extent of losses has been documented (Killick, 1983). But subsidies to state enterprises are not restricted to absorbing losses. The provision of low-cost finance, including development aid, freedom from taxation and the ability to sell its output or provide services at artificially high prices because of protection or monopoly are advantages which state enterprises may receive.

The rationale for subsidizing state enterprises is that they have 'social' as well as financial objectives. To the extent that these objectives conflict, pursuit of an objective of maximizing net social benefits may entail financial losses, which would justify a subsidy. However, the widespread suspicion that state enterprises, particularly those in a monopoly or

protected position, generate 'X-inefficiency' (production inefficiencies due to lack of competition) suggests that subsidies provided on the grounds of maximizing net social benefits should be justified carefully.

The notion of subsidizing deserving cases may appear to be superficially attractive. However, we have seen that subsidies may have a number of important side-effects, notably in resource allocation, which although unintended, may none the less be undesirable. It is also important to bear in mind that subsidy schemes may be very expensive to administer, a point of particular relevance to countries where administrative staff and skills are scarce, and they open possibilities for corruption. Costs of administration and corruption need to be borne in mind as well as the financial costs of subsidies. As a generalization, therefore, we find that subsidies need to be used carefully. Where necessary, they should be simple to implement, and governments should ensure that the expected benefits exceed the expected costs.

2.7 Economic significance of distortions

Traded goods

The preceding sections have discussed the major distortions which, it is often argued, exist in many developing countries. It is clear that a large number of applied studies on both shadow pricing and broader measures of economic efficiency provide evidence of the existence of many distortions. However, establishing their existence is not the same as proving the validity of arguments which assert that such distortions have a critical role in holding back the long-run development of many countries. The question of the economic significance of these distortions must be considered; for example, are there in some instances short-run costs which have to be borne as part of a desirable and viable long-run strategy? It is clear that one need not accept all the arguments noted in the preceding sections. Most controversial is the implication that trade controls are always undesirable. For example, it might be argued that notwithstanding the distortionary effects of a system of import quotas and tariffs, given the foreign exchange constraint faced by a particular economy, such trade controls provide the most effective and least harmful means of managing the balance of payments. Of course, it must be recognized that specific elements of a system of controls can always be

improved, but for many countries there is no justification for automatically accepting the view that full trade liberalization is a feasible and more effective option, in terms of long-run growth, than some forms of protection.

Given the frequent statements of the desirability of removing distortions from the key markets of developing countries it is necessary to consider some of the evidence to substantiate such claims. It is interesting to note that one of the leading researchers in this area has commented in Krueger (1984) that: 'Despite the importance of distortions in theory relatively little empirical work has been undertaken to estimate their magnitude or their effects.' (p. 555.)

Most work on the quantitative impact of distortions has been devoted to the costs of protection and general interventions in international trade. Two broad approaches can be identified: the first involves what is termed 'partial equilibrium' analysis, since it does not rest on some consistent macro-model of an economy; the second, however, uses such a model, and can be seen as a 'general equilibrium' approach. It is significant that early attempts to estimate the cost of protection in a partial framework found this cost to be only a small proportion of current national income. The approach was basically to estimate the production and consumption cost for goods produced domestically under protection, but which would be imported if the protective system were abolished. The production costs are defined as the difference between domestic costs for the importable items, which would be imported under free trade, and their import value.

Consumption costs are the difference between what consumers are willing to pay for the importable products under protection, and the price that would be established once free trade was introduced.[40] In combination these two effects were described as the 'allocative inefficiency' associated with protection, and, as we have noted, were generally found to be rather small. However, partial equilibrium approaches to the cost of protection were extended significantly by incorporating 'X-inefficiency' effects into the calculations.[41] X-inefficiency implies that firms are not producing at their minimum possible unit costs, and it can arise, it is argued, due to a lack of competitive pressure in an environment protected from world competition. Bergsman's extension of the earlier approach allowed for the possibility that many protected commodities might still be produced domestically after the move to free trade, but that in the new competitive environment X-inefficiency would fall, thus bringing production costs down to international levels. The existence of X-inefficiency creates an

additional cost of protection not captured by the earlier production and consumption costs. The economy as a whole would gain from the reduction of X-inefficiency due to the resources freed for use elsewhere, while consumers of the products affected would gain through lower prices. A major limitation of the approach, however, is that it cannot distinguish between high costs due to a relaxation of cost-reducing efforts, defined as X-inefficiency, and monopoly profits. In other words, with protection, domestic prices may be above world prices either because production costs are higher than they need be – X-inefficiency – or because a monopoly position in a sheltered market is being exploited. However, bearing this limitation in mind, the major point of interest for the present discussion is that by allowing for a combination of X-inefficiency and monopoly returns, Bergsman produced cost-of-protection estimates substantially above those found by others. His major effort was directed at estimates for Brazil, but he also applied his method to other economies; his results are summarized in Table 2.2.

The important points to note are as follows:

1. For all economies the allocative costs of protection, arising from allocative inefficiency, are either very small or negative. Negative results imply that countries lose from the move to free trade, chiefly because of the terms of trade effect.
2. While the X-inefficiency–monopoly returns effect is always more significant, in only two of the six countries studied is it more than 5 per cent of national income.

What is a high cost in this context is not clear. Bergsman himself argues that the figures for Brazil and Pakistan are high enough to matter. Others may feel that, given the emphasis often placed on the irrationality of the protective system in many developing countries, results of this order

Table 2.2 Costs of protection in six economies (data from the 1960s) (percentage of GDP)

	Brazil	Malaysia	Mexico	Pakistan	Philippines	Norway
Net allocative cost	0.3	−1.2	0.3	0.5	1.0	−0.2
X-inefficiency plus monopoly return	6.8	0.4	2.2	5.4	2.6	2.0
Total cost of protection	7.1	−0.8	2.5	5.9	3.6	1.8

Source: Bergsman (1974), Table 1

of magnitude are hardly convincing evidence that distortions arising from protection really are significant.[42]

The general equilibrium approach to estimates of the cost of protection has also been employed in recent years. Krueger (1984) summarizes the types of models which have been used, stressing their demanding data requirements and pointing out the econometric techniques involved. The work of De Melo (1978) on Colombia is frequently cited as an important example of this approach. What is significant is that although his results generally produce higher cost-of-protection estimates than the partial approach, they appear highly sensitive to key assumptions. The cost of protection ranges from 3.8 per cent of GNP, assuming a quota on coffee exports and an upward-sloping labour supply curve, to 11 per cent with an optimal tax on coffee exports, and the same labour market conditions. If a perfectly elastic labour supply curve is assumed, the cost of protection becomes 5.8 per cent with the same coffee quota, and 15.8 per cent with the export tax.[43] This is a very wide range, and illustrates the uncertainty attached to exercises of this type.

The World Bank (1987) cites other studies that use this approach. One study estimated the gain in GDP in Turkey in the late 1970s from the removal of its import quotas scheme as 5.4 per cent of GDP; another for the Philippines for the same period estimated that full liberalization of foreign trade would increase GNP by just over 5 per cent.

The major point to stress regarding any attempt to capture the macro-economic costs arising from an import protection system is that for most countries experiencing relatively high protection, free trade is no more than a hypothetical situation, and little confidence can be placed in projections for an economy which moves from a highly protected to an open trading policy. It is significant that only by incorporating dynamic factors, such as cost reductions due to lower X-inefficiency, can quantitatively significant cost of protection estimates be derived, at least in a partial equilibrium framework. However, these improvements are only one possible scenario resulting from the removal of trade controls. Those less optimistic concerning the benefits associated with freer trade could construct an alternative with high-cost domestic producers closing down, and the resources freed by their closure not finding their way into dynamic export activities. In these circumstances it would be free trade which introduces the costs, in terms of a loss of potential national income, not protection. The difficulty is that once one allows for the central importance of dynamic rather than static considerations, estimates of costs will depend largely upon judgements concerning the viability of

alternative growth strategies. Naturally, opinions differ on such broad questions, and those sceptical of the merits of free trade are unlikely to be convinced by cost-of-protection calculations.

A more fruitful approach to the question of the impact of trade distortions on growth is likely to be through reductions in exports due to the anti-export bias of protection.[44] If exports are held back this is likely to have important implications for long-run growth, since rising exports should help to ease the foreign exchange constraint and may allow the attainment of greater economies of scale, when production is no longer limited to the home market. Exports can be held back in a number of ways: two of these – the high cost of non-traded inputs arising from protection and the relatively higher incentives for domestic market sales – will be referred to in this section. A third, a high exchange rate maintained by protection, will be considered in the following section.

Recent work using what is termed 'shift analysis' has estimated the extent to which protection of importables has penalized the export sector, through its effect on the domestic price of non-tradeables. As we have noted earlier, higher prices of non-traded inputs imply an implicit tax on the export sector which may more than offset any subsidies it receives. Greenaway and Milner (1985) provide data on the shift coefficient in a number of countries, where this can be seen as the proportion of the growth of protection to importers that is passed on to exporters as higher prices of non-traded goods. The simple average for the Latin American countries for which they provide data is 67 per cent.[45] An important point the authors bring out is that while governments can set nominal rates of import duty and export subsidies, unless they operate a very comprehensive set of price controls for the non-traded sector they cannot influence prices of non-traded goods in relation to importables and exportables. The final outcome of relative prices will be determined by the technological characteristics and consumer preferences that determined the degree of substitutability between non-traded and traded sectors. In other words, governments cannot influence the shift coefficient and thus cannot determine *ex ante* the real protection or real subsidy they are granting. This is another way of expressing the argument regarding the unco-ordinated nature of the incentive structure under a trade control system. The exact empirical significance of the findings of shift analysis is unclear since one would need to know how exports have responded to the taxes on exports that are implied. However, it provides further evidence of anti-export bias.

There is evidence from a number of countries, much of which is

summarized in Krueger (1978), that non-traditional exports respond to both export incentives and real exchange rate changes. Krueger stresses, however, that the critical determinant of performance appears to be the trade bias of a protective system, rather than the level of the exchange rate; in other words what is of central concern is the relative levels of incentives for sale in the domestic and export markets. Krueger argues that what is required for successful export growth is the removal of a bias against exports, and a substantial government commitment to prevent the re-emergence of any such bias in future. This involves granting incentives to exports equivalent to those afforded to domestic sales, but does not, it should be noted, necessariiy imply a need to move to a free-trade policy. Several of the successful export economies of the 1960s, for example Japan, the Republic of Korea and Brazil, maintained various forms of import protection, while export growth was taking place. The important point was that the incentives created by import protection were offset by various combinations of export incentives and exchange rate changes. Furthermore, discussions such as that of Krueger, and the earlier work of Little, Scitovsky and Scott (1970) fail to allow for a possible link between an initial stage of import-substitution-biased industrialization, and later export success. Although the case still needs to be proved conclusively, it is possible that some of the successful export economies were able to achieve rapid export growth as a consequence of the production experience acquired initially in selling in a protected domestic market. If this is the case the stark dichotomy between inward- and outward-looking industrialization which is still present in many discussions of trade strategy may prove to be a misleading oversimplification.[46]

Foreign exchange markets

Many studies have estimated the divergence between controlled official exchange rates and market clearing rates. These estimates can be incorporated into the type of cost-of-protection models discussed in the preceding section. However, given the limitations of these models in considering the cost of intervention in the foreign exchange market, it is more appropriate to focus on the disincentive to exports implied by exchange rate overvaluation. There is evidence from a number of studies that implies that overvaluation and its associated policies held back exports and thus tightened the balance-of-payments constraint on overall growth.

Bird (1982), for example, argues that, in general, trade elasticities in most developing countries, at least in the longer term, are sufficiently high for exports and imports to move in the direction required for balance-of-payments improvement. His survey of the evidence follows the earlier work of Cooper (1971) in concluding that in a majority of cases the trade balance improved following devaluation. However a number of qualifications must be made, as follows:

1. In many countries the period over which the real exchange rate is devalued is relatively brief. Often this follows in part from the inflationary consequences of devaluation itself.[47]
2. The internal relative price effect on traded and non-traded goods is also normally transitory. Evidence from a number of countries suggests that the price advantage for tradeables is largely eroded within a period of up to three years.[48]
3. The depression of economic activity following devaluation varies between countries, from periods of a few months to over a year.[49] There are difficulties, however, in disentangling the direct effects of devaluation from those of other policy changes.

These findings suggest that the effect of devaluation on the trade balance is largely short-term, although it may still be a useful impetus for future growth. There are none the less short-run costs likely to be involved to set against favourable trade and allocation effects. These are chiefly a higher rate of domestic inflation and some reduction in real expenditure and activity. The type of economy in which these costs will be highest will be where the propensity to import is high, import demand and export supply are inelastic, and where labour's resistance to real wage cuts is greatest. These are clearly the economies where the favourable effects of devaluation are likely to be weakest, or even negative.

Labour markets

Turning to the question of labour market distortions, some estimates exist of the magnitude of labour and capital market distortions, in terms of raising labour and lowering capital costs. Krueger (1984) reports data from eight countries in the 1960s and early 1970s which show the degree to which labour costs were raised relative to capital for the modern protected sector of the economy. Those data are given in Table 2.3. The

Table 2.3 Percentage estimated distortion in capital and labour costs from various sources[a]

Country or area	Year	% increase in labour costs	% reduction in capital costs due to			% increase in wage/rental ratio
			Trade	Credit	Others	
Argentina	1973	15	8	9	na	38
Brazil	1968	27	0	4	na	31
Chile	1966–8	na	37	na	na	37
Hong Kong	1973	0	0	0	0	0
Côte d'Ivoire	1971	23	0	3	12	45
Pakistan	1961–4	0	38	53	10	316
Republic of Korea	1969	0	0	8	2	11
Tunisia	1972	20	30	6	na	87

Note: [a]Percentage changes refer to costs in the 'distorted' or protected modern sector relative to costs in the rest of the economy.
Source: Krueger (1983), Table 7.1.

key figures are in the last column, and show the increase in the wage–capital cost or wage–capital rental ratio for the protected modern sector relative to the same ratio in the rest of the economy. It is difficult to generalize on the basis of data from only eight countries, but it appears that in only two, Brazil and Côte d'Ivoire, were the percentage distortions in labour costs greater than those in capital costs. In two countries, Pakistan and Tunisia, the combined effect of wage and capital distortions appears to have been substantial. However, again it is unclear what constitutes a significant level of distortion in cases such as this. Krueger reports that efforts to estimate the level of employment in the absence of distortions produced a 10 per cent increase for Argentina, 15 per cent for Brazil, and as much as 271 per cent for Pakistan. The realism of such projections is unclear, but even allowing for the fact that they refer to once-for-all increase, and disregarding the Pakistan result as extreme, the results for the other two countries are still substantial.[50]

As noted earlier there is now general agreement that scope for technology choice, in terms of degrees of labour intensity, exists in a fairly wide range of industrial activities. Several firm-level studies have indicated that for particular branches the gain in employment arising from the use of more labour-intensive techniques can be substantial. One of the most comprehensive of these is by Pack (1980), and his results are

worth noting. Pack examined the range of technologies in use in nine manufacturing branches, and contrasted the characteristics of what he identifies as the most economically appropriate and the most capital-intensive technologies. In total, for an equal investment in each branch, use of the economically appropriate technologies generated approximately four times the number of jobs associated with the most capital-intensive technologies. This result depends upon the branches selected for study, but the nine chosen are all likely to be important, particularly for the low-income developing countries.[51]

However, this evidence on the scope for technology choice does not demonstrate that particular labour or capital market distortions will be sufficient to block the adoption of economically efficient technologies. Squire (1981), for example, judges labour market distortions in many developing countries to be a relatively weak influence on the level of employment.

Squire tests for the effect of reductions in the minimum wage on employment in both the formal and informal sectors, and in particular on productivity in the latter. His conclusion is that the removal of distortions in the form of minimum wage legislation is unlikely to have a significant impact on incomes in the informal sector through a rise in productivity, as workers leave to find formal sector employment. Furthermore, simulations of his model for different demand and supply elasticities for labour show reduction in minimum wages to have relatively little impact on total employment, although they can increase formal sector employment substantially, if relatively high demand elasticities are assumed.[52]

This type of evidence does not mean that in combination the effect of labour and capital market distortions may not still be a significant influence on employment and capital use in many countries. Relative factor prices will be among a number of influences on technology choice and, clearly, if some technologies are judged more economically efficient than others, prices facing producers should be such as to encourage shifts in the desired direction. The extent to which such shifts will actually occur in response to relative factor price changes will vary both between branches, and between economies.

Squire does also suggest, however, that capital market distortions in the form of the availability of cheap credit to farmers may have a significant negative effect on agricultural employment in many countries, due to excessive mechanization.

2.8 Empirical studies of capital market controls

Most empirical work has focused on attempts to estimate the impact of interest rate controls on economic growth. Interest rates are generally taken as a proxy for financial repression, and have the virtue, from a research point of view, of being readily measurable. Various models have been tested by their various authors. Work has concentrated on specifying a model in a testable form where data are available for the variables used and then estimating the values of the coefficients in order to evaluate the impact of the rate of interest on savings, investment and growth. The method of estimation used is invariably a form of least squares regression analysis. Tests have been performed on a number of countries over substantial periods of time. The main econometric studies are summarized briefly below. It should be noted, however, that the regressions produce variable results in their correlation coefficient and *t*-statistics and in the magnitude of their coefficients. However, it is difficult to do full justice to the studies in the limited space available, and interested readers are referred to the original texts, or to Kitchen (1986), Fry (1988) and Gonzales Arrieta (1988).

Fischer (1981) estimated an investment function for forty developing countries over the period 1960--72. He found that 'domestic savings transferred within the respective country had a greater influence upon capital formation in countries with low and stable inflation rates than in countries where rates of inflation were high and stable'.

The positive sign of the coefficient of the nominal interest rate and the negative sign for the expected inflation rate confirm repression theories. Fischer estimated that the interest rate and the inflation rate each account for about 20 per cent of the change in the private domestic investment ratio, but the biggest influence is the inverse relationship between public sector investment and private domestic investment. His results support the notion that public sector investment crowds out private domestic investment.

Fry (1974) found that in Afghanistan changes in the real rate of interest had a definite impact on growth. Abe *et al.* (1977) found a positive but not very substantial relationship between savings and the real deposit rate in six Asian countries. Fry (1978a) looked at fourteen developing countries in the ESCAP region and found that an increase in the real rate of interest did increase financial savings. The effect may not be to increase *total* savings, rather, it may divert savings from inflation hedges to financial savings. The effect, nevertheless, is to increase the availability

of loanable funds for investment. Fry (1978b) found that the real interest rate had a positive effect on domestic savings and economic growth in seven Asian developing countries over the period 1962–72.[53] Fry (1980) extended the analysis to cover sixty-one developing countries and found that saving is affected positively by the real deposit rate of interest and that credit availability is an important determinant of not only new investment, but also of capacity utilization of the entire capital stock. He further estimated the cost of financial repression to be around $\frac{1}{2}$ per cent in economic growth lost for each 1 per cent by which the real deposit rate of interest is set below its market equilibrium rate. Hanson (1980) studied the impact of the change from positive to negative real interest rates in Colombia in 1967 on savings, investment and growth and found that they all declined as a result. In a fairly broad study of ten West African countries, Leite (1982) came to the general conclusion that the prevailing policies of low and stable interest rates are inappropriate.

Not all studies have obtained positive results, though. Galbis (1979b) in a study of nineteen Latin American countries, produced inconclusive results. Brodersohn (1981) found a positive relationship between liberalization of interest rates and savings in the Southern Cone countries, but found that the impact on the demand for investment funds was inconclusive or negative. Vogel and Buser (1976) looked at the relationship between real interest rates, savings and investment in Latin America; the results were again inconclusive.

Few empirical studies have been carried out to estimate the impact of liberalizing interest rates after such a reform has been implemented. Sri Lanka, where interest rates were raised considerably after the election in 1977, has produced two studies. Roe (1982) found that:

> a large part of total investment is not governed either as to its total quantity or its allocation by local interest rate conditions. Under present institutional arrangements, the administered interest rates could be set at almost any level without affecting the pattern of investment. Thus so long as these arrangements persist it is impossible to say what is the 'correct' level of these rates, or whether 'high' rates are preferable to 'low' ones. (p. 221)

Khatkhate (1982), although only concerned with the pre-1977 liberalization in Sri Lanka, was of the opinion that negative real interest rates had resulted in a shrinking of the supply of real loanable funds, leaving the demand for investment finance unsatisfied. However, in a later, more comprehensive survey, Khatkhate (1988) finds that the real interest rate has little or no impact on selected macro-economic variables

such as growth of GDP, real financial assets, and savings and investment ratios.

In Latin America, Galbis (1979a) found that liberalizing interest rates in the 1970s has been generally successful in Brazil, Uruguay and Argentina, but not in Chile.

The Repulbic of Korea reformed its interest rates in 1965. This was followed by an enormous increase in time deposits. Van Wijnbergen (1982) has estimated that this growth came from switching money from the kerb, or parallel, market to time deposits, rather than from increased savings or increased mobilization of cash savings. The effect was to tighten credit on the kerb market, which many smaller businesses depend on, and the reform was therefore contractionary in the short run. Van Wijnbergen considered that the contraction would persist if bank lending were restricted by government controls. Tight credit controls, if a permanent feature of bank regulation, would self-evidently restrict investment, and be contrary to the objective of interest rate liberalization.

In short, the bulk of the empirical evidence supports the main tenet of repression theory, that liberalizing interest rates tends to increase savings and investment. The significant number of inconclusive and negative studies gives some weight to the qualifications we made in the earlier discussion of repression theory, that interest rate liberalization may not be a sufficient condition for increased savings and investment, and in some countries it may simply not work. Gonzales Arrieta (1988) adds further reservations, by highlighting data and methodological shortcomings in the empirical research.

Financial sector reform

In recent years an increasing body of anecdotal, or circumstantial, evidence has arisen concerning the performance of the financial sector in developing countries in financial mobilization and intermediation. This issue was discussed by Kitchen (1986) and brought into sharp relief by the World Bank (1989). The performance of the financial sector has a direct impact on the industrial sector. However, detailed discussion of the reform of financial institutions is beyond the scope of this book. But there is little evidence that liberalization is harmful, and we would repeat our earlier assertion, that the onus is on the supporters of repression to justify the policy, and to justify the implication of repression, that savers should subsidize borrowers.

2.9 Economy-wide distortions

The preceding discussion has focused upon individual distortions more or less in isolation from one another. However, it can be argued that in a highly distorted economy a number of important market signals will be functioning wrongly and that in total the combined effect of these distortions may exceed the individual effects viewed in isolation. The World Bank (1983c) attempted to meet this point by relating estimates of the overall level of distortions in a sample of thirty-one developing countries to their growth performance, on a cross-country basis.[54] Since this is one of the few attempts to quantify the overall effect of distortions, it is worth discussing in some detail. There are major difficulties in quantifying the degree of distortion in different markets, since one requires a norm with which to compare actual prices. The World Bank study was not able to compare market prices with accurate estimates of shadow prices. The approach is to derive rough proxy estimates for shadow prices in different markets. In all, seven distortions are considered relating to the exchange rate, effective protection for manufacturing and agriculture, respectively, unskilled labour and capital, the rate of inflation and public utility pricing. Using data from the 1970s countries are grouped in high-, medium- or low-distortion categories, on the basis of their distortion measure in each market.

The growth performance of the thirty-one developing countries during the 1970s can be considered in relation to their rating by degree of distortion. The basic results of the study are summarized in Table 2.4; countries are grouped on the basis of an overall distortion index into high, medium or low categories, and the simple averages of various performance indicators are calculated for each group. It is clear that the low-distortion group has a superior growth performance on the basis of all the indicators shown. For example, in terms of GDP growth the low-distortion group had an annual average growth of about 7 per cent per year during the 1970s, which is 2 percentage points above the average for all countries in the sample, and 4 percentage points above the average for high-distortion countries. The divergence in performance between the low- and high-distortion groups is particularly marked in the case of exports, with the former showing an average growth of just under 7 per cent per year, and the latter a growth of below 1 per cent.

Cross-sectional regression analysis relating GDP growth to the composite distortion index was also applied to allow for variations between countries in the three separate groups shown in Table 2.4. This

Table 2.4 Indices of price distortions and growth performance in the 1970s[a]

Countries by distortion group	Annual GDP growth	Domestic savings–income ratio	Annual growth of agriculture	Annual growth of industry	Annual growth of exports
Low	6.8	21.4	4.4	9.1	6.7
Medium	5.7	17.8	2.9	6.8	3.9
High	3.1	13.8	1.8	3.2	0.7
Overall average	5.0	17.4	3.0	6.1	3.5

Note [a]All measures of performance are simple averages for the groups of countries involved

Source: World Bank (1983c), Table 6.1

showed a significant negative correlation between the distortion index and growth. On the basis of this evidence the World Bank (1983c) concludes that 'in short the statistical analysis clearly suggests that prices matter for growth' (p. 63).

However, a number of qualifications should be made as follows:

(1) There are several problems in quantifying the various distortions across countries. The measures of distortion used do not compare market prices with shadow prices, but only with proxies for the latter, which in some cases are very crude; for example, market wages are not compared with shadow wages, nor are actual rates compared with shadow exchange rates. One can also add that measures of ERP can vary substantially with the methodology adopted, and it is not clear how directly comparable across countries are the ERPs for agriculture and manufacturing used in the construction of the composite index. Therefore, insofar as the overall distortion index is constructed, at least in part, with data of questionable validity, the strength of the conclusions of the study must be weakened.

(2) The regression results show the distortion index to be a significant explanatory variable, explaining about one-third of the variation in growth performance between countries. However, certain countries grew more rapidly than predicted by the equation – including the Republic of Korea, Brazil, Indonesia, Côte d'Ivoire, Egypt and Nigeria – while others performed markedly worse than predicted – including Ethiopia, Jamaica, Ghana and India. The World Bank (1983c) acknowledged that 'many other elements, not least natural resource

endowment as well as other economic, social and political, and institutional factors would need to be considered in a more complete explanation to account fully for the variation in growth rates' (p. 63). This is quite clearly a reasonable conclusion, but once the importance of other factors is allowed for, the primacy of price distortions becomes open to question.

(3) Finally, perhaps the most important point is that a statistical association between measures of distortion in an economy, and growth, obviously says nothing about causation. Earlier sections of this chapter have summarized many of the arguments which suggest that distortions will reduce both allocative efficiency and long-term growth. Protection, for example, may shelter high-cost producers and create a bias against exports. Similarly, technology choice may be biased in an inappropriate direction due to factor market distortions, and specialization along the lines of existing resource endowments may be hindered. Such arguments suggest that causation runs directly from high distortions to low growth. However, the evidence is open to another interpretation. Some would argue that in many developing countries growth is held back by various structural rigidities. For example, lack of domestic entrepreneurs and skilled workers may make it difficult to increase domestic supply of many commodities in the short run; the inability of the government to raise revenue may restrict the level of investment; and export earnings may be held back by external constraints.[55] In this view distortions can be the symptom of structural problems rather than the fundamental cause of low growth. It is interesting that the World Bank (1983c) finds the exchange rate to be the single most significant individual distortion. However, one would expect an economy with what may be termed a structural balance-of-payments problem – a small non-traditional export sector and a high propensity to import – to experience low growth, since whenever incomes rise significantly the absolute increase in imports will exceed the foreign exchange that the export sector can generate. Growth may be curtailed for balance-of-payments reasons. To conserve foreign exchange, such an economy may have to establish an import controls system – inevitably raising the ERP granted to many producers – and it may also experience a real exchange rate appreciation if structural bottlenecks create a higher rate of domestic inflation than in its trading competitors. In such circumstances, low growth will be accompanied by distortions, as measured by high ERPs and exchange rate appreciation; however, such distortions are not necessarily the underlying causes of

low growth, which in this view lie in the structural characteristics of the economy. One need not generalize this argument too far, since the interpretation of the relation between distortions and growth will be determined by a reading of the constraints faced by particular economies. There is no reason, however, why causation should always lie in a single direction. In some countries, at some time, distortions as defined here may contribute directly to poor economic performance. In other circumstances, however, they may simply reflect more fundamental structural problems so that removal of the distortions alone would not be a long-term solution.

In terms of trade strategy there is evidence that several export-orientated economies have performed more successfully than inward-looking economies over the last twenty-five years or so. The World Bank (1987), for example, categorizes developing countries into the following four groups:

(a) strongly outward orientated;
(b) moderately outward orientated;
(c) moderately inward orientated;
(d) strongly inward orientated.

Data are given on aspects of average performance in each group, and Table 2.5 summarizes some of these for the two periods, 1963–73 and 1973–85.

Table 2.5 Performance of developing countries and areas grouped by trade orientation[a]

	Average annual growth of real manufacturing value added %		Average annual growth of GNP per capita %	
	(1963–73)	(1973–85)	(1963–73)	(1973–85)
Strongly outward oriented	15.6	10.0	6.9	5.9
Moderately outward oriented	9.4	4.0	5.0	2.0
Moderately inward-oriented	9.6	5.1	4.0	2.0
Strongly inward-oriented	5.3	3.1	1.6	−0.1

Note: [a]See source for countries and areas covered. Group figures are averages weighted by each country's share in group total
Source: World Bank (1987), Table 5.1 and Figure 5.2

It can be seen that the first group of more outward-looking countries have clearly been the most successful economically. However, it is worth remembering that this is a small group of only three countries and areas – Hong Kong, Singapore and the Republic of Korea – whose achievements are well known, but whose comparability with other developing countries can be questioned. At the other extreme, the group of strongly inward-looking countries have done poorly in both periods. This group contains countries like Argentina, Ethiopia, Ghana and Nigeria, with major economic difficulties. What is less clear, however, is the conclusion to be drawn from the comparison between the two moderate groups. Here performance is much closer between the inward- and outward-orientated countries, and in the later period the former have even achieved a higher rate of manufacturing growth. Since the moderately outward-looking group have made less use of direct controls than the moderately inward-looking countries, this is not evidence that supports the general case that controls inevitably result in lower growth than policies based on prices as a means of resource allocation. None the less, what emerges clearly from Table 2.5 is that the inward-looking countries that discriminated most against exports have done poorly in growth terms since 1963.

As a qualification to the analysis in World Bank (1987), it is significant to note that in the groupings of Table 2.5, outward-orientated economies on average have significantly higher income per capita than inward-orientated economies. Higher growth in the former group could therefore simply reflect the fact that poorer countries find it more difficult to grow than do countries at a higher income level: the familiar vicious circle of poverty and cumulative causation arguments (Singer 1988).

In addition, there is evidence from several econometric studies that in the poorer developing countries, particularly in sub-Saharan Africa, the degree of export orientation is not a significant variable in explaining growth performance (for example, Michaely 1977, and Helleiner 1987). In other words, while measures of export orientation generally prove significant for samples of middle-income developing countries, this is not the case for those below some minimum threshold level. This evidence questions the universal applicability of arguments relating to the efficiency and growth-promoting effects of an outward trade orientation.

This section has gone in some detail into the empirical evidence on the significance of price distortions, and it is necessary to draw together some conclusions from the, often ambiguous, data considered. The most

important general point is that the economic consequences of the sets of market prices prevailing in developing countries do appear to matter, although getting prices right is clearly not the only issue. There is evidence that the relative prices prevailing in many developing countries often bear no clear relation to government objectives, and that in some circumstances the effects of prices may operate in direct contradiction to certain objectives. In terms of the specific consequences of market distortions, it appears that protection of import substitute industries has sheltered high-cost producers, and in some instances pulled resources into non-priority areas. Perhaps most seriously, incentives for domestic production have often not been matched by incentives for export, which has hindered the growth of exports. Regarding the effect of labour market distortions, their impact on employment growth is unclear, although in certain sectors employment may have been negatively affected to a substantial degree. Finally, domestic savings in several countries do appear to be responsive to real interest rates, suggesting that capital market distortions may have held down savings and investment.

The evidence on the overall consequences of distortions for growth clearly does not demonstrate that price policy is the only factor which can explain the wide variation in growth experience between developing countries. However, there are strong grounds for arguing that prices have a sufficiently important role to warrant consideration of ways of reforming price-setting procedures. If resource mobilization and allocation decisions are responsive to price changes, then one can argue that decision-takers should be forced to examine whether prices currently ruling in key markets of their economies are appropriate, in the sense that the effects created by these prices, in terms of either resource use or income distribution, are in line with government objectives and priorities. The rest of this study considers how to reform policies in order to improve the structure of prices specifically in the manufacturing sector.

Notes

1. This chapter draws on material from R. Kitchen and J. Weiss (1987) 'Prices and government interventions in developing countries', *Industry and Development*, no. 20; and Weiss (1988).
2. One can also distinguish between distortions created by government policies, and those resulting from market conditions, for example monopoly. Corden (1974) uses the term distortion to refer to the effects of government intervention, describing the effect of market conditions as a 'divergence'.

3. There is a substantial literature on the definition and estimation of shadow prices: see, for example, UNIDO (1972), (1978), (1980), Little and Mirrlees (1974) and Squire and van der Tak (1975). Where governments are interested in objectives other than allocative efficiency the measurement of opportunity costs will have to be broadened to cover the effects on these wider objectives. See Little (1982) for a discussion of the origins of cost–benefit methodology as applied to developing countries.
4. In terms of the previous example, this implies that the balance of payments may be controlled by a mixture of the exchange rate, quota restrictions, tariffs and internal demand management.
5. The term efficiency is ambiguous, since it must be related to the achievement of particular objectives. In this section, efficiency is used in the sense of allocative efficiency; that is, the extent to which income is maximized from the utilization of existing resources. Dynamic and distributional considerations are introduced in later chapters.
6. Here the initial distortion will be the difference between the valuation of the commodity by the government and the valuation by private consumers.
7. Major empirical works on shadow pricing include Lal (1980) on India, Scott, MacArthur and Newbery (1976) on Kenya, and Powers (1981) on several Central and Latin American economies.
8. Balassa has been the pioneer in this area: see, for example, Balassa (1971) and Balassa (1982).
9. The term comes from Timmer *et al.* (1983).
10. In this statement and elsewhere in the discussion the deviation of domestic from world prices due to domestic transport and distribution costs is ignored.
11. Strictly, this assumes that export demand is perfectly elastic (the small-country assumption), so that exporters have no problem selling more at the prevailing price, and that competitive production conditions prevail domestically.
12. See, for example, Bhagwati (1978). This point of the relative effects of tariffs and quotas is explored further in the discussion of policy alternatives.
13. Krueger (1974) points out that real economic resources may be wasted by firms or traders wishing to obtain access to licenses or other documents necessary under a system of direct economic controls (rent-seeking).
14. We have already seen how market interventions through tariffs, taxes and subsidies will influence this ratio.
15. The ERP formula for branch j is

$$ERP_j = \frac{T_j - T_i \cdot a_{ij}}{1 - a_{ij}}$$

where T_j and T_i are the nominal rates of protection on output j and input i respectively; a_{ij} gives the input of i per unit of j at world prices, and world prices of j and i are normalized to equal unity.

It can be shown that ERP_j can be rewritten to give the ratio of the additional value added arising from protection to value added under free trade so that

$$ERP_j = \frac{VADP_j - VAWP_j}{VAWP_j}$$

where *VADP*, and *VAWP* are value added at domestic and world prices respectively.

Corden (1971) provides a comprehensive study of the theory of protection.

16. A simple numerical example may illustrate the extent to which nominal and effective protection rates can differ. There are three goods produced under protection - B and C. Nominal rates of tariff are 40 per cent for A, 20 per cent , and 10 per cent for C. For simplicity it is assumed that each good re res only one produced input B, and that B is 50 per cent of the value of output at world prices in each case. With these assumptions the ERP measures will be 60 per cent for A, 20 per cent for B and zero for C.

    In comparison with the nominal rates the ranking of products has remained unchanged, but the relative degree of incentive has widened substantially. C receives no net protection and A's effective protection is 50 per cent greater than its nominal rate.

17. Balassa (1982) finds the rankings of branches by nominal and effective rates of protection to be significantly correlated in some countries. He argues, however, that ERP measures will be much more effective in predicting the absolute size of resource shifts arising from protection. The implication is that in some countries nominal rates may be useful in predicting the direction, as opposed to the magnitude of resource shifts.

18. Little, Scitovsky and Scott (1970) pointed to the bias within manufacturing against production of capital goods.

19. Formally the DRC ratio for activity j is

$$DRC_j = \frac{S_i V_{ij}}{IVA_j}$$

    where s_i is the shadow price of domestic factor i; V_{ij} is the amount of factor i required per unit of output j; and IVA_j is the international value added in j. From this definition it follows that ERP and DRC measures will be equivalent if market prices rather than shadow prices are used in the DRC measure.

20. Bhagwati (1978) surveys some of the evidence on DRCs; see Chapter 5, pp. 82–126.

21. Estimating the appropriate exchange rate for an economy is by no means straightforward, however. For various theoretical approaches see, for example, the papers in the symposium *Oxford Economic Papers* (1974).

22. Bhagwati (1978) points out that, theoretically, a wide range of DRCs need not inevitably imply resource misallocation. A producer with a low DRC at present may run into increasing costs, for example, or alternatively face a falling output price if his production is expanded. Both effects would raise his DRC ratio. Also Warr (1983) points to the limitations of ranking by DRC ratios.

23. Balassa (1982) uses the definition of

$$ERS_j = \frac{VADP_j - VAWP_j}{VAWP_j}$$

    where $VADP_j$ is the value added in j at domestic prices adjusted for

subsidies and, as before, $VAWP_j$ is value added at world prices.

The subsidies included in the estimates are for credit and tax payments. The incidence of the subsidy has to be estimated fairly crudely however: see Balassa (1982), pp. 9–19.

24. This appears to have been the case in Taiwan Province, and to a lesser extent in the Republic of Korea.
25. Agarwala (1983) surveys ERP estimates for agriculture and manufacturing for a number of countries, and finds twelve where the average ERP for agriculture was negative during the 1970s.
26. Balassa (1974) provides formulae for the calculation of the shadow exchange rate under these alternative policy scenarios.
27. Thirlwall (1980) gives a good introduction to devaluation and competing theories of the balance of payments.
28. The 'new structuralist' critique of devaluation as a policy measure for developing countries is that it is 'stagflationary' – creating both inflation and domestic recession. This rests in part on the view that export responses will be slow to emerge: see Taylor (1981) and Krugman and Taylor (1978).
29. For an example of this approach in Jamaica, see Weiss (1985).
30. For example, it figures in the article setting out the famous 'Lewis-model' for a labour surplus economy; see Lewis (1954).
31. The argument must be qualified, however, since under certain circumstances long-run growth of both employment and income could be greater with capital-intensive rather than labour-intensive techniques. Sen (1968) provides the classic discussion of these issues.
32. See Stewart (1977), White (1978), Pack (1980) and Fransman (1985) for surveys of the literature.
33. This abstracts from differences between market and shadow wages due to differences between domestic and international prices; see, for example, the discussion of skilled labour in Powers (1981).
34. High-wage economies where government intervention has been important are listed as the East African countries, plus Nigeria, Puerto Rico, Colombia, Sri Lanka and Pakistan. It is noted that in many mining-based economies the initial impetus towards high urban wages comes from the foreign mining companies; see Squire (1981), pp. 129–30.
35. Interest rate floors on deposit and loan rates are also encountered occasionally, but they have not been taken into account in the analysis here. As an illustration of methods of interest rate controls, Galbis (1979a) found that seventeen out of nineteen Latin American countries studied had imposed interest rate controls at some time during the period 1967–76. Interest rate ceilings on deposits were encountered in fourteen countries, of which five were comprehensive ceilings and nine partial ceilings. Three countries had interest rate floors. In seven countries, interest rates were pegged to some form of index, usually as part of a much wider indexation of financial assets and liabilities.
36. The argument assumes that the interest rate is the main determinant of the investment rate in a given period. This, of course, is questionable and other important determinants include the expected rates of growth and inflation,

the level of excess capacity at the beginning of the period, and all the other factors which make up that elusive concept, business confidence.

37. Of course there will always be a margin between bank borrowing and lending rates, but this is ignored for ease of exposition.
38. None the less, government borrowing, by offering increasingly higher risk-free rates of return to lenders, may 'crowd-out' private sector borrowing. To the extent that crowding-out occurs, government borrowing, if used for current expenditure, may be at the expense of private sector investment.
39. The literature on the impact of foreign capital inflows on domestic saving efforts has been summarized recently by Dowling and Hiemenz (1983), for example.
40. For a brief exposition of the approach, see Corden (1975). It should be noted that a number of qualifications may have to be made to the simple definition of producer and consumer costs given above. In particular, the expansion of exports associated with a move to free trade must be allowed for. This expansion may have a negative terms-of-trade effect if international prices for exports fall, and may also encounter rising production costs if there are diminishing returns to scale. On the consumption side, if domestic prices of exportables rise with the move to free trade, this will create consumption costs of free trade to offset the removal of the consumption costs associated with protection.
41. Bergsman (1974). X-inefficiency refers to production at costs above the minimum attainable due to lack of competitive pressures: see Leibenstein (1978).
42. It should be noted that Balassa amended Bergsman's calculations to produce somewhat higher figures, including 3.7 per cent for the Philippines, 6.2 per cent for Pakistan and 9.5 per cent for Brazil. Balassa (1975), p. 156.
43. These results are cited by both Krueger (1984) and Balassa (1982).
44. Bias can be expressed simply in quantitative terms as the ratio of domestic to world prices for importables over the same ratio for exportables; therefore bias exists where

$$B = 1,$$

and

$$B = \frac{DP_m / WP_m}{DP_x / WP_x}$$

where B is the measure of bias; DP_m and DP_x are the domestic prices of importables and exportables respectively; and WP_m and WP_x are the world prices for importables and exportables respectively. Anti-export bias implies $B > 1$, and pro-export bias $B < 1$.

45. The shift coefficient is derived from the equation

$$\Delta \left(\frac{P_h}{P_x} \right) = w \cdot \Delta \left(\frac{P_m}{P_x} \right)$$

where Δ denotes changes, and P_h, P_x and P_m are the prices of non-tradeables, exportables and importables respectively; and w is the shift coefficient. See also Greenaway and Milner (1987).

46. This possibility is touched on by Diaz-Alejandro (1975) and Findlay (1975). See also Weiss (1988).
47. The brief period of real depreciation is illustrated for several countries in Krueger (1978).
48. Warr (1984) surveys this evidence and contrasts it with the Indonesian experience.
49. See Cooper (1971).
50. The percentage increases in employment refer to the protected sector only; see Krueger (1984) p. 557. Earlier estimates for Pakistan by Guisinger (1981) put the possible additional employment arising from the removal of distortions at rather less. However, exercises of this type are generally highly sensitive to assumed demand and supply elasticities.
51. Pack (1980) defines economically appropriate as the technology which generates the highest net benefit to capital ratio at market prices. His nine branches cover a range of industrial processes and represent a variety of technical rigidities; see Forsyth *et al.* (1982) for a classification of manufacturing activities by their technical properties.
52. Squire (1981), pp. 126–8. High demand elasticities are defined here as greater than 2.0. Squire notes that empirical estimates of unskilled labour demand elasticities are frequently found to be 1.0 or less, and if this is the case, the employment effect of the removal of minimum wage legislation is small even in the formal sector. Berry and Sabot (1978) also take the view that the cost of labour market imperfections is not great.
53. Giovanni (1983) re-estimated Fry's equations for the same countries over a different period (roughly the 1970s) in order to try to test the robustness of Fry's results. He found an insignificant relationship between domestic savings and the real interest rate, concluding: "Serious doubts are cast on the view that the interest elasticity of savings is significantly positive and easy to detect in developing countries." (p. 603.)
54. The detailed research upon which the analysis in the World Development Report 1983 is based is in Agarwala (1983), which gives details of the procedure adopted.
55. Weiss (1988) surveys structuralist and competing perspectives on industrialization.

3

Commodity prices and government objectives: a five-stage framework

The preceding chapter considered in detail the evidence on prices in a number of markets across a range of developing countries. The general conclusion is that prices very often fail to reflect the economic value of resources or commodities. In other words, the market prices at which transactions take place do not capture the economic benefits of producing outputs, or the economic cost of using inputs. Given this situation, two important and complex questions are: at what levels should actual prices be, and what mechanisms should governments use to ensure that these prices prevail in the market? Here the view is taken that prices can be a major policy instrument for economic change. However, to play this role they must operate in a way that produces results compatible with broad government objectives. If the distortionary consequences of the type of government interventions discussed in the preceding chapter are generally undesirable, this does not mean that all government interventions in the price system are inevitably so. Following the distinction of Agarwala (1983) one can have interventionist price policies that are not distortionary.

The question of the set of relative prices that a government should aim for cannot be answered in isolation from knowledge of government objectives, relevant resources and other constraints, and the other policy instruments available to implement objectives. In this chapter the discussion is concerned primarily with government objectives. The other issues are considered in chapters 2 and 4. If what is conventionally termed 'allocative efficiency' is the only objective – in other words if the only

aim is to maximize the national income that can be obtained from a given level of resources – there are a number of well-established guidelines from the cost–benefit literature that can be used to determine economic values.[1] The normal policy recommendation is that to achieve efficiency in this sense, market prices should be equated with economic values, where the latter are the economic opportunity costs of commodities and resources. The guidelines can be summarized briefly, as follows:

1. Prices in the markets for capital, labour and foreign exchange should equal the opportunity costs of these resources to the economy.
2. Prices of traded goods should equal their world prices converted into local currency at an exchange rate that reflects the opportunity costs of foreign exchange.
3. Prices of non-traded goods should equal their long-run marginal opportunity costs of production.[2]

It is obvious, however, that most governments are concerned with more objectives than the pursuit of allocative efficiency alone. These additional objectives will have to be allowed for if one is to devise an appropriate framework for price reform. It is important to consider what type of objectives could lead to recommendations that market prices should diverge from the economic values noted above. Some or all of four objectives, in addition to allocative efficiency, are likely to be important for most governments. These can be listed as: public revenue objectives; dynamic economic objectives; self-sufficiency objectives; and distributional objectives.

3.1 Public revenue objectives

A key concern of most governments is to raise revenue to cover their capital and recurrent expenditures. A major source of tax revenue in developing countries is commodity taxation and, in general, developing countries obtain a significantly higher proportion of their taxation revenue from such taxes, and a significantly lower proportion from taxes on incomes and profits, as compared with industrialized economies. Further, there is a clear trend that the poorer the developing country the greater the share of commodity tax revenue that will be collected on imports and exports, as compared with domestically produced goods. This reflects both the importance of trade in many of these economies, and the

weakness of the administrative system of tax collection, that make it easier to tax commodities as they enter or leave the country. For example, in 1982, from World Bank figures, low-income developing countries collected 20 per cent of total government revenue in the form of income and profits taxes, as compared with 28 per cent for middle-income developing countries, and 38 per cent for industrialized developed economies. Further, for commodity taxation, taxes on international trade were 25 per cent of total government revenue in low-income as compared with 12 per cent in middle-income developing countries, and only 1 per cent in industrialized economies.[3]

Most governments will have a target amount of taxation they wish to raise from taxes on commodities. This will be determined by the difference between planned government expenditure and anticipated income from other types of taxation and additional sources such as government borrowing. Clearly, the smaller the scope for borrowing and the greater the administrative or political difficulty of taxing incomes, profits and wealth, the more important will be commodity taxation as a source of revenue. Given the need to tax commodities to raise revenue, market prices and economic values must diverge by the rate of taxation. This divergence need not apply in relative terms, however, if a uniform rate of taxation is applied to all commodities, and initial pre-tax prices equal economic values. It is the relative price of commodities that matters for resource allocation decisions, and the merit of a uniform tax system is that relative prices will not be disturbed by commodity taxation. The policy of uniform taxes is discussed further below and forms the starting point for the analysis of price adjustments.

3.2 Dynamic objectives

Some governments may not wish to accept the pattern of output determined by considerations of allocative efficiency. The latter can be seen as short-term, reflecting the extent to which domestic production is currently internationally competitive. However, some governments may have a fairly long-term planning horizon, and may wish to identify and support industries which, although currently uncompetitive, have the potential for long-term productivity growth, through learning effects and technical progress. This is the familiar infant-industry case for protection which has been discussed extensively and implies that, through learning, current infants can reach maturity and later become fully

competitive.[4] The case for selective protection has also been made in terms of the external benefits generated by infant producers that stimulate activity in other branches of the economy and thus add to the economic profitability of protection. It should be noted, however, that a fall in costs of production over time, or even the achievement of international cost competitiveness, is not a sufficient condition for supporting infant industries. Support for these industries can be viewed as a form of social investment with short-run costs – when domestic output is more expensive to produce than the price of competing imports – to be offset against longer term benefits, when costs fall below import prices. Justification of support for infant industries requires that net benefits exceed costs over the working lives of the plants in the industry. Competitiveness at a point in time says nothing about the full discounted value of benefits relative to costs in the long run.

Economists have often been sceptical of the validity of the infant-industry argument, and there is evidence that many infant producers in developing countries have never reached full maturity and become cost-competitive.[5] On the other hand, however, there is little doubt that some governments have intervened successfully in their economies, have been able to 'pick winners', and have encouraged infant industries with considerable success. The two most notable examples are Japan and the Republic of Korea, although in both the speed at which different industries have reached maturity, and therefore the time required for protection have varied considerably.[6] The well-known statement on Japanese industrial strategy in the 1950s from the then Vice-Minister of the Ministry of International Trade and Industry (MITI) is worth repeating here, since it expresses very clearly the dynamic objectives inherent in government policy at that time.

> MITI decided to establish in Japan industries which require intensive employment of capital and technology, industries that in consideration of comparative costs of production should be most inappropriate for Japan. From a short run static viewpoint, encouragement of such industries would seem to conflict with economic rationalism. But from a long-range viewpoint these are precisely the industries where income elasticity of demand is high, technological progress is rapid and labour productivity rises fast. (OECD (1972) p. 15)

This is not to suggest that Japan and the Republic of Korea provide a direct model for all developing countries to follow, but simply that well-planned, selective protectionist interventions based on dynamic considerations have successfully fostered competitive industries in these

countries. With this experience in mind, it is wholly rational in economic terms for governments to consider selective interventions based on dynamic objectives.

An aim of industrial policy, then, is to identify and promote industries where domestic costs of production, allowing for any external effects, can fall to international levels over time; in other words, industries in which an economy has a dynamic, as opposed to a static, comparative advantage. The chief mechanisms for this emerging cost competitiveness will be learning as experience in production accumulates, and domestic technical progress, as modifications and adaptations in the light of local conditions are introduced to the international technology of the industry. The process of 'picking winners' while choosing industries for special support is clearly complex and cannot be discussed here in detail. However, it is worth noting that in the context of developing countries such dynamic industries are likely to have the following three main characteristics:

1. Their initial cost disadvantage in relation to imports is not too high.
2. They are not too dissimilar technologically from some existing industries, so that experience gained in other activities can be used effectively in the new industries, and technological similarity will allow experimentation and technical progress.
3. The international technological frontier in these industries is not moving too rapidly, so that technical progress abroad does not make it impossible for new industries in developing countries to catch up. This requirement will probably limit these industries to relatively traditional activities or to those based on newer mechanized engineering technology as opposed to more complex electrical, chemical and electronic technologies.[7]

Once a choice has been made, there are alternative ways of supporting dynamic infant industries. Economists' normal recommendation has been to subsidize where possible – described as industry promotion – as opposed to protection from import competition, through tariffs or quota restrictions. The merits of these alternatives are discussed in Chapter 4. Here it is important to note only that both can imply divergences between domestic prices and economic values, although the attraction of the subsidy alternative is that it is likely to create fewer such divergences.

Use of import controls to protect selected industries implies that

domestic prices for those traded goods will diverge from world prices. Where import tariffs are used domestic and world prices will differ by the extent of the tariff. However, as noted earlier, a uniform rate of tariff will ensure that in the domestic market relative prices for traded goods will be determined by world prices. Where protection is through import quotas, however, domestic market-clearing prices will be determined by the strength of domestic demand relative to total supply available, and relative domestic prices need bear little relation to prices on the world market. It should be noted that where industries are supported through producer subsidies, the degree of divergence of domestic from world prices for traded goods will be determined by the way in which the subsidies are financed. Again, a uniform tax on all commodities will allow relative domestic prices to be determined by world prices.

3.3 Self-sufficiency objectives

Just as governments may wish to encourage key industries on the basis of the potential they offer for such factors as productivity growth, learning, technical progress and externalities, so there may be other industries judged important for national economic or political security. The essential or strategic characteristics of the goods produced by these industries are such that governments may feel that domestic production is justified regardless of cost considerations. In other words the goods concerned are too important for their supply to be left to the vagaries of an uncertain world market, where availability and price may vary considerably. In this view any higher costs incurred in producing the goods domestically more than offset the risk of dependency on imports, and production becomes justified on grounds of self-sufficiency.

Many economists have a natural suspicion of self-sufficiency arguments, and argue that in many instances they can lead to not only high-cost semi-autarkic strategies, but also a confused view of the causes of dependence. Efforts to become self-sufficient in one sector may cause a dependence on imports in another if the locally produced goods are inferior substitutes for the imports they replace, thus causing production shortfalls in user sectors. For example, if a government sees self-sufficiency in various types of farm equipment as an important objective, this can create another, perhaps more serious, form of dependence on the world market, if the local equipment is not sufficiently productive to ensure adequate domestic food supplies.

None the less, for many governments self-sufficiency in a particular line of activity can be an important objective. If this is the case it is clear that the sort of policies required to encourage industries on dynamic grounds will also be relevant here, although the motives for promotion or protection will be different. Therefore, the same potential divergences between domestic market prices and economic values which can arise from the treatment of dynamic industries will also apply for industries supported on self-sufficiency grounds.

3.4 Income-distribution objectives

All governments have explicit or implicit policies on income distribution. Measures to influence distribution can take a number of forms, including land reforms, nationalization and appropriations, denationalization, income and wealth taxes and welfare payments. The manipulation of the price system can also play a role, since prices of particular goods can be set with the effect of these prices on the real income of particular groups of consumers explicitly in mind. The most obvious example would be basic consumer or wage goods, which bulk large in the expenditure patterns of low-income groups. Income-distribution objectives might mean that governments wish to set a low price for these goods – that is, one below their economic value – to allow the poor to consume more of such goods or to have more to spend on other things. Such a pricing policy will involve some form of subsidy and, as we have noted, the taxes necessary to finance the subsidy may themselves create divergences between market prices and economic values. On the other hand, on distributional grounds governments may wish to impose higher than average indirect taxation on those goods consumed predominantly by the rich. This implies differential rates of indirect taxation of commodities on the basis of the income levels of their main consumers. The implication of using the price system as a means of affecting real incomes is that it will clearly be necessary to create a further wedge between market prices and economic values and this will involve differential rates of both subsidies and taxes.

It is worth noting that income-distribution measures aimed at helping the poor may also be achieved by means of welfare payments. Such payments do not directly influence the prices of goods and services, but only the capacity of individuals to purchase them. Welfare payments are less directly targeted in that they leave the choice of how to spend the

payment to individuals, whereas a subsidy system is targeted at a narrow range of goods only, and individuals can only reap the benefit of the subsidies by purchasing these goods.

3.5 A five-stage framework

Given this range of government objectives and the possibility of using the price system as a means of meeting these objectives, what guidelines can be identified if one is to attempt to establish a set of domestic prices that broadly reflect government objectives? The discussion in this chapter is concerned with interventions that affect the prices of commodities, primarily domestically produced tradeable goods – that is, goods that are either import-competing or potentially exportable. The majority of manufactures fall within this category for most countries. For these goods, where the quality of domestic and foreign products are comparable, and where imports are not subject to quantitative restrictions, domestic prices will be determined by world prices plus the effect of domestic taxes or subsidies on trade.[8] The question regarding domestic price determination for these goods therefore becomes one of how to intervene most effectively with taxes and subsidies on foreign trade. Alternative interventions to influence the prices of domestic factors of production and foreign exchange pose somewhat different problems and are considered separately in the following chapter.

There is a vast and often complex literature on the theory of optimal pricing and taxation, and the discussion here oversimplifies some issues to derive the sort of relatively simple framework necessary as a guide to policy. The aim is to set out a system of price interventions through taxes and subsidies that will take account of both government objectives and the economic consequences of various forms of intervention.

It is important to stress that the framework is sufficiently flexible to allow differing degrees of intervention depending upon government objectives. It is clear, for example, that governments wishing to promote large numbers of dynamic industries and having strong income redistributional goals would intervene far more than governments wishing to follow existing comparative advantage and having only a limited desire to influence income distribution.

In this chapter the discussion is of an 'idealized' set of interventions: it is idealized in assuming that one starts from scratch in designing interventions in an economy before all the real world distortions

considered in Chapter 2 have been introduced. One moves from a non-distorted starting position through a sequence of stages, with each stage representing a different government objective. Furthermore, while there will always be different ways of meeting objectives, in this chapter the alternatives considered are largely those considered by economists as being the most efficient for meeting a given objective at the minimum cost elsewhere in the economy. The issue of what constitutes feasible, as opposed to desirable, policies is pursued in the following chapter.

This framework should be helpful, both in illuminating the theoretical issues involved in designing a set of tax-subsidy interventions and also in distinguishing between different objectives and their consequences for price policy. However, given its stylized nature, the framework can only be a starting point for a discussion on policy reform. In the real world one cannot abolish the status quo overnight, and one must design policy changes in the light of the circumstances in which one begins the reform process. The five-stage framework should help to clarify what a government wishes to achieve in terms of price policy; however, the precise route one takes to reach this goal cannot be discussed in isolation from the starting position and the constraints on reform operative in the economy concerned. The question of the implementation of price reforms is discussed in Chapter 5.

The five-stage framework linking prices and objectives can be summarized briefly as follows:

Stage 1. *Allocative efficiency pricing*. Here prices should equal economic values, defined as the opportunity costs to the economy of the commodities or resources concerned.

Stage 2. *Public revenue adjustments*. Here taxes are added to economic values to cover revenue requirements.

Stage 3. *Dynamic adjustments*. Here it will be necessary to promote, or if this is not possible, to protect, key industries with dynamic potential. Where promotion is used this will involve differential subsidies, or, with protection, differential import duties.

Stage 4. *Self-sufficiency adjustments*. Here industries are singled out for special treatment – promotion or protection – on self-sufficiency rather than dynamic grounds. The policy interventions will be similar to those at stage 3.

Stage 5. *Income-distribution adjustments*. Here prices of certain goods will be subsidized, and those of others will be raised by indirect taxation. Differential rates of subsidy and indirect taxation will be involved.

It is necessary to consider the tax-subsidy interventions at these different stages in some detail, in order to illustrate the principles involved. The discussion will move through the different stages in sequence.[9]

Stage 1. Allocative efficiency pricing

The principle here is that domestic market prices should be such that they reflect the economic opportunity costs of all resources and commodities. Following the guidelines noted earlier from the literature on cost-benefit analysis, this implies the following:

1. The official exchange rate equals the shadow exchange rate.
2. The interest rate equals the opportunity cost of capital.
3. The market wage for labour equals the shadow wage.
4. Domestic prices for traded goods equal their world prices converted at the new exchange rate.
5. Domestic prices for non-traded goods equal their long-run marginal opportunity costs of production.

Some of these prices can be established by freeing markets and allowing market-clearing prices to emerge. However, with goods where there is a monopoly of production, import, export or distribution, the process of 'freeing prices' may not be adequate to equate domestic prices with world prices. Also, for wages this scenario may be both unlikely and undesirable, since it would often imply a significant drop in real income for some groups of workers. Given this position a labour subsidy scheme would be required to equate the effective cost of employment to firms with the estimated opportunity cost of labour to the economy. The question of the means of financing this subsidy is not considered in this five-stage framework, but will be taken up in the following chapter.[10] For manufactures, being tradeable goods, therefore, the recommendation at stage 1 is clear – domestic prices should equal world prices, with the absolute value of prices determined by the prevailing exchange rate, and relative values determined by relative prices on the world market.

Stage 2. Public revenue adjustments

Given that governments have to impose indirect taxation, what principles should govern the rate at which it is levied? From an allocative efficiency viewpoint the two following propositions are normally stressed:

1. Domestically produced goods and imported goods should be treated equally.
2. A uniform rate of indirect taxation should be imposed on all commodities.

Proposition 1 is to allow consumers access to imports on equal terms with domestic production. Under competitive conditions this will ensure that domestic production of import-competing goods is expanded only to the point at which the domestic marginal cost equals the world price. Proposition 2 is to avoid discrimination between different branches and producers so that all have equal incentives to expand production.[11] The conditions required by 1 and 2 are met if government revenue from commodity taxation is raised by an indirect tax on all domestic producers, and an import tariff on all imports set at equal rates. This set of taxes raises domestic consumer prices for tradeables above import prices by the extent of the uniform tariff, but ensures that domestic producers do not receive this price rise, since they are subject to an indirect tax, at the same rate as the import tariff. This system is equivalent to a uniform sales tax on consumers imposed equally on all goods, both imports and domestic output.[12] Under both tax systems, therefore, domestic producers receive only the world price for their output. The rate of uniform taxation will be determined by government revenue requirements from commodity taxation and the projected impact of higher tax-inclusive prices on consumer demand.

This non-discriminatory uniform system has significant implications for the protection granted to domestic producers in relation to foreign competition. The nominal rate of protection will be zero, since the protective effect of the tariff on imports will be fully offset by the indirect tax on import-competing domestic production. However, under this system producers who use imported or domestically produced importable inputs or capital goods would face prices above world levels to the extent of the import tariff. They would therefore experience negative effective protection. To avoid this penalization of tradeable goods production by the tariff system one would have to exempt all intermediate and capital goods from the uniform tariff. For equality of treatment domestic producers of import-competing intermediates and capital goods would also have to be exempt from the domestic indirect taxes.

This set of exemptions would grant all producers zero effective protection, since producers would receive world prices for their outputs and pay world prices for their traded inputs. It would also create a

commodity tax system based solely on consumer goods. The only divergence between world and domestic prices would be for consumer goods, where domestic prices would equal world prices converted at the prevailing exchange rate plus the uniform tariff or tax rate which would be determined by government revenue objectives – both by its total requirement and by how much it wished to raise from commodity, as opposed to other, forms of taxation. The uniform rate would naturally be higher under this system than under one which widened the tax base beyond the taxation of consumer goods.

Taxing domestically produced consumer goods at equal rates with imports can be done in various ways. The main possibilities are as follows:

(1) *A manufacturing level sales tax* (or producer tax) is a tax raised at the producer level, and acts as a tax on consumption; it is not uncommon in developing countries. It should be accompanied by a parallel and equal sales tax or tariff on imports, if domestically produced and imported goods are to be treated equally. When the tax is imposed on manufacturers of consumption goods it acts as a tax on final consumers, and no distortions are created. But when it is imposed on manufacturers of intermediate goods it will, like turnover taxes, 'cascade' through subsequent users to the final consumer, resulting in accumulated taxes on the final consumption good, with distortionary effects, unless the intermediaries are able to draw back the tax. Therefore if the cascade effect is to be avoided, drawbacks (or rebates) should be available. The alternative of making intermediaries exempt from tax runs into difficulties with products which are both intermediates and final consumption goods.

(2) *A retail level sales tax* is generally broader in scope than a manufacturers' tax, as it also covers services and distribution. It captures all the value added in the final sale, and captures imported goods. However, if domestically produced and imported goods are to be treated equally, the retail level sales tax would replace tariffs.

(3) *A value added tax (VAT)* is a general sales tax with drawback available on all transactions before the final sale to the consumer. The drawback avoids the cascading effect of taxes which one gets, for example, with the manufacturers' level sales tax. Goods destined for domestic sale, whether locally produced or imported are subject to VAT; goods destined for exports are not. A VAT, therefore, automatically offers drawbacks on purchases of intermediates, and on exports. In

principle, therefore, a value added tax acts as a tax on final consumption, with complete exemption for intermediates and exports. It avoids all the distorting effects created by other taxes which do not have full drawback systems.

From our standpoint, the major impact of using a retail level sales tax or VAT as the major source of revenue from commodity taxes means that tariffs would no longer be regarded as major revenue producers. They could then perform the single function of tools to provide protection and incentives.

Stage 3. Dynamic adjustments

A system of zero effective protection gives no special encouragement to any particular traded good activity. All are treated equally and have the same level of profit as they would in the absence of any indirect taxation. However, governments will not be satisfied with an equitable treatment for all industries, if some are to be encouraged on dynamic grounds. Theoretically, all interventions to support such industries should be 'made to measure'.[13] In other words, policies should aim to provide the dynamic activities with sufficient support to generate a minimum acceptable rate of return. Since the degree of support required will vary with the extent of the current cost disadvantage of the industries concerned, interventions should be tailored to the needs of individual cases. This implies that the profit created by government support should be the minimum necessary to ensure production with as little as possible surplus profit above this minimum level.

As we have noted earlier the general theoretical recommendation is that, where feasible, dynamic industries should be promoted by subsidies – which will have to be at differential rates – rather than protected by import tariffs.[14] The merits of these alternatives are considered in more detail in Chapter 4. Here it should be noted briefly that subsidies are recommended chiefly on the grounds that: they do not differentiate between domestic and export sales, and therefore have no anti-export bias; and they do not penalize the consumers or users of the products to be supported. Their drawback is the fact that they have to be both financed through extra taxation and administered through extra bureaucracy.

If, for the purpose of the present discussion, we assume initially that

subsidies are feasible in both financial and administrative terms, what does this mean for the pricing framework?

If differential rates of subsidy are granted to industries judged to have dynamic long-run effects, and these can be financed without the need for extra commodity taxation, domestic prices for traded goods will remain unchanged from those set at stage 2. However, if the subsidy scheme affects a significant number of producers, additional revenue from commodity taxation may be required. This would necessitate an increase in the uniform rate of import tariff and excise duty on consumer goods. The key difference between stage 3 and stage 2 is that production incentives offered to traded goods industries are now no longer uniform. The effective rate of subsidy (ERS) rather than the effective rate of protection (ERP) becomes the relevant measure of net incentive, for industries given special treatment.[15] However, since the prices of intermediate and capital good inputs remain unaffected by the adjustments in stage 3, ERPs for all non-dynamic sectors do not become negative.

This scenario with a system of differential production subsidies for dynamic industries has been described as the 'first-best' policy option.[16] However, if large numbers of dynamic industries are identified for special support it may not be possible to either finance or administer the system of made-to-measure subsidies required for their promotion. In these circumstances an alternative which could involve fewer subsidies would be to introduce differential import tariff protection to raise the profitability of the industries to be supported on dynamic grounds. However, it must be noted that these tariffs would create by-product effects on users of the protected goods, which should be offset by subsidies if possible. As is the case of the promotional subsidies, theoretically the protective tariffs required would be 'made to measure' for individual industries to ensure that only the minimum necessary level of profit is established.

Where tariffs are used to give special support to dynamic consumer goods industries, the import tariff can be seen as the sum of two components. The first will be the basic uniform rate set at stage 2 on revenue grounds. The second, determined at stage 3, will be a supplementary rate to ensure that the final tariff is sufficient to allow producers to charge a domestic price that generates the minimum profit necessary to maintain or establish domestic production in the industry. Since the whole objective of the differential tariff scheme is to raise profitability above what it would be in the absence of protection, the supplementary differential tariff introduced at stage 3 should not be matched by an equal additional rate of excise duty on domestic

production. The uniform rate of sales tax set at stage 2 should be maintained, however, since it is needed for revenue purposes. The net price that producers can charge, therefore, is the c.i.f. import price plus the supplementary tariff added at stage 3.[17]

For protected dynamic industries producing intermediate and capital goods, however, the complication of two components of the final import tariff does not arise. These goods are not subject to the uniform import tariff and excise duty set at stage 2, so that for these industries there is only one import tariff – that set at stage 3 on protective grounds. Again, as the objective of the tariff is to raise domestic profitability it should not be matched by an excise duty on domestic production.

The selective introduction of import tariff protection at different rates has the following two important by-product effects:

1. It creates an anti-export bias in the protected domestic industries, since sales in the home market would be more profitable than sales abroad, due to the divergence between domestic and world prices. This bias can be offset if a system of differential export subsidies is also introduced. Full removal of the anti-export bias requires that the rate of export subsidy for each industry should be the same as that of the import tariff for that industry.
2. It creates differential ERPs for different industries, and in particular will create negative ERPs for those non-protected industries that use as inputs goods produced by protected dynamic industries. This follows since the output prices of the non-protected industries remain equal to world prices, but if these industries use some newly protected goods as inputs, some of the input prices they face will have risen above world levels.

In principle, this negative ERP, which clearly penalizes non-protected industries, could be offset by a subsidy system that compensated users of domestically produced, protected intermediate and capital goods. These subsidies would be: (i) rebates of tariffs paid on imports of the goods concerned; and (ii) the equivalent of tariff rebates to users purchasing such goods from domestic producers.

The aim of (ii) would be to ensure that producers received the protected domestic price, but that the net price paid by users would be no more than the equivalent of the world price, as a result of the subsidy.

The second variant of stage 3 intervention in support of dynamic industries is therefore a combination of tariffs and subsidies, with the

Stage 5 Income distribution adjustments

Here the relevant question is the extent to which governments wish to tax or subsidize particular types of commodity because of the characteristics of the consumers who provide the bulk of demand for those goods. Three cases can be considered, as follows:[19]

(a) where governments wish to tax consumer goods at a rate above the uniform tax set at stage 2;
(b) where they wish to tax them at a lower rate than the uniform rate.
(c) where they wish to subsidize their sale at prices below world prices.

The first and second possibilities imply non-uniform excise duties and import tariffs between commodities. However, unless the goods are produced by industries singled out for special import protection on the grounds discussed earlier, taxation on domestic output and imports of the same commodity should be equal. The third possibility implies a subsidy to consumers, so that retail prices are below world prices. However, to avoid production disincentives it is necessary to maintain the producer price either equal to the world price or to the adjusted stage 3 and 4 price if the industry is one that receives special support. The producer price will therefore exceed the consumer retail price by the extent of the subsidy.

It should be noted that there is little direct guidance from the optimal taxation literature on how to set stage 5 consumer prices. Where the objective is to raise a given revenue from taxes on consumer goods the standard recommendation is that commodity taxes should be inversely proportional to the price elasticity of demand for the commodities. Goods with inelastic demand for which demand responds relatively little to price changes should have higher rates of taxation.[20] This rule will minimize the loss of consumer surplus or consumption cost in the economy on the assumption that governments place an equal weight on all consumers, regardless of income level or status. Once one allows for the fact that governments may implicitly view a given consumer gain or loss as having a different social value depending on the group affected, the validity of the simple rule breaks down. At stage 5, one is considering precisely such a situation, so that tax or subsidy rates on individual consumer goods will be determined by the weighting system, normally implicit rather than explicit, employed by the government.[21] Naturally this is a subjective area, and the role of economic advisors in these circumstances is to provide data on the extent to which goods are consumed by different

classes or groups, and to assess the distributional consequences of the alternative taxation or subsidy rates that governments may select for these goods.

The implication of the stage 5 adjustment is that a further departure from the principle of uniformity of taxation is created. However, these adjustments refer only to prices paid by consumers. Prices received by producers will be either the world price – if they are not industries receiving special treatment – or in the case of such industries the stage 3 or 4 adjusted prices. Producer price incentives, therefore, should not be affected by these consumer taxes, although clearly the demand for the output of the taxed or subsidized consumer goods will be affected.

3.6 Conclusions

Table 3.1 sets out in a summary form the different objectives and interventions envisaged at the various stages. The aim of the framework is first to establish a uniform system of tax interventions that applies only to consumer goods. This has the effect of raising the necessary government revenue, but without creating any effective protection. Production incentives for traded goods are therefore both uniform and zero. The framework then allows for departures from this uniform system

Table 3.1 Five stage framework for commodities – objectives and interventions

Stage	Objective	Policy intervention
One	Allocative efficiency	Traded goods prices equal world prices Non traded goods prices equal long run economic costs of production
Two	Public revenue	Uniform domestic excise duty and import tariff at equal rates
Three	Dynamic	Made to measure producer subsidies OR made to measure tariff protection, plus export and user subsidies and tariff rebates for protected intermediate and capital goods
Four	Self sufficiency including employment	As for three
Five	Income distribution	Differential indir. tax and subsidy rates for consumer goods

on a case-by-case basis. Therefore, if industries are to receive special support this must be justified by their contribution to either dynamic or self-sufficiency objectives, and the extent to which such industries need promotion or protection must be considered individually. Similarly, for departures from uniformity on distributional grounds, rates of consumer taxation or subsidy will have to be justified by reference to the consumer groups or classes whose real incomes are most directly affected, and by reference to the importance of these groups or classes for government distribution policy. It should be noted also that in the pricing framework set out here indirect taxes for revenue purposes are levied only on consumer goods. Intermediate and capital goods are subject to import tariffs only if their domestic import-competing producers fall under the heading of industries requiring special support and rebates are envisaged to avoid penalizing their users.

This framework attempts to apply the main conclusions of the theoretical literature on trade and taxation in a manner that can generate relatively straightforward policy advice on tax and subsidy interventions. It should be clear, however, that it greatly simplifies a number of important practical issues regarding policy alternatives. These will be considered in the following chapter. Furthermore, the framework is put forward as a means of linking policy interventions with government objectives and not as a sequence of price reform measures to be introduced by stages. The discussion here can be interpreted as identifying where one might want to end up. If initially one started from a free-trade position of zero effective protection. Few governments in the real world are likely to start from this position, and so their policy reform package must be devised in the light of the speed at which it is desirable and feasible to move to a relatively more open, although perhaps still selectively protectionist, trading system.

Notes

1. See, for example, UNIDO (1978).
2. Non-traded goods can be defined as (a) those whose physical characteristics rule out foreign trade, or (b) those whose long-run economic costs of production are below c.i.f. prices of competing imports, but above f.o.b. export prices.
3. See World Bank (1985), Table 27, p. 226–227.
4. See Corden (1974), for example, for a discussion of the infant industry argument.

4

Policy alternatives and price reform

Chapter 2 discussed the case for reforming the operation of markets in many developing countries, and Chapter 3 considered a systematic framework for decision-taking in relation to the market prices for traded goods. This chapter moves from the level of the theoretically desirable to consider the feasibility and effectiveness of the alternative policies that are discussed frequently in relation to market reforms in developing countries. However, since the focus of the chapter is on policy alternatives it is necessary first to survey briefly how the question of policy choice has been considered in the theoretical literature. Two broad approaches can be identified.

First, there is an attempt at quantification of the costs and benefits associated with particular policy alternatives. This obviously has a clear intuitive appeal since rational choice implies an assessment of relative costs and benefits. The major obstacle is, of course, firstly obtaining a clear view of the likely results of implementing specific policies, and secondly placing meaningful numerical values on these effects. Tinbergen (1967), for example, provides a clear discussion of the problem, focusing upon what he calls the efficiency of economic policy. Distinguishing between objectives (which he terms target variables) and policy measures (which he terms instrument variables), the efficiency of a particular policy instrument will be determined by the ratio between the change in the target variable for a given change in the instrument variable.[1] Even setting aside the quantification problem of estimating the full effects of changes in instruments on the relevant target, if one is to make

comparisons between alternative policy instruments, some form of valuation of the relevant effects must be found. Tinbergen (1967) illustrates the problem by reference to a situation where two instruments have the same effect on a particular objective so that the valuation problem on the benefit side is removed. In relation to an employment objective, he hypothesizes a situation in which one million extra man-years of employment can either be obtained by raising the level of public expenditure by US$ 3 million, or by devaluating the currency by 5 per cent.[2] For a meaningful comparison of the efficiency of the two policy instruments, the alternative changes in the instrument variables have to be converted to some common denominator – in other words the costs involved have to be valued in relation to some overall norm or unit of account. Tinbergen suggests that it is up to the policy-maker to decide how he or she wishes to value the relative costs of alternative policies.

> It goes without saying that the most natural valuation is the one to be taken from the policy-maker's welfare function. If 5 per cent devaluation is believed to be twice as burdensome as the spending of US$ 3 million, then evidently the efficiency of devaluation (in relation to the employment objective) is half that of public spending. (p. 58)

The problem for practical policy analysis is, of course, that the numerical weights placed by decision-takers on either the attainment of particular objectives or the costs arising from particular instruments will simply not be known. Practical numerical cost–benefit calculations of this type appear unpromising for this reason, even assuming that the necessary quantitative analysis of the impact of various policies can be carried out.[3]

The second broad approach to policy choice rejects the possibility of precise cost–benefit calculation. It suggests in its place a means of ranking alternative policy instruments, with the criteria (introduced in Chapter 1) used for ranking the side-effects, or, in the terminology of this literature, 'the by-product distortions', created by various policy instruments. Corden (1980) provides a clear statement of this position.[4] The argument is briefly that in general terms the most efficient policy instrument is likely to be the most direct: that is, the one which operates most directly on the target variable. Use of direct instruments, it is argued, will minimize the side-effects in other parts of the economy, which, in this view, will normally be undesirable. The basic premise is therefore that government interventions should be limited to the particular objectives to be achieved and that the consequences of these

interventions in other areas should be minimized. To give a specific example, the government may wish to promote a particular industry – for either dynamic or self-sufficiency reasons. One way of doing this is a direct producer subsidy, for example through lower tax payments in the early years of production. Another alternative would be to impose a protective tariff which allows firms to charge more than the international price for the output concerned. Following the logic of this approach – assuming both measures to be equally effective – the tariff would be an inferior policy since it would create a by-product distortion in the sense that consumers or users of the product concerned would now pay more for this product relative to others. It is argued, therefore, that their choice will be distorted by the imposition of the tariff and its effect upon relative prices.

Alternative policies, it is suggested, can be ranked in terms of the number of distortions they create. The top policy in the hierarchy – which is described as 'first-best' – is one which meets the desired objective without imposing any by-product distortions. This framework for viewing policy choice is useful in the sense that it allows an analysis of the consequences of different policy instruments in areas not necessarily related directly to the instrument concerned. Furthermore, administrative or other constraints on freedom of choice in policy selection can be allowed for, since, if the so-called first-best policy is not feasible, one can move down the ranking until the most desirable feasible policy is reached. Since this framework allows consideration of the secondary or indirect consequences of particular policy instruments, it will be drawn upon in the discussion which follows. However, it is only a partial substitute for a full cost–benefit assessment of alternative policies.

The major problem is that ranking policies by the number of distortions they create will only be strictly valid (a) where one is sure that the effect on the relevant policy is the same; and (b) where the importance of each individual distortion is broadly equal. If these conditions do not hold one could, for example, have a more distortionary but more effective policy which is not necessarily inferior to a less distortionary but less effective policy. Also, the analysis stresses the argument that subsidies are less distortionary than other policy measures, and are therefore preferable where they can be financed and administered. However, in this context the distortionary effect of the taxes raised to finance such subsidies cannot be ignored. Corden (1974) points out that in principle there will be a tax package that minimizes the distortionary effects of

financing subsidies. However, the practical difficulty of identifying this minimum-distortion tax package must be acknowledged.

The position taken here is that precise cost–benefit calculations of the merits of policy alternatives are not realistic and that all that is practicable is a general discussion of the likely costs and benefits involved. As part of this discussion, the central concern of the policy hierarchy approach, that is, the indirect consequences of particular measures on other parts of the economy, will be of importance. However, the policy hierarchy framework cannot alone provide a definitive choice between alternatives. For example, the revenue-raising effects of alternative types of taxes may be a major issue, and administrative costs of collection, potential for avoidance and accountancy burden on tax payers need to be considered.

The rest of this chapter considers alternative policies to reform the markets for labour, capital and foreign exchange. In addition, alternative ways of promoting dynamic or strategic industries, and taxing or subsidizing consumer goods, are examined. The discussion cannot be conclusive since what are both desirable and feasible policies will differ between countries. However, it is hoped that the main issues involved can be identified.

4.1 Labour markets

As we have seen in Chapter 2, on allocative efficiency grounds there is a strong case for encouraging greater use of unskilled labour in many countries, especially developing ones. The earlier discussion noted the frequent discrepancy between estimates of the economic cost of labour, the shadow wage, and the market wage that workers are actually paid, with the latter often being substantially greater than the former for urban workers. Encouraging greater use of unskilled labour in this situation implies either compensating employers in some way or reducing the wages workers actually receive. For skilled workers it is argued that for many developing countries market wages are below shadow wages. This possibility is not considered here in detail since the focus is on unskilled labour. However, where such a situation exists it implies the need for either higher market wages or an employment tax on skilled labour.

It should be recalled that the discussion in Chapter 2 identified the

following three possible negative effects arising from urban labour market distortions for unskilled labour:

1. Insufficient investment due to low private profitability.
2. Bias in technology choice against labour intensity.
3. Excessive migration from rural areas.

It is important to bear this distinction in mind since policies which can counteract the negative effects of a distortion in one area may not be able to do so in another. For example, a number of policies can be considered to solve 1., 2. and 3. above, which do not involve an actual cut in urban wages. However, if excess migration of the type discussed in Chapter 2 is a major problem, its solution appears to require a fall in urban wages relative to earnings in agriculture. If real wage cuts are not feasible politically, and in many cases they may not be desirable on grounds of social justice, it may not be possible to cure the migration aspect of the problems associated with labour market distortions.[5] Most discussions of these issues tend to focus on the first two problems, and the treatment of unskilled labour is often cited as the clearest example of how the policy hierarchy framework can be employed to rank alternative policy instruments. Figure 1.1 (Chapter 1) taken from Corden (1974), illustrates the approach.

If one assumes that reductions in nominal wages are either impracticable or undesirable, or both, the aim must be to bring the cost to employers into equality with the economic costs of additional employment. The first-best policy in the hierarchy is a labour subsidy directly to employers. This creates no by-product distortions, since it is assumed that the subsidy can be financed with a minimum-distortion tax package. This is followed in the ranking by a general production subsidy – this, however, raises profitability in general and does not encourage a shift to the use of more labour per unit of output. It is a 'second-best' policy. Third- and fourth-best policies are also shown involving various import tariffs and subsidies, and an increasing number of by-product distortions.

Corden's original example of the use of policy hierarchy in the case of labour market distortions contained some indeterminacy since certain policies generated an equal number of distortions, and were therefore ranked at the same level. It is possible to remove this indeterminacy, however, by considering the practical scope for introducing the alternative policies. If a general subsidy to production is ruled out, subsidies alone will be unlikely, particularly if one is considering manufacturing, where

a high proportion of production will be of importables. Similarly, it seems unlikely that export subsidies would be used on their own in place of tariffs, if only because, unlike tariffs, they are a use not a source of government revenue. If policy measures (3b) and (4b) in the Corden hierarchy are unfeasible, therefore, on practical grounds the ranking of the hierarchy in this example becomes unambiguous.

The most direct measure is to subsidize employment so that employers are reimbursed for a proportion of their wages bill. Ideally, this sum should equal the difference between actual wage costs and wages calculated using the shadow wage as the cost per employee. This is the 'first-best' policy alternative since all other measures in the table involve various forms of distortion. These alternatives are simply ways of raising profitability through different combinations of tariffs and subsidies. None of these alternative measures, in other words, go directly to the problem at issue, which is the level of wage cost per worker. An increase in profits will meet problem 1, noted above and should raise employment in so far as expansion plans of firms change due to higher profitability. Without a change in relative wage costs, however, there will be no incentive to change production techniques.

It should be noted that the case for tariff protection to offset the divergence between the market and the economic cost of unskilled labour on its own can only provide a justification for relatively moderate levels of protection, of perhaps 10 per cent to 15 per cent in nominal terms. This is on the grounds that in manufacturing, the sector most affected by the distorted urban labour markets which are being considered, wages are normally a relatively small proportion of total costs, so that even a very low shadow wage may not justify very high protection.[6]

Protection of a particular producer will not solve problem 2, however, since it will not directly affect the costs of his labour *vis-à-vis* capital equipment or raw materials, and will therefore not influence the labour intensity of production. If one believes in the possibility of significant factor substitution, in many industrial branches this will be a crucial omission.

Alternatively, one could focus on the better growth prospects for labour-intensive activities or sectors if some form of labour subsidy scheme were implemented. In this view additional employment would come from a shift in the composition of output in a more labour-intensive direction rather than through factor-substitution within existing activities. Of the measures listed in Corden's example, only labour subsidies appear to meet the problem for factor-intensity, so that if this is seen as central

to the growth of employment, the real issue becomes how to implement an effective and widespread subsidy scheme.[7] A number of possibilities can be considered, as follows.

(1) The most direct form of subsidization of wage costs, and almost certainly the least practical, would be to institute a system of cash payments from the government to producers: the payments would be a proportion of firms' unskilled labour wage bills and would be intended to ensure that the labour cost to firms approximately equalled the number of unskilled workers employed multiplied by their estimated economic cost of employment. In practice, where precise shadow wage estimates may not be known, only crude estimates would be used. Such a scheme would undoubtedly encounter a number of major problems. It would be difficult to administer – what Corden terms the 'subsidy disbursement costs' would be high – and it would encourage corrupt practices. Firms, for example, would have a clear incentive to inflate their bills for unskilled labour costs, either by reclassifying skilled workers as unskilled, or by falsifying their employment records. Furthermore, it would be difficult to extend the scheme to all producers paying distorted urban wages and inequitable treatment could arise. Finally, the scheme would depend critically upon the ability of the government to raise the revenue from taxation required to finance the scheme. In general, such a system of direct cash payment is unlikely to be a serious policy option for a revenue-constrained developing country.

(2) Subsidization of wage costs is obviously easier where producers already make payments to the government linked directly to their numbers of employees. In such a situation a subsidy can be paid simply by reducing the producers' existing payments. Such considerations led to the suggestion, for example by Balassa (1977), that a labour subsidy scheme could be implemented by reducing employers' social security contributions and financing a higher proportion of these from the general budget. However, the administrative attractiveness of such a proposal should not divert attention from its limited practicability. In the first instance, in most developing countries the social security system is very limited in scope, affecting only the larger firms and their employees, and, in the second, where it does operate, social security contributions will not be a major part of wage costs. If one wished to give a labour subsidy which was a high proportion of total wages, more than simply a partial refund of social security contributions would be required.

(3) Perhaps more promising is the possibility of devising a tax credit scheme so that producers paying profits or corporation tax, or indirect taxes on their sales, have a proportion of their annual wages bill for unskilled labour offset against their annual tax liability. Such a scheme would have fewer administrative costs than a system of cash payments, and the main problem would be the financial one of generating the tax revenue from other sources to offset lower profits or sales taxation, combined with the possibility of abuse of the system by producers with an incentive to exaggerate their unskilled wages costs. Coverage would naturally be limited to tax-paying producers only.[8]

(4) A less direct form of labour subsidy could be introduced through measures to keep down future increases in money wage rates. This, in turn, could be attempted in a number of ways: policies of wage restraint could be introduced in sectors where the government is a major employer, minimum wage levels might not be raised, and the prices of basic consumer goods might be subsidized to maintain real wages. Apart from the administrative and financial difficulties involved, this option is less certain since the exact impact of such measures on the money wage bill for producers will be difficult to predict and may not accord with estimates of the relevant economic costs of employing unskilled workers.

(5) Finally, a possibility which has been discussed is to link general protective measures for industry with the degree of labour-intensity in production, in particular industrial branches.[9] This would involve differentiating either nominal or effective protection rates by the share of unskilled labour in production costs; branches with higher labour-intensity would receive higher protection and thus a boost in their profitability relative to the industrial average. There are a number of problems with this approach, however, which are likely to make it inoperable. It would require a substantial data base with detailed information on the cost structure of all industrial branches. Such information is required, of course, for all attempts to set tariffs with domestic production objectives in mind. However, the recommendations on levels of protection derived from this approach might conflict directly with the objectives of supporting industries with dynamic effects or strategic importance. Labour-intensive activities might not warrant special treatment on these grounds. Finally, this means of determining rates of protection will encourage existing labour-intensive producers. However, its effect on technology choice will be only indirect, since the incentive

to shift resources in a labour-intensive direction would be simply the prospect of higher levels of protection in the future. This option of differentiating protection levels in line with labour-intensity does not appear to be a practicable possibility.

From this discussion of the subsidization of unskilled labour it appears that there are only a limited number of alternatives for developing countries and that of these, tax credits, as an offset against profits or sales taxation, appear to be the most practicable option. The major objection would be a fiscal one since, if the scheme were spread widely to cover all employers in the urban sector, very substantial amounts of taxes would be forgone, which would have to be covered by additional revenue from other sources.

It is worth pointing out that despite the fact that labour subsidies, as a means of promoting industrial development, have been advocated over a considerable period of time by several prominent economists, perhaps most influentially by Little, Scitovsky and Scott (1970), very few governments have adopted them.[10] The main explanation appears to be not an unawareness of the argument, but the fiscal constraint noted earlier. It is generally difficult to raise tax revenue in most economies and, as will be discussed further in a later section, the great attraction of tariff protection as a means of encouraging industries for many governments is that a tariff provides the equivalent of a subsidy to producers financed by the higher price paid by consumers of the product concerned.[11] This clearly may not be the most equitable means of financing the subsidy-equivalent but it is the simplest and most direct. Subsidies to labour or to production in general must be financed out of the general revenue and will require the imposition of additional taxes, some of which may include tariffs. The difficulties involved lead some economists to discount totally the practicality of a widespread labour subsidy scheme and, in the context of developing countries at least, one must remain sceptical about its feasibility on a large scale.

For example, Squire (1981) dismisses the practicality of wage subsidies in one sentence: 'The alternative approach of wage subsidies is not considered explicitly on the grounds that it is administratively and fiscally unfeasible.' (p. 127.)

If this scepticism concerning the feasibility of a labour subsidy scheme is justified, what alternatives are available to cope with the undesirable consequences of labour market distortions? Two possibilities can be noted, as follows.

(1) As we pointed out earlier, one can make a case for moderate levels of protection to offset the effect of the excess of market over shadow wages on the profitability of domestic producers. All producers paying distorted urban wages should be eligible for this protection. However, where production is in the form of non-tradeables, no import competition will be involved and tariff policy cannot be used to allow an increase in domestic prices. This means that manufacturing, which produces tradeable goods, is the main sector for which this policy will be relevant.

In principle, within manufacturing, protection could be differentiated on the basis of the share of wages in either value added or total costs. However, as we pointed out above, in practice the government is unlikely to have access to the detailed cost data to make this possible. Therefore a relatively low general tariff on output of 10 per cent to 15 per cent on all manufacturing might be justified as an offset to labour market distortions. Setting uniform ERPs for different manufacturing branches can be very complex and demanding in terms of data requirements. For simplicity, therefore, it is far easier to work in terms of uniform nominal rates. Where rates are low this is unlikely to create major variations in ERPs between branches. However, there may be other cases where one would wish to grant significantly higher rates of protection to particular producers on dynamic or self-sufficiency grounds and one must collect the data to allow this. These types of situations will be discussed further below.

(2) The first proposal has not touched upon the issue of factor-intensity. The problem here is to lower the cost of labour relative to that of other inputs, chiefly capital equipment, but also intermediates such as raw materials and energy. Since this problem relates to relative, and not absolute, labour costs, if the option of lowering labour costs proves difficult, one can try to raise the costs of the other items. Considering a simple two-factor model with substitution between labour and capital as an example, estimated economic values of these factors might suggest that the market price of the former needs to be lowered and the latter to be raised. Other things being equal, the factor substitution arising from these combined price movements would be greater than that resulting from an increase in capital costs alone. However, if reductions in labour costs are difficult for the reasons considered, and if increases in capital costs prove to be more feasible, these latter on their own could provide

a movement in the right direction. The suggestion, therefore, is that it may often be easier to raise the cost of capital than to lower that of labour, and that this may provide the most practicable means of dealing with the factor-intensity issue. Alternative ways of raising the cost of capital are considered in the following section.[12]

4.2 Capital markets

Another measure discussed in Chapter 2 was the desirability of raising real interest rates to the level of the economic value of investment; in other words, the economic return obtainable on additional productive investments. As we have just noted, increases in market interest rates to this economic level may be the most effective means of shifting factor-intensity in a more labour-using direction.

Increases in the capital costs of investments can be affected in two main ways: first by increasing the cost of the initial investment, and second by increasing the principal amount borrowed (and therefore the interest costs).

There are also a number of other ways of raising the initial investment outlays on any particular project. These include increases in tariffs on equipment imports and reduced rates of tax credits against investment expenditure, for example shorter tax holidays or less favourable depreciation allowances. Such measures will often have a less direct and more uncertain impact upon the cost of capital. Furthermore, in the case of tariffs, a number of different considerations will govern tariff policy and the objective of raising capital costs may be simply one of several which have to be borne in mind in establishing tariff levels. It is probably simpler to aim at using one policy – interest rate policy – as the major means of increasing capital charges, and merely attempt to ensure that the other factors which can affect capital costs do not work in an opposing direction to interest rate changes.

Considering increases in interest rates, the most obvious and most direct policy would be to free interest rates and allow them to settle at a market-clearing level. Credit in this case would be allocated by the market rate, not by some administrative rationing system run either by the government or commercial banks.

However, it is possible that a market-clearing rate still does not reflect the economic returns available on productive investment. Theoretically, in fact, in an economy in which market prices diverge from shadow

prices, there is no reason why equilibrium prices in any particular market should equal economic values. The market demand for loanable funds, for example, will be based on firms' expected returns at market prices and will include an allowance for risk and distortions in particular markets. The economic opportunity cost of investment, however, is defined strictly as the return on the marginal project in the economy, with this return expressed at shadow, not market, prices. None the less, insofar as a price reform programme succeeds in moving market prices closer to economic values this will lessen the likelihood of a major divergence between a market-clearing interest rate and the opportunity cost of investment. In the absence of information to the contrary the former can thus be taken as a proxy for the latter.

4.3 Foreign exchange markets

As noted earlier the types of price and trade reforms considered here are likely to have significant implications for balance-of-payments management. The aim is to set domestic prices for traded goods on a rational basis that reflects government objectives and priorities. This is in contrast with the current situation in many countries where relative prices for these goods are determined largely by the unanticipated effects of the system of tariffs and controls often introduced for balance-of-payment reasons. The approach to tariffs and quotas is likely to imply a lower overall level of import protection than is present in many developing countries, although it does not necessarily mean a free-trade framework. None the less, a reduction of protection, even if phased over a lengthy period, is likely to require a depreciation of the exchange rate for reasons outlined earlier. However, in the post-1971 world of flexible exchange rates there are a number of alternative ways of devaluing. In general there are three broad alternatives, as follows:[11]

(a) a free float of the exchange rate;
(b) devaluation followed by pegging the exchange rate to either one major currency or a basket of currencies;
(c) devaluation followed by a 'crawling peg' system whereby the exchange rate gradually depreciates against the currency to which it is pegged.

This is not the place to go into detail on the merits of these alternative approaches, but two general points can be made.

First, a free float is not normally suggested for developing countries, since it is argued that the stability of the exchange rate in such a system requires a country to have financial asset markets that are integrated into the international system. If such markets do not exist, as they do not in most developing countries, in a floating system the exchange rate will be determined by the demand and supply for foreign exchange from the goods market, which can lead to instability.

Second, the crawling peg is normally recommended for countries experiencing inflation above the world rate. A steady depreciation of the currency is thus a means of maintaining a constant real exchange rate. With high domestic inflation a pegged currency is liable to speculative movements, and in the period before the shift in the pegged rate the competitiveness of the tradeable goods sector will be weakened.

The choice appears to be between a form of pegging or a crawling peg. Factors such as the inflation rate, and the concentration of trade with main trading partners are likely to be relevant considerations in the choice of approach. It must be stressed, however, that governments are not indifferent to the level of the exchange rate. This may be partly for 'non-economic' prestige reasons, but in addition, as we have argued, there may be real costs that can be involved with devaluation – a combination of inflationary and deflationary tendencies. For these reasons, governments may not wish to have devaluation beyond a certain rate. If this is the case, it clearly imposes a constraint on any reform programme of the type discussed here. However, that is something that must be faced and allowed for. The implication is that the timing of any trade and price reform proposals must be such that it does not necessitate an unacceptable shift in the exchange rate, with what is acceptable determined by the impact of devaluation on domestic prices, output and employment.

4.4 Industry incentives

In any reform programme allowance should be made for the possibility of granting different activities, different rates of protection or promotion. As we have argued this is because governments may wish to encourage particular branches for several reasons not related to short-run allocative

efficiency. If domestic production in such branches is to be commercially viable, it may require some form of industrial promotion or protection to allow local firms to receive a market price sufficiently above comparable international prices to cover domestic costs with an acceptable return on capital. The policy hierarchy has been drawn upon in discussions of the alternative ways of providing this encouragement and for this reason its conclusions should be noted. Table 4.1 ranks alternatives in this area in the policy hierarchy framework.

In this case indeterminacy remains between the second-level alternatives – either import tariffs combined with export subsidies, or a form of input subsidy – since both create a single distortion. Choice between these two policies, assuming they are equally effective in promotional terms, would therefore have to be based on a view of the importance of the distortions associated with the alternatives. It should be pointed out that the framework in Table 4.1 assumes that the problem of labour market distortions has already been resolved, so that the need is solely to encourage production in particular industries.

The conclusions of the policy hierarchy analysis in this case are similar to those in that of unskilled labour. For industry incentives, direct subsidies to producers are shown as the first-best policy since they raise profitability without the need to increase prices to users or consumers above world levels, so that no consumption distortion is involved. Unlike the labour case discussed earlier, there is no need to encourage the use of a particular input, so that the subsidy can be a general one on total production rather than being linked specifically with an input. A combination of import tariffs and export subsidies is the second best policy, since it does not discriminate between sales for the export and the home market. However, it does introduce a wedge between domestic and world prices for the commodities involved, arising from the effects of the tariffs and subsidies.

The alternative second-best measure is a form of input subsidy, such as accelerated depreciation allowances and credit subsidies that lower the cost of capital, or subsidize input prices, such as energy sales at less than world prices. Labour subsidies would also come under this general policy of input subsidies. These measures raise profitability, and thus encourage production, but at the same time also create incentives for a shift in factor or commodity use that may not be in line with relative economic costs.

Table 4.1 The policy hierarchy: industry incentives

Rank	Policy measures	By-product distortions
1.	Production subsidy	None
2a.	Import tariff plus export subsidy	(i) Consumption distortion
2b.	Subsidy to inputs	(i) Factor-intensity distortion
3.	Import tariff	(i) Consumption distortion (ii) Home market bias
4.	Import quotas	(i) Consumption distortion (ii) Home market bias (iii) Public revenue effect

Note: Items a and b at level 2 are equivalent since they involve the same number of by-product distortions.

Tariffs and export subsidies taken individually are seen as third-best policies since each creates a bias in favour of a particular market, either the home or the export market, in addition to consumption distortions. However, export subsidies would be unlikely to be used in the absence of some protection, so that export subsidies alone, as a single policy, are left out of the listing in Table 4.1. Finally, import quotas are viewed as the least satisfactory alternative on the grounds that they not only introduce consumer distortions and a bias against exports – as do import tariffs – but, in addition, their distributional effect is in favour of import licence holders rather than the government. With tariffs the margin between domestic and world prices of imported goods is captured by the government through tariff revenue. Under a licensing system, however, this margin goes to the importer who can charge a price reflecting the scarcity created by the quota.

Some problems associated with the policy hierarchy approach have already been referred to. In some circumstances, for example quotas, the least attractive alternative in this framework, may be the most effective means of protecting new industry. Quotas act directly to reduce the level of imports – which is likely to be important in short-term balance of payments crises. In addition, they give domestic producers greater certainty regarding the future size of the domestic market than does tariff protection. This follows since it is often difficult to predict how a given tariff will affect the demand for imports. Furthermore, while quotas insulate the domestic market from international price movements, this is not the case with tariffs expressed on a price percentage (*ad valorem*) basis. With tariff protection of this type a fall in world prices will lead to a fall in the domestic price of imports and thus, perhaps, a cut in the

share of local producers in the domestic market. One can argue that the fact that tariffs do not fully isolate domestic producers from developments on the world market is a good thing, providing a spur to greater efficiency. However, much is likely to depend upon the stage of development of domestic industry. At later stages the impact of foreign competition may be highly beneficial, while earlier it may have a destructive impact pushing local producers out of the home market and setting back the prospects for industrial expansion in the economy concerned. The case for the use of import quotas as a form of protection is likely to be much stronger, therefore, in the early stages of a developing country's industrialization programme, and where domestic production is encouraged, particularly for self-sufficiency reasons. Even in such cases, however, the negative aspects of quotas tend to make them policy instruments of last resort.

4.5 Industry promotion

Producer subsidies, the first-best policy in the hierarchy framework, face the same objections considered in the case of labour subsidies. The rationale for such a scheme is that if domestic production of particular goods is desired, this should be encouraged by subsidizing local firms so that they can earn a normal return on capital while competing with imports in the domestic market by selling at roughly equivalent prices to world levels. In this way no consumption distortion is involved since domestic prices are broadly equal to world prices and there is no bias against exports since all production, regardless of whether it is sold at home or abroad, qualifies for the subsidy. As with the treatment of labour, a number of alternatives can be considered for implementing such a subsidy scheme. However, a prior question that must be resolved before considering the form of subsidies is whether equal subsidies should be given to all producers that are eligible, or whether the made-to-measure schemes, discussed in Chapter 3, are to be used. It ought to be acknowledged that made-to-measure subsidies are difficult to introduce, since they imply that subsidies should be given only to the extent that they allow a normal rate of profit in the industry to be promoted. This requires not only detailed information on the current cost position of producers, but also, since costs are likely to vary with the scale of output, assumptions about future demand trends and the market share of

individual producers. For these reasons it is likely that, at least within industries, there would have to be uniformity of treatment for different firms, and in some circumstances uniform subsidies between industries might also be necessary.

Production subsidies are linked specifically with the level of output, or preferably value added, in an industry. The most direct form would be cash payment from the government, but this can be taken as administratively impracticable in the context of developing countries. A more feasible alternative would be a tax credit scheme that reduced liability for profits taxation, with the tax credit set as a percentage of value added, thus giving an incentive to expand production. We have already seen that, other things being equal, input subsidies are inferior to general production subsidies, even when they lead to the same growth in value added. For example, credit subsidies are one of the most common forms of support for favoured industries, but they clearly conflict with the objective of raising capital relative to labour costs discussed earlier. A tax credit scheme linked with the level of production is clearly the most practicable method of production subsidy. However, it also runs into administrative and fiscal objections considered above in the case of labour subsidies.

The administrative problems lie largely in the fact that only the taxable large-scale production sector could be reached by a tax credit scheme. Small-scale producers, largely outside the tax net, who benefit indirectly from import protection, would find that if protection were removed there would be little or no compensating boost to their profitability through lower profits tax payments.[14]

Even setting aside administrative difficulties, there will be some developing countries where even the selective use of subsidies to producers will create fiscal problems. Subsidies must be matched by higher revenue from other sources if total government expenditure is not to fall. The theoretical solution is to raise this revenue in the least-cost manner, allowing for the various costs associated with taxation, such as distortions and collection costs. We have seen in chapter 3 that, theoretically, foreign and domestically produced goods should be taxed at the same rate. However, if it is either administratively or politically more difficult to tax domestic production than trade, equal rates of domestic excise taxes and import tariffs will be ruled out, and it will be necessary to rely heavily on tariffs as a means of financing producer subsidies. This implies (a) the use of uniform tariffs for revenue purposes; and (b) the use of selective subsidies to promote the industries to be given

special incentives. The existence of a constraint on the ability to tax domestic production is therefore an argument for relatively high import tariffs that do not discriminate significantly between industries.

The extensive use of subsidies is likely to be difficult in all but a limited number of countries for the fiscal and administrative reasons outlined above. Where policies of selective support for industries are followed the extent to which it will be possible to use subsidies – either on production or input use – will depend chiefly upon the following:

(a) the number of industries to be promoted;
(b) the tax base of the economy and the scope for raising revenue to finance subsidies;
(c) the competence of the government bureaucracy in administering subsidies.

It is clear that selective use of subsidies is less difficult than a general labour subsidy scheme that would involve large sums of money and would cover large numbers of employees, particularly in the organized manufacturing sector and perhaps in other sectors as well. However, in some economies, particularly those where governments wish to promote a significant number of industries, it may be difficult to use subsidies as the main policy instrument to provide this support.

4.6 Industry protection

Where subsidies on a large scale are ruled out as impracticable, one is left with import protection – either through tariffs or quotas – as the major alternative for giving special encouragement to industries. We have already noted two possible justifications for setting positive uniform import tariffs – one for revenue purposes and the other as a means of compensating domestic producers of tradeable goods for the excess of urban wages above the economic cost of employing workers. However, industry protection can imply the need for differential rates. As has been stressed in Chapter 2, the number of industries to receive special protection will vary with the policy emphasis of governments. A government following a relatively open export-orientated policy may wish to give extra protection on dynamic or self-sufficiency grounds. As was pointed out in the discussion of labour subsidies, many economists accept that a large-scale system of producer subsidies would be administratively and fiscally very difficult to implement. Balassa, for example, focuses

on the 'second-best' policy of import tariffs combined with export subsidies as a means of encouraging industrialization because of its lower budgetary consequences than a system of producer subsidies.[15]

It should be noted, however, that subsidies on production or on the use of inputs are in practice used much more widely than labour subsidies. They tend to be used either to compensate for the effects of other policies which discriminate against particular sectors or activities, or to provide assistance to particularly depressed industries. Examples in the first category might be the subsidies – in the form of cheap inputs such as fertilizers or credits – received by agricultural producers in part to offset the low protection granted to agriculture relative, for example, to manufacturing; export subsidies may also be used partly to compensate for the level of the exchange rate and the level of incentive afforded by import protection for sales in the home market. An example of subsidies to depressed industries would be the financial support received by the steel industry in many developed economies.

Such subsidies differ, however, from widespread producer or labour subsidies. Their coverage is relatively narrow; for example, although many developing countries now use export subsidies, exports are typically only a relatively small proportion of total manufacturing output, so that even high rates of subsidy as a proportion of export value are not high in relation to total manufacturing output. Also, in few, if any cases are these subsidies seen as a means of replacing the existing system of import protection – which is, of course, the rationale for the schemes discussed above. The existence of a range of subsidies in practice should thus not be interpreted as evidence that total removal of import tariffs and quotas, and their replacement with broadly based producer subsidy measures, is feasible in many countries.

However, a government placing more emphasis on the home market and wishing to establish a closely integrated industrial structure is likely to wish to grant protection to a much larger number of industrial activities. The establishment of priorities in these areas is a matter for economic judgement and broad strategy, and discussion of policy alternatives given here is intended to be sufficiently flexible to allow for different approaches.

In what follows, when protection is discussed it is normally tariff protection which is being considered. As we have seen, in certain limited circumstances quota protection may not be inferior to the use of tariffs. However, to simplify the discussion, alternative tariff measures alone

are considered on the grounds that quotas will generally be an inferior policy instrument. The discussion also considers manufacturing alone.

In discussions of tariff policy for manufacturing four alternative approaches are possible, as follows, each implying a different goal for trade policy:

(a) zero effective protection;
(b) uniform positive effective protection;
(c) uniform positive nominal protection;
(d) made-to-measure tariffs.

A system of zero ERP is one where producers make the same profit as they would in a free-trade situation. Where it is pursued as a goal, governments do not wish to give special encouragement to key industries, and plan to allow only industries that are currently competitive internationally to be established. Zero ERP will arise under free trade – that is, with the total absence of trade controls. However, as Chapter 3 points out, zero ERP is compatible with import tariffs provided these are uniform, imposed only on consumer goods, and that all domestic producers of these goods are subject to an excise tax at the same rate as the import tariff.

Uniform positive effective protection can be interpreted as a policy of giving general support to all manufacturing in comparison with other sectors, but not discriminating between specific manufacturing branches. As we have seen, one argument for a low positive ERP for manufacturing is to compensate for the divergence between the shadow and the market wages for the unskilled workers employed in the sector. Another is to compensate manufacturing as a sector for the external effects it generates in other parts of the economy. A uniform ERP will give equal incentives to expand to all producers within the sector, regardless of the commodities they produce. The growth of particular branches can be determined by the relative competitiveness of the various producers. In this view, therefore, the government should not attempt to influence the pattern of expansion within manufacturing.[16]

A number of problems are associated with this approach, however. First, as was pointed out in Chapter 2, ERPs can be extremely difficult to calculate since accurate rates require detailed branch input coefficients, along with nominal tariffs and tariff equivalents where quotas are involved. They will often only be known with a substantial time lag. Second, where market and shadow prices differ substantially, a policy

of allowing the pattern of growth within manufacturing to be determined by the private decisions of producers based on commercial profitability may lead to an economically inefficient pattern of growth.[17] In so far as a reform programme reduces the divergence between market and shadow prices this objection will be weakened, although the potential importance of external effects will remain. Finally, uniform ERPs provide equal production incentives but they do not remove the problem of consumption distortions, since uniform ERPs will result in a varied set of nominal tariffs. This assumes that there are some non-traded inputs into the production of traded goods. If all inputs are traded, uniform ERPs will also mean uniform nominal protection at the same rate. In practice such a situation is most unlikely.

The third alternative of aiming for uniform nominal rates of protection approaches the problem from the consumption viewpoint. Uniform nominal rates will result in varied ERPs – and thus a varied set of production incentives – but they will ensure that consumers' decisions are not distorted by the set of relative tariffs. The other major advantage of working with uniform nominal rates is that it side-steps the difficulty of calculating ERPs.

It must be recognized that there are two conflicting goals behind the policies of uniform ERP and uniform nominal protection. Uniform ERP implies uniform incentives to producers in their output and investment decisions, and uniform nominal protection implies uniform incentives to consumers in their expenditure decisions. Corden (1980) notes this incompatibility and suggests that in practice some form of compromise is needed: one possibility is to start with uniform nominal tariff rates as a goal and to adjust these to a mild non-uniformity if they are found to have caused very wide divergences in ERPs.[18]

However, none of the two uniform approaches to protection attempt to distinguish between different branches and to ask whether the priority branches, in terms of government planning, have the protection they need. That is the concern of the made-to-measure approach to tariff policy. The made-to-measure approach accepts that the ratio of domestic costs to world prices will vary substantially between different branches and may also vary within branches. It aims to set a tariff rate which will be just sufficient to give the producers concerned a normal return on capital. In principle, such made-to-measure tariffs can be in either nominal or effective terms but, given the complexity of calculating ERPs, most practical applications of this approach are likely to focus upon nominal rates.

The logic of the made-to-measure approach is appealing in that it aims to avoid unnecessary costs to consumers or monopoly profits by granting producers only the protection they need to earn a normal rate of profit. This is clearly a different approach to, for example, setting a uniform rate of protection, either nominal or effective, and allowing the establishment of all domestic producers who feel that production will be commercially viable at this rate. This latter procedure may create monopoly profits in some branches, yet still not ensure that production is established in other higher-cost but priority areas.

The practical problems associated with the application of made-to-measure tariffs to industries which it is felt desirable to protect should not be minimized, however, and have been stressed, by many, including Corden (1974) and Corden (1980). Several points should be noted, as follows.

(1) One needs some technique or mechanism for justifying protection and for identifying the key industries to be protected. It is clear that in few countries will it be felt desirable to protect all domestic activities which it is technically possible to establish. Government preferences need to be articulated, either through direct policy guidelines or through the use of some form of cost-benefit technique reflecting the economic case for protection of various activities. Chapter 3 has considered briefly ways in which special protection might be justified.

(2) A major objection raised frequently in discussions of the made-to-measure approach is that it requires considerable data on the cost position of domestic producers. If one is to attempt to set a tariff which generates a certain rate of return, one quite clearly needs accurate current and projected cost information. This problem may perhaps be less serious than is sometimes suggested if one can institute a mechanism whereby producers requiring protection make accurate cost data available to the relevant planning authorities. More difficult is the conceptual problem of whose costs should be considered. In a simple case of one producer and a single commodity there is no problem. However, with several producers and several products a number of issues arise. For example, should the made-to-measure tariff be based on the costs of the average producer or the marginal producer? If the former is chosen, the less efficient producers might be forced out of the industry, while if the latter are used, non-marginal producers are likely to make excessive profits. Furthermore, should the tariff-setting authority attempt to estimate

the tariff which is required to establish efficient levels of production in the industry and ignore the current costs of existing producers, either average or marginal?

Also where there are significant quality differences between the output of different producers, it may be necessary to set tariffs on a firm-by-firm or commodity-by-commodity basis rather than at the industry level.[19]

These are all complex issues which in practice will involve various compromises. If domestic production is to be protected, most governments will want to do this in a manner which minimizes the avoidable economic costs involved but which protects local jobs and encourages further domestic expansion in the industry. In many cases, there is likely to be a balance to be struck between maintaining too many high-cost domestic producers and preventing the closure of too many firms or the emergence of strong domestic monopolists.

(3) A characteristic of a tariff structure based on made-to-measure tariffs is its non-uniformity. Different activities and different branches will require different nominal rates of protection and this can create a complex set of incentives, the full impact of which may not always be known. Furthermore, there will be the possibility of interdependence between the rates of protection granted to different activities. If protection is granted to newly established producers in industry A, for example, which sells its output to industry B, the imposition of a tariff on A will raise B's costs. If B itself is receiving protection from a made-to-measure tariff and A's output is a major component of its costs, there will be a need to review the level of B's tariff. Interdependence such as this will be greater the more integrated the industrial structure and the greater the proportion of domestic output that is protected.

(4) Finally, on its own, made-to-measure protection provides no direct incentive to lower costs. If firms are granted the protection they need to earn a normal profit, further cost reductions will create extra-normal or monopoly profits, and the more efficient and profit-conscious firms may strive to raise profits. However, if the reaction to this greater cost efficiency is a lower tariff the next time the tariff level for the industry is considered, one can argue that the incentive to reduce costs will be very weak. The proposal normally made to overcome this lack of incentive to reduce costs is some form of timetable for reductions in made-to-measure tariffs, the idea being that producers should not be allowed

to assume that they can shelter behind their current level of protection on a permanent basis.

All of these problems are clearly substantial, but none the less they must be faced if a government is to come to terms with the need to grant economically justified levels of protection to particular activities, in contrast with the chaotic and often excessive forms of protection still existing in many countries at present. The uniform proposals, for either equal nominal or effective protection, have a clear administrative appeal due to their simplicity, but their theoretical rationale is weak.

The argument put forward here is that differential incentives will be required if it is the objective of governments to selectively encourage particular industries. This implies, therefore, either made to measure tariffs or made to measure subsidies. Of these two alternatives differential subsidies are generally seen as preferable on the grounds of the by-product distortions referred to above. However, where such subsidies cannot be implemented for either fiscal or administrative reasons, differential tariff protection will be necessary. It must be recognized that there are major problems in implementing a policy of fully made to measure promotion or protection, for the reasons noted above. A relatively simple way around some of these difficulties, which still retains some element of selectivity, is to work with a relatively small number of rates of tariff or subsidy for those activities that are to receive special encouragement. Industries receiving special treatment would fall into one of these categories with each category having a separate rate of protection. Theoretically, there is a stronger case for setting these rates as a proportion of value added rather than of gross output; in other words, where it is practicable, rates of protection or subsidy should be set in effective rather than nominal terms. The particular rate applicable to individual industries would be determined by discussions between planners and producers taking into account current and expected world prices and domestic production costs.

Detailed information would be required to justify the level of support given to particular industries, but the scheme would recognize that the identification of individual rates of subsidy or tariff sufficient to generate a normal rate of profit would be beyond the scope of most planning authorities. Rates of promotion or protection and the categorization of particular industries would have to be reviewed periodically, both to allow for changes in international and domestic conditions, and to encourage reductions in domestic cost

It is likely that in at least some developing countries tariffs will for some time remain an important element of economic strategy for protective as well as public revenue reasons. This implies that tariff schedules must be devised in the light of both their effect on revenue and the incentives to domestic production that tariffs create. However, as was suggested in Chapter 3, where differential tariffs are used for protection it is desirable to offset their side-effects – on exporters and users of protected intermediate and capital goods – through subsidies and possibly tariff refunds (drawback).

4.7 Price policy and income redistribution

It is clear that governments may wish to alter the prices of particular commodities on equity grounds: to lower those consumed by the poor and raise those consumed largely by the rich. The discussion here focuses primarily on changes to consumer prices since these are the most obvious commodities to influence if one wishes to use price policy for distributional reasons. However, prices offered to producers could also be influenced by such considerations: for example, agricultural marketing boards might be instructed to offer small farmers prices higher than warranted by purely economic considerations if the government wished to raise farmers' incomes.

For altering consumer goods prices there are two main policy alternatives. Indirect taxes, either tariffs or taxes on domestically produced goods, can be raised or lowered in line with distributional policy. The chief problem here is that where taxes are not already imposed, and for most goods purchased by the poor this will often be the case, it will not be possible to cheapen prices by tax reductions. The second approach involves lowering retail prices for particular items consumed by the poor and will normally need subsidy payments to cover commercial losses elsewhere in the economy. Examples of such controls would be government sales of essential goods from government retail outlets at below cost-price; alternatively the government could control retail prices, for example for urban transport or electricity, and cover any commercial losses incurred by public sector enterprises in the transport and power sectors by budgetary transfers. It is now generally recognized that subsidizing consumption by holding down producer prices in the private sector is undesirable due to the disincentive effect this is

likely to have on producer supply decisions, which are often responsive to price changes.

In discussing food price policy, Timmer *et al.* (1983) point to a number of ways in which food prices to consumers can be subsidized.[21] These include the following:

1. Direct subsidies to private marketing operations to reduce the margin between producer and consumer prices to less than the full marketing costs involved.
2. A dual price system whereby foodstuffs are sold to the poor in government ration shops at a price below the free-market price. If the ration shop stock can be obtained by a tax in kind on farmers, no direct subsidy payments by the government will be required, although implicitly farmers will be subsidizing consumers who use ration shops.
3. Food stamps which give holders of the stamps the right to obtain specific foodstuffs.
4. Sales of food consumed solely or primarily by the poor – 'poor people's foods' – at retail prices below those paid to the producers, with the difference covered by a government subsidy.

Timmer *et al.* (1983) stress the danger of linking policies that reduce prices to consumers with lower prices for producers. For example, they point out that it is often the poorest farmers who grow 'poor people's foods' and that attempts to hold down producer prices of these foods need not imply an improvement in income distribution, apart from their disincentive effect on supply. They also stress some of the difficulties of implementing many of these policies, for example in restricting access to ration shops to the very needy, and ensuring that ration shop foodstuffs are not resold again on the open market. Food stamp systems are also rare in developing countries because of the administrative complexities involved.

A case can thus be made for introducing various subsidy payments on distributional grounds. Where these subsidies are for public sector enterprises, the administrative or disbursement problems will be less. However, the revenue consequences considered earlier in the cases of labour and general production subsidies will remain. It appears that one must distinguish between fairly limited subsidy schemes for individual commodities and relatively small numbers of producers, which are

implemented in many developing countries at present, and schemes of much wider coverage, for example subsidizing the use of all unskilled labour in the modern sector or all, or most, manufacturing production. As has been stressed the latter schemes are clearly far more demanding in terms of their revenue and administrative consequences. However, more limited selective subsidies cannot be ruled out for administrative or fiscal reasons.

4.8 Commodity taxation policies

In enumerating some principles of indirect taxation, one can start with the following principles listed by Adam Smith:

- People should be taxed in accordance with their ability to pay.
- Taxation should be certain, not arbitrary.
- Tax should be cheap to collect.

(*Wealth of Nations*, Book V, Chapter II, Part II).

In addition, one can take into account the modern developmental objectives of governments and, following Lewis (1984), list the following principles:

- Taxation should not be detrimental to economic growth.
- Taxes should create as few economic distortions as possible.
- Taxation should conform to the government's income distribution objectives.
- Taxes should produce stable revenues.

While these principles may conflict from time to time in framing individual taxes, they none the less provide a framework whereby a government can compare conflicts, and assess the trade-offs between different principles.

Turning more directly to indirect tax policy, we shall discuss the extent to which tariffs, sales taxes and value added taxes meet these principles. These taxes were introduced in Chapter 2. Before discussing each in turn, though, we have to point out that indirect taxes tend to be regressive, in that they are not levied in proportion to people's ability to pay. Therefore, they differ from income taxes, which are generally structured so that they are progressive, with the rate of tax rising as income rises.[22] However, as suggested in Chapter 3, rates for luxury goods can be (and often are) set higher than those for basic consumer goods.

Tariffs

As we have seen in Chapter 2, tariffs create distortions in that they drive a wedge between the market price and the opportunity cost to the economy of obtaining a good subject to a tariff. While tariffs are levied on imports only, they create a price shield for domestic producers. To the extent that tariffs are non uniform, they may create consumption distortions. Likewise, non uniform tariffs, by altering relative prices, can and do affect the pattern of investment and production, which may be detrimental to economic growth. On the other hand, non uniform tariffs can be used as an instrument of income distribution policy, with high tariffs on luxuries and low tariffs on necessities. [illegible] tariffs have the attraction of being easy and cheap to collect, and [illegible] sizable source of revenue. However, [illegible] the use of tariffs to raise revenue.

[illegible]

As tariffs are levied on imports only, [illegible] sales taxes [illegible] are levied on both domestically produced goods and [illegible] in contrast with tariffs, they can [illegible] price distortions introduced by tariffs [illegible] sales tax on a good is equal to the tariff on the same good when imported. However, a manufacturers' level sales tax on intermediates has a cascade effect (as noted in Chapter 5) and drawbacks are needed if the tax accumulation caused by the cascade effect is to be obviated. [illegible] manufacturers' [illegible] sales tax is relatively easy and cheap to collect unless drawbacks are introduced, in which case the administrative cost [illegible]. As with tariffs, the manufacturers' level sales tax can be [illegible] at different rates to accord with the government's income distribution objectives.

The imposition of a manufacturers' level sales tax at a lower rate than [illegible]

[illegible]

The main differences between this tax and the previous tax are that the retail level sales tax can cover services as well as goods and it captures

all value added. Therefore, it avoids the distortion of taxing goods rather than services, which would tend to encourage the development of services at the expense of manufacturing, and widens the revenue base. However, unless drawbacks are available, the tax will catch intermediates, thereby triggering a cascade effect again. This may be avoided, though, if the tax is really levied on retail sales to final consumers only, and wholesale or inter-firm sales are not subject to the tax. On the other hand, such exemptions may give rise to widespread tax evasion.

Unlike the manufacturers' level sales tax, a retail sales tax would catch imports. Therefore, it needs to be closely co-ordinated with tariffs. If a price distortion is to be avoided, then tariffs should be replaced by retail sales taxes. Of course, tariffs may be imposed over and above the sales tax with a view to providing protection, in which case the tariff becomes a marginal tax for revenue purposes, principally to encourage domestic manufacturers.

Value added tax (VAT)

A VAT is a comprehensive sales tax with drawbacks on all transactions before the sale to the final consumer. Goods destined for domestic sale, whether locally produced or imported, are subject to VAT; goods destined for export are not. Thus a VAT automatically confers drawbacks on purchases of intermediates, and on exports, and therefore acts as a tax on final consumption only. It avoids all the price distortion effects created by other taxes which do not have full drawback systems, is applied at all levels, and applies in principle to all goods and services. A comprehensive VAT would act as the main source of revenue from commodity taxes and tariffs would again become marginal sources of revenue, imposed for reasons of protection only. VAT, as with other commodity taxes, can be applied at differing rates for 'luxuries' and 'necessities', thus acting as a tool for income-distribution policy. The chief drawback of VAT is the cost of administering it, which we shall turn to in Chapter 5. For an extensive discussion of VAT see OECD (1988).

The introduction of such measures as those discussed above may imply a major shift in policy for some economies. Such a shift may be neither costless nor easy, and would have to be phased gradually to avoid harmful side-effects of the reforms. The question of the phasing of such reforms and the constraints on the ability of governments to move in this direction are the subject of the final chapter.

Notes

1. Symbolically this will be $\Delta y/\Delta z$, where y is the target variable and z is the instrument. If one assumes that all other factors apart from the instrument variable are held constant, mathematically the ratio becomes a partial derivative ($\delta y/\delta z$).
2. Tinbergen (1967) p. 58.
3. It must be stressed that Tinbergen (1967) himself is doubtful of the practical value of cost–benefit calculations of various policies. While he argues that 'the most complete investigation of efficiency should also reckon with the influence of the instruments on the social welfare function', he also comments, 'in practice, however, it will often be on incomplete information only that decisions have to be taken' p. 52.
4. This general approach to policy analysis has a relatively long history, starting initially from the international trade literature. Corden (1974) has a detailed bibliography.
5. One can consider alternative measures to curb rural–urban migration. For example, if it is impossible to check the growth of urban wages, it may be possible to raise agricultural incomes and employment prospects as a part of a longer-term investment programme for the agricultural sector.
6. Little, Scitovsky and Scott (1970) make this point and suggest that even assuming a zero shadow wage, it would be difficult to justify an ERP of above 15 per cent, pp. 147–8.
7. Some would wish to qualify this view by arguing that employment growth may be best served by maintaining a high level of investment in the economy rather than by alterations in the factor-intensity of production. See Weiss (1984b) for a survey of some of these neo-Keynesian arguments. From this perspective a policy of reducing real wages in manufacturing, which is one of the alternatives considered below, will have a negative impact on employment due to its effect on internal demand.
8. It may be of interest to note that a limited scheme of tax credits against profits tax linked with the employment effect of new investment was introduced in Mexico in the late 1970s, see Weiss (1984a).
9. Corden (1980), pp. 75–6, refers to this possibility, for example suggesting a uniform rate of protection for unskilled labour costs.
10. The case of Mexico referred to above is an exception. However, there the main purpose of granting labour subsidies appears to have been defeated by granting even greater subsidies to the use of capital. Little (1982), clearly unaware of the Mexican case, comments that, 'so far as I am aware only the UK has used labour subsidies to encourage employment, although training subsidies are in use in some [developing countries]' p. 143.
11. Tanzi (1982) gives data on the fiscal deficit in a sample of twenty-three developing countries. In addition he attempts to explain revenue shortfalls. The most common factor cited is 'administrative difficulties' in tax collection procedures.
12. Means of raising intermediate costs relative to labour are not considered explicitly. When most are tradeables a devaluation is one way of achieving this.

13. Wickham (1984) surveys the literature in this area.
14. Corden (1974), p. 48, comments that just as some sectors may be untaxable, the same producers may be unsubsidizable.
15. 'The advocates of production subsidies disregard budgetary considerations on the assumption "that government intervention is a costless operation; in other words there is no cost attached to the choice between a tax and a subsidy". But while such an assumption is "in accordance with the conventions of theoretical analysis of these problems" it does not conform to the conditions existing in most developing countries.' (Balassa, 1982, p. 67.)
16. See, for example, Balassa (1982), pp. 66–70. Balassa argues that a moderate level of effective protection for manufacturing as a whole can be justified in most developing countries on the grounds of external effects.
17. This assumes that planners can estimate economic costs and benefits from different branches. Balassa recognizes the potential case for granting differential rates of protection to infant-industry branches. He tries to maintain a degree of uniformity, however, by arguing that it is desirable to set one standard rate for infant industries, but that this should be no more than double the rate for manufacturing in general. He also suggests that infant-industry protection should be temporary, perhaps for 5–8 years; see Balassa (1982), p. 69.
18. See Corden (1980), p. 75.
19. See the discussion in Corden (1974), pp. 201–23.
20. As Little, Scitovsky and Scott (1970) put it: 'Apart from the argument in favour of simplicity . . . all the theoretical arguments . . . suggest that different industries should be encouraged by different amounts.' (p. 160.)
21. Timmer *et al.* (1983), pp. 189–211.
22. It is beyond the scope of this study to discuss the arguments for and against raising revenue from taxes on income, wealth and rents rather than commodity taxes. This is obviously a major area of fiscal policy, though a qualification must also be added. Bird (1987) argues that indirect taxes in developing countries, 'while not as regressive as most people seem to think, do continue to impinge upon the lives of many poor people in limited, but potentially important ways'. However, he found that the effects were complex and subtle, 'and hinge very much on the detailed structure and administration of the tax in question'

5

The policy dialogue and implementation of policy reform

The discussion so far has concentrated on the economic arguments for reform of prices and markets in developing countries. In this final chapter we will concentrate on the mechanisms for arrival at policy reform decisions, and for their implementation. The first topic to discuss briefly will be the administrative and political constraints which can create political costs and difficulties in the way of reform, but which have received little prominence in theoretical discussions of the above. We then move on to what we call the 'policy dialogue' through which the economic and finance departments of a government determine the country's policy direction, and which of course must take account of political and administrative constraints as well as the economic arguments. The last pages consider some of the general problems of implementing policy reform.

The framework for the policy dialogue will be the five stages set out in Chapter 3. However, the use of the five stages should turn out to be rather different. In Chapter 3 they were used as a theoretical framework for policy reform, but in this chapter they will be used to provide a basis for systematic discussion of a reform programme. The five stages, though referring to the pricing of goods and services, and of factors such as foreign exchange, capital (whose price is the interest rate) and labour do not fit exactly into the five-stage framework. It should be clear that in practice discussion of the price of these factors would also be going through the five stages – but for clarity of exposition we have kept them separate. As further background, what has gone before will be provided

by reference to the reform measures described in Chapter 4, and particularly those mentioned in the conclusions to that chapter. This reform package is seen as indicating the direction that reform should take, but we recognize that the extent, pace and emphasis of reform will have to vary from country to country. What we provide is a framework and direction for reform, not a rigid prescription to be followed by all.

5.1 Administrative constraints

Any policy of reform requires administrative efforts to design the reforms, which we discuss under the policy dialogue, plus continuing effort to implement and to operate them.

In most developing countries, the capacity of administrative staff in the civil service is still limited. Moreover, administrative procedures in many countries are still relatively young. Therefore, in designing a reform programme, it is important to take account of the capacity of the administration to carry out the reforms.[1] A further point to be considered is that reform can be costly. A programme which requires considerable effort to implement and operate is one which will require additional resources of manpower, offices and overheads, and perhaps computers. These can only be provided by diverting resources from other uses, or by increased current expenditure by government. As most developing countries' governments have severe budgetary constraints, it is likely that any increase in current expenditure can only be met at the expense of capital, or development expenditure, or by increased borrowing. As we believe that both of these methods of providing additional resources are often undesirable, we are looking for proposals for reform which will not result in increased government expenditure, and which may even result in savings. The emphasis, therefore, is on reform programmes which are simple to implement and to operate. Administrative constraints should thus be seen as major considerations in the design and speed of any reform programme. In this respect our recommendations have a different emphasis from earlier reform proposals such as those of Little, Scitovsky and Scott (1970), Corden (1974) and Balassa (1977 and 1982), which at best treated the administrative constraint as a minor consideration, if at all.[2] However, Lewis (1984) does give some attention to the administrative difficulties of taxation.

The collection of data is an important area where the administrative

constraint may be felt. In an ideal world, a government would collect information to make estimates such as the effective rates of protection for individual industries, and price and income elasticities of demand for individual products. Such estimates are technically difficult to make, the data expensive to obtain, and continuous effort is needed to keep them up to date. The experience of the United Republic of Tanzania, which attempted a price fixing regime based largely on costs of domestic production, but which encountered severe difficulties with the policy, is a case in point (Whitworth, 1982). The administrative costs of operating a price fixing organization such as the United Republic of Tanzania's National Price Commission also indicate that administratively simpler methods of pricing are generally desirable.

Under the reform programme proposed the government has to decide which industries merit support for reasons of industrial dynamism, self-sufficiency and employment generation and what the degree of support should be; it has to undertake discussions with the managers of those industries and withstand the lobbying and possibility of corruption, not only from the industries to be protected, but perhaps more importantly from those industries which do not need protection. However, the owners and managers of industries which do qualify for support have different objectives from government. They are likely to want to maximize their protection (and profits) and, therefore, to exaggerate their costs of production. Government may not possess administrations with sufficient knowledge of specialized industrial costs to be able to assess the requests for protection from a variety of different producers adequately.

One type of protection discussed in Chapter 4 is the payment of labour subsidies and production subsidies to certain industries. Government needs the administrative procedure for assessing claims for subsidies and paying out the subsidies. Again, scope for dishonest and corrupt practice is considerable. A firm may be tempted to exaggerate its labour force in order to receive an increased labour subsidy. The procedure of government for checking the labour force may not be adequate. Likewise, other forms of producer subsidy (for example, on the consumption of raw materials) may again be open to abuse. Government should not enter into subsidy schemes unless it is sure it can administrate them efficiently and honestly.

Consumer subsidies may present less of a problem; indeed, some governments have substantial experience of administering consumer subsidies for agricultural and food products, and also products such as

petrol and diesel. None the less, any significant extension of subsidies to industrial goods would increase government administration, and administrative costs.

A further area of strain on government administration may arise should the government decide on a policy of widespread reduction in industrial tariffs and their replacement by taxes on final consumer goods. As we have seen in Chapter 3, import tariffs are relatively cheap and easy to collect and account for a much higher proportion of government revenue and tax revenue in developing countries than in industrialized countries. Taxing final consumption through a sales tax or a value added tax on all goods may lead to a less efficient system of taxation in that the ratio of tax due to tax collected will possibly be lower than with tariffs, and the collection of tax will be administratively more expensive and difficult. Both these considerations thus imply a need for a higher nominal rate of taxation than would be needed under the conventional tariff on imports, everything else being equal. This in itself may encourage further tax evasion.

Administrative constraints may also be encountered with a proposal for drawbacks (that is, refunds) of taxes or tariffs on intermediate goods. A drawback or refund system, such as operates under a value added tax regime, for example, requires extensive book-keeping and accurate invoicing by businesses and organizations. It also requires a considerable force of inspectors, and detailed checking of all business records. Such a system requires a fairly skilled administration, and is probably practicable on a substantial scale only in the more advanced developing countries (Mexico, Argentina, the Republic of Korea and Côte d'Ivoire, for example, have value added tax systems).

Any efficient tax and tariff system requires considerable administrative capacity. In many countries, it is likely to be the 'capacity problem' which is the most difficult to overcome. Bremer (1984) has recognized the capacity problem in policy analysis and has proposed that third world governments should consider relying on outside agencies, such as local accountancy firms, consultants, and universities for work in policy analysis rather than trying to do all the work themselves.[3] In the context of price reform, this would mean subcontracting much of the technical work,[4] with ministers concerning themselves with defining the policy problems and civil servants deciding the work to be done outside, drawing up terms of reference and later interpreting the results. While this approach may reduce the burden of technical work (such as examining detailed industry costs), it will still leave a substantial part of the analysis,

decision-taking and administration to be done by the government staff itself.

5.2 Financial constraints

Although provision should be made for consideration of the impact of price reform on government revenue, the reform package may still have a significant negative impact of tax revenue. This may be offset by compensatory increases in revenue from income or corporation taxes. Failing that, the tax shortfall will have to be met by additional borrowing, either domestically or abroad. The extent to which a government can do this will depend on its present levels of borrowing and on its external creditworthiness. None the less, there exists the real danger that in some countries additional government borrowing may be inflationary, or may further distort capital markets, or both. Increased foreign indebtedness exposes the country to the risk of adverse currency and interest movements, at a time when it is likely to be devaluing anyway, and to the risk of an exogenous downturn in either the price or the volume of its exports. Designing a reform package which is revenue-neutral may be an ideal, but one which is difficult to achieve in practice.

A further constraint may arise with the number of different tax rates which can be levied. In an ideal world the government will know the price elasticity of demand for each good it proposes to tax and can select the tax rate for that good accordingly. We suggested in Chapter 4 that the maximum number of rates for import tariffs which could be easily handled administratively would be three or four and the government would merely be left with the task of allocating an individual good to one of these categories.[5] A similar constraint would operate with levying domestic sales taxes, and the number of tax rates should be no more than four. Made-to-measure tariffs for goods selected under stages 3–4 require that in principle every good be given its own tariff. In practice, such detailed differentiation may not be necessary, and it will probably be adequate to round the tariff to the nearest 5 per cent (i.e. a made-to-measure tariff of 28 per cent would be classed as 30 per cent rather than 25 per cent). A similar system would be to have one tariff rate for those goods not afforded special consideration under stages 3–5, and perhaps two or three other rates for goods afforded special protection. An individual good would be given the rate of tariff nearest to the degree of protection the industry is felt to need.

5.3 Political constraints

All governments face political constraints on their policies. The constraints may be more apparent in countries where governments have to submit themselves for re-election, but they are always present, even under the most totalitarian regimes. Essentially, there will be a limit to the extent that governments can impose unpopular measures on the population, for fear of rejection at the ballot box, or through riot, coup or revolution. Policies which raise prices or taxes appear particularly sensitive to political constraints, and we are conscious that as our reform proposals fall into this sensitive area, governments will (and should) consider the popularity of a reform package with the population before implementing it. It is only sensible to recognize that the structure of a reform package will be significantly affected by a government's political constraints; so too will the speed of implementation of the package.[6]

5.4 Economic constraints

(a) Macro-economic constraints

There is a risk that the procedure of policy reform, as described in Chapter 4, may result in short-term macro-economic difficulties. One of the immediate effects of reducing tariffs and removing quotas may be a substantial balance-of-payments deficit to be followed by devaluation. A devaluation is generally acceptable if it is effective in restoring external equilibrium. As we have seen in Chapter 2, this requires that the sum of the price elasticities of imports and exports should be greater than 1, which may not hold in practice, combined with internal price stability. In the absence of these conditions, devaluation may simply lead to a continued external deficit. The available evidence, though, suggests that in most developing countries the elasticities at least are such that devaluation will have the required effect on the current account (Bird, 1982). Of course, this external constraint may not exist for all countries; some will be stable enough to withstand the balance-of-payments effect of the reform package because of surpluses from agricultural or mineral exports, or service income such as tourism. Reduction of industrial tariffs will lead to external deficits, and devaluation may largely serve to increase inflation. Although there is in principle a case for exchange rate

flexibility, in some countries it may not be economically or politically feasible. We return to the question of alternative methods of exchange rate adjustment below.

The second major consequence of the removal or reduction of industrial tariffs is that several industrial firms may become loss-making and close down. Any static allocative efficiency thereby gained will be at the cost of significant industrial dislocation, and unemployment of plant and people will in turn have negative multiplier effects throughout the economy, resulting in a cumulative loss of national income. On the other hand, some firms may be stimulated if they can purchase inputs at lower prices than previously. Clearly, a programme of reform must be sensitive to its impact on the manufacturing sector, and the structural adjustment of industry through tariff reform must be undertaken gradually.

A shift towards a uniform tariff, and an accompanying devaluation, will hit highly protected industries more than others. To the extent that lower profitability in the industrial sector or higher perceived risk follows from the implementation of these policies, investment may be switched to the non-traded sector, especially services. The service sector is less exposed to the forces of international competition; however, there is a view that the service sector lacks the 'economic dynamism' and potential for productivity growth of manufactured industries, and that an overdeveloped service sector tends, in the long run, to reduce the rate of growth (Kaldor, 1966).

Few decision-takers would be prepared to implement with equanimity policies which would result in the decline of the industrial sector. For most developing countries the growth of the industrial sector is a gradual and difficult process (as it was for the industrialized countries), and therefore the exposure of parts of the industrial sector to international competition is itself something which can be undertaken only gradually. None the less, the development of an industrial sector which is internationally competitive must for most countries remain one of the long-term objectives of industrial policy, and in some instances protection may merely prolong monopoly and inefficiency. Proponents of tariff reductions, such as Balassa (1982), argue that in the long run it will lead to a shift in resources from import substitution industries to export industries, which is one of the principal objectives of reform. A necessary condition, though, is that the export sector should be willing and able to expand in the light of its improved opportunities. Expansion depends heavily on the motivations of owners and managers of industrial firms.

(b) International trade negotiations

Any reform programme which effectively subsidizes export runs the risk of contravening the rules of the General Agreement on Tariffs and Trade (GATT) and possibly encountering countervailing action in export markets. Some methods of reducing the dollar price of exports appear to be more acceptable than others. For example, devaluation (or maintaining an undervalued exchange rate, which, from time to time, Japan has been accused of doing) seems more acceptable to trading partners than providing a direct export subsidy, which risks the pejorative label of 'dumping'. It is beyond the scope of this study to do more than mention the constraint, but the likelihood of retaliatory action to alternative export incentives has been examined by Balassa (1982) in a similar context.

Finally, the proposals for tariff rationalization must be considered in the context of global trade negotiations. We would not wish to suggest that the developing nations should gradually reduce their tariffs on imports in the absence of similar steps to reduce protection in the industrialized countries. Developing countries already have limited access to some markets because of non-price restrictions. When this is the case, increasing competitiveness of exports, which is one of the aims of the reform programme, will not have the desired effect. Moreover, unilateral tariff reductions may result in the developing countries throwing away what bargaining power they have in international negotiations. Tariff reductions would generally result in increased imports by the south from the north, but for these to be sustained, the south must have improved opportunities to export to the north. Gains from trade will accrue only if both sides are prepared to contribute equally to the relaxation of trade restraints.

5.5 The policy dialogue: the actors

Our suggestions for policy reform fall mainly in the macro-economic arena, but also have implications for planning at the micro-level. The principal macro-economic variables which are likely to be affected are government revenue, tariffs and protection, employment and income distribution, the exchange rate, and interest rates. At the micro-level, there will be a requirement to examine the economics of individual industries and even firms which are considered for protection or subsidies

under stages 3, 4 and 5. The reforms therefore embrace the major areas of government involvement in the economy, and require close collaboration between those concerned with designing and implementing government economic policy. In order to encourage this collaboration, we propose the establishment of what we label an Industrial Policy Co-ordinating Committee, IPCC or The Committee's, the name itself of course being unimportant.

As policy is largely political in nature, the Committee would have as its permanent members the ministers responsible for Industry and Trade and the Minister of Finance, together with the most senior civil servant from each ministry. As the exchange rate and interest rate will frequently come under scrutiny, the Governor of the Central Bank, together with a senior staff member, should also be permanent members. Additionally, the head of the Inland Revenue service, and ministers responsible for economic planning, employment or consumer affairs, and a member of the Prime Minister's or President's Office, if they exist, may also be permanent, or possibly co-opted members. Essentially, the IPCC will be a high level committee for discussing industrial policy reforms. To be effective, the IPCC would require political support and encouragement from the highest level.

In keeping with the spirit of minimizing the costs and complexities of administration, the IPCC would not have its own secretariat. Instead, it would make use of the existing secretariats of its members when more detailed work is needed. Thus, for example, if the IPCC were worried about the impact of a reduction in tariff on a given industry, it might request that the civil servants of the Ministry of Industry should undertake a detailed study of the impact of this change. The senior civil servant of the Ministry of Industry would then be responsible for seeing that the work was done. In effect, he would be acting as a link between the political and administrative levels of government.

The essential role of the Committee is to bring co-ordination to government industrial policy (and perhaps even all economic policy). We believe that regular meetings and discussions at a high level will lead to at least a modest improvement in industrial policy. However, it would be naive to pretend that meetings would be without difficulties, tensions and disagreements. None the less, they should lead to greater consistency and unity of policy, which is one important aspect of an improvement in many countries.

The IPCC would have the following two distinct functions:

(a) the decision to reform prices of industrial goods, chiefly through changes in taxes and tariffs on industrial goods;
(b) the implementation of the changes in prices, through tariffs and taxes, on these goods.

Another consideration which will certainly arise from the first two is:

(c) the pricing of the factors foreign exchange, capital and labour.

We will discuss the two main functions in section 5.6, and subsequently discuss the pricing of factors in section 5.7.

5.6 The policy dialogue: reform of prices, taxes and tariffs

In Chapter 3 we presented a five-stage framework within which proposals for reforming prices, taxes and tariffs can be viewed. The five stages can also be used as a systematic framework for the IPCC to use in its deliberations. While we do not wish to repeat what has already been written in Chapter 3, it may be helpful to give an outline of how the IPCC might draw on the five-stage approach to its deliberations, in combination with the policy reform suggestions in Chapter 4.

Stage 1. Allocative efficiency pricing

At the beginning, the IPCC will examine the overall relationship between domestic prices and world prices for manufactured goods, the divergences which exist, and the reason for these divergences. In many countries it is likely that such comparisons will reveal a complexity of tariffs, quotas and outright prohibition of import of some goods, resulting in widely differing nominal and effective rates of protection. A further study may reveal differences between market prices and the opportunity costs of foreign exchange, capital and labour. Again, an examination of the causes of such divergences would be instructive. The outcome of discussions at stage 1 would be an understanding of the magnitude and causes of divergences between efficiency prices and existing prices for industrial goods and for the factors of production. Preliminary discussion of reforms at stage 1 would be concerned with ways of reducing the divergences. Several possibilities exist, depending on the circumstances in the individual country. Among them would be the replacement of quotas

by tariffs, the reduction in the number of different tariff rates and the narrowing of the gap between the highest and lowest tariffs. Consideration may also be given to imposing tariffs on goods which are at present imported duty-free. The object would be to move towards similar and more uniform tariff structures. For domestically produced goods, consideration may be given to the possibility of introducing (or expanding) excise or sales taxes.

It is quite likely that discussion of the pricing of the factors of production would arise at this stage, although we prefer to keep them separate from the pricing of goods, and reserve our discussion until after stage 5. However, it may be necessary to formulate an exchange rate policy at an early stage, as substantial tariff reductions, if introduced, would in many countries imply a reduction of the exchange rate. For reasons of presentation, though, it is easier to discuss the prices of labour and capital outside the five-stage framework, and we will therefore return to the subject of the pricing of factors after stage 5.

Discussions at stage 1 would probably be crucial to determining the overall direction and pace of policy reform, as the extent of divergences between domestic and international prices became apparent. The Committee is likely to come to a position on the extent to which it considers reform desirable, and the extent to which it favours a free market, or less interventionist policy. The conclusion may be liable to revision though, as overall policy cannot be finally determined until all the subsequent stages have been considered. Even in a stylized logical framework such as the five stages, determination of policy is necessarily a gradual and an iterative process.

Stage 2. Public revenue adjustments

The need to raise government revenue through taxes on industrial goods is essentially a constraint on policy reform, but not necessarily an inflexible constraint. While governments in developing countries tend to rely quite heavily on tariffs for revenue purposes, the evidence presented in Chapter 3 suggests that this dependence tends to decline as economic development progresses. Therefore, many governments will expect to take a declining proportion of their revenue from trade taxes as the economy develops and as the administration becomes more capable of collecting other taxes, such as taxes on income and sales taxes. But even in a static context, the revenue 'take' from trade taxes can be varied

by increasing revenue from other taxes, by increased government borrowing or by reduced government expenditure.

The Ministry of Finance can be expected to be concerned about the level of revenue to be obtained from taxes on commodities, and should give a target figure for each year. However, this is a figure which is negotiable within government, and one which other parties to the policy dialogue may wish to discuss. Proposals for general tax reform, and shifting the burden of taxation, are legitimate areas for discussion. Of particular relevance is the possibility of introducing alternative taxes on commodities such as sales taxes or value added taxes to raise revenue.

At a more detailed level, reform of tariff structures is likely to be an important area of discussion. How can the tariff system be simplified, and the number of tariff rates gradually reduced, while still meeting an agreed revenue target from tariffs? The objective of these simplifications would be to move towards a lower, more uniform, tariff structure (with exceptions arising at stages 3, 4 and 5), aiming ultimately at a low or even zero uniform tariff. While the main target of reform in many countries is likely to be import tariffs, attention might also be given to reducing export taxes where they are likely to act as a disincentive. (Caution is needed, though, when export taxes on one or two commodities provide a substantial proportion of government revenue.) Another matter for consideration would be the possibility of introducing import subsidies, or tariff drawbacks, to industries whose inputs are subject to tariffs or other taxes. All these reforms have revenue implications which need to be considered at stage 2.

Stage 3. Dynamic adjustments

The discussion at stages 3 and 4 will be concerned with identifying industries which qualify for special treatment. The special treatment will consist of measures designed to assist specific industries, through selective tariffs, subsidies or other incentives which differ from those generally applicable to the industrial sector, and which have been determined at stage 2. The second part of the discussion will be to agree on the amount of special assistance to be granted. At stage 3, the task will be to identify industries which have above average growth prospects and economies of scale, or above average linkages, externalities or learning effects, but whose development would be threatened if exposed to the general treatment of industry agreed at stage 2. The process of identifying qualifying industries, and estimating the type and level of incentive is

likely to involve the staff of the ministry of industry in considerable data collection and analysis.

As we have seen in Chapter 3, the possible existence of dynamic factors suggests that valuing goods according to the principles of static economic efficiency may not be sufficient. Given that dynamic effects are thought to be significant, and given that they are usually difficult to estimate quantitatively, how can they be taken into account in the valuation of goods? The starting points for traded goods are as follows:

(a) the world price of the good;
(b) the resource costs of domestic production, valued at economic opportunity costs.

(1) *The decision to produce.* If (b) is less than (a), then it is clearly beneficial from static efficiency considerations for the country to produce the good, unless dynamic diseconomies are thought to be considerable. However, the difficult case arises if (b) is greater than (a) and dynamic factors are thought to be significant. The problem can then be addressed using an example.

A country is thinking of setting up diesel engine production for the first time, to replace imports. The c.i.f. price of diesel engines is 100 per unit, but a study shows resource costs of production, valued at shadow prices, to be 120 per unit. Clearly, in terms of static efficiency only, the country should not produce diesel engines. However, there are thought to be significant dynamic economies which will arise from their domestic production. The question is whether or not the country is prepared to pay 20 per cent more for diesel engines in terms of static efficiency in order to reap the benefits of the dynamic economic factors resulting from domestic production.

To answer this type of question, one needs a specification of the dynamic effects and an estimate of their likely magnitude. However, the nature of many dynamic effects means that they are difficult or even impossible to quantify. In principle, linkages may be quantified by estimating the increase or decrease in value added in supplier and user enterprises. In practice, this may be difficult to do even if the linked enterprises are willing to co-operate in supplying the necessary data. Of the dynamic economies such as learning effects, or the benefits of research and development (R and D) expenditures, are even harder to quantify. However, it is likely that, on average, benefits from R and D [illegible] cost. The [illegible] industry [illegible]

be examined systematically. The firm's output can be expected to grow over time, resulting in falling unit costs of production. Its initial unit costs of production can form the basis for establishing a special protective tariff. However, as with all the considerations at stage 3, the Ministry of Industry needs to examine critically cost data obtained from firms, and to come to its own conclusions.

Although the technical staff may be able to present some quantitative indications of the dynamic benefits or costs arising from domestic manufacturing, there is likely to be considerable uncertainty surrounding these estimates, and the IPCC will have to exercise judgement in many cases. Limitations of data, time, technical staff and even of methodology to estimate dynamic effects mean that the Committee in some instances will have little more than a 'hunch' to fall back on. Does the intuitive perception of dynamic benefits overcome an estimated 20 per cent initial cost disadvantage or not? Reference to experience in other industries, and even other countries, might help, but such references can only be a partial guide.

(2) *Pricing the product.* If the diesel engine company has to price its products at c.i.f. prices then clearly it will make a loss, at least to start with. Assuming it needs to make a certain rate of return on its capital, it needs incentives of one form or another so that it can achieve such a rate of return. It may not be sufficient to allow the company to charge 120 per unit, as the figure of 120 is arrived at using shadow prices rather than financial costs. A low shadow price of labour, for example, would have the effect of producing resource costs below the financial costs. Moreover, the company will have to be compensated for its perception risk. Therefore the company may have to receive, say, 130 per unit for its diesel engines. There are a variety of price policy mechanisms which the government could introduce to achieve this effect which are discussed below. Essentially, they all involve giving the producer an incentive equal to 30 per cent of the c.i.f. price. The Committee has to ask itself whether or not it is prepared to do this.[9] The figure of 130 per unit can only be agreed upon by the Committee after an examination of the cost data of the company.

The examination of cost data generally is likely to form a significant part of the Committee's work. Companies themselves may present accounts and cost data and the Committee may, if it chooses, have these checked by government technical staff, or independent consultants or

auditors.[10] As we have noted in Chapter 4, for products where there is just one existing (or putative) manufacturer, the problem is relatively straightforward. For products with several manufacturers, the problem becomes more difficult as each will generally have different costs. Should the Committee assess the incentive on the basis of the least cost, the average, or the highest cost manufacturer, or on some other basis? The Committee should consider the costs at shadow prices before arriving at its decision; cases may arise where companies with relatively high costs at market prices have relatively low costs at shadow prices (perhaps because they are labour intensive). In such cases there would be a strong argument for protecting them.

In an industry with multiple producers, who each have different costs, the pricing decision will depend on the extent to which government wishes to protect the industry. Three possible cases are as follows:

1. If the government wants to ensure no plant closures (for example, because of the stage 4 consideration of avoiding further unemployment), then it will set the price at the average cost of the least efficient producer.
2. If the government wants to keep only the most efficient local producers, then it will set a price which will equal their average costs.
3. The government may set the price somewhere between the prices under 1. and 2., depending on the extent to which it wishes to eliminate high-cost producers, and the extent to which it is prepared to risk plant closures and create unemployment. An alternative to closures may be takeovers or mergers between efficient and inefficient producers, which would have the effect of raising the overall level of efficiency.

The problem of defining 'average cost' is considerable and beyond the scope of this study to discuss in detail. The problem has been encountered by price-fixing organizations, such as the United Republic of Tanzania's National Price Commission (NPC), whose difficulties in this regard are discussed in Whitworth (1982). Essentially, the NPC worked on the basis that a 'firm's profit margins, and hence its prices, should be fixed so that it can earn a "fair" return on capital employed if it operates "efficiently" during the pricing period, usually 1 year'. A 'fair' profit is one that enables a firm to earn 30 per cent pre-tax on capital employed. Since the rate of corporation tax is 50 per cent, this means 15 per cent after tax. There are considerable difficulties in defining

'capital employed', and in estimating operating costs, *ex ante*, some of which Whitworth discusses. The NPC had considerable difficulties when there were multiple producers of a given good, with different operating costs. According to Whitworth, the NPC took the average of all the plants, while acknowledging that there is no satisfactory solution to the problem.

The NPC of the United Republic of Tanzania is quoted merely as an illustrative example, rather than as a model to be followed. Other countries will have to set their own criteria and their own definitions. What is accepted in one country may not be acceptable to another. For example, the United Republic of Tanzania's NPC priced domestic goods on the basis of manufacturers' cost-plus without reference to world prices. Other countries, for example Côte d'Ivoire (World Bank, 1978) and Morocco (World Bank, 1981), chose to give rather more attention to world prices; indeed the procedure recommended in Chapter 3 suggests that world prices should be used as the starting point.

The second pricing consideration is to detemine what the domestic consumer should pay. In the diesel engine example, the following three prices appear possible:

1. The consumer pays the world price (i.e. 100 per unit).
2. The consumer pays the price which will give the producer his desired return on capital (i.e. 130 per unit).
3. The consumer pays the resource costs (i.e. 120 per unit) or some other price between 100 and 130.

Clearly, the producer will need to receive at least 130 per unit, otherwise he will not produce. This could be arranged by setting a 30 per cent tariff on imports, or by paying him a subsidy of 30 so that his goods are competitive with imports. It may not be considered desirable that buyers of diesel engines, for example a tractor manufacturer, should pay 130, as they would suffer negative effective protection. Such a price would mean the tractors would cost more than the world price to produce. The tractors would need protection from competing imports or a subsidy, and tractors would not be exportable unless subsidized. Unless the tractor manufacturer received a subsidy or a drawback of 30, domestic sales would be lower than if the diesel engines cost 100, which may result in even higher unit costs of tractor production and lower employment. The Committee should consider these points carefully before deciding what the tractor firm should pay for diesels. In an ideal world, it should pay 130, and receive a subsidy of 30, so that it does not suffer negative

effective protection. However, in practice a government might find a subsidy scheme difficult to administer. In the absence of subsidies to either the diesel engine producer or the tractor producer, a uniform rate of protection may partially reduce the difficulty. This type of problem is likely to arise with any industrial intermediate which is given special protection, and also with agricultural inputs such as fertilizer, unless a subsidy scheme can be administered.

Throughout the discussion at stage 3, it will be apparent that there is likely to be conflict between producer and consumer interests, and perhaps with government interests also. Moreover, the IPCC is likely to be subjected to special pleading and other pressures from interested parties. Naturally, firms manufacturing for the domestic market are likely to argue for protection, and they will have an incentive to exaggerate some of their costs or otherwise understate their profits. In some cases firms may even resort to corrupt practices to increase their protection or subsidy. This type of problem only increases the committee's difficulties, and puts increased emphasis on the cost analysis to be done by the civil service. Providing special protection is clearly going to give rise to many difficulties, and we emphasize that it should be the exception rather than the rule. The fewer industries the government has to protect, the easier it will be to implement.

The discussion has been conducted in terms of setting prices of goods which are already manufactured locally. However, similar considerations apply to setting prices for products when an enterprise proposes local manufacture for the first time. The major difference is that the IPCC will need to work on the basis of production costs estimated in a feasibility study, rather than with historical cost data. Once the enterprise is operating, then the costs will have to be reviewed, as actual costs often differ from estimated costs. However, the Committee should emphasize to potential manufacturers that it does not intend to protect inefficiencies in operations, and should review subsidized or protected industries frequently.

Finally, the point needs to be emphasized that special protection or subsidies for dynamic industries are, by definition, to be seen as temporary palliatives. A dynamic industry should be able to increase output and reduce costs to a point where it becomes internationally competitive, at which point the special incentives are no longer required. Therefore, when an initial incentive is agreed, a timetable should also be agreed for its phased reduction leading to eventual elimination. This timetable should only be departed from subsequently if the firms affected

can make a convincing case for its modification. If protected 'dynamic' firms do not appear to be progressing towards international competitiveness, the incentives should be withdrawn anyway, as the firms have turned out not to be 'dynamic' after all.

Stage 4. Self-sufficiency adjustments

At this stage the government will identify industries that it wishes to protect on the grounds of national self-sufficiency, although downstream consumers may also be concerned about the risks involved in relying on imported supplies. Conversely, consumers may be concerned about the possibility of having to buy at a higher price from a protected domestic industry.

The comparison of production costs of such goods at shadow prices with world prices can show the Committee the resource costs of pursuing policies of self-sufficiency. It must then assess whether or not the higher costs are outweighed by the risks avoided. If they are not, the Committee will recommend dependence on trade in preference to self-sufficiency. Such decisions are essentially ones of judgement; it is difficult to put a quantitative value on self-sufficiency which will enable it to be compared directly with the higher costs implied. The question of the level and method of incentive to be offered will be resolved in just the same way as described for dynamic industries.

The Committee will also need to consider the dependence of existing enterprises on tariffs. Any proposals to reduce or withdraw a tariff may result in the eventual closure of an enterprise and subsequent job losses. In some countries, employment effects may be a major determinant of tariff policies, and tariffs may be imposed at stage 4 for this reason. There is at least a case for establishing a tariff which will cover the difference between labour costs at market prices and labour costs at shadow prices. The uniform tariff discussed in Chapter 4 may generally fulfil this purpose.

Stage 5. Income-distribution adjustments

For a good whose consumption has a significant distributional impact for low-income groups the government may want to set low prices to encourage consumption and to alleviate poverty. The agreed price for consumers to pay will depend in part upon a technical discussion of incomes of the poorer groups, household budget surveys and nutritional

or other basic needs. If the agreed price is below the free-market price (if produced locally) or the c.i.f. price plus distribution costs (if imported), then some form of subsidy will be needed. Alternatively, the government may consider increasing (or establishing) welfare payments to increase the disposable incomes of the poor, rather than directly subsidizing goods or services.

Distributional considerations are likely to arise mainly in connection with the price of foodstuffs, and perhaps other basic needs such as clothing and housing.[11] To take the example of rice to illustrate a practical application, the IPCC will ideally need estimates of the following:

- How many grams of rice per person per day are nutritionally desirable?
- How much does this cost at the existing market price?
- What proportion of existing poverty line incomes does this cost represent?
- What change in real incomes is considered desirable?
- What change in the price of rice is needed to bring this about?
- How will the change in price affect consumption?

A technical study will be needed to answer these questions, which again emphasizes the role to be played by civil servants or by outside consultants.

The level of any subsidy or tariff change may not be finally agreed at stage 5, as it imposes a demand on public revenue, and if the cost of a subsidy on the good is substantial, then it may be necessary to refer back to stage 2. The Ministry of Finance would naturally need to consider the impact of the change on government financing and may request some modification to the proposed price. The possibility of introducing a sales tax or a value added tax is relevant to stage 5, as these taxes permit differential, low rates to be applied to goods identified as 'necessities', and high rates to be applied to 'luxury' goods.

5.7 The pricing of factors

As we mentioned earlier, the liberalizing of the factor prices interest rates, exchange rates and wage rates also come into the equation. We will discuss each in turn.

Interest rate adjustments

As with tariff and subsidy adjustments, a gradual adjustment and eventual freeing of interest rates is to be recommended. A sharp upward adjustment may dislocate financial markets, and may also result in a degree of financial distress for some variable rate borrowers. Alternatively, a sharp increase in deposit rates may cause banks some difficulties if they have many fixed rate borrowers, to whom they cannot pass on increases. Therefore, as with other prices, the move towards free-market rates may need to be gradual.

Exchange rate adjustments

For many countries, a gradual reduction in tariffs is likely to lead to a balance-of-payments deficit, which in turn is likely to require a devaluation of the exchange rate. A country would face the possibilities of a substantial once-and-for-all devaluation, recommended by Little, Scitovsky and Scott (1970), a 'crawling peg' devaluation or allowing the exchange rate to float. *A priori*, it is impossible to say which would be preferable, as much would depend on the magnitude and speed of tariff reductions, the structure of the economy and the possibilities of currency speculation, which could be destabilizing.[12] However, a government will have to choose its preferred method of devaluation, so we will attempt to give a few general guidelines in the section on implementing the agreed reforms.

Wage rates

The divergence between market wage rates and the opportunity cost of labour has been noted earlier. However, any attempt to reduce real wages so that they become equal to the opportunity cost is likely to cause hardship and to meet with resistance. In many countries it will also run counter to the government's income-distribution policies, and concern for the poor. In general, therefore, we do not consider a reduction in real wages to be feasible. Nor is the alternative policy of a labour subsidy, discussed in Chapter 4, likely to be feasible, because of the difficulties of implementing it. To some extent, domestic manufacturers may be compensated for the labour cost distortion by means of a uniform tariff

on imports. As an economy develops, and eventually approaches full employment and international competitiveness, the opportunity cost of labour will tend towards the market wage, allowing a gradual reduction in the uniform tariff. This may be a slow process, though, and it may be many years before a country can dispense with its uniform tariff.

5.8 Results of the policy dialogue

At the conclusion of stage 4, the IPCC should arrive at an agreed policy for the reform of tariffs, taxes and subsidies on manufactured goods. The general theme of our argument is that policy should tend towards the elimination of quotas and a reduction in the number of tariffs, with the aim of arriving eventually at a uniform tariff, which may then be reduced over time. A number of exceptions to the uniform tariff will arise, however, as a result of taking into account dynamic self-sufficiency and income-distribution considerations. The number of the goods falling into these categories, and the degree of protection given to them will of course vary from country to country. Goods which are thus protected will be subject to special tariffs which are higher than the uniform tariff. Rather than devising a system of made-to-measure tariffs for each good, we suggest that two or three higher bands of tariff be chosen.

At the same time, changes in subsidies may be introduced. Export industries which, because of tariffs on imported inputs, suffer from negative effective protection, will need a drawback scheme if the negative effective protection is to be removed. A subsidy would be a second best solution. This problem should diminish over time, however, as tariffs are reduced – and as a parallel reduction in the exchange rate also assists exporters. As noted earlier, though, subsidy schemes are not easy to operate, and administrative difficulties are avoided if they are not needed.

The probable loss in revenue resulting from a reduction in tariffs is likely to require changes in domestic taxation. This may be done in a variety of ways, but assuming that revenue from commodity taxes is to be held roughly constant, then some form of domestic sales or excise tax is needed, as discussed in Chapters 3 and 4. The rate of sales tax would rise as tariffs fall. Exports would, generally, be exempt from sales taxes – although, as mentioned before, special export taxes might be retained in exceptional circumstances. A system of drawbacks is desirable

so that domestic manufacturers do not pay the domestic sales tax on intermediate inputs, whether they are imported or domestically produced. Eventually a system of drawbacks might be widened to become a fully fledged value added tax. We discuss the introduction of alternative forms of commodity taxation in greater detail below.

The aim of policy reform, as suggested here, will be to move towards a system which provides uniform effective protection, which diminishes over time, but which allows for flexibility in protecting or subsidizing particular industries which the government wishes to encourage for reasons of dynamism, self-sufficiency or employment creation. Even if reform is only carried out to a limited extent, the government should at least recognize the effects of its policies, and should at least end up with fewer unintended protection effects. A modest improvement is better than no improvement at all.

The Committee should consider also the pricing of the factors of labour, capital and foreign exchange. We are not inclined to suggest any reductions in real wages, nor wage subsidies. Rather, labour-intensive industries might be protected under stage 4, self-sufficiency adjustments. We also suggest that the relative prices of labour and capital should be adjusted by raising interest rates. The suggested reform programme is likely to imply a devaluation of the currency in many countries, as protection falls and imports rise. Exchange rate adjustment and the impact of the reforms on existing industries, are likely to be constraints on the implementation of the reform programme, a subject to which we now turn.

5.9 Implementing the agreed reforms

A major difficulty in discussing the implementation of a reform package generally is that every country will start from a different point. One is reminded of the traveller asking the way to his destination. The reply 'Well if I were you, I wouldn't start from here' was no doubt well meaning, but not very helpful. It would be simple, though unrealistic, to give the same advice to developing countries contemplating a reform package. The consequence, though, is that a discussion of the implementation of a reform package becomes highly generalized, even platitudinous, in the absence of any well-defined starting point. We hope developing-country readers will accept this severe limitation on what

follows, but that they will be able none the less to apply the general remarks to their own countries.

The reform programme outlined below is not intended as an 'all or nothing' option. Some countries may prefer to go only part of the way, and may feel unable, for reasons of policy (for example, preferring to maintain a relatively closed economy) or administrative constraints, to introduce a full programme of reforms.

Sequence of the reform

At the outset, the government should envisage reforms as a sequential process, to take place over a number of years. It is not a process which ever comes to an end, though, as goods specially protected under stages 3–5 may have their protection gradually removed, and new industries can be expected to develop with claims for protection in their initial stages. However, for discussion purposes it is convenient to view the reform process as a sequential one, and a typical sequence might be as follows:

1. Replacement of quotas by tariffs.
2. Reduction of the number of tariff rates to three or four.
3. Move towards a uniform tariff, with systematic introduction of special protection to selected industries under stages 3–4. On occasion, it may be possible to offer subsidies to industries rather than protection. Modification of consumer subsidies under stage 5.
4. Gradual reduction of the standard uniform tariff.
5. A parallel reduction in the exchange rate, and liberalization of interest rates. Reduction of export subsidies.
6. Introduction of a uniform tax on domestic production equal to the uniform tariff. Exports would be exempt.
7. Introduction of a system of drawbacks for industries using imports which carry tariffs or production taxes.
8. As the uniform tariff falls to zero, or to its intended floor level, the production tax may be replaced by a uniform sales tax on imported and domestically produced goods. Selective support for qualifying industries would still be available.
9. The uniform sales tax and the tax drawback system may be combined in a single value added tax (VAT) system. Simultaneously, differential

rates of VAT may be introduced, if required. We discuss the mechanisms of VAT later.

The sequence may be varied to some extent, and some steps may be implemented simultaneously. It may also be simplified, in that some steps may be omitted. For example, a country may prefer to introduce a sales tax (or even a value added tax) directly, rather than going through the intermediate step of a domestic production tax. The advantage of a production tax is that it may be difficult to restrict a sales tax to domestically produced goods only, and it would not be desirable to apply it to imported goods until the uniform tariff had fallen to a low level or even zero, as the sales tax would then add to protection. There is clearly a phasing problem in moving from import duties to sales tax on all goods, and transitional and administrative difficulties may be expected whatever route is adopted.

Speed and timing of the reforms

The process of introducing the agreed policy reforms may present some difficulties, notably the speed at which reforms are implemented and the timing of the reforms. Much depends, of course, on the circumstances of individual countries. The question of the speed of reforms is whether to spread tariff and tax changes gradually, for example over a 3–5 year period, or to introduce the whole change at once. The question of timing is whether to introduce a package of changes together on a given day in the year, or whether to introduce specific changes (or, at least, the first stage) as soon as they are agreed.

The main argument in favour of gradual reform is that large price changes may have too violent an impact, especially if several are introduced simultaneously, leading possibly to high inflation, industrial dislocation or social discontent. Earlier advocates of price reform – Little, Scitovsky and Scott (1970), Corden (1974) and Balassa (1982) – all advocated a gradual approach to overall tariff reduction. In most cases, a gradual approach is clearly advisable, especially if reforms are to be substantial. Minor changes can, of course, be introduced in their entirety. Major tariff, tax or subsidy reforms should be introduced in steps over a period of, say, 3–5 years. However, the process may take much longer in countries which have complex tariff structures, many quotas, and which lack a sales tax and an efficient tax collection system.

The timing of the introduction of changes also needs careful thought. A tariff or tax change (or, at least, the first stage of a change) could be introduced shortly after it is agreed. Alternatively, the government could wait until a specific day in the year (such as Budget Day in the United Kingdom) and announce a package of tariff, subsidy and tax changes, together with exemptions. This procedure would have a logical advantage of relating the reforms to announcements concerning the government budget, to which they are closely related. It would also help to avoid the transitional difficulties of temporary distortions to the desired relative prices which may arise if reforms are introduced piecemeal. On the other hand, a large number of simultaneous changes may lead to confusion among manufacturers, importers and consumers, and may lead to problems for the customs and tax collectors in implementing a substantial number of changes simultaneously. It may also lead to hoarding or restocking and speculation. This is a matter on which governments have to use their discretion, bearing in mind their existing procedures.

Elimination of quotas

If a country has import quotas, estimates and introduction of tariff equivalents will be needed to avoid a flood of imports which may harm existing local producers. This may seem at first sight to be an argument for setting a relatively high tariff initially and subsequently reducing the tariff, more with other tariffs. On the other hand, replacing quotas with high tariffs might push up the cost of the goods substantially. If the goods concerned are intermediate or capital goods, then the effect will be to increase manufacturers' costs, reduce jobs, which in turn may reduce sales and profit.

One solution to this problem may be to admit goods duty free to the extent of the previous quota and to apply the tariff only to imports in excess of the quota. This may be difficult to implement, though, as it requires the allocation of the quota between different users. For intermediate and capital goods, it would seem preferable to impose a relatively low tariff, perhaps about the same as the standard low uniform tariff is expected to be. This will not hit user firms as hard, and may even encourage them, if the quotas have been imposed to protect high cost local producers. In some cases, though, it may be justifiable to provide transitional help to local producers who suffer from the removal of

protective quotas. Obviously, though, the removal of quotas may be a delicate operation, and governments will have to be sensitive to the effects of the operation.

Reform of tariffs

(1) Types of tariff structure

The two principal types of tariff are *ad valorem* tariffs whereby a percentage mark-up is added to the c.i.f. value of imports, and specific tariffs, whereby a fixed sum is added to each unit of import, regardless of value. The *ad valorem* tariff is in general more suitable for the following reasons:

- Specific tariffs are regressive, in that consumers of poorer quality goods pay relatively more tax than consumers of better quality similar goods.
- Specific tariffs provide higher percentage nominal protection to lower-priced, lower-quality goods than they do to higher-priced, higher-quality similar goods.
- Specific duties may cause problems in inflationary times. Unless the tariffs are raised regularly, government revenue from specific tariffs will fall in real terms.

Ad valorem tariffs do not have these disadvantages, but do require a valuation of the goods imported, whereas specific tariffs depend only on physical measures such as weight or length. Valuation is open to judgement, underinvoicing and possible corruption, and therefore requires sound customs administration.[13] Sometimes specific or *ad valorem* tariffs are used together, with the duty applicable being the one which yields the higher revenue. However, *ad valorem* tariffs are generally preferable, especially as they result in prices in the market being more responsive to world prices than if specific tariffs are charged. Moreover, from the point of view of reform, it is easier to simplify a tariff structure to three or four *ad valorem* tariffs than it is to apply only three or four specific duties, which could lead to some observed anomalies in *ad valorem* rates on goods. Therefore, whenever we discuss tariff reform, we will assume that *ad valorem* tariffs are to be used, and that specific tariffs will generally be replaced by *ad valorem* tariffs. More-comprehensive discussions of types of tariffs are given by Due (1970) and Lewis (1984).

(2) Moving to a uniform tariff

What route should be taken to reduce a large number of disparate tariffs to a lower or zero uniform tariff? The process will require tariff cuts for many goods, and tariff increases for some, notably goods which are free of tariffs before the reform. Two possible methods have been described in detail by Corden (1974). The first is the concertina method by which the higher tariffs are first reduced to a medium level, then all the medium-level tariffs are pushed down to a lower level, and so on, until the low uniform tariff is reached. By reducing the nominal higher tariffs first, the method will, by and large, remove the large distortions before the smaller ones.[14]

The disadvantage of the concertina method is that the more highly protected industries suffer the most rapid reductions in protection. In order to avoid severe distress, these industries may need rather longer to adjust than the concertina method allows. The alternative is to use an across-the-board tariff reduction approach. Each year, all nominal tariffs are reduced by an equal percentage, say 10 per cent, until the target uniform tariff has been reached. Under this scheme, all effective rates of protection experience the same across-the-board reductions as the nominal tariffs and therefore relative effective protection remains the same. The highly protected industries are given more time to adjust.

(3) Goods given special protection

In addition to the initial reform programme outlined above, prices of the goods given special protection under stages 3–4 should be subjected to periodic review by the Committee, say every one or two years. This will enable changes in world prices to be taken into account, as well as changes in local manufacturing costs. It is not the intention to suggest that the prices and protection agreed initially should thereafter be regarded as rigid; far from it. Infant industries are expected to grow up (and to be replaced by new infant industries) and internal efficiencies should eventually allow many industries to become internationally competitive. The protection afforded them should be reduced accordingly, perhaps even in anticipation of increased competitiveness, rather than in response to it. It is important that protected industries should be encouraged to become more efficient. Likewise, economic growth and administrative improvements may eventually make stage 5, the subsidy to consumers for distributional reasons, much less important. Economic growth will,

it is hoped, increase the incomes of the poor, and administrative improvements may enable distribution objectives to be met increasingly from tax and social welfare reforms rather than through price subsidies.

Reform of commodity taxes

We shall now turn to the discussion of the mechanics of the domestic commodity taxes such as producer taxes, sales taxes and value added taxes, as they have a part to play in price reforms.

(1) *A manufacturers' level sales tax* is the easiest to introduce, as the tax is levied at far fewer points of sale than the retail level sales tax or the VAT. It would operate alongside a tariff system for revenue purposes. Initially, it would be easier to introduce it without drawbacks, but as a cascade effect would be produced, a drawback system would be desirable sooner or later. Drawbacks and exemptions (for example, on 'necessities') require detailed documentation and an efficient and honest administration to check that all claims are legitimate. It will also require a registration system for all manufacturing firms which wish to claim drawbacks. Drawbacks or exemptions must also apply to taxes on exports and imports, although imports which are subject to a uniform tariff equal to or greater than the rate of producer tax should be exempt from further taxation.[15]

(2) *A retail level sales tax* is an alternative to a manufacturers' level sales tax and, as described in Chapters 3 and 4, is more comprehensive. It may be introduced as an 'improved' manufacturers' sales tax; alternatively governments may go straight to a retail sales tax without a manufacturers' sales tax as an intermediate step. The retail level tax, though, is administratively the more complex of the two by a large margin. In principle it is levied on all retail outlets, but in practice tax would only be levied on retailers with annual turnover above a minimum level, who would have to register. Small and informal retailers would therefore be exempt from the system for administrative convenience and economy and their sales would therefore avoid the tax. The sales tax would be levied equally on domestically produced and imported goods, and would largely replace tariffs as a source of revenue (although not as a form of protection). Exports would be automatically exempt as they do not pass through retail outlets. A major administrative

weakness of this form of commodity tax is that it is not levied on wholesalers or on inter-firm sales. Therefore, there is considerable scope for tax evasion. If the tax is imposed on wholesalers and inter-firm sales, the cascade effect is built in. Cascading can be avoided by introducing a comprehensive drawback system, but then we have a value added tax in all but name.

Lewis (1984) states that there are few retail level sales taxes in developing countries, because of the administrative difficulties and because political pressures to exempt a range of basic commodities from tax dilutes the tax base to a small [illegible]

[illegible] tax is the most difficult form of commodity tax to introduce, and rarely follows on from earlier and simpler forms of taxation.

Another obstacle to the introduction of VAT in developing countries, apart from its inappropriateness, is the difficulty of administering it. It requires detailed record keeping by firms, and efficient and even harsh assessing and collection by the government. Again, it requires registration, although firms below a certain minimum turnover are generally exempted. Some form of VAT is used in many developed countries, but, as Lewis (1984) comments, 'the disadvantages of the value added tax have outweighed its advantages relative to some other forms of sales taxes in the developing countries, and the manufacturer importer level sales tax, in particular, seems to be preferred'. Several developing countries, though, have introduced a VAT recently. Cote d'Ivoire, the Republic of Korea, Mexico and Argentina, and others can be expected to do so in the future.

Considerable diversity in the form of VAT is available. Some countries apply it only at the import and manufacturing stages, which in effect appears to be an import duty and manufacturers level sales tax. Others extend it to the retail stage. Some countries have single rates, others multiple rates. The use of a low or zero rates of exemption for necessities, and high rates for luxuries, permits the VAT to be used as a means of implementing stage 5 income distribution adjustment. However, multiple rate are more difficult to administer, and a potential conflict exists between administrative and distributional considerations. We take the view that distributional considerations are important, and that VAT should not be introduced until the administration is sufficiently advanced to permit differential rates, exemptions and zero rating.

Otherwise the tax will be sharply regressive. For further discussion of VAT in developing countries see Gillis, Shoup and Sicat (1987), Casanegra de Jantscher (1987), Sicat (1987), and Tait (1988) who has produced a comprehensive review of VAT.

Although we broadly favour a move towards a comprehensive VAT, we recognize that for many countries it will be a long-term objective only. On the general subject of indirect tax reform, Bird writes:

> Both the literature cited in this paper and extensive experience with indirect taxes in a number of developing countries suggest that what is generally needed is the reform, not the replacement, of the existing structure, and not least of its administration. More use of microdata sets for incidence studies, more explicit modelling of the effects of tax substitutions in a general equilibrium setting, more thought on the importance of the considerable horizontal inequities characterizing most indirect tax systems, and much closer attention to administrative realities – all these offer better guides to what is needed to improve policy recommendations in this area than does the search for some unique, all-encompassing solution (such as a value-added tax) to the problems with most existing indirect tax systems. (Bird, 1987)

The introduction of VAT should be gradual, starting with large manufacturing and trading companies that have the resources to administer it. The turnover of a firm is a suitable criterion, and the VAT can subsequently be widened by gradually reducing the turnover threshold. Certainly, the experience of Niger, when VAT was initially introduced in 1986 on a widespread basis, covering almost all economic activity except agriculture, was that too many enterprises were included and many of the smaller enterprises did not understand it. This should teach tax authorities to proceed cautiously.

Implementing devaluation

The objective of devaluation is to try to maintain equilibrium on the current account during the tariff reform programme. Tariff reductions, by reducing the final cost of imports, will tend to increase demand for them. A devaluation will have the offsetting effect of making them more expensive, and at the same time will make exports priced in local currency cheaper to foreign buyers, thereby encouraging them. It is unlikely that a government will be able to estimate accurately the devaluation required

to maintain equilibrium on the current account following a round of tariff reductions. Import and export price elasticities can be estimated, but these change, and also the time-lag before devaluation becomes effective is difficult to estimate.

While the above may make a 'crawling peg' approach with devaluation in step with tariff reductions sound logical, such a policy may be difficult to implement in practice, partly because speculators may anticipate devaluations, thereby disrupting the foreign exchange market. The once and for all devaluation possibility assumes that the government knows what the final exchange rate should be. It was proposed by Little, Scitovsky and Scott (1970), but during an era of fixed exchange rates. Since 1972, exchange rates have floated, and while a country may be able to devalue against one currency or a basket of currencies, this will not eliminate the possibility of other currencies rising against it. It is not possible nowadays to determine an appropriate fixed exchange rate, and adhere to it. Simply, there is no such thing as a fixed exchange rate. The third possibility, a floating exchange rate, also creates difficulties. It is perhaps more vulnerable to destabilizing currency speculation than the other possibilities, where threat of government intervention in the foreign exchange market may deter speculators. This is especially true when the government has a known policy of trade liberalization. 'Dirty' floating, with some government intervention to maintain order in the foreign exchange market, may be preferable to 'clean' floating. Clearly, all methods have drawbacks, and the choice is likely to be a difficult one.[15]

The problem is magnified by the possibility that devaluation will produce inflation, particularly if real wage rates are inflexible. Therefore parallel policies may be needed to control inflation. If inflation is not controlled, then rising prices will put up the price of exports and make imports cheaper than before in real terms. In other words, inflation will have the effect of reducing the real devaluation made, and may eliminate it altogether, thereby requiring a further nominal devaluation.

It is likely to be preferable that trade liberalization and exchange rate devaluation should be conducted against the background of an unchanged exchange control regime, whatever it may be. Trying to liberalize exchange controls at the same time as trade runs the risk of stimulating destabilizing capital flows (in whatever direction), which may mean that the planned coordination between tariff reduction and exchange rate devaluation is lost. The subject has been discussed in detail by Edwards (1984), who concludes that there is a strong presumption in favour of liberalizing the current account before liberalizing the capital account.

Co-ordinating reforms

We have already noted difficulties which may arise with the coordination of tariff reductions and the introduction of domestic taxes on goods and services. But perhaps a more serious difficulty arises with the coordination of tariff and tax changes on the one hand, and factor price changes on the other, especially the exchange rate and the interest rate. Experience of reform attempts in Argentina, Chile and Uruguay (Corbo and de Melo, 1985) highlight these difficulties. Policy inconsistencies were identified as the main cause of the difficulties. In all three countries, tariff reductions were accompanied by increasing, rather than falling, real exchange rates as the rate of inflation outstripped the rate of devaluation. The implementation of interest rate liberalization, too, led to problems, with the switch from negative to high positive (40–50% at times) real rates of interest. The high real interest rates hit firms hard at a time when they were also suffering from the combination of tariff reduction and increasing real exchange rates. It would be facile to try to present any generalized prescription for overcoming these difficulties; any country attempting a liberalization programme will need to adapt the reforms to their own particular circumstances.

Two further points should be made concerning exchange rate adjustments. First, any pre-announcement of a policy of tariff reduction is likely to lead to speculation against the currency. It would be convenient if this led to an appropriate fall in the exchange rate, but it may be more likely to produce capital flight, foreign exchange shortages and even 'dollarization'[19] of the domestic economy, which may be destabilizing. Argentina, for example, attempted to pre-empt these reactions by pre-announcing devaluations, but ambiguities and inconsistencies in the announcements tended to nullify the advantages of the scheme. In Uruguay, the pre-announced rate of devaluation led to destabilizing behaviour such as consumer hoarding of imported durable goods, and capital flight set in when confidence ebbed in the adherence to the pre-announced devaluation programme (Corbo and de Melo, 1985).

The second point concerning exchange rate (and interest rate) adjustment is the potential conflict which arises between long-run adjustments as part of a reform programme, and short-run adjustments which may be needed as part of a stabilization programme. So far, we have implicitly assumed that reform would take place in an economy in internal and external equilibrium, but the reality is that either high internal inflation or substantial external deficits (and sometimes both

together) will require short-run stabilization programmes which interfere with, or even reverse, changes envisaged under a long-run reform programme. This applies to interest rates, exchange rates and tariff adjustments. Chile, for example, in 1983, reversed its tariff reduction programme by increasing its uniform tariff from 10 per cent to 20 per cent, in response to the impact of the recession. In any economy suffering from instability, the coordination of tariff and tax changes to adjust prices becomes doubly difficult.

5.10 Concluding remarks

We do not pretend that these comments on implementing policy reform have done more than outline the difficulties likely to be encountered by countries pursuing such a programme. The only thing we feel reasonably confident about is that generalized prescriptions for implementation for all countries can only serve as a starting point. Therefore we have avoided trying to do more than outline possible procedures, leaving those responsible in individual countries (who know much better than us) to develop the details of their own reform programmes, according to their own ambitions, circumstances and constraints.

Notes

1. In several countries, poor administrative capacity is a major obstacle to the implementation of structural adjustment programmes. Some governments and external financing agencies have begun to appreciate the need for administrative reforms as part of the process of economic adjustment. Administrative reform programmes are under way in Jamaica, Dominica, Trinidad, Venezuela and several sub-Saharan African countries. See Kitchen (1989).
2. Stern (1984), for example, in a discussion of tax reforms, states that: 'In conclusion, however, it is desirable to indicate important aspects of the theories that have been left out, at least up to now. First, the theories are medium-term in scope. They do not refer to short-run stabilization policy and, as yet, have not been directed towards consideration of growth. Second, administrative costs have been ignored.' Balassa (1982) does not mention administrative constraints.
3. This practice is in fact followed by governments of industrialized countries and by international agencies.
4. The type of technical work has been referred to on several different occasions. The main subjects for the study are as follows:

- domestic resource costs and effective rates of protection;
- price elasticities of demand for imports, exports and non-traded goods;
- resource cost estimates at shadow prices;
- production cost estimates at market prices;
- minimum economic scale of production;
- world market trends for various goods.

5. The practicability of three or four rates of domestic taxes as a maximum is based on practice in European countries (see OECD, 1988), which usually have a maximum of three rates of value added tax. Some have only one rate.
6. The precipitated increase in the price of basic foodstuffs in Zambia in 1986, as part of the price reform programme, led to riots and the subsequent moderation of the price increases.
7. Although this study is concerned with industrial policy and we therefore propose an IPCC, we do not preclude it being a sub-committee of a wider Economic Policy Co-ordinating Committee, concerned with policy reform in all sectors of the economy.
8. The method of assessing the benefits of education by estimating the present value of increased future earnings lacks conviction in the case of industrial training because it is unlikely that the whole of the benefit would accrue to the trainees. In any case, the method is fraught with difficulties.
9. Decisions on the acceptability of the resource costs (an economic decision) and on the acceptability of the subsidy (a financial decision) need to be kept distinct. In our example, resource costs of 120 and a producer market price of 130 may both be acceptable. However, were the resource costs 140 and the producer market price 130, then the financial subsidy may still be acceptable, but the resource cost of the project may now be considered too high.
10. We have avoided detailed discussion of many practical problems here. One is the problem of allocating joint costs when an enterprise produces more than one product. Another is the problem of annual or seasonal variations of costs which may arise. Even identifying the costs in enterprises which do not have adequate management accounting systems may be a considerable problem. Even if the systems are adequate, the cost data included in them may be questionable. Just the issue of which overhead costs to include requires considerable thought
11. We have dealt rather briefly with the dialogue on distributional objectives as it is likely to apply to only a few industrial products, which are our main concern.
12. Krueger (1978) concluded that, 'it seems a fair conclusion that one of the policy mistakes of the two decades covered by the country studies was using devaluation to a new, fixed exchange rate as an instrument designed to attain both domestic price stabilization and a liberalized trade regime. The adoption of a sliding-peg exchange rate policy would have freed the fortunes of the trade sector from their dependence upon successful price stabilisation.' (p. 297.) Experience in Argentina and Chile, though, suggests that a sliding-peg exchange rate policy does not provide all the answers (Corbo and de Melo, 1985).

13. Some countries in recent years have adopted the practice of employing international trade surveillance firms to provide independent valuation and authorization of imports and exports, and to speed procedures and reduce consumption. While this is superficially an attractive scheme, and one which has often worked well, some countries (e.g. Jamaica) have decided that the benefits do not justify the costs.
14. We assume here that nominal and effective rates of protection roughly coincide. If a country has estimates of effective protection rates available, it can then attack high effective rates of protection first.
15. This opens up a further tax problem for imports subject to a tariff lower than the sales tax. If the sales tax is 20 per cent, and an imported good is subject to an import tariff of 15 per cent, then imposition of the 20 per cent sales tax would provide excessive protection to domestic producers, whereas an exemption from sales tax would leave negative nominal and effective protection to domestic producers. Ideally, the good would be subject to a sales tax of only 5 per cent (20% minus 15%).
16. Gillis, Shoup and Sicat (1987) found that: 'By October 1986, nearly sixty nations used one or another form of VAT, 40 of which are classed as developing countries (LDCs) in the 1986 World Development Report of the World Bank.' (p. 1.)
17. Exemptions, where there is no right to a refund of the prior stage tax on inputs, are easier to administer than zero rating, which carries the right to a refund of prior stage tax paid on inputs.
18. In the 1980s, a number of countries introduced auction systems for foreign exchange markets, often under the aegis of an IMF stabilization programme or a World Bank structural adjustment programme. Ghana, Jamaica, Nigeria, Uganda and Zambia are cases in point. Essentially, a twice weekly auction allows the price of foreign exchange to be determined by supply and demand, but subject to the important qualification that supply is fixed by the government or central bank, which announces in advance how much foreign exchange will be made available at the auction. It is really a relatively transparent form of a dirty float.
19. Dollarization is the process whereby goods and services in the domestic market tend to be priced informally in US dollars rather than local currency. It occurs when people find that because of high inflation and non-convertibility of the local currency, the US dollar offers a more constant measure of values and is a safer currency to hold.

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