

Introduction

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During the last two decades, policy advice from bilateral and multilateral donors to developing countries has been conditioned by increasing market openness and more integration into the global economy – a process that characterises globalisation. Some of this advice is predicated on two major assumptions. The first is that outward-oriented economies are not only more efficient and less prone to resource waste, but also appear to have performed well in terms of overall development. Second, that raising average incomes generally benefits all groups in countries, though not necessarily to the same extent. Thus, it subscribes to the notion that as long as inequality is not increasing too much, economic progress through growth will reduce poverty. However, the validity of these assumptions is being challenged in some quarters (especially by the anti-globalisation movement) and there are doubts and uncertainties about the effects some liberalisation policies might have on poverty in a globalising world. Despite these doubts, the relationship between globalisation and poverty remains inadequately researched and poorly understood. Clearly, if the effects are ambiguous, and the relationships are obscure, then the appropriate policy directions in the current environment are even more uncertain.

The meaning of globalisation has been a matter of considerable debate. In this book globalisation is viewed as a process of increased *integration* between and within countries – especially in relation to the movement of commodities, people, capital and/or technology. Clearly it is not a new or recent phenomenon. There is evidence that over a long sweep of time globalisation has occurred in phases, in different ways and degrees, and for quite different reasons (O'Rourke and Williamson, 1999; and Dollar, 2004). Dollar (2004) identifies three broad phases of globalisation since 1870, and from their perspective the evidence suggests that since 1980 global integration has been unprecedented and, furthermore, that it has impacted on developing countries as never before.

Although globalisation is generally acknowledged to be multi-faceted, a good deal of the debate, and much of this book, is centred on trade liberalisation, its effect on growth, and on the impact on the poor – the so-called 'Trade–Growth–Poverty' linkage (Dollar and Kraay, 2002). However, even this more restricted perspective does not lead to a consensus view. In a way the discussion on trade policy is part of the bigger debate on the role of markets and government in development.

Indeed as Kanbur (2001) recently put it: “trade and openness is the archetypal, emblematic, area around which there are deep divisions, and where certainly the rhetoric is fiercest.” He identifies three broad areas of disagreement in the current discourse on economic policy, distribution and poverty. The first disagreement is on the *level of aggregation*. Poverty experts, as well as NGO activists focus on high level of disaggregation, and emphasise the heterogeneity of the causes of poverty. They consider the welfare of individuals within households, or, at least, of groups of households differentiated by socioeconomic group, geographic region, ethnic group, or by some other characteristic. Conversely, macro or trade economists focus more on average levels of income or aggregate poverty indicators.

The second disagreement is on the *time horizon* of the analysis. Most economists probably assess the consequences of trade reform having a medium term time horizon in mind. According to Kanbur: “[a] five to ten year time horizon [...] is implicit in the equilibrium theory which underlies much of the reasoning behind the impact of policy on growth and distribution”. In contrast, others emphasise the shorter or the long run time horizon in their analyses. Some focus on the effects of withdrawing children from school, or selling assets at uneconomic prices, or falling into starvation in the immediate aftermath of an adverse shock. Others worry, as environmental analysts do, about developments in the far future, fifty or a hundred years from now. Although not always explicitly stated, different methodologies have different time frames and may not be suitable to analyse concurrently short term adjustment problems, with their associated rationing and regime-switching issues, and medium or longer term problems.

Finally, a third area of disagreement is on *market structure* and power. A standard conclusion, derived from the Stolper–Samuelson model of international trade, that trade openness is good for the poor is based not only on the fact that unskilled labour is often abundant in developing countries but also on the more controversial assumption that goods and factors markets are competitive. Many claim, and provide empirical evidence in support, that distributive channels, capital ownership, institutional settings, foreign interventions, and other public or private practices may dramatically affect how markets operate. However, analysts do not always take these features into account.

These areas of disagreement, namely the *level of aggregation*, *time horizon*, and *market structure and power* are particularly relevant to the debate about globalisation and its effect on poverty and are clear and manifest in the chapters of this book. The authors examine a variety of evidence-based analytical approaches in assessing globalisation ‘shocks’ on the poor. Thus, rather than demonstrating that theory alone can provide a set of conclusive results as to whether (or not) globalisation leads to a reduction in poverty, the most important collective contribution of the authors consists of looking carefully at empirical evidence and trying to establish directions and magnitudes of effect. It is through the cumulative experience gleaned from these disparate exercises that a deeper knowledge of these complex phenomena can be acquired. The book builds on a solid argument suggesting that globalisation may be more of an opportunity than a threat to poor people, providing – and this is a key qualification – that circumstances and timing are taken into account.

Before presenting an outline of the volume, we now set out the main ingredients of a general reference framework that subsequent chapters will address with more specificity and detail. It provides an overall picture and, although neither exhaustive nor formal, we believe it helps in highlighting the main factors and linkages in the globalisation and poverty nexus.

Globalisation and poverty: determining the key impacts¹

McCulloch, Winters and Cirera (2001) have already set out and discussed in detail a set of channels and pathways through which trade liberalisation impacts on the poor. Trade liberalisation is a major, policy-induced, ingredient in the recent surge of globalisation processes. A more general set of channels pertaining to globalisation shocks can be portrayed in a similar fashion. But in doing so, we continue to restrict our focus on the income or expenditure based outcomes, though not denying the fact that other facets of poverty (health, education, environment, and human rights and freedom) may only loosely correlate with these economic outcomes.

With changing international and domestic prices and by varying the availability of factors of production, globalisation affects the poor through its influence on a country's economic growth and income distribution. Of course, these are by no means the only channels of influence. For example, by affecting government revenue-raising and spending capacities, globalisation can also increase the exposure of individuals to risk and volatility. But given that a key ingredient to long run eradication of absolute poverty is economic growth, understanding how globalisation-induced growth (or even growth in general) affects poverty is a prime consideration.

Many recent studies (Ravallion and Chen, 1997; Dollar and Kraay, 2002) focus on the statistical relationship between growth and poverty across countries and between time periods. And this is referred to by Francois Bourguignon in the Foreword to this volume. The main conclusion from these studies is that growth strongly reduces poverty: Ravallion and Chen (1997) find an elasticity close to three, which means that a one percent increase in the mean income or consumption expenditure reduces the proportion of people living below a 1\$-a-day poverty line by three percent. Taken at face value, these estimates suggest a rather strong policy implication, namely that poverty reduction strategies should be based on growth. However, this may be problematic if such strategies are validated only by cross-country evidence. As pointed out by Bourguignon (2003), the heterogeneity across countries of the poverty change due to income growth is very high, and it is possible to find cases of fast-growing countries that record virtually no poverty reduction alongside countries with low growth rates that show considerable improvement in poverty. In other words, only a small proportion (26% in Bourguignon's calculations) of the total variance of poverty effects is explained by differences in growth rates. Intuitively, accounting for the large unexplained share of this variance means that a growth rate may, in one country, benefit the urban, more affluent population, whereas in another country with the same growth

rate poorer rural farmers benefit more than proportionately. Bourguignon (and others) formalises this intuition by linking poverty reductions to both the growth of the mean income and changes in the distribution of relative incomes (that is, inequality).

The formal link between changes in poverty, growth and inequality can be used to re-estimate the growth elasticity of poverty. In doing so Bourguignon (2003) obtains the following key results: (a) the introduction of inequality in the relationship explaining poverty change doubles its explanatory power, which means that growth and inequality have the same weight in explaining the variance of poverty changes across countries; (b) by adding the initial level of development, initial inequality, and interaction terms of growth with these variables, the estimate of the growth elasticity of poverty is more precise and depends, as expected, positively on the level of development and negatively on the initial degree of inequality. So although redistribution can be very effective, in fact just as effective as growth in reducing poverty in the short term, a long run strategy based on redistribution alone is not sustainable, and growth is the only viable primary option. However, Bourguignon's results suggest more than this. Redistribution seems to have a double effect: it immediately reduces poverty, the direct effect, but it also permanently increases the growth elasticity of poverty, thereby making a given growth rate more effective in achieving poverty reductions.

The statistical relationships outlined above tell us a good deal about the relationships between growth, inequality and poverty in terms of outcomes. But they do not tell us much about the mechanisms and the channels through which globalisation and liberalisation influences growth, inequality and poverty. We first examine what theory tells us. The theory explaining how trade liberalisation affects goods and factor prices and hence the level and the distribution of income was crystallised in the well-known Heckscher–Ohlin model of international trade. The main conclusions of the model are that (a) trading economies specialise in the production of those goods or services that use more intensively the most abundant factor, and (b) changes in the relative price of goods have direct effects on the relative prices of factors. So, for example, in the case of a poor African country such as Mali – which has a comparative advantage in cotton because of its intensive use of the relatively abundant unskilled farmers' labour – a rise in the *relative* price of cotton would be translated into increased profitability in this sector, leading to an increased demand for farmers' work and higher wages, and, consequently, a reduction in the number of poor. The rise in the *relative* price of cotton may be induced by a reduction in tariffs protecting the (presumably capital-intensive) manufacturing sectors, thereby reducing the cost of the cotton sector's inputs.

Interestingly, one of the central findings of the Heckscher–Ohlin model is that by altering factor returns, trade liberalisation has strong redistributive implications. Given the importance of distributional changes in affecting poverty, one could reasonably conclude that trade reform might be a powerful instrument in the fight against poverty. But some caution towards such a generalisation is necessary. The price changes and poverty consequences, so described, result from the basic version of the Heckscher–Ohlin model. However, many modifications to the model

have been proposed, aimed at making it more realistic, and their introduction can radically alter the conclusions of the basic version. Besides numerous additional variables, especially to accommodate domestic public policies – including institutional and regulatory reform, or policies aiming at increasing efficiency of customs and ports, the so-called trade-facilitation domestic policies – influence the effectiveness of trade reforms and the broad-reaching contributions that trade and, more generally, globalisation can make to social welfare and development. Because of these factors, similar trade- or globalisation-friendly policies are likely to produce different outcomes in different countries, and in-depth country-specific investigations are needed to estimate the potential poverty consequences of particular interventions.

These theoretical arguments and the statistical enquiries outlined earlier provide an essentially macro perspective on the links between globalisation and poverty, and a more detailed micro analysis of these links is needed to assess fully the final outcome of the effects of globalisation on the poor. In fact, even for the same country, when the effects of globalisation reach households, their poverty impacts depend on the micro characteristics of the households concerned. In particular, we refer to consumption and production baskets, human capital, physical assets, access to credit, and the capacity to bear risks. These are all factors determining how a global shock will influence each household. As Winters *et al.* (2004) put it, poverty is heterogeneous: “there are many reasons why people are poor; and even within broadly-defined groups there are huge differences in the circumstances of individual households”. Beyond this households’ heterogeneity, the potential reasons for either reductions or even reversals of the macro effects described above can be highlighted for each of the following transmission channels: (i) goods markets channel, (ii) factor markets channel, (iii) government taxes and spending, (iv) investment/productivity channel, (v) other channels (e.g. adjustment/transaction costs). Some illustrative arguments now follow.

(i) Goods markets channel

Before being transmitted to households, price changes induced by globalisation shocks are influenced by internal factors such as trade costs, institutions and local competition. Those factors soften (or maybe even amplify) the effect on households.

In pure accounting terms, policies affecting trade or other international transactions provide a filter between the world price and the border prices of imported goods and factors. Once inside a country, the goods still face taxes, transportation costs, regulatory measures, and competition from substitutes, all of which influence the final price faced by the households. The particular effects of these policies on a local market depend on a series of factors that affect the price transmission from the world markets. For example, the existence of an administrative price for a particular product is likely to isolate the product from any external shock. Similarly, if infrastructure is weak (which implies high transportation costs) the transmission mechanism might be restricted or even blocked in some areas of the

country. Also, the presence of import-competing products and home-bias toward domestically-produced products might inhibit the price transmissions reaching households. Finally, in the case of weakly competitive markets, movements in the prices of goods at the border are likely to be absorbed by traders instead of being directly transmitted to households.

The above considerations for imported goods can also be made in the case of exportable goods. In this case, the price paid to households (the farm gate price) is simply a function of the world price filtered by a series of factors such as transfer margins (from the farm to the border) and mark-ups applied by the various agents involved. The empirical literature ² has found that ‘pass-through’ elasticities are different across countries and across products; although on average, these elasticities have been found to be around 0.5.

(ii) Factor markets channel

The second link is provided by the globalisation-induced changes in the returns to factors of production, and in particular to the returns to labour. For example, standard trade theory suggests that an increase in the price of a particular good will increase the returns to the factor used intensively in the production of that good. This conclusion crucially depends on some strong assumptions, such as full employment and perfect competition in the factor markets (as well as a two-factor, two-good economy), and may therefore not always be confirmed in practice. In developing countries, with high unemployment (or underemployment) and a large informal sector, the upward pressure on wages (especially of unskilled workers) due to trade reforms is likely to be muted. In the Mali cotton example, the effect of the trade policy on the labour market will probably show up as an increase in employment, rather than as an increase in wages.

This functioning of the labour market can be summarised according to two different analytical approaches: the trade approach, based on Heckscher–Ohlin theory, for which growth in a specific industry will produce an increase in the remuneration of the factor that is used more intensively by that industry; and the development approach, for which the growth in the industry is fuelled by an increase in the employment at a more or less constant wage. These approaches effectively represent two extremes in modelling the labour market: a very tight market and a wholly flexible market. In most cases, reality will be somewhere in between. Furthermore, especially in developing countries, labour markets are often segmented by skill, gender, and location, and wage and employment responses to trade shocks may differ across segments. For example, given that in most developing countries skilled labour is in limited supply whilst unskilled labour is relatively abundant, the trade-induced expansion of a sector employing a mix of skilled and unskilled labour, will be fuelled by increases in skilled wages and in unskilled employment.

The extent to which globalisation-induced (especially trade-related) changes in prices influence factor returns (especially wages) has been at the centre of a large literature and more sophisticated analyses than these two extreme approaches have

been developed. For instance, many studies explain wage responses that are not in line with the predictions of the Heckscher–Ohlin model³ in terms of skill-biased technological change. Early literature, based on the measurement of the factor content of trade, finds that trade-induced changes in labour demand (by skill) are not sufficient to account for the actual changes in relative wages.⁴ More recent studies, by comparing relative product price changes with relative wage changes, conclude similarly that the trade contribution is negligible and that technological progress explains most of the premium paid to skilled labour.

Another approach has been to estimate price–wage elasticities using earnings equations with prices of goods among the explanatory variables.⁵ In some cases, the necessary time series data on prices and wages can be obtained by the analysis of a series of compatible household surveys using pseudo-panel methods. Whenever the quality or availability of data is not sufficient to estimate price–wage elasticities, the relationship between prices and wages can be also extrapolated by linking national statistics on prices with wage data from surveys of firms or labour force surveys.

Other studies challenge the assumption of perfectly competitive labour markets,⁶ and examine the consequences of state regulation, unions, collective bargaining, as well as other institutional rigidities. Labour market adjustments induced by changes in trade policies might be quite different when some of these labour market characteristics are present. Bussolo, *et al.* (2002) show, in an empirical study for Chile, how the introduction of labour market imperfections in an otherwise standard trade model is enough to break down the expected Heckscher–Ohlin outcome and generates the observed increase in the wage gap between skilled and unskilled workers.

As in the case of prices of goods, the aggregate wage and employment changes need to be translated into micro effects at the household and even individual levels, and their ultimate impact on poverty depends on household factor endowments and labour force participation decisions. Some households may experience an increase in real wages, while others may increase their income through new employment if the individuals in such households choose to participate in the market.

(iii) Government taxes and spending

A third channel through which globalisation may affect the well-being of the poor is via changes in government revenues and spending, and in government policies more generally. For example a change in trade policy can be quite important for countries where a large part of government revenue is collected in the form of trade taxes (up to 50 percent in some cases). If trade taxes fall then either compensatory taxes have to be levied, or government expenditure on publicly-provided goods and services (or public transfers) should be reduced. However, this simple relation has to be qualified. Trade tax revenues may increase with falling tariffs if, initially, tariffs exceed their revenue-maximising levels,⁷ or if quantitative restrictions are replaced by tariffs and the initial rents were not appropriated by the government. Besides, reforms that simplify tariff collection (by establishing fewer rates and exceptions) and streamline custom procedures may be revenue-increasing.

More generally, some stylised, empirically-based facts linking development, trade and the size of governments have been highlighted in the literature. On average, richer economies tend to have larger governments, suggesting some support for “Wagner’s Law”.⁸ Additionally countries that trade more intensively tend to have larger governments.⁹ Thus, compensating for the loss of trade tax revenues might not be a problem at all for some countries, and it may be just a temporary problem for others.

To a first approximation, changes in revenues due to tariff reductions can be estimated econometrically using import demand functions or via numerical simulation. In the next step, the losses or gains due to variations in government expenditure and/or compensatory tax payments need to be assessed on a household-by-household basis. Detailed data on government spending or tax incidence by household are not often available. However some existing evidence suggests the following: (a) poverty impacts are strongly dependent on the type of replacement tax (Rodrik, 1998); (b) budget balancing does not necessarily imply expenditure reductions in sectors that directly benefit the poor (McCulloch *et al.*, 2001 and references therein).

(iv) Other channels

Empirical studies have also found that the factor market channel (both factor price and income/employment) is usually the most important of all the links between globalisation and poverty. Nevertheless, since markets and institutions function differently in each country it would be difficult, *a priori*, to judge the relative importance of these channels. Therefore analyses of household surveys help in identifying which are most relevant in each case. Household data provide insights on the functioning of labour markets, the relative abundance of skilled or unskilled labour, and the receipt of government transfers. For example, in the case of a rural agricultural economy where households obtain their income from the sale of agricultural products, the impact of trade policy on household welfare would occur through the movement in prices of goods while the wage effect would probably be negligible. On the other hand, in urban areas, household welfare will be mostly affected by labour market outcomes and government spending.

Beyond the three channels identified and discussed above, other channels may assume significance in a long term, dynamic context. This includes an investment and productivity channel, whose ultimate positive or negative effects on poverty are again an empirical matter. There is little doubt, for instance, that significant poverty reductions in South Asia were connected with international technological transfers that allowed the green revolution in agriculture. But it is also true that increased productivity may initially translate into lower input demand and this may hurt the poor. Furthermore, international movements of factors, both capital and labour, may affect and even alter some of the static responses outlined above. Equally, the transmissions of global shocks and their effects on particular households and individuals may be affected by a host of economic realities, potentially the most significant of which are as follows.

(a) Market failures, transaction costs

Various market imperfections that may hinder price signals have already been mentioned, however an extreme case is that in many developing countries some rural markets may be absent. Remoteness, and its associated (at times, prohibitive) transaction costs, may be the greatest obstacle to creating interconnected domestic markets, thereby leaving a large proportion of the population isolated from policy effects and globalisation opportunities.

(b) Subsistence households

Another issue in analysing the effect of any global shock on household welfare is that in poor countries many rural households live in a self-sustaining environment. That is, a large part of household income and expenditure is own production. This has the effect of essentially isolating most many households from the price system. When a household's production and consumption are not purchased or sold in the market, the movement in the market prices of the goods it produces or consumes have no direct effect on its income. But given incomplete markets (for capital and insurance, as well as for goods and factors) subsistence farming can lead to sub-optimal outcomes and is often associated with high poverty incidence.

(c) Private transfers

Since trade and other globalisation-related policies are redistributive in income they are likely to produce an effect on private transfers across households. Also, these policies may create movements in the labour force (involving national and international migration) which may in turn have an effect on remittances and therefore on household income and social welfare. In quantitative analysis, private transfers are often modelled as a function of earnings. However, in some cases the data available in household surveys can help identify a better approach.

(d) Distribution within the household

Globalisation may also have an effect on the distribution of resources across individuals within households. When several members of a household sell labour (or goods), it is possible that each individual's share of total household income may change, altering the relative power of the different members of the household. There is evidence that the income earned by women is spent more altruistically than income earned by men (thereby affecting more the welfare of other members of the household). This implies that policy intervention may have a stronger welfare effect if it is targeted towards the employment, and hence income, of women.

In conclusion, we see that theory can get us just so far in assessing the possible directions of effect of globalisation shocks on household poverty. The channels are many and complex, and the directions and size of impacts are far from clear, hence our ability to inform policy is necessarily limited. It is this reality that motivates the research agenda that, in turn, underpins the papers in this volume.

Outline of the volume

Background to the volume

This book is based on a selection of papers presented at a two-day seminar held at the OECD Development Centre in December 2002. An important objective of the seminar was to show why knowledge advancement in this area, although difficult to achieve, is necessary and to emphasise that without a sound knowledge base there is increased risk of adopting overly simplistic responses in devising poverty reduction policies. The seminar brought together researchers from institutions in both industrialised and developing countries, who contributed papers, all of which were empirically-based and country-focused. The seminar participants addressed the following core issues:

- What are the main channels through which globalisation affects poverty? Are these impacts negative or positive and what is the intensity of the impact? Do all channels have the same importance for most countries? How do these channels operate?
- What policy measures can governments adopt in order to alleviate negative poverty outcomes? Are the impacts of these policy measures country-specific or can some more general lessons be learned?
- How can governments increase their monitoring capacity in order to pursue a robust macro-micro strategy of growth in income aggregates and an equitable distribution of individuals' incomes?

The analytical techniques and approaches used in the papers are not identical. Indeed, the variety of analytical approaches is a central feature of the volume. Only in one or two cases is there an attempt to look at the evidence *ex post*; the reason for this is that cause and effect are often inextricably linked. Many of the papers represent *ex ante* analyses; indeed most are based in particular on computable general equilibrium (CGE) and numerical simulation methods. It is entirely debatable of course whether results derived from simulation methods constitute *empirical* evidence or whether this is more accurately described as *numerical* evidence, on the grounds that it is based on analytical structures and perceived representations of how these economies function. Nevertheless, in those cases where CGE models are used, a great strength is that they do provide the basis for laboratory experiments to be conducted. This is especially useful in considering alternative policy responses. Also, in all cases the studies rely on actual country-specific data – either to calibrate the models, to conduct counterfactual analyses, or to study econometrically the transmission mechanisms of policies on poverty.

Overview

The book is organised essentially along methodological lines. However the main messages that emerge from the volume are less to do with methodology and more to do with identifying the important channels of effect and the possible outcomes of globalisation shocks and policy responses. The first two papers rely only on

observed evidence, and in quite different ways they trace through the effects of trade and price reforms on households of different types using partial equilibrium analysis. The next four papers employ general equilibrium models in a wide variety of contexts. By definition, the common feature of all these applications is to capture second and higher order effects transmitted through alternative channels, markets and equilibrating mechanisms. The final two papers extend the general equilibrium analysis to embrace microsimulation analysis of individual household behaviour. The papers are therefore representative of a range of simulation and counterfactual analyses.

The first two papers, by McCulloch and by Niimi, Vasudeva and Winters, approach the identification of channels of effect (of globalisation shocks on poverty) using essentially partial equilibrium and econometric approaches. McCulloch's paper is primarily methodological, with applications to data for Cambodia and Nepal, that trace out the impact of structural and price reforms (rice) on poverty of different households according to their relative positions as producers and consumers of rice. There is no modelling of markets *per se* but the paper embraces well-known features of the household economy, and agricultural household models, that are often missing in economy-wide empirical analysis. Niimi *et al.* set out and explore different channels of effect (price, wage and employment channels) of trade liberalisation and reform in Vietnam. They conduct an econometric analysis of trade liberalisation-induced household poverty dynamics, using panel data from a household survey. Various implications stem from the results detailing the effects of trade reforms on the movement into and out of poverty of individual households. Both papers are good examples of *ex post* analyses of the empirical evidence, though they are quite different in what they attempt to do.

Round and Whalley review the evidence from a series of studies that examined the impact of liberalisation, and globalisation more generally, on relative and absolute poverty in four South Asian countries (India, Sri Lanka, Bangladesh and Pakistan). The studies were undertaken as part of a project financed by the Department for International Development involving researchers from, and based in, the four countries in question. This paper demonstrates that dating globalisation is itself a hard exercise to undertake; that the countries, though geographically contiguous, differ in respect of the speed and extent of globalisation; and that there may be excluded variables and other global influences that hamper a simple analysis of cause and effect in terms of poverty outcomes. Overall the results give an early indication that there is unlikely to be a simple, direct and universal answer to the question of whether globalisation is good for the poor; the channels are multifarious and too complex for that. It further suggests that it may be difficult to generalise about policy responses, because of either the nature of the globalisation shocks or the specific character and structure of the economy.

Many empirical studies of globalisation concentrate on trade liberalisation. As outlined earlier there seems to be no clear analytical evidence on whether or not other facets of globalisation benefit the poor. So Bussolo and Whalley examine empirically the possible effects of reductions in transaction costs on relative poverty in India – considering transactions costs in different markets using various exper-

imental structures. The experiments embrace both *ex ante* and *ex post* forms of analysis and rely on a small, stylised CGE model. Their first analysis is to see what effect a reduction in transaction costs alone might have on relative wages (used as a proxy for relative poverty) under simple model variants and configurations. This is an *ex ante* analysis as it starts from an actual base case but does not attempt to reproduce an actual final outcome. The second analysis, an *ex post* analysis, aims to see how much transactions costs would have to change in order to meet an observed change in relative wages during the reform period after allowing for observed changes due to tariff reduction, terms of trade, labour supply and technological progress. Several messages emerge from these analyses. The results of the *ex ante* simulations broadly confirm intuition; it matters whether transaction cost reductions apply in product or factor markets and whether there are differences in transaction cost mark-ups across sectors. The *ex post* analysis reveals that to be compatible with the observed recent spike in real incomes and in addition to the changes in tariffs, the terms of trade, labour supply and technology, transaction costs would have to have fallen by about 65% series of 'obstacles' in setting up formal business and employing labour that have recently being eliminated in India, the authors put in context this large 65% motivate further policy reforms towards fostering reductions in transactions costs in all quarters.¹⁰

Focusing on the poverty effects of trade liberalisation Khondker and Mujeri examine two issues using a large-scale CGE model for Bangladesh. They employ both *ex ante* and *ex post* analysis. First, they consider the household income, welfare and poverty consequences of an across-the-board elimination of tariffs. Although the current tariff levels are low compared with other South Asian economies, they are still at around 20% on average. Secondly, as private capital inflows have been a feature in Bangladesh in recent years, they assess the poverty impacts of such inflows concentrated mainly as investment in the gas and service sectors. Both simulations record welfare gains across all socio-economic groups of households, but more especially across the better-off groups. The poverty calculations confirm that an elimination of tariffs are pro-poor, though benefiting the better-off households most, whereas in the case of increased private capital inflows the poverty of rural households reduced against an increase in the poverty of urban households. These are *ex ante* analyses, simulating the effects of exogenous shocks applied to some base equilibrium. Khondker and Mujeri also carry out an *ex post* experiment, which attempts to apportion observed outcomes to different kinds of shocks. Between the mid 1980s and late 1990s wage inequality between skilled and unskilled workers widened, and they therefore assess the extent to which this increase can be attributed to trade and non-trade factors. Identifying non-trade factors as combinations of changes in factor endowments (labour and capital) or technical changes, Khondker and Mujeri's analysis suggests that trade factors are a relatively unimportant contributor to inequality. Overall, the policy implications from their simulation analyses are stark: trade reforms do not appear to have brought significant direct benefits to the poor in Bangladesh – relative, that is, to other events during the era of liberalisation.

The experimental framework of these analyses shows how important it is to distinguish the effects of globalisation shocks from concomitant policy-induced changes and responses. The analysis carried out by Khondker and Mujeri raises a number of important questions about the experimental design to do with, for example, the effects of raising replacement revenues to compensate for the loss in tariff revenue under trade liberalisation. Bussolo and Round consider these issues in a different, though closely related context. Based on a large-scale CGE model for Ghana they consider the poverty consequences of making redistributive (ostensibly, poverty-reducing) income transfers between household groups under alternative revenue-neutral financing schemes. The results for Ghana show that the choice of financing scheme does matter. So too does the issue of whether one considers the effects in the short run, when there are rigidities in the movement of labour between sectors, or in the long run when labour moves between sectors more freely.

Up to this point all of the papers treat poverty measurement in a fairly pragmatic fashion. In small, stylised models changes in relative poverty can be assessed on the basis of relative wages or relative incomes of two or more groups (Bussolo and Whalley; Khondker and Mujeri). In larger, CGE models authors undertake poverty calculations under assumptions about the parametric distributions of incomes within household groups (Khondker and Mujeri; Bussolo and Round). The assumptions usually involve constant second and higher order effects (spread), so that poverty measures are only affected by shifts in the group means. The final two papers (Cockburn; Bussolo and Lay) combine micro-simulation models with CGE models and, in consequence, the results of the experiments are far more sensitive in their assessment of the effects of external shocks on individual households. The applications of the methodology enable the authors to explore additional mechanisms, especially income distribution (Cockburn) and the labour market (Bussolo and Lay). In consequence the models are dimensionally larger and a great deal more complex.

A common method of adapting CGE models to the study of income distribution and poverty is the so-called 'representative household' approach (e.g. the papers by Bussolo and Whalley, Khondker and Mujeri, and Bussolo and Round). The equilibrium effects of exogenous shocks are first assessed on the basis of the changes in average incomes of representative groups of households, usually defined according to appropriate socio-economic categories. Then, poverty effects are calculated on the basis of the shifts in mean income, while holding the variance of income in each group constant, assuming alternative parametric forms for describing income distribution. Cockburn adopts an alternative approach in a study for Nepal. He potentially models each household differently, constructing a model with as many household categories as there are households in the base data (household survey). This avoids the restrictive assumptions of the representative household group (RHG) approach. The results of an experiment based on eliminating tariffs and replacing them by a uniform consumption tax suggest a wide variation of effects across households, although overall urban poverty falls and rural poverty

increases. But beyond this Cockburn suggests the approach might be useful to policymakers in tailoring policies towards a pro-poor outcome.

Bussolo and Lay undertake an analysis for Colombia to try to understand more about the effects of the substantial trade liberalisation in the early 1990s in the context of other substantive changes in the economy that took place between 1988 and 1994. The changes include major shifts in the composition of the labour force (male/female participation, skilled/unskilled proportions). Leaving aside the many differences in the modelling approach, unlike the studies for Bangladesh (Khondker and Mujeri) and Cockburn (Nepal) the analysis by Bussolo and Lay suggests that trade liberalisation in Colombia results in a general and significant reduction in poverty across all societal groups. This is a strong result but the historical evidence suggests that actual levels of poverty fell by substantially greater amounts than is due to tariff reductions alone. Additional modelling features are also important. These include a more sensitive treatment of the labour market and, partly as a result of incorporating the micro-simulation model, a means of basing the poverty calculations on the full sample of households rather than representative household groups (RHG). The latter avoids relying on an assumption about the nature of the income distribution within household groups and, more importantly, on an assumption that the variance (or inequality) within groups is constant. The data for Colombia suggests that inequality rose between 1988 and 1994 and this means that the model results based on 'full sample' (microsimulation) methods are closer to the actual change than those based on RHG methods. Another major feature of the Bussolo and Lay analysis is that, in addition, they simulate the effects inclusive of the historic changes, introduced as additional shocks. The poverty calculations based on the combined trade and historic shocks are closer to the actual changes, though not equal to them. Like Khondker and Mujeri, the analysis is *ex ante* and does not therefore exhaust the components of change.

The labour market is a direct and important channel of impact of globalisation on the poor. In money-metric based poverty analysis households are either affected by price changes (in terms of the goods and services they can buy) or by changes in their incomes. Incomes, in turn, are determined mainly (or at least in part) by changes in factor market outcomes, including changes in wage rates, the decisions to participate in various labour markets or to engage in self-employment or own-account activity. Bussolo and Lay highlight the importance of the labour market; formal versus informal labour markets, occupational choices of different household members; and to some extent, gender differences.

Policy insights

The papers in this volume confirm our intuition that the poverty responses to globalisation may not be a one-way bet. It is hard to predict that there will be an unequivocal positive (or indeed a negative) outcome for all types of households in all kinds of circumstances. As suggested by McCulloch *et al.* (2001) there are many channels of effect in translating the macro-level initial shock to the micro-level impact on households and individuals. The more easily identifiable (and

quantifiable) channels will include price responses and labour market responses – both on the demand and supply sides, including changes in wage rates in different market segments. Other channels, such as changes in infrastructure, may also affect social well-being although these are often much harder to quantify. Nevertheless the variety of price and factor market responses in the country studies portrayed in this volume suggests a few insights.

First, the studies confirm our intuition that globalisation ‘shocks’ may not benefit all segments of society uniformly – or, indeed, positively. There are many reasons for this, but the studies identify examine a number of channels of effect on individual households, and they demonstrate that the direction and level of effects crucially depend on household endowments; differential price responses in markets (e.g. prices of goods and factors); rigidities (e.g. supply constraints); and, of course, heterogeneity in individual responses. To these we might add other factors, not explicitly examined in these studies, such as the importance of good institutions (e.g. financial institutions, governing the availability of credit; agricultural and industrial extension services; etc), and referred to in the papers by McCulloch, and Khondker and Mujeri.

Second, the studies highlight the role and importance of household poverty dynamics – more specifically, whether trade reform affects the chances of households of different types escaping poverty. The principal reasons for households to fall into or exit from poverty have been examined in terms of household demographics and characteristics in earlier studies. Niimi, Vasudeva and Winters report that location, the level of education and occupation of the household head, and infrastructure had previously been found to be among the main factors that increased the chance of households escaping from poverty. In their study, Niimi *et al.* consider additional ‘trade’ factors, such as engaging in the production of specific agricultural export crops, and the proportion of household members engaged in export sectors. Both are found to be significant. Bussolo and Lay also consider poverty dynamics and suggest that trade and occupational choice matter for the poor. These results provide clear insights for policy intervention.

Third, outcomes might well differ (and substantially) between the long run and the short run, as highlighted in the paper by Bussolo and Round. None of the papers examine full dynamic effects and this can only be indicative. It suggests that policy ought to be directed to improving the supply response of households to changes in their external environment induced by globalisation – for example, enabling households to cope with risk and uncertainty, and improving their skills, health, and other factor endowments.

Fourth, policy responses to external shocks might have to be explicitly ‘pro-poor’. Cockburn suggests there might be scope to choose between alternative replacement taxes to compensate for the initial loss in government revenue through trade liberalisation, tailoring the choice explicitly towards poverty reduction. Bussolo and Round do precisely this in their experiments for Ghana, though with a less-disaggregated (and static) model, and demonstrate that there may be quite different poverty outcomes from different replacement taxes. Clearly the nature and degree of policy intervention matters greatly alongside the primary consequences

of natural-, technological- or policy-induced globalisation. It is our hope that these quantitatively-based studies lead to a better understanding of their consequences.

Notes

- 1 Parts of this section are further elaborated in Bussolo and Nicita (2004).
- 2 See Goldberg and Knetter (1997) for a review, and Nicita (2003) for an application to trade liberalisation.
- 3 For instance, increased relative wages for skilled labour are observed in many developing countries abundantly endowed with unskilled labour: Slaughter and Swagel (1997) cite evidence for Mexico, Meller and Tokman (1996) study the Chilean case, and Sanchez and Nuñez (1998) examine the Colombian case.
- 4 Although, as reported by Abrego and Whalley (2003): “These estimates, based on factor content of trade calculations, were later criticised by Wood (1994) who argued that trade is a considerably more important factor than these analyses show. He argued that for many products, especially those from developing countries, there is no comparable domestic product, and so factor substitution effects attributed to trade using conventional elasticities are understated. He also argues that technological response to trade will occur in expectation of future trade surges, and so some of what is attributed to technology in factor content analyses should in reality be attributed to trade.”
- 5 See for example Porto (2003), and Nicita (2004).
- 6 One interesting exception is Devarajan, Ghanem, and Thierfelder (1997).
- 7 Ebrill, Stotsky and Gropp (1999), cited in Winters *et al.* (2004).
- 8 The validity of Wagner’s Law has survived recurrent scrutiny; for an interesting look at it see Easterly and Rebelo (1993).
- 9 See Rodrik (1998).
- 10 This is also one of the key messages of the 2004 World Bank report on the investment climate.

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