


# Trade Liberalisation and Poverty: What are the Links?

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## 1. BACKGROUND

 PENNESS and trade liberalisation have been a major component of conventional economic policy advice for the last fifteen years. There is widespread acceptance that in the long run open economies fare better in aggregate than do closed ones, and that relatively open policies contribute to long-run development. Many commentators fear, however, that in the shorter run trade liberalisation puts great stress on certain actors in the economy and that even in the longer run successful open regimes may leave some behind in poverty. Others additionally argue that being open – rather than just the process of opening up – exposes an economy to shocks that generate uncertainty, cause it to operate with higher levels of poverty than would a less open economy and undermine policy measures designed to alleviate poverty and redistribute income.

This paper attempts to take these concerns seriously; it asks how a developing country's own trade liberalisation could translate into increased poverty, and what information would be required to identify whether it will do so.<sup>1</sup> While companion papers, Winters (2000b and 2001a), describe two partial empirical exercises and address the appropriate policy response to fears of liberalisation-induced poverty, and McKay, Winters and Kedir (2000) survey empirical evidence, this paper concentrates on positive economics, presenting a conceptual framework into which to marshall and assess relevant evidence.<sup>2</sup>

If trade liberalisation and poverty were both easily measured, and if there were many historical instances in which liberalisation could be identified as the main

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<sup>1</sup> While I focus on trade liberalisation, the analysis largely generalises to cover other trade shocks such as commodity price booms and slumps and exchange rate changes.

<sup>2</sup> In addition, McCulloch, Winters and Cirera discuss practical aspects of the trade-party link, and detailed analyses of three cases (Zambia, Vietnam and Sichuan, China) are under way at the University of Sussex.

economic shock, it would be simple to derive simple empirical regularities linking the two. Unfortunately, none of these conditions is met, and so we are thrown back on fragmentary evidence on parts of the argument. The key to assembling this evidence into a coherent picture, as well as to designing policies to alleviate any ill effects, is to understand the channels through which such effects might operate. This is the main job of this paper.

I explore the static effects of trade policy on poverty via four broad groups of institutions: households, distribution channels, factor markets and government, and then consider the dynamic questions of volatility, long-term economic growth, and short-term adjustment stresses. None of the economic analysis for the individual institutions is very complex, but in each case there are both pro- and anti-poor influences. Thus when we come to put them all together, it is hardly surprising that there is no universal conclusion as to whether a particular trade liberalisation will increase or reduce poverty. While there is a strong presumption that the long-run effects on growth will benefit the poor, the detailed and immediate effects differ both between households and across countries. Simple statements about 'the poor' will, at best, lose a lot of information, while simple generalisations about all countries will just be wrong. What I do provide, however, is a checklist that policy-makers might use to guide their thoughts about whether a particular liberalisation is likely to be pro-poor.

An important aspect of any analysis of poverty is the definition and measurement of the phenomenon itself. While recognising that there are many legitimate approaches to this, I adopt here an absolute consumption metric.<sup>3</sup> This entails that poverty is held to have fallen if fewer people fall below a fixed threshold in terms of their claims (entitlements) over goods and services. The threshold is not necessarily the same for all countries, although once one has to aggregate across countries – for example, to consider global effects or effects on subsets of developing countries – it becomes difficult to make the case for differences. In choosing this definition of poverty I am not denying the importance of other aspects based, for example, on social exclusion; however, a sensible first step towards understanding the effects of trade on poverty is to focus on the simplest and most directly observable aspects of the question.

There are many reasons why people are poor, and even within broad groups there are huge differences in circumstances between individual households. Thus the effects of many shocks will differ across 'the poor', and a crucial part of any practical analysis must be to identify different interests within that group. A first step towards this is a poverty profile, including information on the consumption, production and employment activities of the poor. I do not labour the point about heterogeneity below, but in truth it is hard to over-estimate its importance.

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<sup>3</sup> Baulch (1996) offers a useful account of different poverty measures.

While poverty profiles are a necessary input to thinking about the links between trade and poverty, they should not lead one to believe that poverty is a static and unchanging state. There is, in fact, a fairly rapid turnover of families into and out of poverty, and the determinants of those transitions appear to be rather different from those turned up by studies of the static correlates of poverty (Baulch and McCulloch, 1998). This is potentially an important insight for present purposes, for if trade affects the transition probabilities it could have significant effects on the stock of 'poor', while apparently having little to do with that stock directly.

## 2. THE HOUSEHOLD

Poverty is a condition of individuals or households, so for convenience I start with a simple model of the farm household (see, for example, Singh, Squire and Strauss, 1986). This is not to be taken literally as referring only to the rural poor, although they are the majority group, but to any household which potentially makes production as well as consumption decisions. In the simplest case, household welfare is expressed as a function of the prices of all goods that the household faces and income. The latter is 'full income' comprising the value of the full complement of time at prevailing wage rates, transfers and other non-earned income (including a wide range of elements such as remittances, official transfers, transfers in kind, etc.) and profits from production decisions.

To a first-order approximation, the effect of a single price change on household welfare is proportional to its net supply position in that good expressed at current prices as a proportion of total expenditure. In practical terms, then, to predict poverty effects we need to know the price changes implied by a shock and poor households' net supply positions.

For finite price changes the household's responses influence the size of the welfare effect, but if there is full optimisation with full information, they will not reverse its sign. Responsiveness is particularly important when one considers the vulnerability aspects of poverty. Policies which reduce households' ability to cope with negative shocks could have major implications for the translation of trade shocks into actual poverty. Moreover, fear of the consequences of not being able to cope with negative shocks might induce households to rule out activities that would raise mean income significantly. Responsiveness is also important in terms of spreading shocks from one market to the next. These factors are all considered below.

Given the prevalence of small-scale agriculture among the poor, the analysis of prices is indispensable. But the poor also derive some of their income (most, in some cases) from labour and other factors of production that they own. The proportionate shock to earned income induced by a trade liberalisation depends

on the shares of factors in household income and the proportionate changes in their returns or wages.<sup>4</sup>

An important complication in developing countries is that a given type of labour may have different value to the household according to where it is employed. If different wages are given exogenously, the choice between jobs is easy – take the activity for which the net wage is highest. More interesting, however, is the (very common) case where the trade-off is between explicit wages for ‘traded’ labour and an implicit or ‘virtual’ wage for work within the household.

For example, the higher costs of monitoring non-family workers make family labour cheaper than bought-in labour, while the transportation costs entailed in reaching other employers will make outside work less attractive to the family than work at home. When the virtual wage falls between these limits, labour is not traded outside the household. If the range is very large labour is effectively non-tradable as in de Janvry, Sadoulet and Fafchamps (1991) – but by changing the prices of goods produced in the households, trade reforms could switch it between tradable and non-tradable status. Indeed, the ability to switch between activities will be an important aspect of adjusting to potentially impoverishing shocks.

A further necessary generalisation recognises that some transactions may be quantity-constrained. Most obviously, some external jobs may be available only for either  $t$  or 0 hours a day – e.g. factory work or service activities such as transportation services. If trade shocks flip workers from  $t$  to 0 hours, poverty impacts could be very great. The loss of a job is probably the most common proximate cause of households descending rapidly into poverty.<sup>5</sup>

Finally, of course, the set of factors of production and associated returns that we consider must include land and other assets. The unequal distribution of land is an important contributory factor to poverty, and while addressing it is not strictly a matter of trade policy, it does clearly affect the outcome of trade liberalisation if the latter affects the rate of return to land. If, for institutional reasons, an asset cannot be sold or hired out (as is very frequently true of land) its rate of return is endogenous.

A key extension of the approach just outlined is to recognise the importance of intra-household distribution. It is frequently argued that the costs of poverty fall disproportionately on women, children and the elderly. Two approaches seem possible: either to describe a household and add some analytics for intra-

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<sup>4</sup> Lloyd (2000) shows how price and factor effects can be combined formally to predict real income effects.

<sup>5</sup> A general observation is that major shocks to welfare are usually associated with ‘corner solutions’ such as this. Smooth quantitative adjustments between interior solutions need to be large to matter seriously, whereas at the corners small shocks can induce qualitative changes in life-style. Below I consider collapsing markets and changes in the sets of goods that are available, as well as job loss and creation.

household distribution, or to define welfare for individuals and add some analytics to describe inter-personal transfers. The former is probably the more effective route.<sup>6</sup>

The easiest approach is to assume separability between household activities generating and those distributing welfare. Thus the basic model could describe the former, while the latter would be characterised by a model of distribution. If the determinants of the distributive shares were not affected by trade policy, the welfare of each person in the household would vary in proportion to the whole in response to a trade shock. This would more or less remove gender and age from the picture and would be very convenient.

Unfortunately, however, separability is just not plausible. First, the homotheticity required by separability is unlikely to hold. As household incomes change, relative weights change (Kanbur and Haddad, 1994). Second, for this approach to be useful, intra-household transfers will be necessary to compensate individuals who, because of their non-transferable endowments (labour), bear the brunt of adverse shocks. If subsistence requirements or culture preclude this, the decision is no longer separable and the effects of specific prices or factor shocks impinge directly on individuals. For example, if female external employment increases – because, say, the wage rises or male wages fall – but women receive little compensatory help with their traditional in-home activities, female poverty could result.<sup>7</sup> Unfortunately, gender aspects are likely to be very case-specific and, worse, to be analysable only with data that are not generally available. Thus other than noting that gender and intergenerational issues must be taken seriously, and that they call for attention and flexibility in the application of the basic results, it is difficult to specify how to proceed.

### 3. PRICE CHANGES AND TRANSMISSION

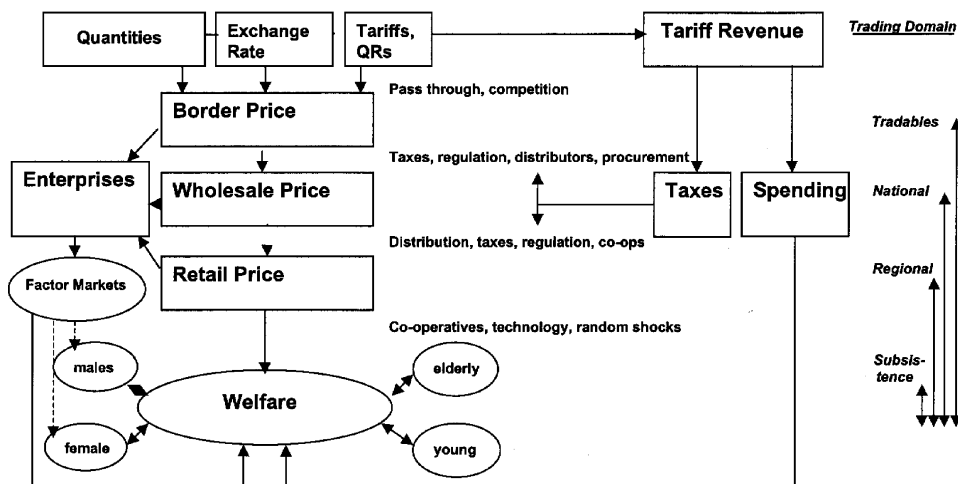
#### *a. The Direct Effects of a Price Change: The Distribution Sector*

I start by considering a change in the world price, tariff or exchange rate of a single good. Figure 1 summarises the way in which such shocks might work through to household welfare in a target country. Schematically, it comprises five columns of information. The elements concerning the distribution sector lie in the middle of the figure where I plot the transmission of price shocks from world

<sup>6</sup> The fact that the majority of data and the bulk of interventions refer to households rather than individuals suggests that policy-makers and legislators see households as the fundamental unit.

<sup>7</sup> Elson (1991) and Haddad, Hoddinott and Alderman (1994) provide useful overviews of these non-separabilities and their consequences. Fontana and Wood (2000) operationalise some of them in a CGE model.

FIGURE 1  
The Transmission of Trade Shocks



prices through to final consumers, and briefly describe the factors influencing the extent to which shocks at one stage are passed through to the next.

Consider the transmission of price shocks in pure accounting terms. For an import, the world price of a good, the tariff it faces and the exchange rate combine to define the post-tariff border price. Once inside the country, the good faces things like domestic taxes, distribution costs from the port to major distribution centres, various regulations which may add costs or control its price and the possibility of compulsory procurement by the authorities. The resulting price is termed the wholesale price. From the distribution centre the good is sent out to more local distribution points, and potentially faces more taxes and regulations. This stage may involve co-ops or other labour-managed enterprises, which may respond to shocks differently from commercial firms. I term the resulting price the retail price, although of course market institutions may well not resemble retailing in the industrial economy sense. Finally, from the retail point, goods are distributed to households and individuals. Again cooperatives may be involved, plus, of course, inputs from the household itself. More significantly, the translation of price signals into economic welfare depends on the household's endowments of time, skills, land, technology and random shocks such as weather. Anything that increases farm yields, for example, would permit a household greater welfare at any given price vector.

A corresponding taxonomy can be constructed for export goods, starting at the bottom of the column. An export good is produced, put into local marketing channels, aggregated into national supply and finally sold abroad. At each stage the institutions involved incur costs and add mark-ups, all of which enter the final

price. If the world price of the good is given, all such additions come off the farm-gate price that determines household welfare.

In determining the effects of world price or trade policy shocks on poor households it is important to have a clear picture of these transmission channels and the behaviour of the agents and institutions comprising them. For example, monopsonistic buyers of export crops will respond differently to price shocks than will producers' marketing cooperatives. Regulations that fix market prices by fiat or by compensatory stock-piling can completely block the transmission of shocks to the household level.<sup>8</sup>

Even more important, all these various links must actually exist. If a trade liberalisation itself – or, more likely, the changes in domestic marketing arrangements that accompany it – lead to the disappearance of markets, households can become isolated from the market and suffer substantial income losses. This is most obvious in the case of markets on which to sell cash crops, but can also afflict purchased inputs and credit. If official marketing boards provided credit for inputs and against future outputs, whereas post-liberalisation private agents do not, no increase in output prices will benefit farmers unless alternative borrowing arrangements can be made. The converse case is that if trade reform opens up new markets, it can have dramatically positive effects on poverty alleviation, as for example in Bangladesh with new sources of work for females (see CUTS, 1998, Ch. 5) and new supplies of farm equipment (see Gisselquist and Harun-ar-Rashid, 1998).

The importance of transmission mechanisms is well illustrated by the contrasting experience of Zambia and Zimbabwe during the 1990s (Oxfam-IDS, 1999). In Zambia, the government abolished the official purchasing monopsony of maize; the activity became dominated by two private firms which probably colluded to keep prices low and which abandoned purchasing altogether in remote areas.<sup>9</sup> In Zimbabwe, by contrast, three private buyers emerged after privatisation of cotton purchasing, including one owned by the farmers. Here the abolition of the government monopoly resulted in increased competition and prices and farm incomes rose appreciably. In a less extreme example, Glewwe and de Tray (1989) show how transport and storage costs attenuated price changes of potatoes following liberalisation in Peru.

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<sup>8</sup> Lest this seem automatically a good thing, remember that many shocks are positive and that official bodies have a tendency to take a large cut out of the price in return for providing the 'service' of insulation.

<sup>9</sup> Even if the latter was justified in the aggregate, it still left remote farmers with a huge problem. This was said to have been exacerbated by the difficulties of their re-entering subsistence agriculture, because the necessary seed stocks and practical knowledge had declined strongly during the (subsidised) cash-crop period. I have also heard, however, that in the early 1980s the state marketing system failed to serve the Northern Province effectively and that the economic saviour was illegal cross-border trade with Malawi. It is not clear when, or if, this ceased, nor whether it actually mitigated the shocks of the 1990s.

This discussion prompts three comments. First, and most obviously, the effects of a liberalisation depend on where you set off from. For example, if an import ban plus government monopoly subsidises remote farmers, the first-round effects of liberalisation will be to hurt those groups.<sup>10</sup> The analysis of the poverty impact of trade liberalisation can be no more general than is the pattern of trade restrictions across countries.

Second, usually many goods are liberalised at once, so that the effects on individual households will be the sums of many individual shocks. When some of the goods affected are inputs into the production of others, the net effect is quite complex and it is important to consider the balance of forces. For example, Zambian liberalisation raised the selling price of maize in the 1990s, but even where purchasing arrangements continued, input prices rose by more as subsidised deliveries were abolished; as a result, maize output fell (Oxfam-IDS, 1999).

### *b. Indirect Effects and the Domain of Trade*

Third, one needs to know how the household will accommodate the price changes. An adverse shock may entail large losses of utility if no alternative activities exist, or relatively small losses if they do. Similarly, positive shocks may deliver great benefits if households can switch their activities to take advantage of them.

Accommodating a shock also transmits the shock to other markets and sets off a whole series of second-round price and quantity effects. A critical consideration in assessing these is the domain over which the 'second-round' goods are traded, because this defines the range of agents whose behaviour can be called upon to equilibrate the various markets. The trading domains are summarised on the far right of Figure 1.

The price of a good that is traded internationally will be largely determined by the world price. Hence putting aside endogenous adjustment in the various margins identified above, the prices of such goods will not change further as the market equilibrates and all adjustment will be in internationally traded quantities. At the other extreme, if goods are traded only locally – say because of transportation difficulties, or local taste idiosyncrasies – the trading domain is very small and price is likely to bear part of the adjustment. The impact will be more narrowly focused geographically, but economically more significant within that domain. In between, goods that are traded nationally but not internationally will generate national second-round quantity shocks but probably rather small price changes. While small, however, the price changes will be widespread and through this mechanism shocks could be spread from one region of the target country to another.

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<sup>10</sup> Second round effects could, of course, be positive – see below.



The literature on growth linkages – e.g. Timmer (1997), Delgado et al. (1998) and Mellor and Gavian (1999) – argues that agricultural liberalisation and productivity growth are so effective at poverty alleviation because their demand spillovers are heavily concentrated on relatively employment intensive and localised activities in which the poor have a large stake – for example, construction, personal servants and simple manufactures. This literature assumes that developing country rural economies have excess labour and can deliver extra output by taking on more workers without price increases.<sup>11</sup> This, in turn, means that shocks have income multiplier effects. The basic idea, however, generalises to the present approach, in which prices as well as quantities adjust: local spillovers increase local prices and hence local incomes.

Positive shocks to the urban economy, on the other hand, result in more diffuse spillovers, including to imports. In a fix-price world, imports are just a lost opportunity for generating further employment, but in the long run, when prices adjust imports also generate spillovers: output of exports has to grow, because the imports have to be paid for. If the factors used intensively in the export sector or in domestic sectors on which urban residents spend their income are not among the poorest, the spillover from urban shocks will be less pro-poor than agricultural shocks.

Finally, there are two sets of goods for which explicit prices are not observed: first, subsistence goods. By definition these are not directly subject to trade shocks, but they will still be affected by spillovers. Second, there are goods that are just not available. While conceptually simple to deal with – the price is infinity when they are not available – changes in the available set create complex measurement problems in practice.<sup>12</sup> Romer (1994) has noted the large welfare benefits associated with changes in availability, while Booth et al. (1993) show how important they were even for the poor in Tanzania, and Gisselquist and Harun-ar-Rashid (1998) show how liberalisation greatly increased the availability of, for example, small tractors and water pumps to small farmers in Bangladesh.

In many cases, of course, trade shocks will be sufficiently specific and/or small for us to ignore second-round effects, and focus just on the direct impacts described previously, but in others the latter could be important.

#### 4. FACTOR MARKETS: WAGES, EMPLOYMENT AND PROFITS

The left-hand side of Figure 1 describes the link from trade to poverty operating via factor markets – most importantly for poverty than for less-skilled labour employed outside the household. Enterprises (loosely defined) determine

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<sup>11</sup> See Section 4*b* below for a discussion of whether such changes actually alleviate poverty.

<sup>12</sup> Feenstra (1994) has pioneered solutions to the measurement question.

output by comparing prices and costs. Costs depend on factor prices and factor input-output coefficients which, in turn, depend on technology, on factor prices and possibly on scale. Total output and the factor-mix determine total factor demand which is equated with total factor supply in the factor markets. In the process, employment and wages (and their equivalent for other factors) are determined. Implicit in this view is that the distribution of assets is given and that any non-pecuniary determinants of employment/factor use remain unchanged. Increasing asset stocks is an issue of economic growth, and perhaps public expenditure (for education and health) which I treat below. Redistributing them is a separate issue independent of trade policy.

*a. 'Trade Theory' – Fixed Factor Supplies*

Assuming that, for poverty purposes, the critical factor market is for unskilled labour, it is useful to consider two polar forms of that market. The first is that assumed by traditional international trade theory, in which factor supplies are exogenously fixed, wages are perfectly flexible and goods are homogeneous.

Price changes affect the incentives to produce particular goods and the technologies they use. The simplest and most elegant analysis of these incentives – the Stolper-Samuelson Theorem (among the most powerful and elegant pieces of economic analysis on any subject) – generates the powerful result that, under particular conditions, an increase in the price of the good that is unskilled labour-intensive in production will increase the unskilled real wage and decrease that of skilled workers.<sup>13</sup>

Following Wood (1994), imagine a world of two national factors (skilled and unskilled labour) and a third (capital), whose rate of return is fixed by virtue of being perfectly mobile internationally. As the price of the unskilled labour-intensive good rises, production of it increases, drawing factors of production away from the other, skill-intensive, sector. Since the former wishes to employ more unskilled per unit of skilled labour than the former releases (by virtue of their factor intensities), this reallocation increases the demand for and the relative wage of unskilled labour. This change causes both industries to switch to more skill-intensive production methods – i.e. to employ less unskilled labour per unit of skill – which, in turn, raises the marginal product of unskilled labour in both industries. If factors are paid their marginal products, unskilled labour receives a higher wage in terms of each good and so, *a fortiori*, has a higher real wage regardless of its consumption patterns. Similar reasoning shows why skilled labour's real wage falls.

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<sup>13</sup> The Stolper-Samuelson Theorem is described in all International Economics textbooks – see, for example, Winters (1991) or, in more detail, Bowen, Hollander and Vianne (1998). A full account appears in Deardorff and Stern (1994).

Unfortunately, for all its elegance, Stolper-Samuelson alone is not sufficient to answer questions of trade and poverty in the real world. Among the complications are:<sup>14</sup>

- *The functional distribution of income is not the same as the personal distribution of income*: household income depends also on the ownership of factors and on intra-household activity, which are both often very difficult to ascertain empirically.<sup>15</sup>
- *Dimensionality*: once one moves beyond a model with two immobile factors and two goods, the results become less definitive.
- *Mobility*: labour is required to be perfectly mobile between all sectors and regions of the economy. If labour markets are segmented, similar labourers in different markets are different factors, and will fare differently from each other.
- *Diversified equilibrium*: to guarantee the Stolper-Samuelson result the country must produce all goods before and after the price change in question. If one distinguishes goods by levels of sophistication, this is unlikely, and perverse results are possible – e.g. Davis (1996).
- *Non-traded goods*: prices are determined by the need to clear the domestic market. These price changes will tend to attenuate the rate at which tradable goods price shocks are translated into changes in the relative demands for different factors. On the other hand, if trade shocks induce changes in the real exchange rate, the relative prices of traded and non-traded goods, and if these goods have different factor intensities, a further source of factor market effects is introduced, as identified by Lal (1986) in the Philippines and, perhaps, Winters (2000b) in India.

Despite these complications, the basic insight of Stolper-Samuelson seems likely to hold very broadly. An increase in the price of a good will increase the incentive to produce it. This will raise the returns to factors of production specific to that good – e.g. labour with specific skill, specialist capital equipment – and, assuming that some increase in output is feasible, will also generally affect the returns to non-specific, or mobile, factors. Generally, the returns to at least one such factor will increase and, provided that economies of scale are not too strong, those to at least one other fall. Thus the presumption on wages remains that if the prices of unskilled-labour-intensive goods increase one would expect unskilled wages to increase.

In world terms developing countries are clearly unskilled labour-abundant, so that freer trade gravitates towards higher wages in general. However, within those

<sup>14</sup> An extended discussion is given in Winters (2000a).

<sup>15</sup> Recently, Lloyd (2000) has shown how to generalise Stolper-Samuelson to the personal distribution of income conditional on both households' endowments and their consumption patterns.

countries it is not clear that the least-skilled workers, and thus the most likely to be poor, are the most intensively used factor in the production of tradable goods. Thus while, for example, the wages of workers with completed primary education may increase with trade liberalisation, those of illiterate workers may be left behind or even fall. One of the reasons that reforming agriculture is such an important element in any future round of world trade talks is that for this sector one can be reasonably confident that very-low-skilled workers in rural areas – the majority group among the poor – will benefit through the production responses.

It is sometimes suggested – at least implicitly – that the factor intensity approach to the distributional effects of trade policy is refuted by the failure of Latin American liberalisation in the 1980s to alleviate poverty. Without denying the need for refinement in the argument, I would rather argue that the alleged surprise arose more from faulty premises than from theoretical failure. Thus, as Wood (1997) argues, by the 1980s Latin America was not obviously the unskilled-labour-abundant region of the world economy: both China's 'arrival' in world markets and Latin America's abundant natural resources suggest otherwise. Similarly the growth of outsourcing, for which Northern firms do not find it most efficient to seek the lowest-grade labour, suggests that Mexican exports are intensive in labour that is relatively skilled by local standards (Feenstra and Hanson, 1995). Finally, of course, it may take time for markets to clear. Thus Chile's liberalisations (trade and otherwise) were associated with worsening inequality over the 1980s, but inequality measures have now returned to pre-reform levels – and at vastly higher average income levels and lower poverty levels (Ferreira and Litchfield, 1999).

#### *b. 'Development Theory' – Infinitely Elastic Factor Supplies*

One exception to the rule that an increase in the demand for a factor increases its wage (real return) is if the factor is available in perfectly elastic supply. Then the wage (return) will be fixed exogenously – by what the factor can earn elsewhere, which is assumed to be unaffected by the trade shock – and the adjustment will take place in terms of employment.

First, suppose that unskilled labour is the elastically supplied factor. Most generally this will be because the formal sector can draw effectively infinite amounts of labour out of the informal sector or subsistence agriculture at the subsistence wage (Lewis, 1954). Of course, if the formal wage is no more than the subsistence wage, this transfer will have very little effect on poverty. Poverty will only be alleviated if the loss of labour in subsistence agriculture allows the workers remaining in that sector to increase their 'wage', because the sector begins to run short of labour (the case of successful development).

Probably more common will be where the formal sector has an effective minimum wage, at which there is excess supply. Then as labourers transfer to the

formal sector they earn higher wages and poverty may be alleviated.<sup>16</sup> If trade liberalisation raises the value of the marginal product of labour in the formal sector, it increases demand and alleviates poverty. (It effectively reduces the cost of the minimum wage enforcement.) If, on the other hand, it reduces the value of the marginal product, it reduces employment, and thus has adverse consequences.

One possibility is that trade could increase *measured* poverty precisely when it raises unskilled wages in the formal sector. If, following Harris and Todaro (1970), workers migrate until the (unchanged) subsistence wage equals the expected wage in the city, a rise in the actual city wage must be balanced by a higher probability of unemployment in the city. Thus although in expected value terms the trade shock would be beneficial (actually benefiting infra-marginal urban workers) and would impose no expected cost on migrants from the subsistence areas, it would lead to an increase in urban poverty and, if measurement methods were urban biased, to an apparent increase in overall poverty.

In fact, neither of the polar extremes is likely to be precisely true, and so in practical assessments of the effects of trade shocks on poverty, determining the elasticity of labour supply and locating the various pre- and post-reform wages relative to the poverty line are important. Also, if labour markets are segmented, wage impacts will be larger in affected sectors, but less widespread. Segmented markets restrict the set of people who can gain from liberalisation, and so probably hinder poverty alleviation in the long run.

International capital mobility tends to increase the effects, positive or negative, of trade liberalisation. An inflow into a sector that has gained from liberalisation is likely to boost wages and/or employment, which will increase the welfare benefits and, if they exist, the poverty alleviation benefits, of a trade liberalisation. However, outflows from losing sectors will also be larger.<sup>17</sup> Conversely, however, if a trade liberalisation would reduce the returns to capital if it were immobile, it will generate a capital outflow if it is mobile and this is likely to reduce income and so tend to be poverty-worsening.<sup>18</sup> However, if capital has been attracted into a country by distortionary policies – e.g. tariff protection and tax holidays – the inflow could have been immiserising. Then, while the outflow resultant on reforming these policies will still hurt workers in the affected sectors, the overall welfare effects taking account of impacts on other sectors will be positive – and larger than if there had been no immiserising investment to undo.

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<sup>16</sup> Depending on the measure of poverty used, the relative levels of the ‘before’ and ‘after’ wages and the poverty line, and how wages contribute to household income.

<sup>17</sup> Rama (2001), among others, suggests that foreign direct investment is good for wages.

<sup>18</sup> For policy purposes we should note, however, that this is not a cost of globalisation or internationalisation overall. Rather it represents the loss of mitigation that capital mobility brought the unliberalised economy, not a loss relative to never having had an inflow at all.

### *c. Differentiated Products*

Of course, if the target country is not a price-taker in every good, developments in the production sector will affect the prices faced by consumers and feed back into the prices column of Figure 1. This is particularly relevant for non-tradable goods and services, of which, given weak infrastructure and trading institutions, there will be many in developing countries. Their prices will be determined by the need to equate local supply and demand and by the influence on supply of endogenous changes in factor prices.

An important distinction in the analysis of the production sector is whether or not goods are homogeneous across foreign and domestic suppliers. Homogeneous goods must have the same prices, and so trade defines the prices of both internationally traded and domestic output. Trade prices essentially determine internal producer and consumer prices and analysis is straight-forward. The alternative case is that goods are differentiated, so that each variety faces its own downward-sloping demand curve, with links between goods depending on the substitutability between varieties. In this case the transmission of trade shocks to domestic prices is diffused, affecting more goods but being quantitatively smaller than with homogeneous goods. Diffusion typically attenuates the shock to factor prices, because, as more goods are affected, it is more likely that changes in factor demand will be off-setting. The degree of substitutability between domestic varieties and those traded varieties that are affected by the trade shock becomes a critical parameter in this view of the world (see Falvey, 1999): the lower it is, the less extreme the effects of a trade shock generally will be.

## 5. TAXES AND SPENDING

The right-hand set of boxes in Figure 1 illustrates the final major static link between trade and poverty: via taxes and government spending. The early stages of trade liberalisation entail converting quantitative restrictions and regulations into tariffs and reducing high tariff rates. Particularly if the latter is accompanied by a reduction in the scope of tariff exceptions and exemptions this stage is likely to increase tariff revenue, rather than reduce it (Pritchett and Sethi, 1994; and Hood, 1998). Removing exemptions could have an impact on the poor, but given that most are the result of political processes, over which the poor have arguably even less influence than they do in markets, this seems pretty unlikely.<sup>19</sup>

Eventually, however, a trade liberalisation will reduce tariff rates so far that government revenue falls. This triggers the more commonly expressed worry about liberalisation and poverty – namely that the government, finding its

<sup>19</sup> Exemptions typically create rents for the exemption holder, not lower prices for consumers.

revenue constrained, will curtail expenditure on social and other poverty-alleviating policies and/or levy new taxes on goods consumed heavily by the poor. Given the association between stabilisation, liberalisation and poverty over the 1980s, these worries have some historical basis, but it would be mistaken to assume that the association is immutable. Ultimately it is a political decision how to raise and spend money.

A further question under this heading is whether trade liberalisation restricts a government's ability to manage spending and taxation in a way that impacts poverty. To start again at the politically incorrect end of the question, a trade liberalisation bound at the WTO, or perhaps as part of a Bretton Woods package, makes the price-reducing effects of tariff cuts less reversible and constrains a government's (or its successor's) ability to manipulate policy in arbitrary ways. Given that such manipulation very often redistributes real income from the poor to the rich, and that uncertainty reduces the incentives to invest, these constraints are likely to be beneficial. Put more positively, WTO or the Bretton Woods organisation may allow governments to tie their own, or their successors', hands in ways that would otherwise be politically impossible.

Much more common is the fear that bindings and/or commitments at the WTO prevent governments from pursuing pro-poor interventions. For example, if price variability is a problem it is argued that the ban on variable levies, which stabilise the domestic prices of internationally traded goods, could hurt the poor by subjecting them to greater uncertainty. It is sometimes argued that the Uruguay Round Agreement on Subsidies precludes production subsidies that could stimulate output and development – see, for example, the positions of India and Korea during the Uruguay Round negotiations (Croome, 1995, p. 201). The Agreement does restrict production subsidies in principle, but for developing countries the disciplines are very weak. A trading partner would have to demonstrate actual harm before acting against them, which seems very unlikely for the sort of subsidies that might help to alleviate poverty. Factor, regional or consumption subsidies are not subject to WTO constraints.

All these arguments are essentially specific examples of the analysis above: they are trade interventions whose direct effects can be traced via the distribution and enterprise sectors. In addition, however, they may have systemic effects because they affect whole classes of policies. Hence, even if some subsidies would be beneficial individually, given the difficulty of identifying these cases and preventing their capture by interest groups, a blanket ban may be advantageous (Winters, 2000d).

Finally, some have argued (e.g. Rodrik, 1997) that increased openness reduces governments' abilities to raise revenue because mobile factors can no longer be taxed. In its direct form this argument applies only to factors that can move in response to tax (or other) incentives, so international trade policy is only indirectly relevant. For example, the general reduction in trade barriers since the

mid-1980s has made it easier to 'cut up the value chain', which presumably fosters capital mobility. On the trade side, increasing world competition makes it more costly for an individual country to tax exports in terms of both eroding the tax base and distorting production patterns. However, it is not clear that individual countries have ever had much scope for such taxes in manufactures, which is where trade barriers have come down most strongly in recent decades. Note, also, that in both these examples, it is more other countries' policies than the target country's that matter.

## 6. SHOCKS, RISKS AND VULNERABILITY

The static analysis compares two perfectly stable scenarios, but, in reality, the world is full of shocks. Thus an ideal analysis should try to deal directly with the effects of trade liberalisation on the *chances* of moving into or out of poverty in an uncertain world. This requires information on the way that liberalisation affects the distribution of shocks and households' ability to cope with them. It would also recognise that these factors feed back onto the static level effects just considered, making an already complex story even worse. This is an area that is very important and yet poorly researched and should clearly be a priority for future attention.

The simplest analysis of risk supposes that both foreign and domestic economies are subject to independent random shocks and that despite any trade liberalisation, the economies are not completely integrated. By increasing foreign exposure, trade liberalisation increases the weight of foreign relative to domestic shocks in the determination of domestic welfare.<sup>20</sup> Simple risk spreading suggests that at low levels of trade, further trade liberalisation would tend to reduce overall risk, but if foreign shocks are much greater than domestic ones, one could get the opposite effects.

The most obvious application of the independent risks model is if farmers produce a crop which is transformed from non-tradable to tradable status. Postponing consideration of changes in price stabilisation policies, this seems likely to reduce variability since for most goods world markets are likely to be more stable than local ones. In particular, they may prevent the largest variations in price by permitting trade in extreme conditions. If world markets are more variable than local ones, however, variance could be increased by opening up. One possibility is that, say, for favourable production conditions, the domestic

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<sup>20</sup> Foreign shocks are, of course, transmitted through the links discussed above. As above, they will pass through different amounts of the risk onto the poor according to the specifics of the case – e.g. much if a sector makes heavy use of casual labour. Thus sectors with apparently similar distributions of international shocks can have very different implications for the probability distribution of shocks facing the poor.



market is atypically stable and that opening up 'imports' price variation. A more interesting but not very realistic case is that of Newbery and Stiglitz's (1984) 'Pareto worsening trade'. Imagine a good with an elasticity of demand of one and random supply shocks: producer revenue is completely stable with price fluctuation perfectly off-setting quantity shocks. Now put two economies together and let their shocks be perfectly negatively correlated. Trade stabilises the price and destabilises revenue, so if it is the producers who are poor, the poor become more vulnerable.

A third possibility is that, because trade liberalisation alters the set of feasible policies, it affects the ability of governments to operate price stabilisation policies. For example, if prior to liberalisation domestic food prices were stabilised by varying trade policy, moving to a fixed tariff could increase instability.<sup>21</sup> Thus the Uruguay Round constraints on variable levies or on export subsidies could, in principle, increase domestic instability in certain economies even if they raise average incomes. If economies are inherently inflexible, increasing instability could increase the incidence of poverty.

Another possibility, however – observed quite frequently – is that liberalisation leads farmers to switch from crop  $x$  (subsistence food, say) to crop  $y$  (cash crop). Their risk then switches from  $\text{var}(x)$  to  $\text{var}(y)$ , and thus could obviously increase. However, if this switch is made knowingly and has no external effects, it is not clear that it is welfare worsening, even if the variance increases. Thus, just as with the Harris-Todaro example above, higher expected welfare might be correlated with increasing observed poverty if farmers accept higher variance in order to reap higher mean rewards and periodically get unfortunate drawings from the distribution.

Of course, the switch from subsistence to cash crops may not be made knowingly (governments do not always convey information on risk accurately) and there may be serious implications for intra-household income distributions. If, for example, adult males receive the returns from cash crops but females and children bear the risks of failure in terms of nutrition or schooling, the decision to switch may not be optimal for the household overall. The important point, however, is that not every *ex post* descent into poverty is the result of an *ex ante* flawed response to trade liberalisation.

An alternative lens on the previous paragraph is the observation that the poor can often not afford the risks of being entrepreneurial (Morduch, 1994). Their inability to bear the downside risks entailed in producing cash crops (because, say, a price fall would push them below subsistence) might explain the unwillingness to pursue higher mean returns created by trade. If so, the poor may

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<sup>21</sup> Note, however, that such insulating policies increase the variability of world prices. If all countries eschewed them at once net variability could decline even though insulation had been removed.

suffer the costs of a reform (e.g. higher food prices) without reaping the expected rewards. The policy implication of this is to examine the effectiveness of capital markets (which is where the market failure exists) and safety nets as a means to spreading the benefits of liberalisation.

Turning briefly to country-level data, there is a presumption that more open economies suffer more heavily from terms of trade shocks; e.g. Rodrik (1998). This question has at least two elements. First, if openness encourages specialisation one would expect the net barter terms of trade (NBTT – the ratio of import to export prices) to become more volatile with openness. In fact, this appears not to happen – see Lutz and Singer (1994), and also Easterly and Kraay (2000), who find very small countries have no worse volatility than larger ones. Second, a given volatility in the NBTT implies a greater volatility in national income the more open the economy, which one expects to increase, *ceteris paribus*, with trade liberalisation (and also as size falls). This second element does receive empirical support (Rodrik, 1998; and Easterly and Kraay, 2000). A possible third element is whether open economies generate larger or smaller domestic shocks, which could go either way. Krueger (1990), for example, argues that openness encourages better policy positions all round and receives some empirical support from Romer (1993) on inflation and Ades and di Tella (1997 and 1999) on corruption. Rodrik suggests that open economies have greater income volatility overall, which suggests that the second element predominates, but, of course, this does not necessarily mean greater consumption volatility. Thus, overall, trade liberalisation has ambiguous implications for macro stability.

## 7. ECONOMIC GROWTH AND TECHNOLOGY

Economic growth is the key to permanent poverty alleviation. Unless growth seriously worsens income distribution, the numbers in poverty measured in any absolute way will fall as average incomes increase. This observation makes it tempting to think about the effects of trade liberalisation on poverty as the product of a growth effect and an inequality effect. I discuss the former in this section, but argue that the latter is not a useful component of poverty analysis. Poverty and inequality are different phenomena, with poverty referring only to the lower end of the income distribution. Any simple parameterisation of inequality runs the risk of implying worsening poverty merely because the income distribution has worsened in its upper regions. If one is to focus on the lower end alone, one needs to analyse prices and incomes in the sort of way described in this paper. In short, one should derive one's view of the lower end of income inequality from poverty analysis, not vice versa.

Ultimately the question of whether growth does actually assist poverty alleviation is an empirical one. Recent evidence suggests that *on average* the

incomes of the poor grow proportionately to the overall average (e.g. Romer and Gugerty, 1997; Gallup, Radelet and Warner, 1998; Dollar and Kraay, 2001; and White and Anderson, 2001). There are clearly particular cases where this is not so, and it is worth trying to find out why, but there has been no challenge to the general result that the poor gain significantly from growth. In fact, attempts to see if openness was one of the factors leading to unsatisfactory outcomes have suggested otherwise – White and Anderson and the later versions of Lundberg and Squire (2000).

By the same token, the effects of trade liberalisation on growth is an empirical rather than a conceptual matter.<sup>22</sup> There is plenty of theory to suggest a positive link, based on factors such as technology flows, the prices of capital goods, and access to specialist tools and inputs, and, indeed, most economists believe that the link is positive. The evidence, however, is not unchallenged.

The most commonly cited cross-country studies (e.g. Dollar, 1992; Sachs and Warner, 1995; and Edwards, 1998), received rough treatment recently from Rodriguez and Rodrik (2001) on the grounds that their measures of openness were flawed and/or endogenous.<sup>23</sup> They include open trade (the *result* of trade liberalisation) as only one of several indicators of openness and one which generally seems to weigh rather lightly in the overall result (e.g. Harrison, 1996). In part, I suspect, the weakness of the empirical link between liberal trade and growth reflects the difficulties of measuring trade stances once one comes inside the boundary of near autarchy: for example, tariffs need to be aggregated, QRs assessed and aggregated, the degree of credibility and negotiability of trade barriers represented, and the level of enforcement measured (see Winters, 2000d). A second difficulty is that, to be fully effective, trade liberalisation needs to be part of a package of measures promoting greater use of the market, more stable and less arbitrary policy intervention, stronger competition and macroeconomic stability. With the exception of the last, openness is probably essential to the long-run achievement of these stances, and it probably helps with the last as well (Krueger, 1990). Isolating such joint effects is very complex, although Taylor (1998) and Wacziarg (2001) have made some progress.

Overall, the fairest assessment is that trade liberalisation alone has not been incontrovertibly linked to subsequent economic growth, but that the general tendency of the evidence – cross-section and case study – is strongly in that direction.<sup>24</sup> Even Rodriguez and Rodrik concede that liberalisation has certainly not been identified as a hindrance to growth. Thus one would need strong

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<sup>22</sup> It is dealt with more fully in McKay, Winters and Kedir (2000) and in Winters (2001b).

<sup>23</sup> Srinivasan and Bhagwati (2000) chide the profession for being too concerned about Rodriguez and Rodrik's critique of the cross-section studies. The latter were not, they argue, the basis on which wise economists believed that liberalisation stimulated growth.

<sup>24</sup> Jones (2001) shows that even Rodriguez and Rodrik's data tend towards positive effects.

evidence to conclude that any particular liberalisation would not eventually boost income and alleviate poverty.

The link from openness to growth operates at least partly via technical progress, for example by making new inputs, new technologies, or new management techniques available to local producers. Such flows could arise from trade – either imports or exports – or from direct flows of technology from abroad.

The evidence that access to imports enhances performance is quite strong (Esfahani, 1991; and Feenstra et al., 1997), while that which postulates a link from exporting to technology is, surprisingly to some, weaker. While macro studies and case-studies have suggested an export link, detailed and formal work based on enterprise data is doubtful: Bigsten et al. (2000) find links for Africa, while Kraay (1998) is ambiguous for China and Tybout and Westbrook (1995) find nothing for Latin America.<sup>25</sup> Similarly it is quite difficult to prove that FDI boosts efficiency (e.g. Haddad and Harrison, 1993). In both cases the problem is one of causation: efficiency and exporting are linked because efficient firms export, FDI and efficiency because investors choose efficient firms and sectors.

Of course technological flows need not depend just on trade or technology policies in a WTO-sense; they may arise autonomously or through direct interventions in research and development in favour of developing countries. An example of the latter is the green revolution, which developed and disseminated high-yield varieties of grain to many parts of the developing world. While most commentators hold the green revolution to have been a significant step forward in poverty alleviation, the mechanisms identified are quite varied. For example, farmers have benefited where markets have been open (because prices are largely fixed), while net buyers of food have gained where policy has meant that agricultural output has to be domestically absorbed rather than exported (Binswanger and Quizon, 1986). Non-farmers have also sometimes been major beneficiaries via increased demand for locally produced inputs or consumption goods (Moseley, 1999) or where demand for local services has increased (Mellor and Gavian, 1999). Whatever the route, effective access to improved seeds and other food technologies is likely to have major effects on poverty.<sup>26</sup>

The fear is often expressed that technological advance hurts the poor by reducing the demand for unskilled labour. This may be true of general technical progress that is biased against unskilled labour, although why any trade-related technical progress should be so is unclear. Such effects might appear to apply,

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<sup>25</sup> Tybout (2000) suggests that this may be because the last was able to identify the temporal links between productivity and exporting more accurately than the others. Bigsten et al., on the other hand, suggest the result is substantive and that small poor countries can gain advantages from trade that larger economies can generate for themselves.

<sup>26</sup> IFAD (2001) makes a passionate case that technology is key to solving rural poverty.

however, if liberalisation reduces capital goods prices and leads to substitution against labour (e.g. Robbins and Gindling, 1999).

When technical advance differs across sectors its sectoral composition is as important as its bias. Increases in the efficiency in a sector will increase demand for the good concerned (strongly in open economies) and thus, generally, for the factors that produce it. Factors specific to that sector will benefit, as will mobile factors that are used intensively in the sector (as in Section 4 above).<sup>27</sup> Thus progress in unskilled labour-intensive sectors will probably aid the poor, at least immediately, even if it is biased against unskilled labour use.

Growth does not appear explicitly in the analytical framework of Figure 1, but it is present throughout and vital. Growth will affect relative prices as well as the incomes generated for households by the production sector both in terms of their average level and the number of people working in that sector. By generating greater demand, growth will raise household sales and assist government in raising revenue and spending. To the extent that it is based on technological improvements, growth will increase the output that farm households generate at any given price level and to the extent that it is due to accumulation incomes will rise accordingly. While it may be difficult to identify the effects of trade liberalisation on economic growth directly, they lie at the heart of both the policy and the positive debates on trade and poverty.

## 8. SHORT-TERM ADJUSTMENT

Trade liberalisation is generally held to have long-run benefits, but it requires adjustment in a country's output bundle to achieve them. If adjustment is costly this could lead to periods of decline and/or poverty before things get better.

For assessments of the overall economic benefits of liberalisation, it is important to distinguish between the social costs of adjustment – net losses to society, through, for example, higher unemployment – and private costs that are counterparts to private gains elsewhere – for example, a cut in wages due solely to the loss of a subsidy. For present purposes, however, the distinction is less significant. Our question is just whether individuals or households slip temporarily into poverty as an economy adjusts to more open trade.

The most significant adjustment problem lies in the market for less-skilled labour, especially employment, and so I concentrate on that. There are two separate questions: how long do spells of unemployment/under-employment last and who suffers them?

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<sup>27</sup> This argument is spelt out in Haskel and Slaughter (1998) but dates back to Findlay and Grubert (1959).

*a. How Long Does Unemployment Last?*

The key to answering this question lies in the speed of labour turnover and the flexibility of factor markets. Unfortunately, there is apparently very little research directly on labour turnover in developing countries (Matusz and Tarr, 1999). These authors suggest that, in industrial countries where liberalisation more frequently means the contraction of a sector, not its demise, it is surprisingly rapid in most circumstances. If so, unemployment of displaced workers will be relatively short-lived. In some cases workers displaced from low-paid jobs not only found new jobs quickly, but at higher wages (Jacobson, 1978). In developing countries such benign effects are also a realistic possibility, although the evidence is based on aggregate employment data rather than surveys of workers. For example, Mauritius has successfully combined trade liberalisation with poverty reduction (see, for example, Milner and Wright, 1998, who identify increasing unskilled and female wages as exports boomed). Panama is another case: a strong liberalisation of trade in 1996/97 and of domestic regulations in previous years preceded a decrease in unemployment (16.2 to 13.2 per cent in one year) and a reduction in poverty as informal sector wages rose and poor workers entered formal employment (World Bank, 1999). Harrison and Revenga (1998) find manufacturing employment increasing almost immediately after half the liberalisations they study; the other half are mostly transitional economies in which much more than trade liberalisation was happening and in which the general retrenchment created a very unfavourable environment for trade-displaced workers.

Not all is so rosy, however, even in 'regular' (i.e. non-transition) liberalisations. Workers may suffer long-lived and deep losses of income if they have previously enjoyed very high levels of protection or if they had built up strong firm-specific human capital. For example, Jacobson et al. (1993a and 1993b) find that the US workers laid off after long job tenure earned 25 per cent below their pre-dismissal wages after five years. Rama and MacIsaac (1999) find that employees displaced from the Ecuadorian Central Bank in 1994 had regained on average only 55 per cent of their pre-dismissal salaries after 15 months despite generally low unemployment levels. Mills and Sahn (1995) found that of Guinean public sector workers laid off over 1985–88, half of those who found new jobs increased their earnings. However, their average unemployment duration exceeded two years and fully 30 per cent of them were still unemployed by 1992.

It seems likely that transitional losses will be greater the more protected the sector was originally and the greater the shock. In particular, labour markets suffering very large shocks can become dysfunctional because even normal turnover ceases as incumbents dare not resign for fear of not finding a new job. Thus major reforms – e.g. transition – or concentrated reforms – e.g. closing the only

plant in a town – do seem more likely to generate transitional losses through unemployment than more diffuse reforms. On the other hand, it is precisely the sectors with highest protection or the economies with most widespread distortion that offer the greatest long-run returns to reform.

*b. Transitional Unemployment and Poverty*

Transitional unemployment (or a declining reward for skills) is unfortunate for anyone who suffers it, but it does not necessarily lead to poverty. Individuals who have lived beyond the reach of poverty for some time will generally have assets, or access to credit, with which to smooth consumption.<sup>28</sup> Thus for such individuals it is only longer-lived shocks that fall within the remit of this paper. The poor, on the other hand, will have very few assets, and so will be unable to smooth over even short spells of unemployment. Hence, even switching from one unskilled informal sector job to another could cause severe hardship, especially if temporary stress led to permanent or semi-permanent consequences, such as losing one's place in the queue for rented housing or education services.<sup>29</sup> This suggests that attention to transitional unemployment should mainly be focused on those who were poor or near-poor initially. This is not always the case in practice, however, for the middle class will typically be more articulate and more influential politically than the poor.

## 9. TRADE LIBERALISATION AND POVERTY: A CHECKLIST

The link between trade policy and poverty is evidently very complex and case-specific. The framework developed here defies further summary, but it does suggest a series of key questions that might help to explore a trade liberalisation's effects on poverty.<sup>30</sup>

*Will the effects of changed border prices be passed through to the rest of the economy?*

Trade policy and shocks operate primarily via prices. If price changes are not transmitted the most direct effects on poverty (positive or negative) will be nullified.

<sup>28</sup> In case it seems callous to suggest consuming assets, recall that most precipitous declines in income result from losing public support – i.e. from being unable to continue to live comfortably on the proceeds of distortions or transfers that others finance.

<sup>29</sup> Lokshin and Ravallion (2000) find that the effects on the poor of shocks in Hungary are long but not infinitely lived.

<sup>30</sup> Winters, McCulloch and McKay (2002) organises empirical evidence under the questions defined here.

*Is reform likely to destroy effective markets or create them?*

A shock that undermines an important market could well cause poverty, while one that introduces new employment opportunities, goods or services to the poor can greatly enhance their welfare.

*Is reform likely to affect different household members differently?*

Within a household, claims and endowments are typically unevenly distributed. Hence particular members – usually females and children – may lose personally even when the household in aggregate gains. Conversely some reforms directly boost female earnings.

*Will its spillovers be concentrated on areas/activities of relevance to the poor?*

Adjustment to a shock results in it being transmitted from one market to another. Frequently the diffusion will be so broad that it has little effect on any particular locality or sector, but sometimes – e.g. where services are traded only very locally – the transmission is narrow but deep. Then it is necessary to ask whether the second-round effects have serious poverty implications.

*What factors are used intensively in the most affected sectors and what is their elasticity of supply?*

Changes in the prices of goods affect factor rewards according to factor intensities, but if factor supplies show some elasticity, employment will be affected as well as wages. Poverty effects depend heavily on where the various wages lie relative to poverty lines. Moreover, falling unskilled wages generate poverty only to the extent that poor households depend disproportionately on such wages.

*Will the reform **actually** affect government revenue strongly?*

In the limit cutting tariffs will reduce government revenue – zero tariffs entail zero revenue – but many trade reforms actually have positive revenue effects. Even where revenue falls, it is not inevitable that compensating tax increases or expenditure cuts will impinge on the poor disproportionately. That, ultimately, is a political decision.

*Will reform expose the poor to greater risk?*

Foreign markets may or may not be more variable than domestic ones; even if they are, risk spreading can reduce overall risk as the economy opens.

*Does the reform depend upon or affect the ability of poor people to take risks?*

For the very poor the consequences of even small negative shocks are very serious. Hence they might be unwilling to seize risky income-raising opportunities and so reap only the negative elements of a reform package.



Similarly, if a reform makes it more difficult for the poor to continue their traditional insulation strategies, it may increase their vulnerability to poverty even if it increases mean incomes.

*Will the reform stimulate growth? Will the growth be particularly unequalising?*

Economic growth is the key to sustained poverty reduction and trade liberalisation generally appears to foster growth. Thus it will normally have strong long-run poverty alleviation effects.

*Will transitional unemployment be concentrated on the poor? Will it be deep or long-lived?*

Almost by definition the poor, have few assets, so even relatively short periods of transition could induce descent into deep poverty. Adjustment will typically be harsher if the trade reform is associated with macro-stabilisation or is concentrated on a particular locality. However, many reforms show quite rapid positive employment responses.

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