

# **WORKING PAPER**

**No. 15**

## **Macro-Economic Stabilisation, Income Distribution and Poverty : a Preliminary Survey**

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### Preface

This paper has been prepared as part of a major ODI project on the income distribution effects of stabilisation policies in less developed countries. The research, which is funded by IDRC (Canada) and ODA (UK), is conducted in collaboration with researchers in five countries (India, Jamaica, Kenya, Sri Lanka and Zimbabwe); in which case-studies are being conducted. It is a working paper, therefore, in two senses. In the first place, the paper is to be read as a working draft, as a report of research which is still in progress. But it is also a working paper in another sense, as an input into the case-study work of ODI's collaborators. The literature review that the paper undertakes is therefore directed at providing some guidance for empirical research into the subject.

This paper has been prepared in order to promote discussion and provoke comment. It has benefited from discussions with Gerry Helleiner, Adrian Hewitt and Tony Killick. Earlier versions of this paper were presented at an ODI/IDRC workshop in Nairobi, December 1984 and at an ODI/ICRIER workshop, New Delhi, June 1984. We are grateful to participants at those workshops for their comments.

## I. INTRODUCTION

Over the past decade the developing countries have found themselves faced with such changing circumstances regarding international payments that they have been obliged to pay more attention to macro-economic stabilisation. Whereas previously, a preoccupation with growth and development objectives permitted a general neglect of stabilisation policies, the tempestuous events in world trade and exchange since the first oil shock of 1973, and their contribution to the subsequent widespread economic disequilibria, have generated fresh interest in what may be termed 'conventional macro-economic management' in ldc's. Much of this concern, though not all, has been inspired by the IMF, and its practice of 'conditionality' in making its assistance available.

IMF-recommended policies have generated considerable debate, at both the technical and political levels, on the effectiveness of these policies in correcting disequilibria in ldc's, on their consequences for the long term goals of the countries, and on their internal political relationships. These concerns are often deepseated, and relations between the IMF and member countries have been frequently strained as a result. President Nyerere's statement following the breakdown of Tanzania's negotiations with the IMF in 1979 is an illustration of some of the passions raised by these conflicts,

'Tanzania is not prepared to devalue its currency just because this is a traditional free market solution to everything and regardless of the merits of our position...My Government is not prepared to give up our national endeavour to provide primary education for every child, basic medicines and some clear water for all our people... Nor are we prepared to deal with inflation and shortages by relying only on monetary policy regardless of its relative effect on the poorest and less poor'.

As his statement clearly indicates, the heart of this concern is the inevitable conflict between competing policy objectives, and the need

to take into account these trade-offs in policy design. Unfortunately, these have not always been recognised by the various parties to the debate. One can group these potentially conflicting policy objectives in ldc's into four main categories: growth and development, allocative efficiency, stabilisation and improving income distribution. In addition, there are conflicts within each of these categories, the most familiar being between internal and external balance in stabilisation policy (Meade 1951, Williamson 1982).

Our interest in this paper is in one of the least understood of these trade-offs, that between stabilisation policy on the one hand, and income distribution on the other.<sup>1</sup> The expression 'income distribution' is used as a portmanteau term covering the issue of inequality (which refers to incomes across the whole distribution) and the incidence of poverty.<sup>2</sup> This paper, in part a preparation for a major research project implemented by ODI into these issues, seeks to review the literature within a broadly defined conceptual framework. This framework is set out in section II, which reviews various concepts and measures of poverty and income distribution, and suggests a process through which their determination may be analysed. The basic methodological theme of this paper is that careful consideration must be made of the principal mechanisms determining the distribution of income and level of poverty. Then the principal adjustment policies must be analysed in relation to these distributive mechanisms, accompanied by a careful analysis of other forces working through the same mechanisms. Thus there is, methodologically, a two stage process. It is only through this type of specification that the effects of stabilisation policy per se on income distribution can be traced. Section III traces the potential links between stabilisation policies and income

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<sup>1</sup>They are to be considered in the national context. The broader issue of how global income distribution among countries has been affected by international monetary arrangements, is not addressed in this paper. But see Helleiner (1983).

<sup>2</sup>The meaning of the term 'stabilisation policy' is also not self evident, and has been defined in different ways in the literature. This is discussed in detail in Section III (p39).

distribution within the context of this framework, whilst section IV attempts to draw some meaningful conclusions.

## II. INCOME DISTRIBUTION, POVERTY AND THEIR DETERMINANTS

### II.1 Some Conceptual Issues<sup>3</sup>

In this section we explore in general terms the forces acting upon income distribution in a developing country. But, before these issues can be addressed, some clarification is needed on the meaning and measurement of inequality and poverty. As the discussion proceeds, it will become apparent that our choice of definition and measurement will depend on two sets of considerations. In the first place, concepts must be analytically meaningful, in the sense that they relate to an appropriate theoretical structure. For example, most economists speak of the functional distribution of income, simply because of the use of such aggregates in production function analysis. Similarly, in the context of our present concern, rural and urban income distributions would need to be distinguished, bearing in mind the dualistic nature of many developing countries.

Second, our choices are also constrained by the practical requirements of policy making. It would hardly be useful to describe changes in income distribution simply in terms of factor incomes if governments wish to formulate specific policies to alleviate poverty. For research to be directly useful, it must be sufficiently specific to meet this point. Unfortunately, these considerations are often in conflict, since theoretically appropriate concepts do not always meet the requirements of policy making. As we shall discover, much of the recent empirical work on income distribution addresses this problem, and is concerned with mapping functional income distribution into more policy-relevant space.

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<sup>3</sup>This section only touches on some of the many complex issues involved. For a clear summary of these issues see both Fields (1980 : Ch 2) and Sen (1983).

### The Nature and Measurement of Poverty

It is not inconceivable that poverty may be reduced whilst overall income inequality increases as a result of policy change. Whilst it is true that humanitarian priorities would direct us mainly to the plight of the poor, it may be the case that typical stabilisation policies in the Third World have greatest impact on middle to upper income groups. Which income or socio-economic groups receive emphasis is an empirical matter. Nevertheless, as we show below (Section III) there is a good case for directing our attention towards the poverty effects.

Much of the literature on poverty is concerned with the relative merits of absolute or relative concepts of poverty (Fields, 1980 and Sen, 1983a review much of it). For a comparative analysis of poverty, there are obvious merits in absolute measures, with an appropriate emphasis on quantitative criteria. But most recent work has questioned the usefulness of absolute poverty, since what constitutes poverty in one society (at one point in time) may not be the same for another society (or the same society at a different time). Whilst Sen (1983b) restates the case for an 'absolute' basis for measures, he retains much of its relativity. He distinguishes between the 'capabilities' which incomes confer, and the goods and services needed to produce them. Poverty, according to this view, is the absolute absence of certain critical capabilities - especially such essentials as avoiding shame, community participation and self-respect.<sup>4</sup> But the bundle of goods and services required to provide these capabilities varies from place to place and from time to time, and it is in this respect that poverty is relative. If the absolute aspect of poverty is ignored, and the analysis adopts a 'thoroughgoing relativity' as Sen (1983: 156) puts it,

'poverty cannot - simply cannot - be  
eliminated and an anti-poverty programme  
can never really be quite successful'.

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<sup>4</sup>Sen derives these absolute criteria from Adam Smith, Townsend (1977) and Rawls (1972). See also Sen (1976) in which an index of poverty is derived axiomatically.



Taking relativity too far makes poverty just an issue of inequality, and our enquiry would do well to mark Sen's contribution very carefully. Whilst we do not expect the income poverty line to be identical (say in equivalent US dollars) in all country case studies, some similarity in terms of absolute 'capabilities' should be sought. Since there does exist a close relationship between poverty and inequality, we will consider the determinants of poverty alongside our discussion of the determinants of inequality in the latter part of the next section.

### The Nature and Measurement of Inequality

Inequality is perhaps more challenging than poverty from the measurement point of view, since incomes across the whole distribution have to be described, often in terms of a single index. Several indices of inequality have been proposed in the literature, each having its own peculiar properties. In deciding between them in an analysis of stabilisation policy effects, a number of considerations have to be borne in mind.

In the first place indices of inequality necessarily imply a system of welfare weights assigned to each income category. For most indices these weights are not explicit, and indeed are sometimes difficult to determine. Champernowne (1974) compared a number of standard measures in terms of their sensitivity to income changes at different points of the distribution. He distinguished three types of inequality - arising from extreme wealth, from changes in middle incomes, and from extreme poverty. He found that the variance (or more accurately the log variance)<sup>5</sup> and the Gini coefficient were more sensitive than other measures to inequality arising from changes in the middle and low income groups. For those interested in the upper income strata, the coefficient of variation and the Theil index are more appropriate.<sup>6</sup>

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<sup>5</sup>The log variance being the variance of the natural logarithm of income.

<sup>6</sup>The Atkinson index explicitly ascribes weights through the incorporation of a parameter of 'relative inequality aversion' (see Atkinson, 1970). For details of these measures see Fields (1980).

This property has led Fields (1980), among others, to favour the analysis-of-variance procedure, since it is more appropriate for analysing low income populations. Whilst agreeing with the thrust of Field's conclusion, we may wish to keep other considerations in mind. If, for example, middle income groups bear the main burden of macro-stabilisation, the Gini coefficient would be a more sensitive indicator of induced changes in distribution.

The difference in weights, however, is not the only criteria for index selection. Since our concern is with tracing the effects of macro-stabilisation, the index should ideally throw light on both the proximate and underlying determinants of inequality. It is important, therefore, to consider the decomposition properties of the various measures available. Decomposing inequality indices separates the overall income distribution into within - and between - group distributions. In the case of the Gini coefficient, a number of decomposition techniques have been developed (see for example Mangahas, 1974 and Pyatt, 1976), each of which uses an accounting procedure, which can be considered neither causal nor behavioural. Analysis-of-variance, on the other hand, gauges the importance of the unexplained residual, which facilitates the application of standard statistical significance tests.<sup>7</sup>

'This permits us to bring the full logic of conventional statistical analysis to bear on the problem of ascertaining the determinants of inequality. From a causal (as opposed to accounting) perspective, this is valuable indeed'.

Decomposing indices of inequality requires the selection of appropriate groups within and between which distributions are ana-

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<sup>7</sup>The availability of standard computer software packages, and the similarity with OLS estimation, make the choice of analysis-of-variance all the more suitable. Dervis et al (1982 : 431) make the point that the variance is therefore easier to decompose than the Gini-coefficient.

lysed. Taking income source (by factors of production) has an analytical appeal, whilst separating distributions between socio-economic groups may be more appropriate for policy formulation. In a ldc context these categories of distribution are not mutually exclusive, however, and we shall find that each has a role to play in policy analysis.

## II.2 The Distribution of Income

Following Dervis et al (1982), five distributions of income may be identified: to factors of production, to institutions, to socio-economic groups, to individuals and to households. To these may be added regional distribution, especially between rural and urban areas. These can be derived in the sequence illustrated in Figure 1, which is based on the income distribution mapping procedures of the Social Accounting Matrix (SAM).<sup>8</sup>

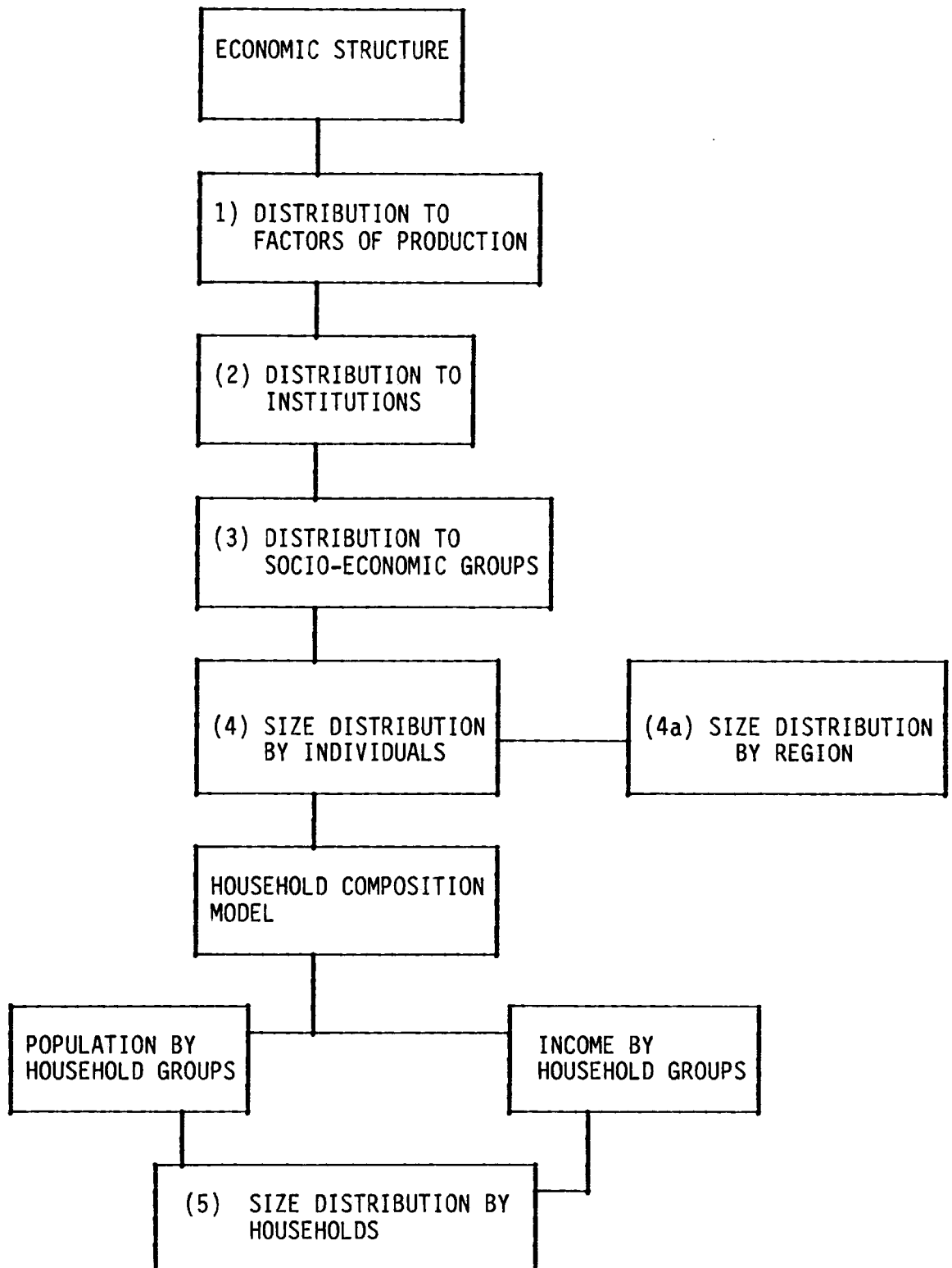
### Functional Distribution

Theories of the functional distribution were developed mainly in the context of advanced industrial economies where the distribution correlates reasonably closely with household distributions. Thus, for example, the return to labour (and therefore the wage share) can generate useful information about the distribution of income to working-class households. But the picture is not so clear in the context of ldcs. As Chenery et al (1974: 43) observe,

'Existing theories of income distribution are of only limited value....because they are somewhat narrowly focused on the functional distribution of income between labour and capital....The inadequacy of existing theories for our purposes arises less from the lack of consensus as to the determinants of the functional distribution of income than from the omission of other aspects of the problem. The available evidence on the nature of poverty in underdeveloped countries shows

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<sup>8</sup>See, for example, Pyatt and Thorbecke (1976) and Pyatt and Round (1979).

FIGURE 1: INCOME DISTRIBUTION MAPPINGS

SOURCE: based on Dervis et al (1983)

that half of the poor are self-employed and do not enter the wage economy. Most wage earners are already in the middle income groups, so that policies affecting the split between wages and profits mainly concern the upper end of the distribution'.

Whereas our analysis of income inequality must of necessity examine its functional determinants, this alone does not take us very far. The functional distribution may be considered necessary but not sufficient in analysing inequality, since it is a useful theoretical construct which does not suffice from a policy perspective.

Empirical investigations into income inequality in ldc's have tended to highlight the inadequate explanatory power of functional distributions. Decomposition studies taking factor sources as main categories, indicate that variation within labour income is the predominant factor in explaining overall income inequality (Fei and Ranis, 1974 and Fields, 1979 and 1979 and 1980). To some extent, this failure of source decompositions to explain inequality is due to insufficient disaggregation, especially of labour. Labour in ldc's ought to be divided into groups reflecting wage and self-employment and along lines of labour market segmentation. This issue is discussed further in II.2.

### Institutional Distribution

The total value-added produced by factors of production is distributed to a number of institutions in the economy. For the mixed economies of the developing world, it is convenient to identify three broad groups, namely households, firms and the government. Out of the capital income that accrues to firms (as owners of the capital stock) part is retained for investment after deducting payments to Government (in the form of corporation taxes) and to households (in distributed profits).

Analysing the income distributed and disbursed by the Government is obviously of central importance to our subject, since stabilisation policies will necessarily entail changes in patterns of revenues and expenditures. Moreover, for our purposes, the 'rest of the world' accounts of firms and governments would require very careful attention, perhaps more than is usually accorded in typical SAM exercises. Although the distribution to households occupies the centre stage of our study, the importance of the behaviour of firms and governments cannot be underestimated. In the first place, their income /expenditure decisions directly affect household incomes and their distribution. Decisions by firms on distributing and retaining profits will clearly affect higher income households. The incidence of government spending will also have a direct effect on real income distribution, since the benefits are often distributed unevenly to households. Pyatt and Thorbecke (1976) give some consideration to fiscal incidence and income distribution within the SAM context. Moreover, insofar as expenditures by firms and governments influence the distribution of assets, they may have indirect effects on household income distribution. Government expenditure in education is an obvious example. This confers immediate 'consumption' benefits to the recipients, but also imparts human capital, the returns to which can be reaped over the recipient's life cycle. These issues are explored in II.2.

### Distribution to Socio-Economic Groups

It is usually helpful to divide households into policy-relevant socio-economic groups in empirical investigations of income distributions

in ldc's. The choice of grouping is not likely to be straightforward, since it is usually a compromise between conflicting requirements. Broadly, three distinct sets of considerations determine the choice of socio-economic disaggregation. First, the division of households must be meaningful from a policy perspective. The groups must, in general, be readily identified for policy design, and must be selected to reflect political considerations. For example, ethnic groups would need to be distinguished in policy analysis in Malaysia, given its 'New Economic Policy' of improving the economic status of Malays, (see Mazumda, 1981). Ethnic distribution is also of direct policy interest in many developing countries (eg Sri Lanka, Philippines) although in most cases, this would relate closely to regional distributions.

Second, the socio-economic groupings should conform as closely as possible to appropriate analytical constructs. Groupings which interest policy makers may not be amenable to economic analysis in any meaningful way. How this would in practice influence the grouping depends of course on the underlying theoretical perspective of the enquiry. Chenery et al (1974: 43-44) have suggested the following grouping based on asset ownership,

'A more general statement would recognise that the income of any household is derived from a variety of assets: land, privately owned capital, access to public capital goods, and human capital embodying varying degrees of skills. A grouping of households according to the type and productivity of their assets provides more insight into the nature of income distribution among the lower-income groups than does a narrower focus on the determination of wages for different types of labour'.

The categories selected by Dervis et al (1982: 415) are based on source (factor) and sectors, essentially allocating income to factors by sector, and reflecting the neo-classical underpinnings of their work on computable general equilibrium planning models. The ILO Basic Needs work of Hopkins and Van der Hoeven (1981) reflects a slightly

different political economy, and entails the following division,<sup>9</sup>

- Farmers
- Small Farmers\*
- Labourers and unpaid family workers\*
- Owners of large enterprises
- Self-employed in small enterprises
- Skilled workers
- Unskilled workers\*
- Foreign profit earners and transnationals.

Groupings of this nature facilitate the identification of poverty groups, such as those marked with an asterisk. This probably represents the minimum degree of disaggregation for useful policy analysis - Adelman and Robinson (1978) distinguish fifteen groups.

Finally, the choice of socio-economic group must offer empirical insights into the underlying determinants of inequality. Overall inequality can be represented as a function of inequality within socio-economic groups and of differences between group incomes. Algebraically, this is expressed as,

$$s^2 = \sum_i^n n_i s_i^2 + \sum_i^n n_i (\bar{x}_i - x)^2 \dots 1$$

where  $s^2$  is the variance in overall income,  $s_i^2$  is the variance within socio-economic group  $i$ ,  $\bar{x}_i$  is the mean income of  $i$ ,  $x$  is the overall mean income, and  $n_i$  is the population weight. The two components of overall inequality are separated on the right hand side of 1 - within-group inequality  $\sum_i^n n_i s_i^2$  and between-group inequality  $\sum_i^n n_i (\bar{x}_i - x)^2$ . If the selection of socio-economic groups is to enhance our understanding of income distribution and its sensitivity to policy change, the second term ought to be both quantitatively more important and more sensitive to the policy changes under consideration. If stabilisation policy leaves the distributions of  $x_i$  around  $x$  more or less unchanged, but leads to significant changes in  $s_i^2$  then our categorisation will have failed to capture the essence of the problem.

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<sup>9</sup>Knight (1976) uses a similar classification.



In order to meet this requirement,  $s^2$  should be conceived of as a stochastic term, which implies that within-group incomes are normally distributed.<sup>10</sup> Skewness in the within-group distribution would be evidence of some non-stochastic process at work, and would suggest a need for reclassification. This distinction between the 'chance' or stochastic influences on income distribution and the underlying behavioural and policy sensitive factors, is a key issue facing empirical research. As Cline (1975: 365) puts it,

'....the basic utility of 'chance' models in my view is limited to explaining the distributional noise around the fundamental income distribution patterns determined by more basic economic phenomena'.

The first term on the right hand side of equation 1 could be interpreted as 'distributional noise' - its main distinguishing feature for purposes being its independence of stabilisation policy impacts.

#### Size Distributions by Individuals and Households

The size distributions by individuals (often referred to as the personal distribution of income) and by households, represent the next stages of a typical SAM distributional mapping procedure. To obtain distributions to households from the size distribution by individuals, household compositions must be specified. Adelman and Robinson (1978) and Rodgers et al (1976) use a household composition matrix to perform this mapping, but the procedure is somewhat mechanical, especially for analyses over the medium to long term.<sup>11</sup>

Although it is important to know, for example, the proportion of households in the lowest income category, these measures cannot be

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<sup>10</sup>Assumptions of log normal distributions within categories are common in modelling analyses of income distribution (Dervis et al 1982, Rodgers et al, 1978, Hopkins and Van der Hoeven 1981).

<sup>11</sup>Pyatt (1977) and Dervis et al (1982) provide useful summaries of the use of a Social Accounting Matrix (SAM) to map from the functional distribution to individual/household distribution. See also Pyatt and Thorbecke (1976) for a detailed treatment.

relied upon for policy analysis in ldc's. This is because there is less homogeneity in the occupations of households within the income percentiles in ldc's compared to developed countries. Thus, for instance, the lowest income group may contain a mixture of smallholders, rural wage labourers and urban unskilled or unemployed workers - ie a mix of rural and urban occupations. In contrast, the lowest income group in developed countries will consist primarily of those whose income derives mainly from urban industrial or service employment (even though some may currently be unemployed). This greater heterogeneity in the income groups of a size distribution in ldc's, makes such distributions less useful.

In addition, the size distribution may not be of great utility because stabilisation policies may affect the socio-economic groups aggregated within an income percentile in different ways,

'...changes in the share of a particular decile reflect 'possibly offsetting movements in the fate of heterogeneous groups who happen to be represented in the decile'

(Griffin and Khan 1978: 302).

For instance, it is possible that devaluation could improve the income of the rural poor, and reduce the incomes of the urban poor. An income category that aggregates both the urban and rural poor together will not, therefore generate a great deal of information about the possible effects of stabilisation policy. Consequently incorrect inferences could be made that, for example, since the income share of the lowest percentile has not changed then a change in the income shares of poor rural and urban household has not occurred - when in fact offsetting variations for these social groups may be present.<sup>12</sup>

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<sup>12</sup>This was found to be important in the simulation experiments of de Melo and Robinson (1980). See the discussion of exchange rate adjustment in Section III of the Working Paper.

### Intra-household inequality

Recent research has demonstrated the importance of disaggregating the household in order to consider the welfare of individual family members. This work focuses on the consumption levels of individuals by sex and age (although the household itself may still usefully be taken as the basic income earning unit). In particular Sen (1981 and 1983b) has surveyed the evidence for South Asia on biases in food consumption within the family. The literature suggests significant biases against female children and older female family members. Thus knowledge of the family's income may not be sufficient to determine its individual member's wellbeing. Consideration of the (non-price) allocation mechanisms within the family thus has an important role in the formation of policy (UNICEF, 1984).

### Income Distribution Grouping and Prices

If a rural household has the same money income as an urban household, it will be grouped in the same percentile of the size distribution. However, as is empirically well known, the cost of living differs significantly between urban and rural areas<sup>13</sup> and thus a size distribution in money terms may group together households whose real incomes differ markedly. Deflating the whole size distribution after it has been ordered into percentiles to obtain a "real" size distribution will not resolve the problem since the different costs of living must be taken into account. Thus each socio-economic group's income must be deflated by the relevant cost of living index, and then aggregated, and split into percentiles, to obtain the size distribution in real terms. Of course, some real size distributions are presented separately for the rural and urban sectors and this resolves many problems.

The problem of appropriate price deflators in income distribution applies equally to disaggregation by socio-economic group. If house-

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<sup>13</sup>Food prices will typically be higher in urban than rural areas, contrawise the prices of consumer goods will usually be higher in rural areas compared to urban ones. However, since food is a greater proportion of the budget for both the low income rural and urban poor then the cost of living index for the urban poor will exceed the index for the rural areas.

holds within groups are not sufficiently homogeneous with respect to the prices they face and the basket of goods consumed, changing prices will probably affect not only the mean level of group income, but also its distribution within the group. In other words,  $s_1^2$  (in equation 1 above) cannot under such circumstances be considered stochastic, but would depend systematically on changing prices. One of the many considerations influencing the choice of socio-economic group should be the independence of  $s_1^2$  with regard to prices, which can only occur when within-group prices and consumption patterns are reasonably homogeneous. We return to this question later in this part.

### Regional (Rural-Urban Distribution)

Finally, the distribution of income between urban and rural areas should be treated explicitly. For large countries such as India, the distribution by region is also important (where a region is defined as having both urban and rural income sources). Rajaraman (1976: 230) is quite emphatic,

In India, regional breakdowns for both rural and urban sectors are absolutely necessary: because of the size and diversity of the country, estimates of inequality and poverty for the country taken as a whole conceal more than they reveal'.

Sri Lanka's income distribution data are often presented on the basis of a rural/urban/estate breakdown. This is because of the structural difference between the estate sector and other parts of the economy and the fact that poverty incidence tends to be concentrated among estate workers (see Rajaraman, 1976: 229, and Isenman 1980). Regional distributions can also have significant political implications, as for example, the dry zone in Sri Lanka.

An important issue is the extent of transfers or remittances between households in urban and rural areas - usually from higher earning workers in the urban sector back to the extended family located in the rural areas. Thus a significant part of rural income may have its source in the urban sector - see Rempel and Lobdell (1977) for an empirical survey of the importance of such transfers in Africa, and

Connell et al (1976) and Connell (1980) for reviews of the role played by remittances in rural development in Asia and the Pacific respectively.<sup>14</sup> This has clear importance for an analysis of stabilisation policies, since an adjustment policy whose incidence falls on, for example, the urban working class may also significantly affect rural income groups. Thus any gain by the latter group from the policy itself may be reduced by a fall in urban to rural remittances.<sup>15</sup>

## II.2 An Analytical Framework

We now turn to consider the determinants of income distribution and poverty from a rather more fundamental perspective. The foregoing section was mainly concerned with 'proximate' determinants, and was largely devoid of behavioural content. It is hardly sufficient for the purpose in hand, which is to analyse the effects of stabilisation policy, and the intervening variables they influence, on income distribution and poverty. What this requires is an analytical framework, through which these effects can be traced in the context of the underlying determinants of distribution. Having established the framework, we can then review (Section III) the evidence pertaining to stabilisation policies.

The choices concerning the establishment of an economic framework are difficult and contentious. To begin with, a decision must be made regarding its scope - whether it should necessarily deal with the economy as a whole, or with certain key sectors only. This will depend in part whether our concern is with poverty per se, or with incomes throughout the size distribution. In the latter case, an economy-wide framework is obviously essential. But if the analyst's principal

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<sup>14</sup>The role of rural-urban remittances in income distribution is highlighted Rodgers, et al (1978).

<sup>15</sup>For comparative work it is important that the case studies are consistent in the way they treat this problem, and that we are aware of any difference in the treatment of remittances in the different national income data surveys. Comparisons must be made with care between countries with a high degree of settled urbanisation (eg Jamaica) and those at a lower stage of development (including especially circular migration) eg Zimbabwe and Kenya.

interest is in poverty, a partial or sectoral analysis may suffice, particularly if the poor are readily identifiable within socio-economic groups. There is, more generally, a tradeoff between the comprehensiveness of economy-wide systems, and the depth of the detailed case-study approaches. It remains to be proved that the recent class of economy-wide models for ldc's (Blitzer, Clark and Taylor, 1975, Taylor, 1979, and Dervis, de Melo and Robinson 1982) offer as much policy insight as they display technical ingenuity. The 'nearer' the analyst gets to his problem, the more likely it is that his efforts will yield results of use in policy formulation. However, since our principal concern is with macroeconomic policies, beginning at the economy wide level can provide a useful starting point. But such analyses should be combined with in-depth case studies on poverty, and the ways in which it has been affected by macro-stabilisation.

One of the main difficulties is that our subject straddles (somewhat uncomfortably) two distinct branches of the discipline of economics. Stabilisation policies - their design and effectiveness - are the concern of macro-economics, with its emphasis on the interaction between important economic aggregates. Income distribution and poverty, on the other hand demand a more disaggregative treatment, distinguishing not only between the socio-economic groups which are the subject of study, but the various sector-specific mechanisms through which economic changes affect output and its distribution among the agents involved. Whilst most macro-models for ldc's give scant, or highly aggregative attention to income distribution (see Taylor, 1979, for an example of the latter), frameworks which yield suitable distribution predictions, pay little attention to macro-economic aggregates, particularly policy or control variables like money supply, absorption, and so on. In many respects, the Input-Output Leontief framework, and its extension in the Social Accounting Matrix (SAM), has great appeal, as they represent a half way house between macro and micro frameworks. More will be said of their advantages and disadvantages later.

Second, the choice of framework will also depend upon the time perspective taken. Obviously, the longer into the future one takes

the analysis, the less confident one can be about its predictions, and the less relevance they have for government policy. The question of time period has further implications for the theoretical framework, since the relative importance of price and quantity adjustments is partly dependent on time. One view expressed commonly in the literature (see for example Bigsten, 1983: 116) is that neo-classical assumptions apply only to the long term, and that for short run analyses Keynesian, or neo-Keynesian models are better approximations. But even for the longer term, the persistence of surplus labour, institutional constraints and oligopolistic markets suggest that caution is required. Cline (1973: 356) has said that, 'as a very minimum, the neo-classical rules can only be applied to ldc distribution after the incorporation of a series of special institutional constraints within the system'.<sup>16</sup>

Whilst neo-Keynesian models may be more appropriate for the short run, they also have their limitations. The application of 'Cambridge' models (based on Kalecki, 1972) by Taylor has only limited relevance to those ldcs characterised by large agricultural sectors, which typically comprise a large number of small producing units.<sup>17</sup> This model does insufficient justice to the presence of surplus labour in agriculture, and the role played by labour transfers in the dynamics of development - a feature highlighted by the classical system of Lewis/Ranis-Fei. Clearly, for most ldcs, a two sector structure is an essential requirement for the analytical framework we are considering, and this is discussed in greater detail below.

These issues arise from the fundamental root of the researcher's basic 'economic philosophy'. Different philosophies are distinguished by their assumptions concerning the endogeneity or otherwise of such

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<sup>16</sup>See also Dervis et al (1982 : 80).

<sup>17</sup>Interestingly, Taylor applies these models to relatively industrialised developing countries. As we shall see much of the recent work of macro stabilisation has been directed at Latin America since here the accepted theoretical constructs (be they neo-Keynesian or Neo-Classical), can be most readily applied in a 'development' setting.

important variables as prices, factor returns and investment in the system. Decisions on these variables can have profound effects on income distribution outcomes. Price flexibility is featured in neo-classical approaches, in which relative prices (in product and factor markets) are determined endogenously by excess demands, and in which aggregate investment is determined through the supply of investible resources, also determined endogenously. In the Neo-Keynesian system, money wages are typically assumed to be fixed (or at least sticky in a downward direction), whilst investment is exogenously determined by expectations and 'animal spirits'. A feature of such models (see Kalecki, 1950, Kaldor, 1956 and Taylor, 1979), is the crucial equilibrating role played by income redistribution, through which savings and investment are equated. Finally, classical assumptions can be invoked to close economy-wide systems, resting on the premise of surplus labour and the constancy of the real wage at subsistence level. This determines the real rate of profit, and the rate of investment accordingly.<sup>18</sup>

Clearly, the paradigm will to a large extent pre-determine the results of a systematic analysis of the effects of macro policies on income distribution and poverty. Macro variables can affect sectors in noticeably different ways and in the last analysis this will depend on two considerations - the 'world view' of the analyst, and the conditions existing in the country in question, with perhaps increasing emphasis these days on the latter.<sup>19</sup>

This discussion on the relative importance of different equilibrating variables raises a rather more fundamental issue. In so far as countries in need of stabilisation measures are in a state of macro-economic disequilibrium, it is patently absurd to base policy prescriptions on the results of comparative static, equilibrium theory. What is required is a theory of disequilibrium, with due emphasis on the importance of expectations and quantity rationing (along

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<sup>18</sup>In formal models, the basic economic philosophy of the researcher determines the 'closure rule' adopted.

<sup>19</sup>This can be seen in recent work on SAM's. The SAM does not imply any one closure rule since it is typically under-determined. Recent work on a so called 'Transactions Values' approach to SAM's, in which the



the lines of Leijonhufvud, 1968 and Barro and Grossman, 1976). Moreover, this should not be thought of simply as a fine point of theory. Ramos' (1980) account of stabilisation policy in post 1973 Chile is a graphic illustration of the failure of simple-minded 'equilibrium-oriented' policy prescriptions, and of the critical role played by price expectations and quantity rationing in frustrating the plans and objectives of government policy.

### Stylised Facts

Obviously, the analytical framework that is adopted in analysing the distributional consequences of stabilisation must reflect the individual characteristics of the country in question. Nevertheless, there are certain regular features, or stylised facts, which should be recognised in such a framework. First, and perhaps foremost, basic structural differences exist between sectors in ldc's, which is not true to the same extent in developed countries. The existence of a large, rural and agriculturally based sector, in which the vast majority of the poor earn their living, is of fundamental significance. Its links with formal economic institutions (such as banking, industrial enterprise, etc) are not well articulated, which raises questions concerning the appropriateness of most macro-economic models, on which policy prescriptions are often based.

The differences between the rural and urban sectors in ldc's can be characterised from a number of perspectives. According to the jargon,<sup>20</sup> much of the rural sector is 'informal', whereas more formal

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individual cells (in value terms) are determined by a number of alternative behavioural and technological specifications, and closure rules are explicitly determined, has confirmed the crucial role that is played by the latter. (Drud, Grais and Pyatt, 1983). This was established also in Taylor's more aggregate studies, in which neo-Keynesian closures generally meant much larger changes in income distribution than the neo-classical alternative (see Taylor, 1979).

<sup>20</sup>The distinction between formal and informal sectors, dating back to Hart (1983), has been criticised as being both conceptually and empirically hazy. For a review of the weakness of the concept and its various interpretations, see Hackenberg (1980 : 412-415).

economic relationships exist mainly in the urban sector. Economic organisation in rural areas, is usually characterised by a situation in which both consumption and production decisions are taken by the household. In the formal urban sector, households continue to be the predominant consuming unit but production decisions are taken by enterprises.<sup>21</sup>

As a consequence of this fundamental difference in economic organisation between sectors, our treatment of both factor and product markets must distinguish between these sectors. With most output decisions taken within the household, there will be only limited recourse to factor markets, which as a consequence, will be relatively poorly developed. This gives rise to difficulties in analysing incomes and their determinants. Knight (1976: 164) summarises the problem as follows

'because traditional workers are often self-employed there is frequently no market separation of the returns to labour and capital. When there is no ownership of land - as in parts of Black Africa - there is no market distinction between the returns to labour and to land in agriculture'.

The product markets of informal and formal sectors will also require careful distinction. In the former case, product markets will be generally characterised by a large number of small suppliers, and therefore typically competitive. The formal sector, on the other hand, usually comprises a relatively small number of large enterprises, trading in oligopolistic product markets. In general, informal sectors are characterised as 'flexible' as compared with the formal sector, although output responses will obviously be slow in the short run for the agricultural sector.<sup>22</sup>

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<sup>21</sup>Obviously the distinction is not completely clearcut since some households may derive income from both sectors eg food deficit smallholders who hire out their labour in certain seasons.

<sup>22</sup>Prices in the formal sector may tend to be sticky, given its oligopolistic structure, so that (at least in the short run) quantity adjustment may be more important. See for example Taylor (1983).

The formal-informal distinction is of central importance in our study for the following reasons:

- the informal sector is poorly articulated with many organised institutions which affect stabilisation policies, and some uncertainty surrounds the effects of such policies on the sector.
- price and quantity adjustments will differ noticeably between the sectors, leading to asymmetric responses to policy changes.
- the incidence of poverty is typically concentrated in the informal sector.
- analytical methods of determining income and its distribution are likely to be different in each case.
- the extent to which each of these sectors predominates in an economy determines the usefulness of theories developed in dcs for the functional distribution.

### The Primary Distribution of Income

The previous discussion provides us with some of the necessary background to set out our analytical framework. However, it must be borne in mind that this framework must be presented tentatively since the theory of income distribution for the developing countries is in

'The development of such a theory will not be easy. Existing data on income distribution in different countries reveal a pattern which defies the simple theories of both quantitative and non-quantitative analysis....anyone of a scientific turn of mind must broadly admit that we are at the beginning of a long journey of intellectual and social exploration for which the theoretical maps so far available are grotesquely unreliable'.

However, we can begin to set out our framework by using Stewart's distinction between the primary distribution of income and the

secondary distribution of income (Stewart, 1983: 4-5). Thus a distinction is drawn between

'...primary claims on resources which arise directly out of the productive process of work and accumulation, and secondary claims which result from the transfer of primary claims'.

The latter may work through the family, village or most importantly for our purposes through the state in the form of taxes and transfer payments. Note that this is a useful but not watertight distinction since obviously the policy of state income transfers will affect the structure of production, but it provides a useful starting point. In the following we shall concentrate on the primary distribution, leaving most of our discussion of the secondary distribution to Section III in which transfers are analysed in the context of stabilisation policy.

Figure 2 sets out our analytical framework in schematic form.<sup>23</sup> The forces acting on the secondary distribution are also shown for later reference in Section III. In figure 2 we proceed from left to right, going through the process sequentially. The diagrammatic presentation is deliberately simplified to set out the bare bones of the principal processes and interactions. The primary causes of change in the structure of production and hence of income distribution are as follows.

First, there is the 'time path' of the economy - a general term subsuming the processes of the rate of capital accumulation by sector, demographic change (mainly population and labour force growth) changes in age and sex composition and labour force participation, (Rodgers, 1978 and Visaria, 1979) the rate of technical change by sector (Stewart, 1983) and the all embracing term 'stage of development', the latter referring to studies of the distribution of income through time, principally associated with the work of Kuznets (1955) and (1963).

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<sup>23</sup>Page 35 of this paper.

Secondly, we have separated out forces acting from the state namely, political and institutional change, the macro-economic stance as observed through the budget deficit, state policy towards each sector (and particularly state provision of inputs and marketing, as well as the policy toward producer prices) and finally, the trade policy adopted, ie the relative importance attached to the production of tradeables versus non-tradeables through policies pursued on the exchange rate and on trade restrictions.

These forces act on the structure and rate of growth of output by sector, through the patterns of supply and demand for the output of each sector (refer to Figure 2). The change in sector output through time will therefore depend, in the first instance, on the relative changes in sector supply and demand, and the structure of these markets, namely:-

- the elasticity of supply and demand by sector (this in turn depends to a large degree, on the elasticity of supply and demand of factor inputs - see further discussion).
- the organisational nature of the sector: for industry the degree of competition-oligopoly, and for agriculture the system of tenure and scale of unit.
- the degree of import dependence by sector and, for our purposes, the degree to which any external financing of the stabilisation policy eases production.

In order to consider the effect on incomes of changes in the structure and growth of output we use the distinction already established, between the formal sector containing factor markets (primarily urban) and the informal sector consisting mainly of the self-employed (and primarily rural).

#### Formal Sector Incomes

Using the ILO classification of socio-economic groups considered earlier, we can say that the developed factor markets of this sector will primarily determine the incomes of rural labourers, urban

industrial workers, owners of large urban enterprises and foreign transnationals.

Changes in output will feed into the factor markets via the factor intensity by sector which in turn reflects the production technology available. The change in relative factor returns and quantities employed will then depend on the rate of change of supply and demand for each factor and the structure of these markets, namely,

- the elasticity of supply and demand for factors by sector. For example if the labour market is characterised by surplus labour and an institutionally determined real wage
- the presence of unemployment and under-employment
- the mobility of factors between sectors
- the segmentation of factor markets for labour<sup>24</sup> and capital. Capital markets in ldc's are frequently fragmented with windfall income accruing to those able to obtain rationed resources (Cline: 363).
- the degree of monopoly and oligopoly leading to monopoly profit distortions
- the presence of organised trade unions able to set the money wage, clearly varying from the semi-industrialised to agrarian countries
- state policy targeted to the functioning of factor markets: minimum wage laws, employment legislation, state support for the provision of fixed capital

The determination of factor returns and factor quantities employed then feeds into the functional distribution of income in nominal terms as

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<sup>24</sup>For an example of a segmented labour market see Mazumdar's (1981) study of Malaysia where the urban labour market is segmented along racial lines between Malays and Chinese. Knight (1976 : 164) argues that there may be very little mobility of capital between the modern and traditional sectors.

shown in Figure 2. The ownership of productive assets is the key to the distribution of incomes.

There are two related points. Returns to labour are significantly affected by the ability of different groups of workers to invest via education in their 'human capital'. Changes in state provision of education can therefore, in the long run, influence such remunerations.<sup>25</sup> Secondly, feeding into this distribution (although not shown in Figure 2) is the ability of different factor groups (and, implicitly, different income groups) to substitute other economic activities for those adversely affected by changes in their factor markets. For example, if wages or employment fall in the formal sector then workers may attempt to maintain their income by supplementary informal sector activities.<sup>26</sup> This will depend on the extent of their asset holdings - a question considered in the next section. Moving to the macro level, as an outcome of this process we may observe a change in the aggregate levels of factor employment. This will depend on the degree of flexibility of factor prices, and the speed of adjustment of such prices. If prices are fixed, or are slow to adjust (due to the influence of expectations) then a fall in the wage share may result in an income adjustment process<sup>27</sup> leading to a reduction in aggregate demand - hence, in Figure 2 the arrow feeding back into output by sector.

#### Informal Sector Incomes

This income source consists of activities in sectors without formal factor markets and therefore characterised by no market separation<sup>28</sup>

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<sup>25</sup>This is an obvious point at which stabilisation programmes involving changes in government spending programmes can influence returns from the labour market. This is taken up in Section III.

<sup>26</sup>For an analysis of the urban informal sector and inequality see Tokman (1983).

<sup>27</sup>This process has perhaps more relevance for a semi-industrialised economy : see Ramos (1980) and Foxley (1981).

<sup>28</sup>A conceptual separation is possible as for example in the computable general equilibrium models of Dervis et al (1982).

between the returns to labour and the returns on assets (capital and land). Thus the self-employed receive both types of return, and will comprise small and large farmers as well as those in the urban informal sector.

The distribution of assets must be the central organising concept in determining the distribution of income in these sectors.<sup>29</sup> In Figure 2 we show the distribution of assets by socio-economic group feeding into the distribution of income, via the return on those assets. The ownership of assets is itself determined inter alia by the marginal propensities to save of socio-economic groups out of the final real income they receive. Consequently savings out of current income and its investment in productive assets eventually determines future income and its distribution.

In their influential study, Chenery et al (1973) focussed on policies to change the access of low income groups to productive assets as a key element of their policy of 'redistribution with growth'. They stressed that the principal economic problem for most of the poor is a lack of access to capital with which to work (as either self-employed producers or wage labourers).<sup>30</sup> Stewart (1975 : 9) follows Chenery et al in arguing that inequality in

'...access to inputs leads to unequal distribution of productive employment possibilities, and hence to inequality in income distribution. In this way the distribution of employment opportunities and the distribution of income, and hence poverty, are associated'.

The asset-income relationship is self reinforcing. Thus Morawetz (1977: 41) comments,

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<sup>29</sup>Assets can range from directly productive assets such as land, cattle and machinery to monetary assets. Castro, Hakansson, Brokensha (1981) provide a useful survey of the different kinds of assets held by rural communities.

<sup>30</sup>See Chenery et al (1973 : 43-45). See also Leys (1975 : 4) and Stewart (1978) for analysis of political-institutional factors limiting the access of the poor to productive assets.



'...the initial distribution of assets and incomes may be a crucial determination of the trend in inequality. People who already own assets, whether physical or human capital, are in the best position to profit once growth begins. Thus, a society that begins growing with an unequal income distribution is quite likely to remain unequal or become more so, whereas one in which initial disparities are small may be able to avoid a significant increase in inequality'.

That is, in Kitchings (1977) graphic description, assets get households onto the upward 'income escalators'.<sup>31</sup>

The formation of human capital, and the return from such capital into income, is also indicated by the diagram. Human capital has been central in theories of household income distribution for developed economies.<sup>32</sup> This is further discussed in Section III where we consider the incidence of state expenditure by socio-economic group.

The close relationship between assets and income can provide a useful method for overcoming gaps in the data on income distribution for the informal sector. Where a productive asset is the key determinant of income, the distribution of the asset (or assets) may proxy the distribution of income (provided that the necessary assumptions are well specified). This approach is the most useful for the rural sector. Data on asset holdings (in particular for rural areas) tend

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<sup>31</sup>A range of empirical studies can be cited to support this view. Thus, to take just one example, consider the importance of cattle as an asset in a pastoral society. In their study of rural poverty in Botswana, Colclough and Fallon (1980) found that ownership of cattle is the key determinant of household income. The unequal distribution of cattle in turn affects income from other sources - thus for crops, non-owners have difficulty in getting their fields ploughed. The process is self-reinforcing since cattle can be reinvested in human capital via education thus raising household income. Disney (1976) in a study of income distribution for rural Ethiopia found that access to the few factors of production available was the principal determinant of income inequality, even though agriculture produced very little surplus and thus prima facie there was little room for inequalities.

<sup>32</sup>See Sahota (1978 : 11-19). Cline (1975 : 365-367) and Jolly (1975) consider the theory and its problems in relation to ldfs.

to be more readily available than data on income. Income is a more complex concept since it requires the valuation of non-market production. The problems involved in the measurement of rural income are well known - family self provisioning not expressed in monetary terms, families with multiple sources of income, intra and inter yearly variations in income. Connell and Lipton (1977: 27) argue that income is often the least useful information in village surveys unless the income concept used, its measurement and the data collection method are all clearly specified. See also Castro, Hakansson and Brokensha (1981), Elliott (1980) and Ghai and Radwan (1983).

### Real Income Distribution

Our discussion so far, both for the formal and informal sectors, has concerned itself with the nominal income distribution. We now turn to the real distribution of income, and hence to a consideration of the price indices faced by different socio-economic groups. In Figure 2 the price deflators for each group are shown as feeding into the post tax real distribution (the incidence of taxation and subsidies is considered in Section III as part of the secondary distribution).

Streeten (1978) identifies three key issues;-

- in ldc's, even more than dcs, different groups do not face the same prices for the same goods: the urban cost of living is higher than the rural and regional costs vary. Therefore, money shares may overstate inequalities or rural poverty.
- Different groups consume different goods and the same goods in different proportions. Food forms a higher proportion of total expenditure for the poor and if its price rises at a rate greater than average prices then poverty is underestimated by money income.
- With rising average standards, certain items especially important to the poor may cease to be available and be replaced by more expensive items: this affects particularly the urban poor and farmers.

Beckerman (1977) argues that further empirical work is required concerning the effects of development on the relative prices relevant to different income groups. For some countries this problem has been explicitly recognised.<sup>33</sup> Nevertheless,

'It is thus paradoxical that a phenomenon that is explicable usually in terms of real shares and that is of interest only in terms of real shares should be so frequently analysed in terms of money shares. For insofar as the relative prices of the goods entering into the spending patterns of different income groups in society vary between countries or years, the money shares may bear little relation to the real shares'.  
(Beckerman 1977: 672).

The structure of relative prices is crucial for the distribution of real income between the urban and rural sectors. Thus, for example, to take the case of increasing food prices, the real income of the urban poor will almost certainly fall, but the outcome for the rural poor is mixed - depending on the structure of the rural economy.<sup>34</sup> In cases where the bulk of the rural poor are wage labourers, or those farmers unable to produce enough for subsistence, their real income will fall. But where the rural poor are principally subsistence farmers, the rise in food prices may have little effect on rural incomes.<sup>35</sup> In so far as the structure of relative prices is likely to

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<sup>33</sup>See for instance Van Ginneken (1976 Ch 3) and Lee (1977).

<sup>34</sup>Sri Lanka provides an interesting case. For the period 1963-73, Ahluwalia et al (1979) found an increasing money income share for the bottom 60%. Lee (1977) found, however, that in real terms this share actually fell over the period since the cost of living for the lowest deciles increased at a rate greater than the rest of the population's cost of living. This was primarily due to the increasing relative price of food grains which constitute a larger proportion of the budget for the lower deciles, and thus their incomes had risen at a rate less than the prices of rice and wheat (except for those rice farmers who produced more than they needed). See also Isenmann (1980).

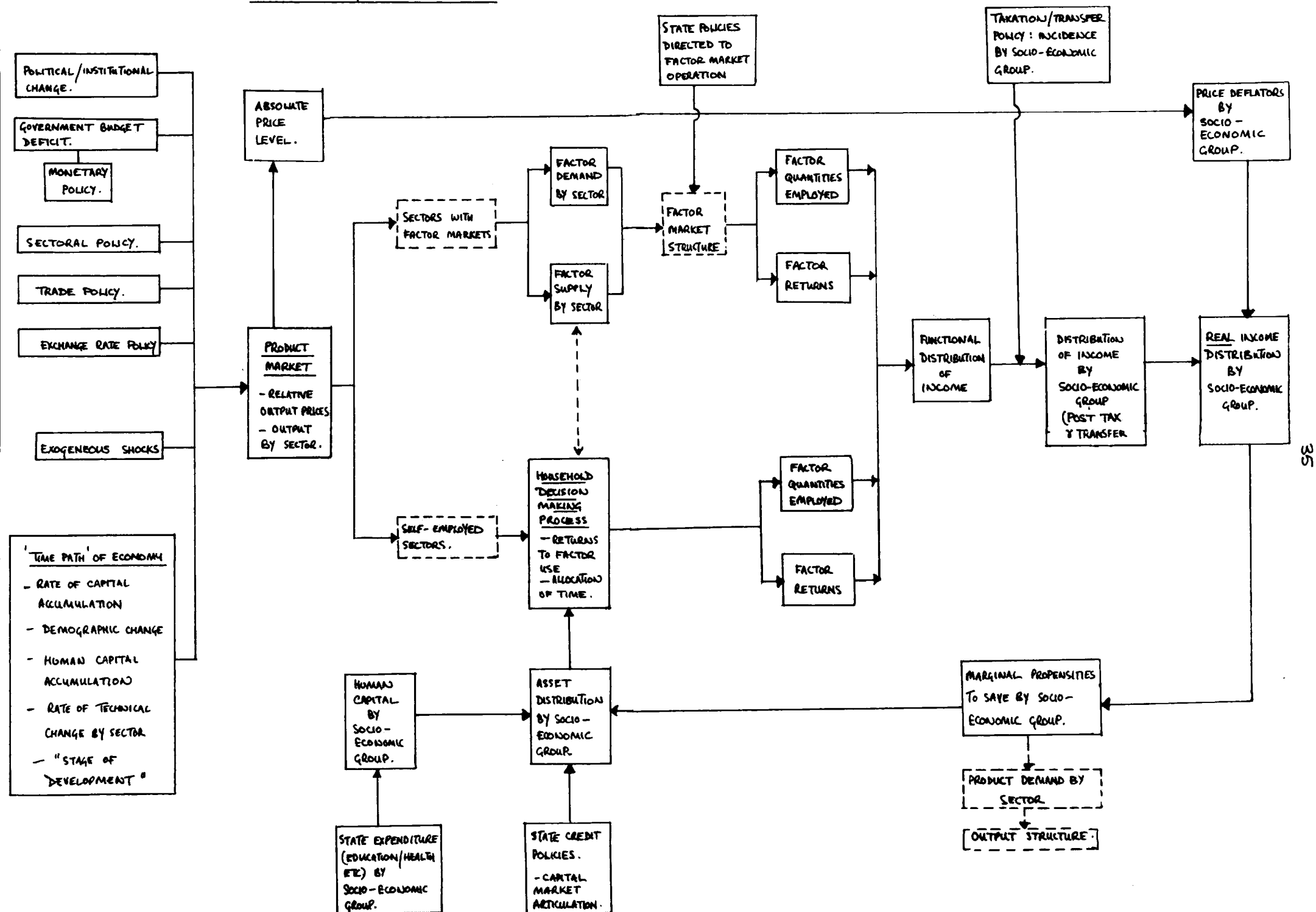
<sup>35</sup>We focus purely on the consumption basket : the rise in food prices will also have effects on the real income of cash crop farmers through the change in demand for their product. The final outcome for total money income depending on the elasticity of demand. Real wages may not fall if groups succeed in recovering their lost income.

be influenced by stabilised measures, this consideration is important.

Having established the price deflators for the post-tax income of the different groups, we have now arrived at the most relevant distribution - the real income distribution (post tax/transfer) by socio-economic group (see Figure 2). The real distribution of income rather than the nominal distribution must be the focus of analysis since first, a household's welfare is a function of the basket of goods and services it is able to obtain with its income and secondly, agents' decisions are determined largely by their income, for instance the consumption savings decision for future asset accumulation.

From the real distribution of income by socio-economic group we can map into the other distribution considered in II.2 namely the real size distribution and the real distribution by region. Correspondingly, there will be a real poverty line, with associated mappings into, for instance, rural and urban poverty groups.

FIGURE 2: ANALYTIC FRAMEWORK.



### III. THE EFFECTS OF STABILISATION ON POVERTY AND INEQUALITY

We turn now to our main objective, which is to establish what is presently understood about the distribution effects of macro-stabilisation programmes in ldc's. We define economic stabilisation as a comprehensive programme of measures designed to attain macro-economic targets, such as the maintenance of acceptable balance of payments deficits, the reduction in domestic price inflation and the full utilisation of domestic factors of production. Our principal concern in this paper is with the relationship between income distribution and policies invoked to correct balance of payments disequilibrium<sup>36</sup>. Whilst our interest is not confined to those policies supported by international agencies, the paper reflects the important role played by the IMF in most stabilisation programmes.

Thus it is of special interest that the IMF in advising recipient governments has been reluctant to involve itself in distributional questions, maintaining that equity is an issue for domestic economic policy. A recent statement by the Fund's managing director, summarises its present position <sup>37</sup>(de Larosiere, 1984):

'...the way these costs are divided within the society is not a matter for the fund to decide but a question of political choices to be made by governments themselves'.

The IMF position is entirely unconvincing for at least three reasons. First, balance of payments difficulties can originate from internal factors that are intimately connected with distributional issues. An over-expansion in domestic demand, for instance, may arise from political pressures for increasing government expenditures. If distributional considerations figure prominently in explaining the emergence of serious payments deficits, they surely cannot be ignored in the design of remedial measures.

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<sup>36</sup>For a definition of balance of payments equilibrium (and disequilibrium) see Killick (1984a : 16-18).

<sup>37</sup>De Larosiere (1984). See also Tseng (1984).

Secondly, even if external factors<sup>38</sup> (for example a deterioration in the terms of trade) are initially responsible for the payments problem, vested interest in the status quo may prevent, or at least delay the introduction of appropriate policies. The design of workable stabilisation measures must therefore take into account these political implications of distributional change.

Finally, the mechanisms through which stabilisation instruments change the balance of payments invariably entail structural adjustments, most noticeably when exchange rate and relative price changes are involved. More often than not, stabilisation requires more than a reduction in current output and consumption, but a reallocation of resources among sectors, from non-traded to traded goods activities. This will inevitably entail a redistribution of income between socio-economic groups. It follows that a policy will not succeed if those social groups who are vulnerable to potentially negative effects of a policy on their real incomes are able to successfully counteract them.<sup>39</sup> Since income distribution changes are central to the process of stabilisation, there are strong technical (as opposed to political or egalitarian) grounds for taking it into explicit account in policy formulation.

Helleiner (1983: 13) therefore comments,

'...at the level of IMF-member relations and the provision of advice on stabilization and adjustment programs, sensitivity to questions of income distribution is still absent...The allocation of adjustment burdens and income distributional issues are crucial components of any politically defensible and workable set of policies. Technically orientated IMF

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<sup>38</sup>For a detailed treatment of the question of 'internal' and 'external' causes, see Dell and Lawrence (1980) and Killick and Sharpley, in Killick (1984a) who attribute recent ldc disequilibrium to mainly external factors, and Black (1981) who ascribes a more prominent role to internal factors.

<sup>39</sup>de Melo and Robinson (1980 : 5) have observed that 'how adjustment takes place depends above all on how the various socio-economic groups will react to the perceived change in relative and absolute income'. (Our emphasis).

missions will only mislead or obfuscate if they pretend otherwise. At present, the IMF purports to be distributionally neutral but it usually is not'.<sup>40</sup>

The rationale for many stabilisation programmes is that short-term losses have to be incurred, and belts have to be tightened, in order to secure improved consumption levels in the future. The implementation of such programmes therefore often amounts to an inter-temporal reallocation of consumption.<sup>41</sup> If this is the case, then the choice of time horizon becomes critical in making judgements about the distributional effects of stabilisation. There may be a tendency for absolute poverty to increase in the short run as a consequence of reduced consumption and employment, but this may be outweighed in the longer term if stabilisation creates the conditions necessary for sustained economic growth. It does not always follow, however, that those who bear the short-run costs of adjustment will also benefit from the advantages of the consequent improved growth performance should it occur. There are two distinct, though obviously related, distributional issues involved here. The question first of who bears the immediate burden of adjustment, and second, of who is likely to benefit over the longer term. This is the essence of Foxley's (1981: 191) point,

'What is the relationship among stabilization policies, employment and the distribution of income? Obviously there is no unique answer to that question, except perhaps that stabilization efforts usually imply reductions in real income and some increase in unemployment. In the short term, the kind of stabilization

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<sup>40</sup>See also Killick et al (1984 : 242-243). In their comprehensive review of the literature Killick et al could find only one public research document on this subject by IMF staff members - see Johnson and Salop (1980).

<sup>41</sup>Knight (1976 : 213) states, 'The maintenance of a trade deficit involves an increase in net indebtedness : a redistribution of expenditure from people in the future to people in the present. The deflation implies a fall in current expenditure. Insofar as investment is cut, people in the future suffer; insofar as consumption is cut, people in the present bear the burden'.



policies chosen determines who bears the burden of the decrease in income and employment. In the long term, the distributive effects depend on the changes in asset ownership that the stabilization policies might bring about and on the nature of structural changes accompanying stabilization'.

Similar care is needed in identifying the benchmark for evaluating the effects of stabilisation. As Johnson and Salop (1980: 10) explain, It should be kept in mind that income distributions are likely to change with or without the stabilisation programmes. Indeed the unsustainability of the original disequilibrium suggests that some adjustments (whether deliberate or not) are inevitable, so that the distribution of income is certain to change. Ideally, therefore, studies should seek to compare income distribution outcomes under stabilisation programmes with the distributional outcome under alternative policies (Johnson and Salop, 1980 :10).

Stabilisation programmes usually come in packages, in which a variety of economic measures are directed at the stabilisation objective. These usually combine demand-side measures, whose objective is to reduce nominal aggregate demand or absorption (through fiscal and monetary policy), with supply-side instruments, designed to increase aggregate supply and its sectoral allocation. The latter include trade and exchange rate policies, measures to improve the operation of markets, and policies to raise long run output growth (for example, raising interest rates to increase resource mobilisation). In practice, it is difficult to disentangle demand and supply effects since policies usually influence both. But it is clear that the distributional effects will depend on the emphasis given to demand and supply oriented stabilisation instruments.<sup>42</sup> Moreover, since the package will combine several instruments, their sequencing or phasing can be crucial, particularly to the income distribution effects. The post

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<sup>42</sup>ODI research on stabilisation policies points to the disproportion ate weight given to demand restraints in IMF sponsored programmes, and the need for a 'real economy approach' (Killick 1984a).

1973 experience of Chile (Ramos, 1980) shows that 'getting prices right' is a hazardous affair unless careful attention is paid to sequencing.

In the following review of the literature, it will become apparent that there has been little research on the relationship between income distribution and stabilisation in ldc's. It is true that there is a sizeable literature on the relationship between trade and distribution.<sup>43</sup> But Killick has observed (1984a: 242),

'There must be an overwhelming presumption that stabilisation programmes will affect the distribution of income....There is nevertheless virtually no systematic evidence on the distributional impact of IMF policies - or of stabilisation in general'.

Moreover, the work that has been attempted (see for example Ahluwalia and Lysy 1981 and Johnson and Salop 1980), usually addresses only the functional distribution of income, which, as we noted in Section II is not particularly useful for ldc policy formulation. The functional distribution may be adequate for semi-industrialised countries (especially in Latin America, in which most previous work has been conducted), but for most of Asia and Africa, other distributions are required.

In order to structure our discussion, it is necessary to separate out the main policy elements that are common to most stabilisation programmes. Therefore our review begins in Section III.1 by considering exchange rate adjustment, followed in Section III.2 by discussion of fiscal and monetary policies. It should be noted that stabilisation policies may be accompanied by policies to 'liberalise' product, factor and money markets. Although policies for stabilisation and liberalisation are logically distinct (and may be applied independently of each other) they nevertheless often run concurrently.

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<sup>43</sup>The literature dates back to Ricardo (and perhaps beyond). It is interesting that Heckscher's (1919) classic paper which laid the foundation of the Heckscher-Ohlin theorem was mainly concerned with distributional effects.

The main reason for this is that some policy makers perceive market liberalisation as an essential requirement for the successful operation of their macro-economic stabilisation policies.<sup>44</sup> In addition both the multilateral agencies and most bilateral donors are supportive of liberalisation measures. Consequently, in our discussion of the main macro policy options we have also considered the liberalisation aspects where these are relevant. By contrast some stabilisation programmes may actually involve the introduction or expansion of controls on both the prices of goods and factors. Hence Section III.3 discusses the distributive consequences of programmes which use price interventions as support, and those programmes which adopt price liberalisation. Section III.4 also briefly considers trade liberalisation, but is mainly concerned with the use of trade restrictions as an alternative to macro stabilisation measures in meeting balance of payments targets.

### III.1 EXCHANGE RATE ADJUSTMENT

Adjustment of the exchange rate is frequently a key component of IMF supported stabilisation programmes, the adjustment usually taking the form of a devaluation from the existing rate.<sup>45</sup> Killick (1984: 191-195) concludes that for the period 1973-81,

'Given all the qualifications, what seems to emerge is that exchange rate adjustment can be presumed to be a policy condition in a substantial proportion of programmes, perhaps more than half of them, but that it is by no means an invariable ingredient'.

Moreover, devaluation is a subject that has generated much controversy and heated debate, and has often been a source of friction between the IMF and the recipient governments, as in the cases of Tanzania and

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<sup>44</sup>This was particularly the case for many of the stabilisation programmes undertaken in Latin America during the 1970s (see Foxley, 1983) Jamaica (post 1981) and Sri Lanka (post 1977) provide two other examples where major liberalisations have accompanied the introduction of macro stabilisation policies.

<sup>45</sup>This would suggest a degree of overvaluation in the current rate which is a 'thorny' subject not central to our present concern. But see Williamson (1983b) and Krueger (1978 : 61-63).

Jamaica (under Manley). The origins of this sensitivity stem from two broad issues: first, the effectiveness and appropriateness of devaluation in a ldc context and second, the politically destabilising effects of devaluation, the latter being often closely related to income distribution changes. Matters are complicated by a lack of a general consensus at both the theoretical and policy levels, on the effects of a devaluation, which can be attributed to 'the peculiar blend of the relative price and real income effects produced by a devaluation' (Diaz-Alejandro 1965: 1).

Whether or not devaluation improves the current account balance of payments depends on the presence of two effects: expenditure switching brought about by a change in the relative price of traded to non-traded goods, and expenditure reduction, which many observers have shown to be the direct result of a devaluation. Opinions differ as to which of these is the more important. This distinction is central to our concern, since there are undoubted implications for income distribution, which are developed below. Expenditure switching can occur only if a nominal devaluation leads to a lasting change in the real exchange rate, defined either as the nominal rate adjusted for the country's rate of inflation vis a vis the inflation rates in other trading countries, or the relative price of traded to non-traded goods.<sup>46</sup>

Whilst there is no 'conventional wisdom' to be found in the literature, our review will take as its starting point a broadly accepted theoretical account of devaluation, and its distributional impact. This will then be qualified in a review of devaluation and distribution in practice.

### Devaluation and Distribution in Theory

The importance of distribution in the theory of exchange rate adjustment has long been recognised (Diaz-Alejandro, 1965, Cooper 1971a,

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<sup>46</sup>These two definitions however, are not equivalent. See Katseli (1983) for an analysis of the theoretical and empirical differences.

1971b). More recently, Knight (1976) has provided a rigorous demonstration of the income redistributive implications of devaluation, based on the neo-classical paradigm and analagous to the Stolper-Samuelson treatment of the effects of a tariff.<sup>47</sup> We shall take his presentation as our starting point.

Consider a small-country facing given world prices for its traded good (T), and producing also a non-traded good (N), the production possibilities of which are bounded by the curve  $N'T'$  in Figure 3. With relative prices given by the price line I, and a particular level of aggregate demand, production is at point x whilst consumption is at y, thus creating a trade deficit of  $xy$ . If the price of N is inflexible, the establishment of external equilibrium at z, in which the trade deficit is removed, requires both a devaluation, shifting the price line to II, and a deflation, the latter preventing excess demand emerging for N.

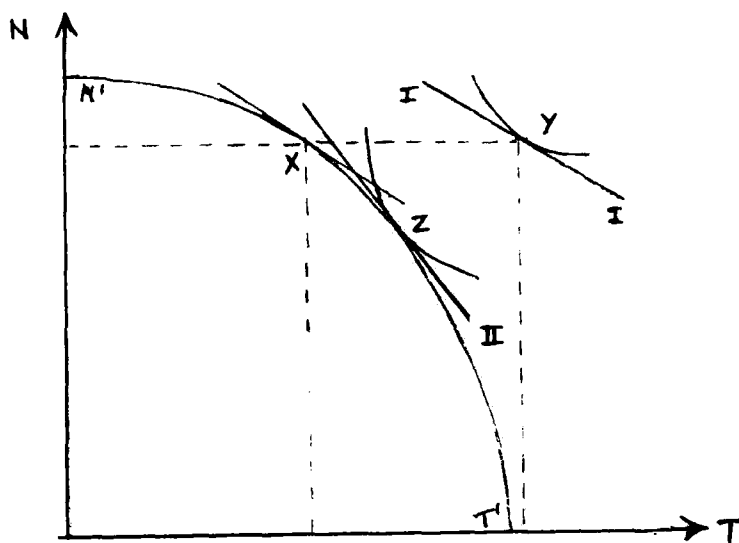


Figure 3

<sup>47</sup>The analysis by Johnson and Salop (1980) which represents one of the most important pieces of IMF work on the subject, is also based on the assumption that factor and product markets function efficiently. In contrast to Knight, however, they do not seriously question the assumptions on which this is based.

Equilibrium is restored therefore partly through a shift in resources from the non-traded to the traded sectors, and partly through a reduction in domestic absorption. Both of these will influence income distribution. Given the usual simplifying assumptions of trade theory<sup>48</sup> it can be shown that, as a result of expenditure switching:

- with no inter-sectoral factor mobility, incomes of those employed in the traded sector will rise relatively to those in the non-traded sector; how these gains are shared in the traded sector depends on factor mobility within the sector;
- given factor mobility, incomes will be redistributed to those factors that are used relatively intensively in the traded-goods sector, and away from factors used intensively in the nontraded sector; for example, if the traded-goods sector is relatively capital intensive, expenditure switching will, at existing factor prices, lead to excess demand for capital - the increased demand for capital in the expanding traded-goods sector will exceed the supply of capital yielded by contracting non-traded sector.<sup>49</sup> With aggregate capital and labour fixed, the rate of profit will rise in both sectors. By contrast, the excess supply of labour created by these sectoral shifts will induce a fall in the real wage. This is, of course, nothing but the well known Stolper-Samuelson result.
- The extent of the changes in factor payments will depend on the difference in relative factor intensities: the effect on factor prices of a devaluation will be larger the more similar are factor intensities, 'since a larger change in the factor price ratio is needed to change relative costs in proportion to the devaluation' (Knight 1976: 211).

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<sup>48</sup>They include perfect competition, well-behaved production functions, profit maximisation and no externalities.

<sup>49</sup>The aggregate capital-labour ratio thus remains constant, but the capital/labour ratio for both sectors increases. This seemingly paradoxical result is explained by Stolper-Samuelson (1941 : 68-69).

- the net effect on the distribution of real income will depend on the relative importance of traded and non-traded goods in the consumption basket of different income earners. If marginal consumption propensities differ, income redistribution will change the indifference map. This will change the final equilibrium point (and the required devaluation), depending on the relative preferences of the recipients of factor payments. Moreover, differences in average propensities to consume will directly affect real incomes via differences in cost of living indices.

In summary,

'a necessary condition for redistribution is that the relative price of traded to non-traded goods changes. In that case, devaluation will benefit those factors of production that are intensively used in the production of traded goods, and the consumers of non-traded goods' (Katseli 1983:362).

With these considerations in mind, it is obvious that whether or not devaluation leads to greater inequality and poverty depends on the specific characteristics of the ldc in question. If the production of exportables were in the hands of self-employed small-scale farmers, devaluation might improve income distribution. On the other hand, if the production of importables is capitalistic, and relatively capital intensive, the increase in profit rate would imply a deterioration in income distribution. Similarly, much will depend on the consumption propensities of different groups. If the export crop is also the staple food (as for example in the case of rice in Thailand and beef in Argentina), the real incomes of the poor are likely to fall disproportionately, since food figures prominently in their consumption basket. But if tradeable goods are mainly manufactures, and the staple food non-traded, the reverse could apply.

### Devaluation in Practice

The assumptions on which the above theoretical treatment of the effects of devaluation is based cannot, by any stretch of the imagina-

tion, be considered realistic for present-day ldc's. This section assesses the significance of some of these differences for an analysis of the distributive effects.

Of the stylised facts highlighted in Section II above, the distinction between the formal (or organised) and informal (unorganised) sectors in ldc's is perhaps the most important departure from the world of pure theory. This does not necessarily correspond to the traded/non-traded distinction, since both sectors comprise formal and informal institutional settings. Knight (1976: 219-222) presents a 'sectoral analysis' in which these institutional sectors are distinguished. With full factor mobility between all sectors, the Stolper-Samuelson result (described above) holds. But if factors are immobile between formal and informal sectors,<sup>50</sup> the theory gives no unambiguous prediction. With factors assumed mobile within institutional sectors (ie between the traded and non-traded components), returns to the factor used intensively in the traded good will increase, but this may not necessarily be the same factor in each institutional sector. It is possible that the production of traded goods is labour intensive in the informal sector and capital intensive in the formal sector, so that returns to labour will rise in the former and fall in the latter. If the formal sector is traded goods intensive, devaluation may induce labour mobility into the sector, most probably involving rural to urban migration and a process of job search. Such workers tend to take employment in the urban informal non-traded goods sector, which will depress wages there, and increase the disparity between rural and urban informal wages (see Fields 1975).

By placing the analysis on a more realistic footing, the effects of devaluation on income distribution have become far more complex than first appeared, the net effect additionally depending on the relative importance of traded goods in the institutional sectors, the differences in factor use between sectors, and the degree of factor mobility.

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<sup>50</sup>The existence of such sectors, facing different relative factor prices and, using different factor combinations, strongly suggests impediments to factor mobility - capital market 'fragmentation' and labour market segmentation.



The existence of a large informal sector, in which households make both production and consumption decisions, also raises questions about the relevance and usefulness of the functional distribution of income in ldc's, on which theoretical accounts are often based. As we showed in Section II, the functional distributional is unhelpful when there is no market separation of factor incomes. Moreover, distributions to easily identifiable socio-economic groups, especially those who are poor, are a better guide to policy. There is little in the above theoretical treatment to indicate whether poverty is likely to be aggravated as a result of devaluation, nor to guide empirical research into this question. If data permit, factoral incomes should therefore be converted into size and socio-economic group distributions, along the lines indicated in Figure 1.

Thus far our concern has been to establish the theoretical distributional impact of the expenditure switching effects of devaluation, and little attention has been paid to the effects of expenditure reduction. In so far as this is the result of restrictive fiscal and monetary policy, the net effects will depend primarily on the incidence of increased taxation and reduced government expenditure. Whilst this is discussed in detail in Section III.2 below, we should note in passing that the change in government net expenditure can offset, or enhance, the redistributive effects of changes in relative prices. But expenditure reduction can be the direct result of devaluation, which will not necessarily have the same distributional effects as deliberate fiscal and monetary restraint. Moreover if an exchange rate adjustment has had its major impact through reduced absorption, the income distribution implications of expenditure switching noted above, would be of only marginal relevance. The possibility that demand effects will dominate exchange rate adjustment in ldc's is due to their peculiar structural characteristics, which result in weak supply side responses, and strong aggregate demand effects. It is to these that we now turn.

### Supply Responses

The extent of output changes as a result of expenditure switching will depend to a large extent the response of factor prices, particularly

wages. Where organised labour predominates, it is possible that non-market responses on the part of unions to maintain real wage levels will erode the nominal devaluation and reduce the extent of expenditure switching. Khan and Knight (1982: 720) express this succinctly,

'In general...as long as the devaluation succeeds in temporarily altering the real exchange rate by raising product prices in domestic currency relative to factor incomes, one would expect it to have an initial stimulative impact on aggregate real supply... Second, since no supply-side effects would appear if all factor incomes were perfectly indexed, the stimulative effects of devaluation depend on the degree to which it reduces the real income of one or more factors of production'.  
(Our Emphasis)<sup>51</sup>

Many observers, such as Kaldor (1983), drawing largely on Latin American experience, maintain that devaluation cannot usually change critical wage-price relationships, which are the outcome of political forces. In Latin America, there is evidence to suggest that for some periods, labour is able to recover its real income. Thus, de Pablo (1977:11) argues that for Argentina, the state cannot influence the real exchange rate, except for short periods of time, but evidence from Chile in the 1970s (Ramos 1980) and more recently Brazil, indicates that this is not always the case. But much of this argument presumes the predominance of the formal, organised labour market. Where the informal sector is important, as in most low-income countries of Asia and Africa, or where unions are weak, the effects on the real wage are less well understood. It is common for urban, organised workers to be in a better position for indexing their earnings than rural smallholders, who constitute the bulk of the working population. It is possible that better organised labour in the formal sector protects its real income at the expense of rural producers by passing on the increased costs of a constant real wage through increases in the price of domestically produced goods (both traded and non-traded). But the empirical evidence on this is extremely sparse.

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<sup>51</sup>Cooper (1976b : 511-513) gives a formal derivation of this result.

Wage responses are also subject to the influences of expectations, which can lead to outcomes entirely contrary to policy objectives. There is some evidence that organised workers (especially in Latin America) form expectations of price changes, and pitch wage negotiations accordingly. These reactions can occur before factors become mobile and market forces operate, thus denying any possibility of significant expenditure switching effects (see Hanson, 1980, and Nugent and Glezakos, 1982, for evidence on the presence of short and long run Phillip's relations in Latin America). Similarly, the formation of expectations on the part of employers can lead to price changes not altogether justified by the devaluation. Ramos' (1980) account of Chilean experience in the early 1970s shows how the formation of expectations can lead to price 'overshooting', and outcomes which run counter to the predictions of equilibrium theory. The extent to which these considerations apply to the major part of the developing world (in Africa and Asia) however, is open to doubt and much more empirical investigation is needed.

Supply responses are also severely restricted in ldc's through reliance on imported intermediate inputs, the demand for which is price inelastic. In so far as firms in the traded-goods sectors import their required intermediate goods, devaluation will raise production costs, and thereby reduce the incentive for increased traded goods production. This is perhaps the most important (and the most frequently cited) limitation of exchange rate adjustment in ldc's. Intermediate imports can prevent a significant decline in the relative price of non-traded to traded goods if they figure more prominently in the costs of producing the former. Moreover, insofar as devaluation in the presence of intermediate imports leads to stagflation (see Taylor, 1983, and Islam, 1984), there are serious implications for income distribution which have little in common with the neat theoretical reasoning of the previous section.

Quite apart from the effects of wage indexation and intermediate imports, there are several reasons to expect slow output responses to devaluation in ldc's, which are perhaps most relevant in the low-income countries of Africa and Asia. The production of exportable traded

goods is often in the hands of small, peasant farmers, who may not be in a position to respond to price incentives if the gestation period required to increase output is long (as in the case of beef, tree crops etc.) In some cases, increased output would require substantial investment, to remove bottlenecks and improve technology. In others, the system of land tenure may reduce the production incentive. In summary as a method of short run stabilisation, the relative price effects of devaluation may not lead for some countries to any noticeable output shift within the policy time-frame.

Knight (1976: 217-8) suggests that in many ldc's, import substituting sectors are monopolistic, with firms facing downward sloping and kinked demand curves. It is possible that devaluation will have little direct effect on the output decisions of such firms. Moreover, indivisibilities often prevent the entry of new firms into the industry, acting to restrict the expansion of manufacturing production in response to a devaluation. Depending on the behaviour of labour suppliers, devaluation may under such circumstances simply raise monopoly profits in manufacturing traded goods, which would clearly worsen income distribution.

From the point of view of supply responses, it is unwise, if not absurd, to view the process of adjustment in ldc's as involving a smooth and costless movement along the production frontier (as depicted in Figure 3) within the time frame of economic policy. On the contrary, as Katseli (1983: 361) concludes,

'The recent emphasis on the supply side has thus shifted the focus of discussion of the implications of exchange rate adjustment from demand towards the cost of production. The shift in emphasis has prompted a serious questioning of the effectiveness of nominal exchange rate adjustment on the current account and its role in macro-economic adjustment. This theoretical questioning is still open to empirical testing, but it is fair to say that its powerful and controversial messages have not been adequately incorporated into IMF thinking'.

We might add that the implications for the income redistributive effects must also be made subject to careful empirical analysis.

### Aggregate Demand Effects

To reinforce the negative supply effects, many critics of exchange rate adjustment as a policy instrument point to the direct effects of devaluation on domestic absorption. Whilst this might facilitate an improvement in the trade balance through reducing imports, it does so at a high cost of unemployment and more rapid inflation. The direct effect of devaluation on domestic absorption arises from a number of possible mechanisms, including the following:

- reductions in real incomes resulting from higher price levels can constrain household consumption levels, leading to reduced aggregate demand through Keynesian disequilibrium quantity adjustments (Leijonhufvud 1968 and Barro and Grossman 1976). This mechanism has been found to be important in the adjustment process in Latin America (Foxley 1983) and particularly in Chile (Ramos 1980). The latter is a dramatic illustration of how severe real-wage cuts led in post 1973 Chile to the collapse of product markets.
- it is often argued that devaluation can redistribute income away from groups with higher marginal propensities to consume and towards high savers. If real wages fall and the share of profits increases, the redistribution of income will result in a fall in the level of aggregate expenditure, and a deflation via the standard Keynesian mechanism. Taylor (1978: 50-58 and 1983) and Krugman and Taylor (1978) give central importance to this mechanism, though it can be traced to the earlier work of Cooper (1971a 1971b) and Diaz-Alejandro (1965).
- a decrease in the real value of money balances would lead to a reduction in expenditure in order to restore real money balances to previous equilibrium levels. This assumes that monetary authorities maintain a fixed nominal stock of money over the period following the devaluation. This mechanism is the feature of the Polak (1957)

model, and its more recent exposition in IMF (1977). In this model, however, it does not lead to deflation because of the assumptions of perfectly flexible wages and prices and full employment.

- if the devaluation leads to a deterioration in the trade balance measured in domestic currency (albeit with an improvement in the balance in foreign currency) the increase in net imports implies an additional leakage from the circular flow and a reduction in domestic absorption (Cooper 1971a: 18 and Ahluwalia and Lysy 1981).
- the domestic costs of servicing foreign debt denominated in foreign currency would also rise as a result of devaluation, leading to increased bankruptcy in the private sector, and problems of raising the local-currency required for external servicing if the debt is official. Both would tend to be deflationary.
- devaluation induced inflation can result in fiscal drag, resulting in a decrease in net government expenditure. This, ceteris paribus, would also be deflationary

All things considered then, the effect of devaluation on income distribution is complex, and is likely to be extremely difficult to nail down empirically. There are several mechanisms involved, not necessarily working in the same direction as far as poverty and inequality are concerned, it being impossible analytically to derive unambiguous predictions. One method of assessing the impact is through simulation analysis, whereby different mechanisms are quantified in order to derive the net effect.

The most extensive empirically based simulation work on devaluation and distribution is that of de Melo and Robinson (1980) which is also reported in Dervis et al, (1982), who use a general equilibrium model to analyse the effects of alternative adjustment policies. Specifying three archetype economies, a primary product exporter, manufacturing exporter and a 'closed' economy, they trace the effects

of an external shock (an increase in the world price of imports and a fall in exports in all sectors), and highlight the importance of differences in the underlying economic structure. The heavy reliance on imported intermediate inputs in the closed economy plays a significant role in its adjustment policy, with the devaluation required to eliminate the deficit being over twice that for the open economies.

For all three economies devaluation leads to an improvement in the income share of smallholders. However, the shares of marginal agricultural labour and unorganised urban labour deteriorate in the closed (CL) and manufacturing exporter (ME) economies as the devaluation induced price increases eat into their real incomes. In the primary exporter (PE) the real income share of the agricultural sector expands, and the increase in the group's nominal income exceeds the increase in prices. The position of organised labour remains approximately the same in both the CL and PE economies, as they index their wage demands - the share of the 'capitalist' group consequently drops. However, the income share of the capitalist group increases in the ME, at the expense of organised labour.

Two other features play a significant role in the final real income distribution outcome. According to Dervis et al (1983: 452),

'Although there is much variation in shifts in price indices, which contribute to shifts in the functional distribution of earned income, relative shifts in cost of living indices among socio-economic groups are equally important in determining changes in real incomes.....The spread across groups is quite wide. The cost of living of farmers in the ME economy rises by 3 percentage points with devaluation, whereas that of capitalists falls by 9 percentage points'.

Second, whilst measured overall inequality does not change noticeably as a result of the external shock and policy correctives, the effect on poverty is significant. Again, Dervis et al (1983: 456-8) note,

'In these experiments, aggregate measures of income inequality such as the Gini coefficient hide more than they reveal. Even when the share of marginal labor falls more than 4 percentage points relative to capitalists, the Gini coefficient

never changes by more than 3 percentage points'.

'More revealing from a distributional standpoint is an analysis of the composition of poverty...Consider the ME economy: it starts out with 15.6 percent and 25.5 percent of its population of 10 million in each of the archetypes, it is easy to see that a large fraction of society can be adversely affected, even when aggregate measures of the relative distribution show little variation'.

'Although for all three economies there is an increase in the number of people in poverty as a result of the deterioration in the foreign terms of trade, the composition of poverty varies depending on the selection of adjustment mechanism. Thus, under devaluation, the proportion of farmers among those that are in poverty declines, whereas the opposite occurs under premium rationing for the PE economy'.

This underlies the point made in Section II of this paper concerning the limitations of the size distribution of income. Attempts to trace the effects of stabilisation policy on the lowest decile may mask important information on the composition of the poor.

### The Issues for Empirical Research

These simulation experiments give some empirical indication of the likely distributive implications of devaluation, but the results clearly depend on the specification of the underlying model. de Melo and Robinson (1980), for example, assume unitary elasticities of substitution between factors of production, which has fundamental significance for the model's distribution outcomes. Moreover, all three archetypes are semi-industrialised which limits their general applicability. Such exercises cannot replace careful, in-depth empirical investigations on a country by country basis, which are undoubtedly long overdue. To complete our discussion on exchange rate adjustment, we briefly bring together the key lessons for empirical research which can be drawn from the literature.



First, devaluation may not have a noticeable effect on overall inequality, as measured by the indices reviewed in Section II. It is more likely (if not certain) to have significant effects on poverty, both its extent and composition. Empirical work ought therefore to place more emphasis on specific income categories and on poverty groups.

Second, empirical work must establish whether a nominal devaluation leads to lasting changes in relative prices. Care must be taken to account for significant differences in the effective real exchange rate faced by sectors, especially if tariffs and multiple exchange rates were (or are) in operation. The 'price signals' of the market may not neatly correspond to the change in the official exchange rate.

Third, the effect of changes in relative prices on both expenditure switching and cost of living indices of various socioeconomic group must be traced. The distributive effects of output changes resulting from expenditure switching will require a careful study of the characteristics of traded and non-traded sectors, the degree of factor market organisation and the mobility of factors between sectors. Investigators ought to examine carefully the effects of changes in relative prices on the cost of living of different socio-economic groups, since this is likely to be an important mechanism by which income distribution is changed. A case which may merit special attention is the effect of devaluation on the monopoly profits earned by the favoured servicesector capitalists who, through premium rationing, possess import licences. Devaluation will reduce these profits, even if the quantitative controls remain in place. If the controls are dismantled, then these profits will be further eroded. This can be an important influence on income distribution in some developing countries (Dervis et al, 1983: 453-6).

Finally, the direct effect of devaluation on absorption will have to be assessed, the main determinant likely to be the degree of reliance on imported intermediate goods. The effect of this on distribution will not be easy to establish, but investigators should perhaps begin by assessing whether reduced absorption affects consumption or

investment expenditures. This will depend on the changes in consumption- and investment-goods prices (which in turn depends on import intensity) and on the inflow of foreign investment induced by the devaluation. Expenditure reduction is more likely to adversely affect equality and poverty if it is the result of declines in aggregate consumption.

### III.2 MONETARY AND FISCAL POLICY

Our review of exchange rate adjustment has shown that to be successful, the policy must of necessity either reduce domestic absorption or increase national output of traded goods or both. Thus much early literature on devaluation demonstrated that in normal circumstances there must be an accompanying reduction in absorption (Alexander 1952), and that both expenditure switching and expenditure reducing policies are required for internal and external balance (Swan, 1960 and Johnson 1961). Most IMF sponsored stabilisation programmes have been based on this orthodoxy, and have included important elements of demand restraint through fiscal and monetary prescriptions. Whilst there is a general presumption that expenditure reducing policies will worsen income distribution, through reductions in real incomes and labour utilisation, their income redistributive effects are probably the least empirically understood of all stabilisation measures.

The extent to which income distributions deteriorate as a result of fiscal and monetary restraint depends on three broad considerations. First, the nature of price and supply responses to macro-demand management, will determine the degree and duration of output reductions. Second the choice of policy instrument will have important implications for the resultant distributive effects. Finally monetary and fiscal policies can have a profound effect on the accumulation and distribution of assets, influencing incomes over the medium and long terms. To some extent, these parallel the mechanisms described in Figure 2, since monetary and fiscal policies affect distribution through underlying changes in the level and structure of output, through specific changes in transfer payments, and in the longer term through its effect on the distribution of assets.

It is hardly necessary to distinguish between fiscal and monetary policies in our assessment of the extent of output loss arising from demand restraint. Changes in the fiscal deficit are closely related to the supply of domestic money, since ldc governments generally rely heavily on bank credit and direct money creation to finance their deficits (Khan and Knight 1982, Sharpley in Killick 1984: 60-63, 117).

### Output Loss

The loss in output arising from a reduction in aggregate absorption depends on the presence of incentives to increase the supply of tradeables, and the subsequent supply responses. If prices are generally flexible, fiscal and monetary restraint would be sufficient for correcting a payments deficit, since it would lead to a decline in the relative price of non-traded goods. With fixed exchange rates, the price of tradeables would remain constant at world prices (given the 'small country' assumption), whilst non-traded goods' prices would fall. This reduction in the aggregate price level, along with the change in relative prices, would in time create conditions for an expansion in the output of tradeable goods. Alternatively if domestic prices are inflexible, or slow to change, the relative price between traded and non-traded goods can only be changed through an adjustment in the exchange rate, as discussed. A reliance on monetary restraint, in line with the monetary approach to the balance of payments would ultimately achieve internal and external balance, but because of the time required for this adjustment process, it may do so only at the expense of considerable output loss.

But even under an expenditure switching policy, in which relative prices are changed 'overnight', output and trade volumes take time to respond (resulting in the so-called 'J' reaction curve). The supply response to expenditure reduction and expenditure switching will vary from country to country, depending on the conditions governing the production of tradeables. In countries, for example, whose export earnings are dominated by tree crops, the degree to which output can respond to a change in relative prices is obviously limited, and would require considerable time and investment in new capacity.

The output effects of monetary/fiscal adjustment also depend critically on the process through which these changes are implemented, and how expectations concerning their future courses are formed. Several studies have extended the earlier work of Lucas (1973) and Barro (1977) to ldc's, particularly to Latin America. Most of these lend support to the thesis that money supply can be anticipated in the developing countries selected, and that unanticipated money growth has short run effects on output (Hanson, 1980, Sheehey 1984, Nugent and Glezakos 1982). In general these studies show that expectations formed either rationally or consistently are weakened when inflation rates are more variable (Lucas 1973, Sheehey 1982). More importantly from our point of view, Nugent and Glezakos (1982: 334) have shown empirically that

'the usual short-run growth enhancing argument for inflationary monetary and fiscal policies associated with conventional Phillips curve theory is unsuitable for predominantly agricultural economies'.

This raises obvious doubts about the relevance of the recent body of theory of macro-behaviour based on rational expectations, and successfully applied in the Latin American context, to the agriculturally dominated countries of South Asia and Africa.

There is mixed evidence of output loss arising from demand oriented stabilisation programmes. Harberger and Edwards (1980) marshal evidence to suggest that it was negligible in countries seeking to control inflation through monetary restraint. Khan and Knight (1981), on the other hand, found significant output and employment costs, though in a later paper (1982: 715), they add the qualification that,

'the costs are considerably smaller than those which observers discern from non-quantitative analyses of specific stabilisation programmes'.

Restriction in monetary policy may not only cause a reduction in aggregate demand, but an increase in the rate of price inflation, arising from the cost-push of increased interest rates. Taylor (1983: 193) questions the neat reasoning of monetarism in the following terms,

'One objection - put forth as often by conservative businessmen as by progressive economists - is that tight money drives up interest rates on loans to firms for working capital and investment, and thus increases costs. The normal business response would be to cut back on activity and attempt to pass increased costs through higher prices'.

The formal analysis of Buffie (1984: 319-20) makes the same point, labour being 'characterised as working capital with the result that real interest costs are a significant determination of employment'. If stagflation is the result of demand restraint, income distribution will deteriorate through both reduced labour utilisation and the adverse distributive effects of increased unanticipated inflation (Foxley 1981).

#### Fiscal and Monetary Instruments

Although, the underlying income redistributive effects of demand restraint through fiscal and monetary policy will depend on the output response to expenditure changes, in the last analysis, the effects will depend on the precise choice of policy instrument. A number of factors combine to restrict the choices available to ldc governments. The underdeveloped nature of financial institutions and markets imposes technical limitations on monetary policy, and the degree to which fiscal adjustment is feasible is often closely circumscribed. Most ldcs are too poor, and their governments too politically vulnerable, to consider increasing the tax burden as a means of reducing the public sector deficit. Neither are expenditure reductions an attractive and easy alternative, since these are invariably unpopular, and often politically destabilising (particularly, of course, expenditure cuts on social welfare programmes). This choice, however, for our purposes is critical, since it will affect the extent to which income transfers (and hence income distribution) are changed as a result of fiscal adjustment. Some have argued that fiscal incidence only marginally influences income distribution (Morawetz, 1977:

41 and Keesing, 1979: 172) mainly because income distribution is governed overridingly by the underlying structure of the economy. But insofar as we are concerned particularly with the income levels of the poor, fiscal incidence can make a significance difference. Whereas there is some evidence that fiscal policy is often regressive (Keesing 1979: 163), there are well documented instances of improvements in income distribution. For example, Jayawardena (1974) for Sri Lanka found that public goods and services raised the incomes of the poor by approximately one third, while reducing the money incomes of the richest group by an equivalent amount (Fields 1980: 195-204).<sup>52</sup>

On the expenditure side, most ldc's have a range of subsidies to prices, designed more often than not to favour the purchases of lower income groups. These policies vary in both the quantity of resources committed to them and the degree of their effectiveness. Fiscal adjustment invariably entails major expenditure cuts, and frequently this involves the reduction of such subsidies. We shall focus on one important class of subsidies - namely subsidies on the consumer price of food. A related issue is that of food transfers, and this is also discussed here for convenience. Both food subsidies and transfers form a significant component of current government expenditure in many ldc's. They are therefore an important factor entering into the determination of incomes of the urban poor and food deficit rural households. Such state expenditure is often the most important component of specific income redistribution/poverty alleviation programmes.<sup>53</sup> Thus Isenman (1980: 241) comments,

'The severe political constraints to substantial redistribution of incomes or assets by taxation or other non-revolutionary means have often been

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<sup>52</sup>See also Huang (1976) on the redistributive effects of the taxation system in Tanzania.

<sup>53</sup>Clive Bell (in Chenery et al 1974 : 64-65) discusses the classes/political alliances likely to oppose or favour the different types of redistributive policy. Food subsidies are a popular method of placating the urban poor - hence the frequent riots when such subsidies are reduced as part of adjustment packages. See also Nelson (1984).

noted. However, the constraints appear to operate less stringently when food, rather than incomes, is to be distributed, as indicated by experience with feeding programmes in a number of countries....'

The impact of food subsidies on income distribution and poverty has been extensively studied for the case of Sri Lanka. Sri Lanka's food ration and subsidy programmes have taken approximately 20% of current state expenditure on average for the 1965-1980 period (Isenman 1980: 240).<sup>54</sup> The data show that in the early 1970s these subsidies were equivalent to 14% of the income of the poorest group of households and the ration also provided 20% of their total calorie intake. Reductions in the food programme on Isenman's evidence, can be linked with increases in the mortality rate among food deficit families. In 1973 for example, a reduction in the programme due to increased prices for food imports and a reduction in the per capita ration allocation meant that many of the poor could not afford enough food for minimum nutritional standards.<sup>55</sup> If devaluation is included in a stabilisation package, it often results in significant increases in the cost of food subsidy/transfer programmes. As a result, governments are put under greater pressure to cut subsidies in order to restrain their budget deficits. In such circumstances, the poor are hardest hit - by the increase in the price of food imports, and the reduction in food subsidies and transfers.

Our discussion so far has been concerned with overall fiscal incidence, and its effect on distribution which, in terms of the entire public sector budget, is 'almost inherently unknowable'. (McLure 1977: 186). However, our interest lies not in the levels of taxation and expenditure incidence, but in changes in fiscal policy. It may be

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<sup>54</sup>See also Alailima (1978), Visaria (1981) and Lee (1977) : the latter also includes a comparison with Malaysia.

<sup>55</sup>Mortality and morbidity indices may therefore provide a guide to trends in acute poverty: in particular they may be useful as a proxy for measuring the impact of changes in food programmes on some groups especially the desperately poor. But they are unlikely to be sufficiently sensitive indicators over short periods of time.

possible to trace the effects of these on a case by case basis, although there is the practical problem of distinguishing those elements of budgetary change directed at stabilisation, and those introduced for other reasons. Moreover, fiscal adjustment within a stabilisation programme need not be as progressive or regressive as the overall tax/expenditure system. Insofar as fiscal changes (be they tax or expenditure adjustments) can be chosen selectively, their net effects on inequality and poverty is a variable within the control of government intervention.

### Asset Redistributions

Demand oriented stabilisation policies can also affect income distributions over the medium and long terms, through changes in the distribution of assets. These occur mainly because monetary restraint is often imposed in a highly 'fragmented' and poorly developed capital market, comprising an organised banking system, subject to interest rate ceilings, and an informal 'kerb' market. The latter often tends to be larger than the organised market (Tun Wai 1977). In so far as monetary restraint is feasible, it directly affects only the formal money market, and only indirectly influences the kerb market, depending on the extent of market fragmentation. This complicates the story as far as income distribution is concerned.

First, credit restriction in the organised market will affect various groups differently, depending on the system of rationing imposed under the conditions of chronic excess demand for credit in 'financially repressed' economies. By maintaining interest rates in the organised market below those prevailing abroad, the state implicitly subsidises recipients of loans. Reductions in credit will therefore erode the subsidy, affecting some groups more than others, depending on the system of rationing in force (Johnson and Salop, 1981: 11).

In many cases, credit restraint would strengthen the position of larger firms relative to their smaller counterparts, with the latter being forced to turn to kerb markets. Although not under the direct control of monetary authorities, the latter market is likely to experience rising interest rates during a period of credit restraint,



given the rise in demand for 'informal' credit. In a repressed financial system, therefore, the larger enterprises would be placed at a greater advantage, increasing bankruptcy among smaller units leading inevitably to increasing asset concentration. This line of reasoning led Foxley (1981: 215) to conclude that,

'..the persistence of financial market segmentation, together with general recessionary conditions in the economy, has two kinds of effects: (1) it sets in motion powerful process of asset concentration, and (2) it generates stagflation. Both effects have negative impact on the distribution of income'.

In the context of an adjustment policy which is heavily monetary based, one of the most interesting questions concerns the distribution between the industrial and agricultural sectors. A priori, it may be reasonable to expect that the effects on the industrial sector will be greater given its greater reliance on monetary credit, although a rural sector based on commercial plantations may also make large demands for credit from the formal banking system. A squeeze on the formal urban credit markets may have only a limited effect on the informal rural credit market again, depending on the degree of fragmentation. In addition a great deal of credit in rural areas is of a non-monetary form eg loans of seed, fertiliser etc. The period of such loans can be extended and, typically, such credit will not be included in the official measures of credit expansion targeted by the central bank. Hence smallholders may be buttressed against the effects of monetary credit restraint to a greater degree than large commercial farmers.<sup>56</sup> On the other hand, with less fragmentation, credit restraint in the formal sector may lead to increased rural interest rates, which may cause hardship for the small farmer. This issue can only be resolved by case studies.

The conclusion that asset holdings become increasingly concentrated through credit restraint rests on the assumption of a fragmented

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<sup>56</sup>An interesting discussion of this problem is provided by Raj (1977: 128) in his general discussion of the applicability of Keynesian economics to Idcs.

capital market. More often than not, however, stabilisation packages will combine credit restraint with financial reform (Sharpley in Killick 1984a: 76-80) involving the introduction of more flexible (higher) nominal interest rates and increased competition in the financial markets, the latter reducing the spread between lending and borrowing rates. In so far as this causes an equilibrating rise in supply of investible funds, by encouraging savers to use formal financial institutions, the bias of credit restraint in favour of larger enterprises would be removed, or at least reduced. A larger number of establishments would have access to 'formal' credit, available at interest rates which, though higher than those operating in the formal sector under financial repression, would be lower than those of the kerb market.

But whether or not the increase in interest rates will lead to an increase in total loanable funds is open to debate, since at least a part of the increase in formal sector loanable funds will arise from substitution away from the kerb market. Buffie (1984: 312) concludes,

'If curb loans constitute a large share of total loanable funds and are relatively good substitutes with demand deposits, the total supply of credit in the economy can contract. The limited empirical evidence available suggests that this is not an unlikely outcome...The upshot of all this is that financial liberalization is an exceedingly chancy proposition'.<sup>57</sup>

Much of the early discussion on financial reform was in terms of the implications for growth and development (McKinnon 1973 and Shaw 1973), but there are reasons to expect income distribution also to be affected and in the opinion of some (IMF, 1983), to be improved. First, financial reform would lead to the removal of various credit

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<sup>57</sup>The reduction in loanable funds arises because of the effect of the reserve ratio requirement. Hence (Buffie 1984: 313) argues that increases in interest deposit rates be linked with increased in the money stock or decreases in the marginal reserve ratio as safeguards against unexpected short-run reductions in loanable funds.

rationing policies which favour the well-established large firms and commercial agricultural enterprises, and would widen the coverage of the financial system, giving access to smaller urban enterprises and small farmers.<sup>58</sup> The availability of credit to the rural sector would appear to be of greater significance as far as income distribution is concerned. Second, financial reform would have consequences for the 'real' economy, leading to a more efficient allocation of resources. In most ldc's, the rise in interest rates would enable factor prices to reflect more accurately their relative scarcities, leading to the adoption of more labour intensive techniques. This should be expected to improve income distribution. These arguments have more relevance to the longer term. As against this there are doubts about the effects of financial reform in the short run, including contractions in the supply of loanable funds and interest cost-push inflation (Buffie, 1982 and Diaz-Alejandro, forthcoming).

There are reasons to believe that fiscal adjustment, as well as monetary policy, will influence the accumulation of assets and their distribution. Take, for example, the possibility that governments elect to reduce expenditure on education, which is frequently a vulnerable sector during fiscal restraint. Reductions in education expenditure will affect both the rate of human capital accumulation and its distribution, which is certain to have profound effects on income distribution over the long run. Similarly cuts in health expenditure can affect human capital and future earning capacity. Whilst it may be difficult to demonstrate empirically this consequence of stabilisation policy given the length of the time lag involved, there is sufficient ground to expect significant medium to long term effects on income distribution, in most countries, if health and education sectors suffer significant expenditure cuts (Bhagwati, 1973).

### III.3 WAGE AND PRICE POLICIES

The core of most stabilisation packages to attain both 'internal' and

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<sup>58</sup>Increased financial intermediation would also reduce the relative advantage of large firms, who are able to finance investment out of undistributed profits when the credit market tightens.

'external' balance consists of exchange rate adjustment combined with changes in monetary and fiscal policies. But as we have seen, responses in the labour market can counteract the objectives of policy intervention, and many stabilisation programmes therefore often include direct interventions in labour markets through incomes or (more correctly) wages policy. Similarly, programmes will usually contain policies regarding prices in goods markets. Whilst most stabilisation instruments will inevitably affect wages and prices through the various mechanisms outlined in Section II, our concern in this section is focussed on direct wage and price interventions by government.

Wage policies applied during a stabilisation programme may include limitations (or complete freezes) on salary and wage rises, alterations in labour contracts to reduce the degree of price indexation, and reductions in the coverage of minimum wage regulation.<sup>59</sup> These policies may be applied across the economy or to specific groups - for example, to those in public employment. The final outcome for nominal and real wages is not necessarily that expected by the policy makers. First, such wage policies may be circumvented by both employers and employees. The opportunities for avoiding such controls are usually greater for skilled than for unskilled workers and consequently the policy can enlarge existing income differentials between groups of workers. Second, the inflation outcome may be better or worse than expected in drawing up the wages policy. Third, there may be considerable opposition from organised labour which can prevent substantial reductions in real wages.<sup>60</sup>

Stabilisation programmes may also change the structure of labour markets. Such structural change may come either as an explicit part

<sup>59</sup>This section confines itself to the most common wage policies included in stabilisation packages. These usually involve some limitation on reduction in the real wage. However, wage indexation to the rate of inflation has accompanied a few programmes - most notably Brazil in the early 1970s. See Baer and Beckerman (1974). However, such wage policies cannot be regarded as stabilisation policies per se.

<sup>60</sup>On the Latin American experience see Foxley (1983).

of the policy package (for instance changes in employment legislation) or through agents themselves changing their demand and supply parameters as a result of the new environment. Of special interest are situations where substantially reduced real wages and high levels of unemployment prevail for long periods of time such as in Chile (during 1973-75) and Argentina (in the immediate post 1976 period). Diaz-Alejandro (1981 : 127) comments that 'the workings of formal and informal labour markets under these peculiar conditions remain unclear, but it appears that structural changes have occurred and that wage dispersion has increased'.

Wage control is frequently used to support the potential output switching effects of devaluation. In Section III.1 it was established that the response of factor prices can be critical in determining the outcome of exchange rate adjustment for the structure of production. Additionally, policies to limit wage increases in specific sectors can be used to reinforce the movement of factors between sectors in response to the incentives generated by a devaluation. For example, in ldc's where the export sector is dominated by small-holder agriculture, limitations on urban wage increases may be applied to increase the income incentive of farming relative to urban occupations. In relation to monetary and fiscal policy, public sector wage control usually has an important role in the reduction of government budget deficits and thus in assisting the attainment of monetary targets. Finally, limitations on nominal wage rises may be central to programmes targetted to an inflation whose source is primarily cost-push.

Stabilisation programmes will usually contain adjustments in the governments pricing policy at the micro level, and such pricing policies can, as noted in Section II, have strong distributive effects. In countries where state authorities set producer prices then such prices must be raised if a devaluation is to benefit producer

incomes.<sup>61</sup> If government control is exercised over consumer prices, then stabilisation will typically involve the upward adjustment of such prices to compensate for increased import costs following a devaluation. Specific consumer prices will also be raised if the programme seeks to raise real profits in important sectors. Increases in the prices of controlled consumer goods will also follow the adjustments of fiscal policy, particularly where the attainment of budget and monetary targets involves the reduction of government financed consumer subsidies. The distributive impact of such subsidies was discussed in Section III.2. However it is important to note here a further aspect of the problem. Increases in the controlled prices of consumer goods and the removal of subsidies are often regarded as having a strongly negative impact on the real incomes of the poor. This may be true in countries which can enforce the official prices. However, in those ldc's with weak administrative structures, the authorities are often unable to prevent traders circumventing such controls and establishing extensive 'parallel' markets.<sup>62</sup> If consumers have to conduct most of their purchases through parallel markets at higher than official prices, then the increases in the official consumer price may have little impact on their incomes.<sup>63</sup>

A few stabilisation programmes have involved the extension of price controls, including the freezing of price increases in exchange for wage limitations. For example, this was a feature of Argentinean

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<sup>61</sup>State marketing boards control producer prices in nearly all African countries. There has been a marked tendency in many African countries for such authorities to increase producer prices by a smaller proportion than the exchange rate adjustment, thus distributing much of the gain (in domestic currency) to the crop authority rather than to the producer of the export crop.

<sup>62</sup>For example, Killick (1973) raises serious doubts about the effectiveness of price controls in many African countries.

<sup>63</sup>In addition, consumer price controls on food usually reinforce the tendency to pay low prices for food to producers. Higher consumer food prices can thus benefit farmers. Cline (1981 : 320) in his study of stabilisation measures in Peru during the 1970s argued that higher consumer food prices benefited food producers who were mainly smallholders.

policy in the early 1970s.<sup>64</sup> However, price controls on their own cannot be regarded as a stabilization instrument since they represent an attempt to suppress inflation rather than an instrument for dealing with its cause. But they can operate to support the principal stabilisation instruments. Thus as part of a stabilisation programme they may be used to limit price expectations. High price expectations play an important role in sustaining and accelerating rapid inflation rates, as the experience of many Latin American countries with hyperinflation bears witness. However, their ability to perform this function critically depends on the capacity of the authorities to implement the controls and in any case, such controls do not remove the necessity of acting on the primary cause of inflation - whether it is due to cost push or excessive monetary expansion.

However, it is now more common for stabilisation programmes to be accompanied by a reduction in state control of consumer prices. Such price liberalisation can be pursued independently of macro-stabilisation policy, but it has nevertheless increasingly been associated with such programmes. Of particular interest are those programmes which combine price liberalisation with a wages policy - a combination which has been described as an 'asymmetrical' price policy (Foxley, 1981 : 206). If the application of price controls is effective in reducing the inflation rate below that prevailing in a free market then loosening such controls will, in itself, tend to sharply increase consumer prices.<sup>65</sup> In the short run this policy, combined with some (effective) wage control, will result in a fall in real wages and a rise in real profit rates. With output and factor employment fixed in the short run, the profit share will tend to rise, with consequent changes in the distribution of income by socio-

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<sup>64</sup>See di Tella's (1979) discussion of Argentina's policy. The economic programme initiated in 1973 involved a wage and prices freeze based on a social pact between labour, business and government which attempted to enforce a given distribution of income (di Tella, 1979 : 182).

<sup>65</sup>At the same time, any reduction in state expenditure will tend to have a deflationary effect. However, at least in the short run, prices will tend to be sticky downward (but not upward) as producers gather market information.

economic group.<sup>66</sup>

However, too sudden a liberalisation of prices can reduce both output and employment. This is particularly the case if the preliberalisation period is one of intense 'repressed' inflation. Upon decontrol of prices uncertainty will exist concerning the future course of prices. Consequently producers may attempt to reduce their risk by raising prices at a higher rate than is warranted by the underlying economic conditions. The resultant 'overshoot' in prices can reduce real wages (and real money balances) substantially below the levels programmed by the policy makers. The result is to reduce the demand for consumption goods and to swamp any expansionary effect arising from the initial increase in profit rates (see Diaz-Alejandro, 1981 : 126-127). In the next period, prices will begin to fall back as producers gather information and as a consequence of the first round reduction in demand.

The Chilean experience with price liberalisation during the 1970s demonstrates that these effects may feed through very quickly (Foxley, 1983). This emphasises the often crucial importance of sequencing the implementation of policies correctly. For theory, recent Latin American experiences show the importance of moving away from the assumption that agents possess perfect market information towards testing more realistic hypotheses concerning price expectations. For low income countries, the analysis of price behaviour in the transition from heavily controlled regimes to more liberal systems is only just beginning (see Roemer, 1984). Firmer conclusions can only be drawn from further empirical work.

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<sup>66</sup>Crucial to the effect on real income of those who enter the goods market, is the question of the degree to which their purchases actually take place at the controlled prices or at black market prices. Where substantial purchases have to be made through black markets then liberalisation of controlled prices may have little effect on real incomes. However, liberalisation may improve consumers welfare by increasing the availability of goods in official markets following the switch back to trade in official markets from parallel markets.



In summary this section has indicated that a range of government interventions in wage and price determination are possible. The most common policies are now the ones based on an asymmetry of intervention via control of wages, but with movement towards price liberalisation in product markets. A few stabilisation programmes have involved the extension of price controls. However, the latter price interventions if not combined with more fundamental monetary and fiscal policy changes, must be regarded as an extension of a policy of non-adjustment and cannot be defined as stabilisation measures per se. We shall thus concentrate our conclusions upon the more common 'asymmetrical' programme.

The first conclusion must be that the distributional impact of any price and wage intervention will depend on the capacity of the control system to meet its objectives. A body of evidence suggests that price controls have limited effectiveness in constraining price inflation in low income countries. The liberalisation of such controls may consequently have only a small distributional effect if most purchases are being conducted through parallel markets at market clearing prices. Wage controls, on the other hand, are usually more effective, at least in the short run. However, the effectiveness of any price or wage intervention is correlated with the countries' administrative capacities.

The second conclusion is that the overall impact on poverty and in equality of the pursuit of an 'asymmetrical' price intervention programme will depend on the country's stage of development. In those middle income countries with a large working class, such a programme is most likely to increase inequality in the short run, and if wage earners comprise the poorest groups, to raise poverty levels as well. In low income countries, with extensive small holder agriculture, the effects will be more complex. If price controls were effective, then the real incomes of wage earners will be reduced by a policy which limits their wage rises, but which liberalises product markets. On the other hand, their number is likely to be exceeded by those engaged in smallholder agriculture, and who will benefit from higher

prices for their output, particularly if prices in food markets are liberalised. These two concluding points then take us back to the necessity of examining in detail the income generating mechanisms outlined in Section II in any assessment of the impact of a particular stabilisation policy.

#### III.4 TRADE POLICY

In this section we will focus on the use of import restrictions (IRS) by means of quantitative controls and tariffs as a tool of balance of payments management.<sup>67</sup> Such restrictions are frequently a central component in strategies of import substituting industrialisation. However, they have now increasingly been introduced as an immediate response to balance of payments crises and often as a substitute for macro-economic stabilisation policies. IMF programmes invariably contain standard clauses obliging borrowers to hold back from introducing new, or enlarging existing trade restrictions. More extensive liberalisation of trade and payments has been included in the conditions of some programmes in the context of improving the efficiency of resource allocation but liberalisation is not a common feature of such programmes (Killick 1984 : 221). We shall first consider the possible distributional impact of imposing 'IRs' as a 'solution' to current account deficits, and secondly briefly consider the effects of moving towards the alternative of trade liberalisation. The latter may be used to support a more extensive programme using instruments of macro-stabilisation.

At the most general level, we must make the following separation of the distributional effects of IRs:

A tariff or an export tax has two types of income distribution effects. Firstly, the revenue raised represents redistribution from particular consumers to the government and

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<sup>67</sup>Import restrictions are henceforth abbreviated to 'IRs'. The discussion of this section is mainly based on : Keesing (1979), Bhagwati (1978), de Melo and Robinson (1980) and Bird in Killick (1984a).

hence indirectly to those sections of the community which benefit from extra public expenditures or from the reduction of other taxes...Secondly, the changed domestic price structure brought about by the trade taxes or other trade interventions will have redistributive effects'. (Corden 1974 : 91).

The revenue effect is important since typically for ldc's, revenues from trade taxes represent a higher proportion of total tax revenues than for developed countries. However, this effect is largely subsumed under our discussion in III.2 of fiscal policy in general and thus we confine our attentions to the second principal effect stated by Corden, beginning with tariffs.

Associated with each relative price structure is a structure of production; and thus changes in the price of traded goods relative to non-traded goods leads to an associated change in the sectoral allocation of output. The change in the structure of output leads in turn to a change in the pattern of income distribution. Thus we can look initially at the distributional effects of imposing tariffs by establishing the direction in which the sectoral composition of output will change.

A useful starting point is to examine the classic Stolper-Samuelson (1941) extension of the Hecksher-Ohlin model. This theoretical extension produced a rigorous analysis of the effect of a tariff in a general equilibrium framework. In the following we shall assume the simplest 2 good, 2 factor, 2 country version, where the factor intensities in the production of the two goods are different, and each country is relatively 'abundant' in one of the factors compared to the other country. The Hecksher-Ohlin theorem states that each country will export that good, the production of which is most intensive in the factor for which that country is relatively abundant. The Stolper-Samuelson theorem states that protection applied against an importable good benefits the factor that is relatively scarce in the economy.

Thus for an LDC which is relatively abundant in labour but in which capital is scarce (relative to say a DC) the Hecksher-Ohlin model

hypothesises that the LDC should/will export the good which is relatively labour intensive. From this the Stolper-Samuelson theorem argues as follows: Protection will increase the price of the imported good relative to the exported good. This change in the relative price structure will favour production of importables relative to exportables and (with an assumption of full factor employment) lead to a move in the factor price ratio in capital's favour. Consequently the share of the scarce factor (capital in this case) will rise relative to that of labour<sup>68</sup>.

This reasoning rests on a number of strict assumptions whose severity increases in the LDC case. These are firstly, that factors are fully employed at a positive marginal product; secondly, it is assumed that all factors are perfectly mobile across sectors; and thirdly, that marginal productivity factor pricing holds. As the discussion of Part II has indicated, all these assumptions are problematic for LDCs. In addition the predictive power of the theory is reduced when the economy is dominated by a large informal sector whose households receive incomes from several factors.

In particular note must be taken of the assumption of perfect capital mobility in LDCs and the basic point of the 'Cambridge Capital Critique' which is that most capital is sector specific in the short run and not instantly malleable into new machinery<sup>69</sup>. Thus despite all the formal theory available, a leading trade theorist commenting on the empirical findings of the major NBER study states that:

'The functional distribution of income, while it can be strongly related to foreign trade regimes in theoretical analysis...does not appear to show anything like a strong and predictable relationship in the (NBER) Project studies:'. (Bhagwati 1978 : 189)

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<sup>68</sup>The Stolper-Samuelson result is a strong one, for not only does it conclude that the scarce factor gains in the expanding sector, but that it gains in the contracting sector as well.

<sup>69</sup>Labour is more mobile, but some of it may be sector specific since the differential in human capital requirements between sectors tends to be greater in LDCs than DCs. In a model for Colombia which simulated

Bhagwati concludes that the project evidence seems to suggest that the outcome for the distribution of income may reflect the more basic underlying distribution of power and wealth. (Bhagwati 1978 : 201).<sup>70</sup>

For LDCs more relevant analysis than that from pure theory can briefly be given as follows (and here we extend the discussion to include quantitative restrictions). Firstly the imposition of tariffs to discourage imports will reinforce any tendency in the economy for inefficient import substitution. The inefficiencies in such industry are manifested in (usually) higher prices due to the monopoly position of most LDC industry without foreign competition. In these circumstances urban industrial workers, depending on their organisation, may be able to obtain higher money wages than in the pre-IR situation<sup>71</sup>. However, these gains will be made at the expense of those outside such industries - particularly for rural households.

Concerning trade restrictions based on quotas and licensing systems there is now a range of literature which analyses the substantial 'rents' available to those able to obtain such licences.<sup>72</sup> The range of profitability in holding such import licences depending on the nature of the restrictions and the structure of demand. Consequently higher prices than those prevailing in the unrationed systems are

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various trading policies from inward to outward orientation, de Melo and Robinson found that factors and socio-economic groups 'that are least mobile across sectors experience greater relative gains and losses from a given policy than the more mobile ones'. (de Melo and Robinson 1980 : 95). Mussa (1974) has developed a short run model where labour is freely mobile, and capital sector specific. The effect of a tariff is then analysed.

<sup>70</sup>One connection is that the initial distribution of power and wealth will influence the likelihood of introducing controls in first place (ie choice of policy instruments within the stabilisation programme) and, especially, the speed with which these will be reduced/abandoned.

<sup>71</sup>Such potential gains over the pre-IR period may be counteracted by trade controls encouraging greater capital intensity.

<sup>72</sup>See for instance Krueger (1974).

generated. Such economic rents can be very important - for example they have been a principal determinant of the distribution of income in Ghana. However, this must be weighed against systems which discriminate against 'luxury' consumer imports in favour of imports of essential capital goods and of basic consumer goods. Such systems may favour the poor, and have an equalising tendency on income distribution since the price of 'luxury' imports in high income baskets rises proportionately more than in low income baskets. However, such systems are often characterised by difficulties in maintaining supplies, thus generating adverse effects for consumers. But as we indicated in Section III.1, simulation evidence suggests that the rents accruing from such premium rationing systems can be quantitatively important.

De Melo and Robinson (1982), in their general equilibrium model, have examined the effects of income transfers that arise from premium rationing and have shown that premium rationing can have profound effects on income distribution. Their results indicate that 'the distribution of premia amounting to close to 10% of GDP, raises the mean income of some recipient groups by up to 25 per cent. No wonder that the choice of policy instrument is such a politically sensitive topic'. Dervis et al, 1983 : 453).

The longer term alternative to using trade restrictions as a means to resolve balance of payments difficulties, is to reduce tariffs and quotas on those goods which compete with domestic production, thus imposing competitive pressure on (usually) monopolistic industries. The consequent reduction in the price of importables relative to exportables will reinforce the pressure generated by devaluation for a movement into export-production<sup>73</sup>. Whether the economy can respond depends on the structural constraints on the economy previously considered in our discussion of devaluation. Such liberalisation of

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<sup>73</sup>On the interaction of exchange rate overvaluation and import restrictions in the important case of Mexico see Balassa (1983 : 805-806). See also Cooper (1971b) for some theoretical considerations on this interaction.

trade and its long run effects on distribution and poverty takes us into an area of longstanding controversy. In the long run, the effect of the IR reduction depends primarily on the growth potential of a pro-trade strategy as against the previous IR based strategy. The reader is referred to the relevant literature on this.<sup>74</sup>

Finally, further simulation evidence on the impact of different trade policies is provided by de Melo and Robinson (1980) in their model of Colombia. The base run is a free trade strategy of non-intervention with regard to imports and exports. This is used for comparison with a strategy directed to a tariff on manufacturing imports, and a set of strategies based on subsidies to export (both manufacturing and agricultural) production. The model looks at the policy impact over the short to medium run and does not broach the distributional effects of trade induced growth. This follows from the authors' specific inclusion of the problem of supply bottlenecks in primary exporters which do not facilitate the expansion of growth. In this static context the effect of the tariff is to marginally reduce income inequality and the level of poverty, while the strategies based on subsidies to expand export production increase income inequality and raise the total in poverty. In contrast the export subsidies strategy through the financing of the subsidy and effects on agricultural prices raises inequality (see de Melo and Robinson, 1980 : 90-94 for details).

As with most simulation models it is difficult to know whether this result is general or comes from the particular structure of the model. Much of the effect seems to come from the characteristic of Latin American economies that they have relatively high percentages of rural wage workers. This may make it difficult to generalise for Africa with self-employed farmers. If the supply bottlenecks can be overcome then the export subsidy strategies do substantially raise the rate of

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<sup>74</sup>See in particular the work of Krueger (1978), McKinnon (1979) provides a good short survey of the issues. An ODI project on long term trade and financing strategies for the 'New Nics' is currently underway - see Page (1984).

growth, and for economies such as Korea and Taiwan de Melo and Robinson support the view that export-led development has had beneficial effect on the distribution of income. However, the extent to which this is true has recently been questioned by a number of authors (eg Koo, 1984), who claim that export-led development may have caused a deterioration in income distribution in the 1970s and early 1980s.

Our discussion thus indicates that analysis of the distributional impact of import restrictions must move beyond the pure theory based on the functional distribution. Resolution of the question must depend on detailed case studies adapting the relevant literature to the specifics of the country.

#### IV. CONCLUDING OBSERVATIONS

Drawing conclusions from our literature review is no easy task, mainly because most studies are inconclusive about the distributional effects of stabilisation policy. Whilst some observers take up a firm position in maintaining that particular forms of stabilisation worsen income distribution, it is clear that this is essentially an empirical question. Moreover judgements based on Latin American experience can be quite misleading for other parts of the developing world.

The inconclusiveness of the literature can be broadly attributed to three factors. First, stabilisation policies typically affect income distribution through three basic mechanisms: changes in the level and structure of output, through income transfers and changes in the accumulation and distribution of assets. Any single policy may therefore affect distribution in a number of ways, not all working in the same direction. Second, various policy instruments which together constitute a stabilisation package can have conflicting effects, so that it may be difficult to be precise about the net effect of the programme. A weighting procedure would have to be devised, in which each policy is ascribed a weight regarding its effect. These two considerations have implication for the time period of analysis. Some policies, and some mechanisms have shorter run effects than others. Finally, there has been little empirical research into the subject,



and a general absence of rigorous statistical tests. These considerations serve to underline the pressing need for in-depth case studies, in which empirical evidence is systematically compiled.

But this will be no easy matter. Isolating the effects on income distribution of stabilisation policies, is likely to be a major research challenge. The distribution of income and the level of poverty will change in a country whether there is a stabilisation policy or not. A difficulty therefore exists in breaking down the change into those due to stabilisation policy and other causes. It may be the case that stabilisation policy initially causes sharp changes in the distribution of income, whereas the other (more structural) forces cause gradual changes over a longer period of time, thus providing a method of differentiating between them.

But there are lessons to be learned from the literature. First and foremost, analyses based on simple policy-on/policy-off time-series comparisons will be grossly inadequate, since these neither prove causation nor indicate the mechanisms through which the effects are transmitted. A minimum analytical requirement is that changes in income distribution are explained, and these explanations linked to the effects of stabilisation. The use of decomposition methods (if data permit) especially the analysis of variance, would seem appropriate, but the categories through which decompositions are performed have to be carefully tailored to account for the likely influences of stabilisation instruments. For example, if policies are likely to have a significant impact on output and its structure, sectoral decompositions may serve the purpose.

Understanding income distribution changes must be matched by an assessment of the extent to which explanatory factors are affected by stabilisation measures. This approach would give a measure (though only a measure) of confidence in attributing the changes in distribution to policy interventions. The degree of confidence would depend inter alia on the 'goodness of fit' of the decompositions, and on the empirical basis for linking stabilisation policies with distribution determinants. The latter probably represents the major problem facing

future case-study research. An alternative approach would be to link inequality and poverty to specific stabilisation measures in a 'partial' approach to the question. Without getting too involved in the determinants of overall distribution, the analyst may be able to make reliable judgements about how changes in equality/poverty can be induced by stabilisation measures.

A case exists also for the use of system-wide methods, which could simultaneously account for the influences of various policies and mechanisms, attributing the appropriate weights (in line with Figure 2 in Section II). Economy-wide models range from macro-models (Taylor 1979) to full general equilibrium models (Dervis et al, 1982). In between is the Social Accounting Matrix. The SAM has the advantage of relative simplicity, a multisectoral approach, and a thorough-going treatment of income distribution. Its weakness lies in its treatment of relative price changes. There are variants of SAM's that can accommodate this (Drud 1983), but these lose the simplicity. If system-wide methods are useful in case studies, based on short run and medium run analyses, they are essential for long run investigations. Although not as useful to policy makers, there would be some advantage in tracing the income distribution effects of stabilisation over the long term, through the identification of alternative development strategies, and their consequent future 'scenarios'<sup>75</sup>.

In most cases it will not be feasible for these system-wide techniques to explain changes throughout the entire distribution. In very few cases would the use alone of such techniques, adequately describe the determinants of distributional change. Whilst in principle it is possible to conceive of separating out the effects of stabilisation policy on income distribution through decomposition and modelling techniques, in practice it is another matter. Quite apart from the data problems in most ldc's, affecting the availability and reliability of inequality indices, there is evidence that overall income inequality

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<sup>75</sup>Modelling techniques have the advantage of permitting policy experiments of the 'counterfactual' case

is largely unaffected by stabilisation policies. There are firmer empirical grounds, therefore, for concentrating research on the links between poverty and stabilisation policies. Moreover, the literature indicates that stabilisation policies may influence the composition of the poor, which suggests that future work would benefit from studying specific socio-economic groups, and assessing how each is affected by the package of stabilisation policies. The impact of stabilisation on the poorest groups is also the most interesting and important question from a policy perspective. It is a matter of policy urgency that measures be designed to protect the most vulnerable groups against the worst effects of stabilisation programmes. Studies should trace the integration of the poorest groups into the monetary economy, and the extent to which their welfare is dependent on government services. They should also examine the 'coping mechanisms', such as intra-family transfers and migration, through which the poor themselves attempt to mitigate the worst effects of changes in their economic environment.<sup>76</sup>

There is little doubt that our subject is underresearched, and that future research efforts, especially at the country level, are likely to be highly rewarding.

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<sup>76</sup>See for example UNICEF (1984).

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