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# The Human Development Impact of Economic Crises

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# The Human Development Impact of Economic Crises<sup>+</sup>

*Draft Background Paper*

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Economic crises may have macroeconomic causes and effects but they also have a significant impact on human development. This paper sets out an elementary framework for linking the two and reviews the propositions generated by this framework against literature on two recent economic crises: Mexico's in 1994-5 and Indonesia's in 1997-8. It finds that these economic crises had a strongly negative effect on household incomes, particularly among urban wage-workers in the non-exported sector. Wages tended to bear the brunt of adjustment with many workers also moving into the informal sector, thereby making themselves more vulnerable to future shocks. Social expenditures fell significantly, particularly on health services. However, while Mexico saw increased mortality rates among the vulnerable, health outcomes in Indonesia were not entirely negative. The picture in terms of education is mixed. Some authors find evidence of a short-term reduction in enrolments in Indonesia and of widening inequality of access to education as a result of the crisis. Others find that enrolments recovered quickly in the aggregate and that substitution effects may have predominated over income effects. Government social expenditures are significantly constrained, even though the services provided are more needed than by the poor than at other times.

## Introduction

Two features of economic crises in the last two decades may be noted. First, the frequency of crises is increasing. Second, they have been concentrated in developing countries, particularly in so-called 'emerging market economies' (EMEs). There is a consensus among macroeconomists that open economies – as well as benefiting from the economic efficiencies that openness permits – are more exposed to the effects of volatility in international capital markets. As developing countries have increasingly opened their capital (as well as trade) accounts, periodic shocks have become a feature of their economic history.

These features are of concern for human development. EMEs with strong growth rates and declining poverty indicators had been lauded as the model for development. Whether one adheres to a vision of export-led, liberal market development or of a more activist state role in industrial and social policy, one can agree that severe

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economic shocks have the capacity, at least, to interrupt this progress in human development and, at worst, to trigger deterioration in human development outcomes.

The purpose of this short paper is to review the literature on the evidence of linkages between economic crises and human development. What have been the key features of recent economic crises? How do these affect the economy in general? Which households do these affect in particular? Which aspects of human development are most affected? Ultimately, it seeks to answer the question: what is the human cost of economic crisis and who pays it?

To this end, the paper begins with a review of the recent theory and history of macroeconomic crises: noting competing explanatory theories for the causes, as well as the proposals for managing and resolving them. It then considers economic theory linking macroeconomic crises to socio-economic outcomes, with a particular focus on impacts on household incomes, education and health. Finally, it reviews the literature on the human development impact of two of the largest crises of the last decade: those in Mexico in 1994-5 and in Indonesia from 1997-9.

## Recent Economic Crises - Theory and History

A reasonable definition of an economic crisis is a contraction of four percent or more of real GNP in one year. On this measure, there have been more than 40 economic crises in Latin America and the Caribbean alone from 1980-98 (Skoufias 2003).

In theory, we can distinguish between (at least) three types of crisis. A *debt* crisis – such as that experienced by a number of Latin American and African countries in the early to mid-1980s – is triggered by a failure to service outstanding debt obligations, leading to the withdrawal of new credit. A *currency* crisis – such as that experienced by members of the European Exchange Rate Mechanism (ERM) in the early 1990s – is triggered by an inability to maintain a certain (usually fixed) exchange rate regime, leading to selling of the currency by market participants and speculators. A *banking* crisis – such as that experienced in the United States in the early 1930s – is triggered by a failure of depositor confidence in a systemically significant number of financial institutions, leading to a massive withdrawal of funds and significant loss of liquidity from the financial system.

In practice, it is a harder task to say which of these ideal-types predominates in a given situation, since they are often all present. For example, a currency crisis in which the monetary authority is forced to abandon a pegged exchange rate may presage a debt crisis when it becomes clear that banks and corporates hold high levels of foreign-exchange-denominated debt which may, in turn, prompt a banking crisis as depositors rush to secure their funds. Identifying whether it was the increasing knowledge of unsustainable debt that prompted the currency attack or the domestic banking run that made the debt unsustainable is the contested part in ‘naming’ a crisis.

Why does all this matter if our principal concern is the human outcome of the crisis? First, a clear understanding of the causes of a particular crisis (or of recent crises in general) serves as a basis for considering how similar crises may be prevented in future. Second, the dominant economic drivers of crisis will affect the distribution of

costs and the duration of a crisis: a currency crisis will disproportionately affect those involved in the trade sector and those with foreign investments, whereas a banking crisis will affect all depositors with domestic banks. Third, the causes of a crisis have a bearing on how the government (often in collaboration with the international financial institutions – IFIs) seeks to manage and resolve the crisis. For example, whereas raising the domestic interest rate may be appropriate in a currency crisis (to stem capital outflows and dampen domestic inflation), it may aggravate a banking crisis (if it further reduces liquidity in the banking sector). Misdiagnosis may consequently exacerbate the effects of a crisis.

Economic crises in the last two decades have been characterised by a mix of the following characteristics: the build-up of debt or high government spending, with attendant increases in inflation and interest rates; an attempt to avoid the ‘monetary policy trilemma’ of domestic monetary, exchange rate and capital account liberalisation policies; an inflexible and overvalued exchange rate; regulatory weakness in the domestic financial system; fully open capital markets; herding, contagion and speculative behaviours by international capital investors. This period has seen crises in most major emerging markets, including Mexico (1982 and 1995), Turkey (1994 and 1999), Thailand, South Korea, Malaysia, and Indonesia (1997-8).

The analytical responses and policy conclusions of these events have combined steps to identify causes and to ameliorate management/ resolution. First, recommendations have been made to improve domestic policy-making. On the fiscal side, governments have been exhorted to improve debt management and central government spending control (e.g. over provinces and over the contingent liabilities of state owned enterprises). On the monetary, the menu includes bringing down inflation, adopting a robust exchange rate regime, and giving independence to the central bank. Lastly, structural and regulatory recommendations have been made, including for privatisations, measures to improve the investment climate and strengthened financial regulation.

Second, a series of proposals have been made to improve the international context for developing countries facing economic crises. These range from actions by developed countries internally (e.g. improved banking supervision) to collective actions by these countries (e.g. to regulate international capital flows) to multilateral actions (e.g. measures to encourage private sector involvement in debt resolution) to actions by international institutions (e.g. the provision technical assistance).

## **Tracing the Effects on Human Development**

The focus of some macroeconomists is on the impact of crises on aggregate measures, in particular the effects of crises on GDP growth. There is an implicit assumption in this analysis that growth generates income which in turn improves ‘development’. This approach has, of course, been challenged by those who have argued for a wider definition of development. In particular, the quality and distribution of the growth and income effects matter (see Cornia, 2004). We now turn to how economic crises may affect these variables.

Drawing on economic theory, we can set out a few simple propositions on the broader, human impacts of the crisis features set out above. In doing so, we are focussing on the aspects of human development which go into the Human Development Index (HDI): income (both earned and unearned); education; health.

A. The first set of potential impacts entails the consequences of a series of changes in the macroeconomic variables of a country facing economic crisis:

1. Economic shock may prompt civil unrest leading to death and injury, and a rise in crime and disorder – potentially answered by a loss of civil and political freedoms.
2. A general contraction of the economy will, other things equal, lead to a loss of employment earnings (whether in terms of the number employed or real wages) with a consequent impact on household income.
3. A banking collapse will lead to a loss of employment in that sector and a loss of savings for those whose deposit accounts are not guaranteed in some way with a consequent loss of income for households with these accounts.
4. A depreciation of the domestic currency will:
  - a. increase the cost of servicing debt denominated in foreign currency (for government, corporates and households);
  - b. increase the domestic value of interest payments on foreign deposit accounts;
  - c. increase the domestic cost of foreign imports (including health products like vaccines), diminishing household purchasing power unless these have domestically produced substitutes;
  - d. increase the domestic value of foreign revenues earned by exporters and the prices of exported goods more generally.
5. A rise in the interest rate on government debt instruments (GDIs) will:
  - a. increase the cost of borrowing;
  - b. increase the cost of servicing debt denominated in domestic currency (for government, corporates and households);
  - c. increase the return on domestic deposit accounts.
6. Diminished tax revenues and attempts to increase debt sustainability will require cutbacks in fiscal spending, which may lead to limits on social and unemployment support payments, on education and health budgets. To some degree, and often in collaboration with the World Bank or regional development banks, governments may make efforts to off-set this consequence with Social Safety Net (SSN) programmes. However, these may be supported by concessional loans such that they increase future debt service costs (crowding out future social expenditures).

These impacts are represented in table 1.

**Table 1: Stylised theoretical human development impacts of economic crisis**

Dimension of Crisis	Household Income						Education	Health
	Wages	Domestic Deposit Interest		Equity Dividends		Transfers		
		Domestic	Foreign	Domestic	Foreign			
Contraction/ Loss of								

Employment	-			-				
Banking collapse	(-)	-						
Depreciation			+		+			-
Rise in interest rate		+				-		
Fiscal Crunch	-					-	-	-

B. The second set of potential impacts focuses on the human development variables and lists the consequent impacts which we would expect of economic crisis. In fact, these are often competing hypotheses.

1. *Household Income.*

- a. The net effect of these stylised impacts is likely to be reduced household income for all but those with significant foreign investments or ownership of units producing exportable goods.
- b. We can consequently anticipate increased poverty. Poverty has two key aspects in this analysis (though there are, of course, others):
  - i. It may be immediate: where a household income diminishes directly so that it falls below the poverty line.
  - ii. The household may experience ‘prospect’ poverty, where the household’s reaction to the crisis causes it take actions which increase the likelihood of it being poor in the future (e.g. by withdrawing a child from school or selling a cow or other asset).
- c. Depending on the distribution of costs of adjustment, we may also see an increase in income inequality within the country. Table 1 suggests that the most affected by economic crisis will be wage-earners in non-export service sectors and those dependent on public social services, especially if they do not have assets.

2. *Health impacts.* Increased poverty will probably have a negative impact on health outcomes.

- a. Households will generally experience a poorer diet.
- b. Medical services (both public and privately funded) may cease to be affordable.
- c. As labour supply exceeds demand, poorer working conditions may be expected.
- d. In order to increase household income, more vulnerable members of the household (young, elderly) may go to work, with negative health impacts. Alternatively, increased unemployment may mean that these groups, along with women workers, are less likely to be employed, with positive health impacts.

3. *Education impacts.*

- a. *Income effects.* Given lower household income, education may become unaffordable and children may be withdrawn from school. This may particularly affect girls (if their education is deemed less important). To boost household incomes, children may be required to

- work and withdrawn from school. This may particularly affect boys (if they are more likely to find employment).
- b. *Substitution effects.* Conversely, the opportunity cost of education may fall with wages, making it more likely that children will stay in and/or start school.
  - c. The outcome for education will consequently depend on changes in wages relative to the price of schooling: this will determine whether the income or substitution effects predominate.

In conclusion, from the theoretical side, we have a series of propositions about the impact of economic crises on human development. In order to evaluate how robust these are, I turn now to two case studies of recent economic crises. In each case, I survey the economic literature on the macro causes of the crisis, before considering what evidence there is of the human development impacts suggested by our propositions.

## **Case Study 1: Mexico 1994-5**

### **1A. Macroeconomic Developments**

From 1990, Mexico embarked on a period of sustained growth, stimulated in large part by inward capital flows. Foreign investors were attracted by higher interest rates than those available in industrialised countries, the prospect of strong growth in Mexico following successful debt restructuring and anticipating the conclusion of NAFTA trade talks and a desire (especially among institutional investors) to diversify their portfolios. In this period, Mexico was attracting one fifth of all flows to developing countries (Lees 2000, p.877).

Given a fixed nominal exchange rate peg to the US dollar and inflation above the rate of that in major currency areas, Mexico experienced significant real exchange rate appreciation. This contributed significantly to a growing current account deficit as import consumption rose and domestic savings rates fell. The economy thus became increasingly dependent on sustained inward capital flows to maintain external balance through the capital account.

At the same time, investors were struggling to find productive investment opportunities. Through the intermediation of the domestic banking sector, foreign capital was increasingly financing an asset price bubble. The changing structure of domestic banking operations, and (in particular) the exposure of domestic banks to exchange rate risk, exacerbated the dependence on foreign capital.

Two political events in the early part of 1994 unsettled the markets. The rise in political violence in the state of Chiapas from January and the March assassination of the Partido Revolucionario Institucional (PRI) Presidential candidate, Luis Donaldo Colosio, prompted a sharp rise in investors' risk premium, reflected in a 7% increase in interest rates in March. At the same time, capital outflows began to exert downward pressure on the peso.

As capital outflows intensified, however, the government neither raised interest rates nor curbed government consumption. Instead, it expanded domestic credit and rolled over its short-term peso-denominated debt (*Cetes*) into dollar bonds (*Tesobonos*). The debt swap had the effect of making it all the more vulnerable to a currency depreciation. This was presaged by a rapid fall in government reserves as the central bank sought to maintain liquidity in the face of continued capital outflows. These fell from 29 billion USD in February 1994 to 5 billion USD in December 1994.

Ultimately, the government found itself unable to sustain these policies in the face of continuing (and now speculative) capital outflows. On 22 December 1994, it announced a free float against the US dollar. From the status quo ante of 3.50, the peso dropped in that day's trading to 4.80 against the dollar (and would fall to 6.0 by April 1995). At the same time, however, the government had to face up to the consequences of its flawed debt management strategy. The value of *Tesobono* liabilities had escalated rapidly and stood at 29 billion USD in November 1994 (Lees, 2000, p.901). With a depreciated currency, the domestic value of this debt immediately jumped. Mexico found itself unable to service this debt and required the assistance of the US, Canada and the international financial institutions (IFIs).

In 1995, Mexico experienced a contraction in GDP per capita of 9.2% (McKenzie, 2003, p.1179). Industrial production fell by around 20%<sup>1</sup>. The peso depreciated to a rate of 7.5 against the US dollar. Interest rates on *Cetes* reached 85%. While there appeared to be fairly rapid restoration of the economic position (Mexico had returned to 1994 levels of GDP per capita by late 1997), our attention now turns to the human development impacts of this severe economic shock.

## **1B. Human Development Impacts**

### *1Bi. Employment*

Evidence suggests that the economic shock was accompanied by a very significant fall in real wages. McKenzie (2003, p.1181) cites data from the Economist Intelligence Unit which suggest that real hourly peso wages rates fell 12.6% in 1995 and a further 9.9% in 1996, before showing their first increase in 1998. Disaggregating these figures, he finds that the greatest falls were in the manufacturing sector, while those who lived in an urban environment, were highly educated and/or worked in financial services or the construction industry were more likely to experience high drops in earnings compared to those who lived in rural areas, were less educated and/or worked in agriculture.

Martin (2000) cites data showing that, while employment rose slightly during the crisis, unemployment rose sharply. Martin argues, however, that these official statistics fail to represent the main employment impact of the crisis, which was a shift into the 'informal' sector. He defines this sector as consisting of work for enterprises with five or less employees, self-employment and work which offers no employment benefits. This is a significant outcome of financial crisis since, as Cutler et al (2002, p.282) note: 'In Mexico ... between 40 and 50 per cent of the labor force, and their

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<sup>1</sup> Lees (2002), p.901 records a fall of 20% in auto production.



dependent family members, receive social security through their principal place of work. Only formal sector workers are covered. Thus, a job loss, a move to the informal sector, or medium-run periods of unemployment imply loss of social security coverage for workers and families.'

McKenzie (2003) finds that there was little change in labour supply as a result of the crisis, implying both that hours did not increase and (therefore) that household earnings diminished. Nevertheless, Mexican national statistics that he cites (p.1181) show that one trend was the continuation of a sustained increase in the female participation rate (the male remained near to constant from 1993-7). In an inter-generational study covering women born from 1936 onwards, Parrado and Zenteno (2001) find evidence to support the suggestion that women enter the workforce in Mexico during times of economic stress to diversify household earnings and to protect against deteriorating income. They find that this tends to be in the informal and domestic sectors, although they do find evidence that economic crises also encourage more women into the professional sector: something which they conclude is evidence that crises (more so than recessions) impact on the middle classes too. At the same time, there is evidence (McKenzie (2003), Cutler et al (2002, p.294)) that the labour force participation rate of young people aged 12-17 fell at the time of the crisis, while McKenzie (2003) finds there was an increase in school attendance by 15-18 year olds during the crisis.

#### *1Bii. Household Income*

One of the principal findings of research into the coping strategies of households confronted by an aggregate economic shock is that these strategies differ significantly and by necessity from those used in the case of specific shocks (i.e. those caused by ill-health, firm closures etc.). Whereas community and family support mechanisms are available in the specific instance, these are placed under strain by an aggregate shock that affects all members.

An obvious coping strategy is to reduce household expenditure. A particular instance of this is highlighted by McKenzie (2003) who found that one in twenty households had postponed having a child in consequence of the 1995 crisis. This survey finding appears to be supported by the national data which shows a decline in births per thousand of the population in Mexico from a steady 32.2 in 1991-94 to 30.4 in 1995, 29.5 in 1996 and 28.5 in 1997 (McKenzie, p.1181).

A second strategy is to dis-save. Attanasio and Szekely (1998) find that saving declined significantly among most households in Mexico from 1994-1996. Their research was prompted by the curious observation that the savings rate appeared to increase during recession years. In fact, they find that this can be explained by the behaviour of a few, highly educated and high earning individuals. Across the pre- and post-crisis years, they observe a declining propensity to save among lower income households. They point out that this has concerning implications for inter-generational transfers and the perpetuation of existing inequality.

#### *1Biii. Health*

In work sampling the effects of crises in Mexico across the 1980s and 1990s, Cutler et al (2002) find that the 1995 crisis coincided with a significant increase in mortality rates among the elderly (those over 60) and the very young (those aged 0-4) of 5-6 and 7 per cent respectively. They assess the causes for this increase through regression analysis. The strongest correlation is between female labour force participation rates and elderly and young mortality rates. However, they determine this is due to the income effect represented by increased female workers rather than a diminished care effect as a result of women working. The second correlation is a negative one between physicians per capita and mortality rates. They observe the central policy paradox that 'countries experiencing economic crises have found that they reduce the ability to provide social services to the poor, just as the needs of the poor increase' (p.280). From 1994-1996, per capita public health spending in Mexico fell by about 15% (25% in the states which benefited most from the PASSPA programme targeted on the uninsured population) or from 3.8 to 3.4 per cent of GDP. At the same time, household out-of-pocket expenditures on health fell: from 3.9% GDP in 1994 to 3.1% in 1995. Cutler et al do not find evidence that increased mortality may be attributed to more vulnerable family members entering work.

## **Case Study 2: Indonesia 1997-8**

### **2A. Macroeconomic Developments**

While Mexico was going through the pain of its economic crisis, Indonesia forged ahead with the other newly industrialised countries (NICs) of South East Asia, demonstrating impressive levels of growth. In 1997, its prospects appeared to remain strong. While inflation was a little higher than other NICs (at 9%) and while it did have a modest current account deficit, it had maintained a fiscal surplus since 1992, had a falling debt service to export ratio and boasted healthy levels of foreign reserves.

Over the three decades to 1997, Indonesia had an average annual growth rate of 6.6%. Meanwhile, average real incomes in the bottom quintile of the population more than trebled (Pincus and Ramli, 1998). This had been accompanied by sustained improvements in indicators of human development. In the 1970s, less than a quarter of children were in primary education. By 1994 this had risen to two thirds and access to primary education was near universal (Watkins, 2000). Nevertheless, there are those who point out that the education strategy was not without its problems. Jones and Hagal (2001) note that completion rates in primary education were only 70%, while the quality of teaching was often poor, especially in private and *madrasah* schools.

When the Thai baht came under speculative attack and then collapsed, triggering economic crisis, Indonesia (in common with other regional economies) took pre-emptive steps to contain the risk of contagion. These included limiting short-term borrowing, widening the bands within which the rupiah could float and pressing domestic banks to support the rupiah. There were underlying weaknesses in the Indonesian financial system, however, which were not revealed by the positive macroeconomic data.

Following early capital account liberalisation in the early 1970s and the deregulation of the banking system in the 1980s, Indonesia had a highly unregulated financial sector. Meanwhile, the pattern of banking activity, particularly in respect of loans to the corporate sector, revealed a tacit use of this conduit as a tool of government industrial policy. Domestic banks provided Indonesian corporations with cheap credit which was implicitly guaranteed by the government. As investors revealed their thirst for investments in Indonesia from the mid 1990s, corporates increasingly issued their own bonds. Placing their trust in the exchange rate peg established by the government, a number of these debts were incurred in foreign denominations and were not hedged by the borrower. Furthermore, 40% of the debts of Indonesian banks and corporations were to Japanese institutions. Their dependence on one source of finance made them vulnerable as these loans were called in to compensate for losses in Thailand. Kenward (1999) notes that the signs of these problems were there, even if they were not observed by the macroeconomists studying Indonesia's performance. In particular, he argues, the scale of Indonesia's gross short-term debt was overlooked: measured relative to central bank reserves, it was higher than Mexico's in 1993 (p.81).

In part due to growing concerns about Indonesia's corporate balance sheet, in part as a consequence of investor contagion from Thailand, the rupiah did come under concerted pressure on 13 August 1997. The Bank of Indonesia deployed 500 million USD in defending the exchange rate before folding and announcing a float of the currency on 14 August. The Indonesian authorities then pursued a strategy of stabilization, seeking to limit capital outflows and raise reserves. In October, it turned to the IMF with which, on 31 October, it concluded negotiations on a new programme, involving 33 billion USD of loans.

Under the 1997 Programme, tariffs were cut on selected products and 16 banks were closed. The bank closures were badly handled, however, so that, rather than restoring investor and creditor confidence in the remaining financial institutions, the financial system looked ever more at risk as depositors scrambled to withdraw their cash. The ill health of Suharto only served further to concern investors. A new programme was negotiated from 11-15 January 1998, conditional on further reforms, including the breaking up of monopolies and independence for the Bank of Indonesia.

The second programme, however, was soon in crisis as the government of President Suharto diverged from its letter of intention by declaring a new currency board and the IMF suspended disbursements in March 1998. Without the IMF's financial support, the payments system broke down. A third programme was negotiated, under which an extremely extensive list of structural and institutional reforms, with the stated intention of dealing with problems of corruption, cronyism and nepotism ('KKN'), was adopted. Shortly after this, prices in staple goods escalated while inflation was fuelled by the central bank's continuing provision of liquidity (in defiance of the programme terms). Rioting broke out when petrol prices rose further on 12 May and in three days of violence, over 1200 were killed.

The macroeconomic effects of the crisis were severe. 1998 saw a contraction in GDP of 13.8%. The economy also shrank in 1999 (0.9%) and 2000 (4.8%). The rupiah depreciated by over 500% from January 1997 to July 1998. Inflation peaked at 77.63% in 1998. Unemployment rose to 6.39% in 1999. The cost of recapitalising

Indonesia's banks was 60 billion USD, or more than 40% of GDP in 1999 (Martinez, 2004).

## **2B. Human Development Impacts**

Indonesia provides a valuable test case in the assessment of human development impacts of financial crisis as a number of household surveys allow for comparison of before and after circumstances.

### *2Bi. Employment*

Frankenberg et al (2003) find evidence of a 40% fall in real wages in the formal sector in 1998: in stark contrast to an 80% hike in the consumer price index and food price inflation of 120%. The decline in wages among the rural self-employed was less, though still substantial (15-20%). Notwithstanding this collapse in the real wage, they find that labour supply increased. Smith et al (2002) support these conclusions. They note that real wages took the adjustment not an increase in the unemployed. For them, this constitutes evidence of the flexibility of Indonesian labour markets.

In keeping with this labour market flexibility, Hugo (2000) argues that population movement was an important coping mechanism for households confronted by the crisis in Indonesia. However, he contests the simplistic view that the urban unemployed simply 'returned to their roots' in rural communities. He finds there to be significant regional variation and that there continued to be stronger population growth in urban areas than rural ones.

Frankenberg et al (1999) differentiate within the labour force participation statistics to find that slightly higher numbers of men and considerably more women are working, although they attribute this largely to 'an entrance of unpaid family workers' (p.iv). Cameron (2000a) finds that at every age from 11 to 16, the labour force participation rate was lower in 1999 than in 1997. Of those children in work, those under 13 worked fewer hours in 1999 while those 14 and over worked more hours.

McGee and Firman (2000) support this view of labour market flexibility, noting in particular the increase in women's employment (to which they attribute 61% of the increase in employment from 1997 to 1998, p.330). Whilst noting this is a coping strategy, they also stress that increased labour at lower real wages constitute part of poverty deepening. Manning (2000) formalises this analysis by distinguishing between Keynesian and neo-classical labour market models and arguing that Indonesia's labour market, in consequence of its large informal sector (which he estimates at 70% of jobs), high share of agricultural jobs and low share of manufacturing jobs, was 'traditional' (i.e. agriculturally dependent, informal, low protection) and therefore closer to the neo-classical model. He concludes: 'Flexible real wages supported the adjustment process, although this contributed to considerable loss of income for most workers' (p.131).

### *2Bii. Household Income*

Frankenberg et al (2003) bring together data on per capita consumption before and after the crisis. They find there to be a 23% fall in average household consumption from 1997 to 1998 and comment: 'This is a stunning decline that is of the same magnitude as the crisis in Russia in the 1980s and the first year for the Great Depression' (p291). However, once they have controlled for various factors (including, for example, child consumption), they find significant variation by income group. In the upper quartile, for example, consumption fell by 30%, whereas it fell by up to 15% in the lowest.

Beegle et al (1999), using the same data set, found evidence to support a high decline in those at the top of the income distribution, but also found expenditures to have fallen sharply at the bottom: in contrast to Frankenberg et al. Levinsohn et al (1999), meanwhile, found that very poor urban dwellers were the most affected by the crisis. In their calculations, they were the most severely affected by changes in the relative price of basic foodstuffs, within which they found very marked variation, e.g. increases in the price of rice ranging by region from 110-280%. In earlier work, Frankenberg et al (1998) had found that the share of household expenditure on food had increased substantially during the crisis for all except the poorest. In many cases, this had been due to delaying purchases of semi-durable goods. Friedman and Levinsohn (2001) found that poor urban households with children were the most severely affected.

Frankenberg et al (1999) use the national statistical estimates of province-specific inflation to estimate that the proportion of households below the poverty line rose by 25% from 1997-9. When they adjust these inflation measures to take account of the data collected through the IFLS (which showed higher overall inflation and higher inflation in rural than urban areas), they suggest that 'the rise in poverty is considerably larger – around 80%' (p.iii). Lanjouw et al (2001) estimate that there was an 11% increase in poverty in Indonesia from October 1997 to October 1998. Skoufias et al (2000) use the Foster-Greer-Thorbecke method to find there was a doubling of poverty from 12.4% to 24.5% from 1997 to 1998. They find that the 'poverty gap' (i.e. the average depth of poverty) increased by a factor of two and half while the 'poverty severity index' went up by a factor of four. They also note an increase in inequality during the crisis. However, they also find that there was greater fluidity into and out of poverty during the crisis period.

There is considerable debate over poverty calculations in Indonesia (see Stalker, 2000). This arises, in particular, because of the clustering of household income distribution such that very marginal changes in the calculation of the poverty line have very significant impacts on the absolute number of those living below it. A more fundamental debate arises over the choice of poverty indicator. Lanjouw et al (2001), for example, argue that the World Bank's measure of poverty according to a basic needs index is superior to the Indonesian government's use of a monetary value based, largely, on basic food costs.

### *2Biii. Health*

Frankenberg et al (1998) found, following the crisis, that the proportion of household income spent on health decreased significantly while health costs rose by at least as much as consumer price inflation, that waiting times increased and that drugs were

less available. Frankenberg et al (1999) found sharp declines in use of public healthcare in the month preceding the IFLS interviews in May 1997 and May 1998: from 7.4% to 5.6% of respondents. Additionally, they found that the number of children under five visiting community primary health care centres (*posyandu*) fell from 46.7% to 27.7%, accompanied by a fall in the number of children receiving vitamin A supplements.

Cameron (2000a) finds evidence in the 100 Villages Survey that adult family members may have reduced their calorific intake to ensure that children had enough to eat. 17.6% of families reported a food shortage in the 12 months to August 1998 and, while there was no evidence of changes in child weight and height by age, there were signs of a fall in adult body mass index (BMI) values. Frankenberg et al (1998) also found evidence of poorer nutrition among adults, especially the poorest, although most other measures of health status were improved.

Nevertheless, Frankenberg et al (1999) also found that 'in many dimensions, the current health status of respondents in 1998 is better than it was in 1997' (p.vi). Given other findings (lower expenditures on healthcare, lower calorie diets among adults), it is intuitively hard to see why this would be, although it should be noted that 'the IFLS health workers consistently indicate that the health of our poorest respondents has deteriorated over the last year' (p.vi). Stalker (2000) claims that one of the problems of before and after calculations is that the provision and quality of healthcare up to 1997 was not as high as was official claimed. This would be consistent with access to services falling but (perceived) health outcomes remaining constant.

### *2Biv. Education*

Cameron (2000a) uses the 100 Villages Survey to estimate changes in child school attendance rates as a result of the crisis. She finds that school attendance dropped slightly before rebounding to a higher level than before the crisis. At the primary level, there was little difference between income groups. At the lower secondary level, however, attendance fell among higher quintiles, but rose among lower quintiles. Cameron suggests that this indicates either that higher income groups were more adversely affected by the crisis, or that they were more mobile in response to it (resulting in their removing children from school). Jones and Hagal (2001) point out that, although government finance for education fell in real terms, so too did school fees. They hypothesise that this may have been due either to an instance of 'community solidarity' (where school principals limited increases in deference to the social impacts of the crisis) or to commercial calculations (that a short-term loss in the level of fees should be traded for a longer-term gain in sustaining the number of students).

Conversely, Frankenberg et al (1998) find there to have been significant declines in enrolment of young children among the poorest. Frankenberg et al (1999) support this finding. In their research, they find that 'children from the poorest households are about five times more likely to be out of school than their counterparts from households at the top of the expenditure distribution' (p.iv). They find, in common with Beegle et al (1999), that the percentage of 7-12 year olds not enrolled doubled

from 6% in 1997 to 12% in 1998. Wetterberg et al (1999) find that rural areas were more adversely affected by the crisis in education outcomes than urban ones.

### *2Bv. Public Policy.*

Ananta and Siregar (1999) assess the impacts of the Indonesian government's *Jaringan Pengaman Sosial* or 'Social Safety Net' (SSN) policies. Introduced in financial year 1998-1999 (with support from the World Bank), this constituted 30% of government expenditure, devoted to temporary policies to insulate the most vulnerable against the impacts of the crisis. They characterise the SSN policies as being largely compensatory and targeted on three goals: food security; income generation; preservation of access to critical social services. They find that targeting of policies is hampered by the weakness of economic indicators. For example, unemployment is a poor indicator in Indonesia, where the absence of unemployment benefits makes a very low rate of unemployment the norm. They also find evidence of weak implementation due to poor administration of the policies.

Lanjouw et al (2001) use static benefit-incidence analysis in Indonesia to show that public expenditure on primary health and education is pro-poor and further indicate (using dynamic benefit-incidence calculations) that changes in these expenditures tend to be progressive, so that an increase in primary education expenditure tends to benefit the poor most.

Cameron (2000b) analyses the success of the Indonesian government's scholarship programme, which was intended to limit drop-out rates. She finds that there is no evidence of an impact on this goal at primary or upper secondary levels. However, she estimates the programme to have had a positive impact at the lower secondary level, reducing drop-outs at this point by 3%. She gives three possible reasons for the limited impact: a fall in the opportunity cost of children attending school due to excess adult labour supply; greater flexibility shown on the part of schools to late or deferred payment of fees; an increase in the value parents assign to education. The second reason may be supported by Frankenberg et al (1998)'s finding that education expenditure declined most among the poorest.

## **Conclusions**

Mexico and Indonesia experienced two of the deepest economic crises of the last decade. It is unsurprising that the consequences of these shocks manifested themselves in impacts on human development. The recorded impacts appear, broadly, to support the hypotheses on income put forward earlier. The findings on health are more mixed, although there is support for a number of the hypotheses. In education, it appears that the substitution effect largely trumped the income effect.

Of the noted impacts, the most striking are the following:

### *Income*

- while there is contention over the magnitude, there is agreement that the number of people living in poverty in Indonesia grew significantly following the crisis

- both Indonesia and Mexico saw a very significant fall in the real wage rate
- the labour market shock was concentrated among urban wage-workers in the non-exported sector
- increased labour supply in response to a declining wage is evidence of an overall deepening of poverty and of a paucity of alternative coping strategies when household income is negatively affected by a general shock
- in order to maintain household expenditures, there is evidence of poor households dis-saving in a way which increased their 'prospect' poverty
- those who moved into the informal sector of the labour market had less job security and also became more vulnerable to future (general or specific) shocks as they no longer had access to employment-related benefits such as firm-based social and health insurance

### *Health*

- expenditure by government and households on health services fell significantly in both Mexico and Indonesia
- there was evidence in Mexico of increased mortality among the very young and very old
- adults in poor households in Indonesia had a poorer diet after the crisis
- however, health outcomes in Indonesia were not entirely negative

### *Education*

- in all but the immediate post-crisis period in Indonesia, school attendance increased following the crises
- in both countries, child labour declined

This short survey appears to have demonstrated, therefore, that economic crises do have significant impacts on human development. Countries like Indonesia, which have made strong progress in bringing down poverty, are vulnerable to a severe economic shock which pushes many back into poverty.

Of greatest concern is the extent to which the immediate impacts of crises may be storing up human development problems for future generations. More analysis is required of the persistence of the impacts. The studies surveyed focused on the immediate effects of economic crisis. Longer term trends are harder to discern, not least due to an absence of comparable data, attribution of causation and managing counter-factuals. Nevertheless, this further work is important if we are more clearly to understand the enduring impacts of economic crisis on human development.

From this survey, it does, at least, appear that persistent effects are likely. They may come through the individual channel: when a child is withdrawn from school and does not return, that child is disadvantaged for life, even if the aggregate number of enrolments reverts to trend. They may also come through the aggregate channel: a shift of employment into the informal sector may not only threaten household income but also undermine poverty reduction strategies reliant on revenues from formal employment, for example. Finally, they may come through the same macro channel which is at the root of economic crisis in the first instance: if crisis 'management' increases the external debt of a country, it reduces the capacity of that country to sustain social expenditures in favour of human development.



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