

Addressing Vulnerability in East Asia: A Regional Study

Report No. 69871-EAP



Social Protection Unit
Human Development Sector Unit
East Asia and Pacific Region
The World Bank



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Regional background papers and several country case studies were prepared for this report. A list of background papers is presented in the first section of this report and the revised versions of the background papers are available as companion papers to this report. The authors of the individual studies are: Shubham Chaudhuri, Hideyuki Nakagawa, M. Caridad Araujo, Laura Pabón, Natsuko Kiso, Emily Farchy, Eduardo Olaberria, Jamele Rigolini, Silvia Redaelli, Timothy Thomas, Helle Molsted-Alvesson, Loveena Dookhony, Norman Loayza, Eduardo Olaberría, Jamele Rigolini, Luc Christiaensen, Magnus Lindelow and Adam Wagstaff, Carmen de Paz and Valerie Kozel.

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Section I INTRODUCTION

The East Asian and Pacific region has achieved tremendous progress in poverty reduction in recent years. Over the past two decades, nearly all countries in the region have experienced dramatic declines in the share of population living below the US\$1-per-day poverty line. Most countries have also made considerable progress in addressing the non-income dimensions of poverty, for example as reflected in improved health and education indicators. Much of this progress can be attributed to the region's rapid economic growth, which has helped boost household incomes.

However, further progress in poverty reduction may be undermined by the high levels of vulnerability in many countries across the region. Households in the East Asia and Pacific region are vulnerable to a range of risks that threaten to push the near-poor into poverty and the poor into deeper poverty. These risks include household-level shocks such as illness as well as larger-scale shocks such as natural disasters. Households in the region are also facing increased risks driven by globalization, economic structural change, and other factors related to social and political modernization. For example, East Asian economies tend to have very flexible labor reallocation processes and high job turnover, which is a strength overall but can have adverse impacts for individual workers and their families. At the same time, the social risk profile of countries in the region has changed profoundly with fast urbanization, rapidly aging populations, and the emergence of new types of shocks such as the increased exposure to region-wide communicable diseases such as SARS.

The problem of vulnerability was underscored by the recent food, fuel, and financial crises and natural disasters such as the 2004 tsunami that have hit the region. These crises showed that a large proportion of the region's population remains vulnerable to shocks. However, it should be noted that even in the absence of such high-profile aggregate shocks, considerable movements in and out of poverty have been taking place, reflecting household exposure to a myriad of more localized shocks. At the same time, it appears that informal social safety nets such as extended family networks and community-based support, which were once the main source of assistance for households in East Asia and the Pacific when faced with shocks, may not be sufficient for helping households to manage such events.

The recent crises have renewed interest among the policymakers in strengthening risk management systems and social protection in the region. Although attention to social protection increased significantly following the 1997 financial crisis, most countries in East Asia and the Pacific did not sustain their efforts to build social protection (SP) programs and institutions. However, the heightened sense of vulnerability brought by the recent food, fuel, and financial crises have spurred countries to reconsider their SP strategies and focus greater attention on improving programs aimed at reducing

poverty and vulnerability. Countries are also realizing that effective risk management systems are important not only for preserving household welfare but also for fostering economic growth, improving competitiveness, and maintaining social stability.

In building effective risk management systems it is important to keep in mind that safety nets typically fulfill a dual role -- a redistributive instrument and insurance mechanism for the poor and the vulnerable. Many existing safety net programs serve primarily as instruments of income redistribution in the short-run as well as in the long-run (e.g., conditional cash transfer programs). Yet, many SP programs also serve as an insurance mechanism. The insurance role of safety nets requires a flexible budget that can be scaled-up rapidly to meet unanticipated circumstances. The political support and will to raise revenue and re-prioritize spending towards safety nets are partly affected by whether safety nets can be or are linked to the growth strategy of the country (such as infrastructure creation/maintenance, human development).

The degree to which countries have developed risk management systems and SP programs varies widely across East Asia and the Pacific. Some countries have made much more progress in putting basic SP programs in place, which has enabled them to respond swiftly to crises and help households manage shocks when they occur. For example, even before the recent crises, China already had a relatively comprehensive SP system including social insurance, urban social safety nets, and labor market programs. The existence of such SP infrastructure and institutions has enabled the government to respond rapidly to rising unemployment and underemployment by scaling up support and increasing program coverage. In contrast, lower-income countries with less developed safety nets in place have had more difficulty shielding vulnerable groups from the effects of the recent crises.

In general, greater efforts are needed to strengthen risk management systems and SP programs in the region. Although SP systems are at different stages of development across the region, countries in East Asia and the Pacific share some similar challenges in developing effective programs and policies to help households manage risk. Risk management systems in most countries appear to be quite fragmented, lacking an overall strategic approach and coordination across the many programs and agencies involved remain weak. In general, the coverage of formal safety nets and programs is limited, particularly when considered against the needs in each country. At the same time, the levels of benefits provided by SP programs tend to be low and in many cases do not provide sufficient assistance to help households manage risks and emerge from poverty.

As a basis for developing a more strategic approach to reducing vulnerability in the region, this report describes the nature and level of vulnerability in East Asia and the Pacific and assesses current SP efforts. This overview report pulls together findings from numerous background reports (See Box 1) and other recent studies related to vulnerability and SP in East Asia and the Pacific. It begins by describing the types of

shocks experienced in the region as well as their frequency and magnitude (Section II). The report then examines the implications of vulnerability for household well-being, poverty reduction, and growth in East Asia and the Pacific (Section III). Against this backdrop, the report takes stock of current SP policies and programs in the region and highlights key issues and challenges that have arisen in the implementation of such programs (Section IV). The report concludes by highlighting some cross-cutting policy implications and areas for further attention (Section V). The report aims to benefit a wide audience in the EAP region, including SP policy makers, specialists working on poverty/vulnerability, and academia.

Box 1: Description of the background papers

Several regional and country case specific studies were prepared as part of this regional study. The research products consisted of the analysis of macroeconomic, health shocks, weather-related and agricultural shocks and employment shocks. Additional studies on risks and shocks were conducted at the country level in Timor-Leste and Lao PDR. A brief description of the content from each study is presented below.

I. Regional studies

- **Managing East Asia's Macroeconomic Volatility.** This paper investigates the factors behind the output growth volatility in the region, and derives lessons about how to mitigate renewed external pressures in face of the financial crisis.
- **Employment shocks and well-being in East Asia.** This paper discusses some of the evidence of the effects of the recent crisis on the East Asian labor markets and tries to understand the frequency and the impact of employment shocks on households' well-being in three different East Asian countries: Lao PDR, Thailand and Timor Leste.
- **Health shocks, vulnerability, and public policy: perspectives from Asia.** This paper aims to review the empirical evidence on risk management strategies and the impact of health shocks in the East Asia and the Pacific region. A second aim of the paper is to outline the rationale of government intervention to help households manage health-related risks, and to provide a selective overview of policies and programs implemented by countries in the region.

II. Country-specific studies

- **Employment shocks and well-being in Thailand, 2005-2007.** This paper uses two rounds of a Thai panel of data in order to understand what types of fluctuations urban Thai workers are exposed to. It also analyses the effects of unemployment spells on workers and their families' household expenditure and well-being.
- **Contrasting Welfare Impacts of Health and Agricultural Shocks in Rural China.** Using detailed information on a variety of shocks and household characteristics from the Chinese Rural Social Protection Survey, this paper examines the frequency of agricultural and health shocks, what ex-post coping strategies are employed, and how shocks affect the welfare of Chinese rural households.
- **Risk and Vulnerability in Timor-Leste.** This paper analyzes the main shocks, vulnerabilities and coping strategies of households in Timor-Leste based on the most recent household survey that gathered shock-specific data on the different kinds of shocks (agricultural, economic, socio-political, and demographic).
- **Geographically Referenced Rainfall and Weather-Related Shock Database for Vietnam.** Using Vietnamese weather station data, this paper discusses and proposes alternative measures to generate data that shows the occurrence of weather-related shocks on households (i.e. drought, rainfall, floods, and cyclones).
- **Vulnerability in Lao PDR:** A similar study to the Timor study was carried out in Lao to understand the frequency of shocks and the coping strategies adopted by households in Lao. This study was complemented by findings from qualitative data.
- **Voicing vulnerability: Gender and poverty-specific consequences of shocks in Lao PDR.** In Lao PDR, qualitative data from focus group discussions with members of the community (carried out separately by gender) and in-depth interviews to a sub-sample of households was collected to better understand the households' main shocks and their coping strategies. This paper documents informal and formal mechanisms through which households cope with different kinds of risks.

Section II UNDERSTANDING HOUSEHOLD VULNERABILITY TO RISK

1. Introduction

This section presents the concepts of vulnerability and poverty. The term *vulnerability* is viewed from an economic context, where it is conceived as the likelihood of suffering from future deteriorations in standard of living which may result in a state of poverty, or inability to meet basic needs. Therefore, vulnerability is stated as an ex-ante measure of well-being, reflecting not so much how well off a household (or an individual) currently is, but what its future prospects are. What distinguishes vulnerability and poverty is that poverty is an ex-post concept (i.e., outcome is already observable), while vulnerability is related to uncertainty about the future welfare state. The uncertainty that households face about the future stems from multiple sources of risk, such as natural shocks, health shocks, volatility in food or input prices may, etc. If such risks were absent (and the future were certain), there would be no distinction between ex-ante (vulnerability) and ex-post (poverty) measures of well-being.

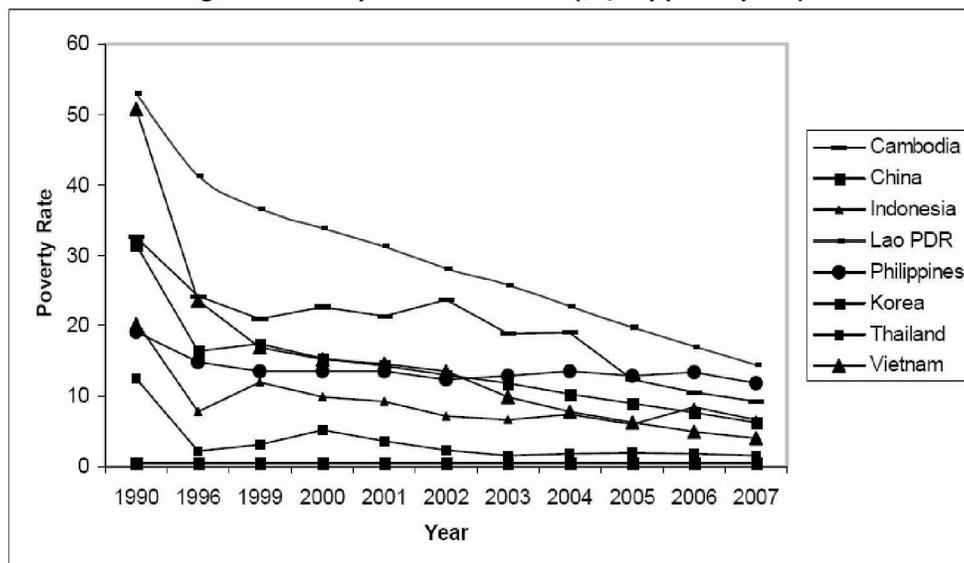
In general, poor are usually amongst the most vulnerable to adverse events. But not all those who are vulnerable are necessarily poor and not all individuals with similar socio-economic status face the same degree of impact after a negative event occurs. In fact, the degree of impact or vulnerability depends on characteristics of the risk and the household's ability to respond to risk. Given these facts, we know that there are considerable flows into and out of poverty linked to the household vulnerability. In such volatile and prone to natural shocks environment, a SP scheme might be developed to protect households from the adverse effects of shocks. It is necessary to think about adopting a forward looking approach that not only identifies the groups of households that are presently poor but also targets the households that are vulnerable to economic shocks and other risks such as natural disasters and climate conditions.

In thinking about poverty and vulnerability, it is important to realize that there are two groups of households: (a) those who are vulnerable to transitory poverty if exposed to adverse shocks; (b) those who are structurally or chronically poor – many of those households have been affected by shocks in the past, and have limited long-term income generating capacity. In the 1st case, the SP (SP) strategy may focus on protecting from shocks, and assisting when shocks happen. In the 2nd case, the focus could be on regularly mitigating chronic poverty, and creating conditions for escaping poverty.

To better protect household from shocks one must also better understand how households face and manage risks. To launch a vulnerability reduction strategy countries needs to have a better understanding of risks, risk exposure, the outcomes that are likely to be generated by shocks, and the most efficient means (and tradeoffs) of managing risks. With an in-depth country assessment of risks, countries can design SP policies to mitigate such impacts.

Where do the East Asia and Pacific countries stand in terms of vulnerability and poverty? Although the levels of persistent poverty have fallen in the East Asia and Pacific region, vulnerability to poverty remains high. Most countries in the region have made impressive progress in reducing overall levels of persistent poverty in recent years (Figure 1). Since 1990, the share of the region's population living in absolute poverty (less than \$1.25/day) has fallen from 55 percent to less than 10 percent of the population, while the number of poor people has declined from about 873 million to less than 200 million (World Bank, 2009a). Nonetheless, a large and growing body of evidence indicates that vulnerability to shocks is still high in many countries across the region, which could undermine the progress achieved in poverty reduction. Households remain vulnerable to various risks that can push the near-poor into poverty and the poor into deeper poverty. Oftentimes, this vulnerability is heightened by exposure to multiple risks.

Figure 1: Poverty Rates in East Asia (\$1/day poverty line)



Source: World Bank (2008b), presented in World Bank (2008d).

Households in East Asia and the Pacific appear to face similar types of risks, although the frequency and severity of shocks can vary significantly by country and even within countries. This section provides a general overview of the different types of shocks that may affect households or individuals then describes some of the more common shocks experienced in East Asia and the Pacific. This discussion draws upon country examples and findings from household surveys conducted for this study in Lao PDR and Timor-Leste (described in Box 2) to help illustrate the major types of shocks as well as their frequency and severity. However, it should be recognized that vulnerability to such shocks may vary significantly due to factors such as geographical location, while the actual degree to which such shocks affect well-being will depend on the various risk management strategies available to individuals and households facing these shocks.

**Box 2: Qualitative and quantitative data on risks and shocks:
Lao PDR and Timor-Leste surveys**

To develop a better understanding of household exposure to risk and the strategies used to cope with shocks, data was collected in Lao PDR and Timor-Leste in 2008. The exercise was unique in having modules designed specifically to capture household vulnerability to risk and gender differences in the perceptions of risk.

The questionnaires of the risk and shock modules began by asking the households whether they had experienced any one of a number of shocks during a reference period. This was followed by a relatively detailed list of shock-specific questions on impact, coping strategies, and recovery path.

As described in World Bank (2009i) and (2009m), two surveys were collected, and the one in Lao PDR was supplemented by a very rich qualitative study.

- Lao PDR: Data was collected from 600 rural and urban households in 30 randomly selected communities in the provinces of Vientiane, Phongsaly, and Attapeu. In each community, the household survey was administered to 20 randomly selected households. A questionnaire on the community profile was also administered to the village leaders, and group discussions were held with government officials in each included district.

After completion of the household surveys, qualitative fieldwork was carried out in 11 communities that were purposely selected for diversity of geographical location, type of livelihood, ethnic background, and access to SP-related programs. In each community, focus group discussions were carried out separately with men and women. Following focus group discussions, in-depth interviews were conducted with seven households, purposely selected to obtain a mix of households who had experienced severe shocks and reportedly had/had not recovered, in each of the 11 communities.

- Timor-Leste: A 2008 extension survey (TLSLS2-X 2008) was conducted to address four topics not explicitly covered by the second Timor-Leste Survey of Living Standards (TLSLS2), which collected information in 2007 on the living conditions of urban and rural households in each of the country's five regions. The 2008 extension survey revisited approximately 1500 households, or about one-third of households interviewed in the original survey. This subsample was selected at random to be representative of urban and rural areas. One of the four topics covered by the extension survey was risk and vulnerability. This risk and vulnerability module looked at the incidence of shocks, the impact of shocks on households, and coping strategies.

2. Types of Shocks

Shocks can be usually classified into different types, based on the source of the shock.

Natural shocks can be devastating everywhere, particularly in rural areas where livelihoods rely more heavily on natural resources. Natural shocks include disasters (such earthquakes), environmental damage (such as erosion or deforestation), as well as problems that damage crops or livestock (such as pests or illness). *Economic shocks* encompass changes in employment, prices, or terms of trade. *Socio-political shocks* can place significant distress on the functioning of a society. They include a variety of events with a wide range of effects, from riots to crime, terrorism, or war. *Health shocks* include illness, injuries, disability, old age, and death. Certain health shocks may be a consequence of other shocks, such as injuries from an earthquake or depression after a long period of unemployment. *Internal family shocks* such as abandonment, divorce,

and domestic violence are also very important determinants of changes in livelihoods, access to assets, and incomes. They can have important psychological and emotional effects on people, and their effects are likely to be concentrated disproportionately on particular vulnerable groups such as women, children, or the elderly.

Shocks can also be classified according to how widespread their effects are. Shocks are of a *covariate* nature when they hit many households, communities, or even countries at once, as in the case of natural disasters or macroeconomic shocks. Shocks can also be *idiosyncratic* in nature when they affect specific individuals or households at different times, as with job loss, crime, or illness. Some shocks can be both idiosyncratic and covariate shocks: for example, when transmittable disease (often an idiosyncratic shock affecting a few individuals or groups) is widespread, it can cause concerns of a possible pandemic, as in the recent case of the H1N1 flu. Table 1 presents a more comprehensive list of types of shocks, classified along the two dimensions described here.

Table 1: Types of shocks

	Idiosyncratic	Covariate	
	Affect individuals and households	Affect communities or groups	Affect regions or nations
Natural shocks	Fire, pest infestation, crop disease, livestock diseases, pollution, deforestation.	Drought, flood, mudslides, storms, frost, hail, extreme cold, extreme heat, fire, pest infestation, crop disease, livestock diseases, avian flu, landslides, pollution, deforestation, nuclear disaster.	Volcanic eruption, tsunami, earthquake, high wind, drought, flood, mudslides, storms, earthquakes, frost, hail, extreme cold, extreme heat, fire, pest infestation, crop disease, livestock diseases, avian flu, landslides, pollution, deforestation, nuclear disaster.
Economic shocks	Job loss, resettlement, harvest failure, reduction in hours worked, non-payment or delay in payment of income, collapse of business.	Increase in food prices, shortages of inputs, decline in prices of commodities sold, unemployment, growth collapse, hyperinflation, balance of payments, financial or currency crisis, technology shock, terms of trade shock, transition costs of economic shocks.	
Socio-political shocks	Crime, robbery, theft, cheating.	Crime, ethnic conflict, religious conflict, confiscation of property, forced resettlement, political violence, gang activity, civil strife, war, social upheaval, riots, political default on programs, coup d'état.	
Health shocks	Illness, injury, death, disability, old age	Epidemic	Pandemic
Internal family shocks	Divorce, abandonment, family disputes, domestic violence		

3. Major Types of Shocks in East Asia

At the household level, a common idiosyncratic shock is the illness or death of a productive household member. If an economically active member becomes ill and is unable to work, the impact on household income can be severe. Other household members may also lower their labor supply to focus on caregiving. Furthermore,

households risk losing whatever savings they have accumulated and/or incurring debts they cannot repay to cover medical expenditures, further reducing household welfare. Health risks are particularly high for women throughout East Asia, mainly in connection with their reproductive role and particularly among ethnic minority groups. For example, maternal mortality rates (MMRs) in Lao PDR and Cambodia remain strikingly high at 660 and 540 deaths per 100,000 live births, respectively—comparable to those in Ghana (560), Kenya (560), and Uganda (550) (WHO, 2007).¹ In Vietnam, MMRs among ethnic minority women are about nine times higher than among women in the majority group (World Bank, 2008c).

Notably, the nature of health shocks is changing as some countries in the region undergo epidemiological transitions. For example, the Philippines has a growing burden of non-communicable diseases (NCDs) and injuries. NCDs are among the leading causes of mortality and morbidity in the country, and their prevalence is expected to rise due to the increasing share of fats in the Filipino diet and higher rates of obesity, which rose from 17 percent of the population in 1993 to 24 percent in 2003. The increasing prevalence of NCDs affects the poor both in terms of treatment costs for these chronic conditions and in terms of reduced productivity, morbidity, and premature mortality (Racelis, 2008).

Employment shocks, such as unexpected job loss, are another type of idiosyncratic shock experienced by households in East Asia. While macroeconomic crises can lead to covariate employment shocks if they affect market wages or result in a shutdown of firms, employment shocks are often idiosyncratic. The impacts of such employment shocks can be particularly strong in places like East Asia which generally has flexible labor markets, a high degree of informality, and relatively weak SP systems. Using Household Socioeconomic Panel survey data for 2005 and 2007 to analyze labor market dynamics in Thailand, World Bank (2009d) found evidence of significant variability in the employment of urban workers over time, pointing to the possible risk of employment shocks. Unemployment spells were not uncommon, with 78.2 percent of those surveyed having no unemployment spell in the 12 months prior to their two interviews (Table 2).²

¹ As described in WHO (2007), these estimates were developed by WHO, UNICEF, UNFPA, and the World Bank in an effort to establish internationally comparable estimates of maternal mortality. In some cases, the methodologies used resulted in country estimates that differed from nationally reported country estimates in some cases. For Lao PDR, the officially reported unadjusted direct estimate of MMR from the 2005 population census was 405 per 100,000 live births.

Table 2: Profile of the employed in Thailand

	2005	2007	2005 and 2007
Number of jobs			
One job	88.6	89.2	71.3
Two or more jobs	11.4	10.8	3.9
Number of unemployment spells			
0	93.4	93.1	78.2
1	5.7	6.4	1.0
2	0.9	0.5	0.1
Number of working days per month			
Less than 25 days	32.1	39.4	18.3
From 25 to 28 days	40.8	35.8	18.9
From 29 to 31 days	27.1	24.8	13.0
Observations	4,194	4,256	

Note: The table was calculated over the persons who, in the last 12 months prior to the interview, worked to earn money as wages/profit and other kinds of income. 2005 weights were applied to both surveys.

Source: Thailand Household Socioeconomic Panel survey data, 2005 and 2007 rounds.

In some countries in the region, it appears that vulnerability to employment shocks has a strong gender dimension (World Bank, 2008c). Reflecting gender-based discrimination in employment practices in East Asia, it was mostly women who lost their jobs as a consequence of the 1997/98 financial crisis across all countries (UNPF, 1999). In China, women have comprised a majority (about 60 percent) of laid-off workers, and the All China Federation of Trade Unions noted that women were often the first to be laid off in the restructuring of state-owned enterprises.² Interestingly, World Bank (2009d) finds evidence of the opposite effect in Thailand, with the probability of unemployment among women being lower than among men, controlling for other socioeconomic and demographic variables.

Natural disasters such as droughts, floods, storms, and earthquakes are one of the most common covariate shocks in the East Asia and Pacific region. As starkly illustrated by the impacts of the 2008 Sichuan earthquake in China and the 2009 Ondoy and Pepeng typhoons in the Philippines, such natural disasters pose a major threat to the well-being of households. They have the potential to cause casualties and disrupt the livelihoods of those affected, destroy critical infrastructure, and bring substantial economic losses. Because they are covariate in nature, affecting groups of households or individuals in a particular geographic area, natural disasters may leave households without a source of informal assistance within their communities.

² See Gale Summerfield (1994), Zhang Qiujuan (1999), and Shufeng, Song (2003), as cited in Liu 2007. ACFTU quoted in *China Daily*, July 2, 2004.

Another potential covariate shock is macroeconomic volatility, as illustrated by the 1997/98 East Asia financial crisis and the more recent global financial crisis. As discussed in Olaberria and Rigolini (2009), volatility in output growth can lower welfare by affecting the labor market, earnings, and consumption. When households have limited capacity to insure against shocks—as is the case particularly with poor households—their earnings and consumption patterns closely follow overall macroeconomic trends. Olaberria and Rigolini (2009) find that one of the main sources of vulnerability to external shocks in East Asia and the Pacific is the high degree of openness to trade: the average trade volume for non-OECD East Asia during 2001-2005 was 78 percent of GDP, compared to 45 percent for OECD countries. Although this high trade volume has been a key contributor to economic growth in East Asia, it also leaves East Asian countries more vulnerable to external shocks.

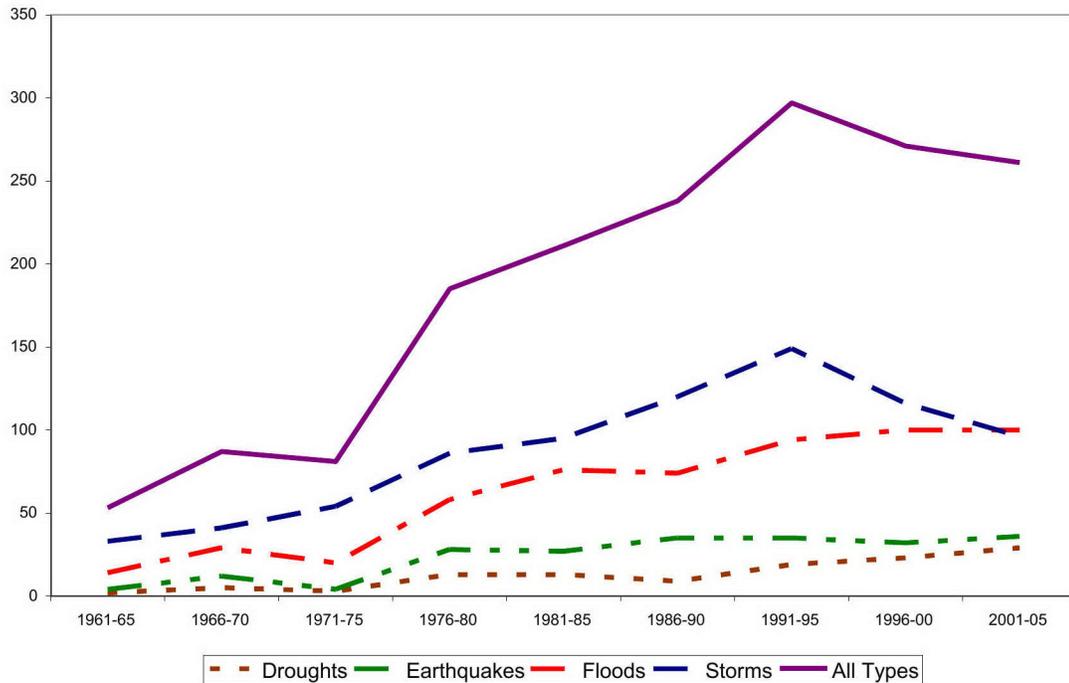
Similarly, as shown by the recent food and fuel price crises, households in the region are vulnerable to price fluctuations. The actual impact of price fluctuations on households depends on whether the household is a net producer or consumer of those particular goods. In Timor-Leste, for example, 56 percent of surveyed households related the increase in food or commodity prices during the recent food and fuel price crisis to a shock to their welfare. About 26 percent of households reported that they suffered from an unexpected decline in the demand for, or prices of, their produce, while about 13 percent said they were negatively affected by higher input prices and/or input shortages (World Bank, 2009i). In Indonesia, 76 percent of the poor are net rice buyers, including around 72 percent of the rural poor. It has been estimated that every 10 percent increase in rice prices reduces the real value of the expenditure of the poorest tenth of the population by 2 percent (Brahmbhatt and Christiaensen, 2008).

4. Frequency and Magnitude of Shocks

Country-level findings show that households in East Asia are oftentimes vulnerable to multiple shocks. The frequency with which a household experiences shocks is an important determinant of household vulnerability. When households face multiple risks or shocks, managing the consequences may become much more difficult, exacerbating the impact of such shocks. For example, China experiences floods, droughts, earthquakes, typhoons, landslides, and other extreme climate conditions each year, and a single area can be hit with natural disasters multiple times a year. A qualitative household survey in Mashan county of Guangxi province found that households faced various natural disasters during all four seasons (COHD, 2006). In Timor-Leste, analysis of the Living Standards 2008 extension survey showed that approximately 77 percent of households suffered from more than one type of shock between 2006 and 2008. On average, each household in the sample experienced 2.87 shocks during this period, amounting to almost one shock per year (World Bank, 2009i).

Moreover, it appears that the frequency of shocks such as natural disasters may be increasing in East Asia and the Pacific. Figure 2 illustrates the trends in all four major types of natural disasters in East Asia during 1960 to 2005. The ongoing climactic changes around the world point to an increase in both the frequency and magnitude of such disasters, although it should be noted that the increasing frequency may also be attributed in part to better reporting of natural disasters over time. The costs and impacts of such shocks for East Asia are discussed in the following section.

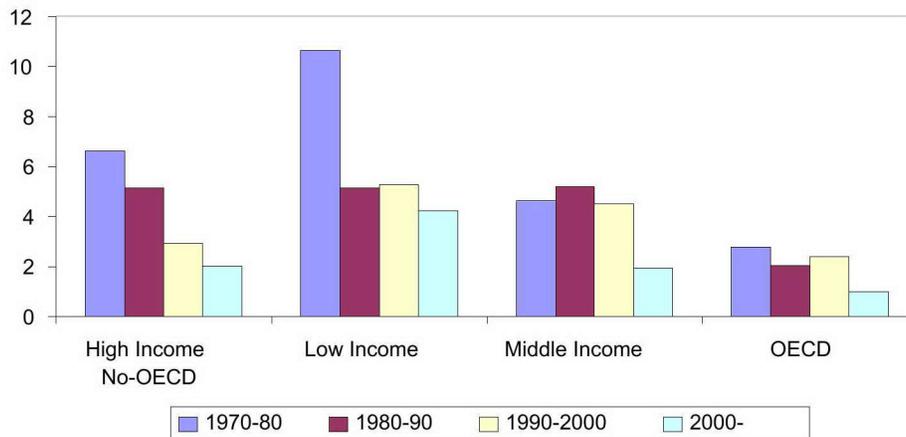
Figure 2: Trends in natural disasters in East Asia (1960-2005)
Number of Disasters



Source: World Bank calculations based on data from the Emergency Events Database (EM-DAT) of the Centre for Research on the Epidemiology of Disasters (CRED).

Likewise, output growth volatility in the region remains well above OECD levels, particularly among the low-income countries. Although the East Asia and Pacific region has experienced a dramatic decrease in output growth volatility over the last two decades, the impacts of the current global economic slowdown show that East Asian economies remain sensitive to external shocks. Terms of trade in low- and middle-income countries in the region have worsened rapidly, particularly in commodity-exporting countries, and both domestic and foreign direct investments have been falling. The differences between countries in East Asia at varying levels of development are also striking. As shown in Figure 3, the most striking reduction in output growth volatility can be observed among high income non-OECD East Asian countries, where volatility is now less than a third of what it was in the 1960s and close to OECD levels, which are below 2 percent. In contrast, in the last two decades, low-income East Asian countries did not make significant progress in reducing output growth volatility, which remains high at around 4.2 percent (Olaberria and Rigolini, 2009).

Figure 3: Volatility of output growth in East Asia and the Pacific, by income level



Note: Volatility is measured as the group's average (weighted by GDP) of the standard deviation of output growth. OECD: Korea (Rep), New Zealand, Australia, Japan. High Income Non-OECD: French Polynesia, New Caledonia, Singapore, Hong Kong. Middle Income: Philippines, China, Thailand, Malaysia, Fiji, Indonesia, Kiribati. Low Income: Solomon Islands, Myanmar, Papua New Guinea. Source: Olaberria and Rigolini (2009).

Such volatility can translate into more frequent employment shocks. Economic, demographic, and other transitions have brought rapid changes to the labor market in the East Asia and Pacific region. Flexible labor reallocation processes and high job turnover are common, and as the region becomes even more open and integrated with the global economy, the frequency of employment shocks may increase. Furthermore, the shift away from agricultural employment toward industry and services, particularly in the informal sector and into self-employment, means that workers may be facing new types of risks. Although agriculture is still a major source of employment in many countries, employment in agriculture has fallen significantly, from 67 percent of the region's labor force to 47 percent (World Bank, 2009c).

Urbanization is also giving rise to new challenges that could increase the vulnerability of households. Along with the sectoral employment shifts described above, the East Asia region has also experienced rapid urbanization. The World Bank estimates that the region's urban population increased from 21 percent of the total in 1980 to 36 percent in 2000 and is expected to reach 50 percent by 2025 (World Bank, 2004). The movement of people from rural to urban areas also means that households are being exposed to different types of shocks. For people migrating to urban areas, natural disasters that affect crops may become less important than economic shocks that affect the availability of jobs in urban labor markets. In places such as China, which has experienced a massive migration of workers from rural to urban areas, migrant workers have faced new sources of vulnerability stemming from discriminatory employment practices, low wages, and limited access to social services (World Bank, 2007a).

The relative significance or magnitude of shocks experienced by households differ by country. In Lao PDR, for example, a survey of 600 households in 2008 found that natural and biological shocks were the most common type of shock experienced by households over the previous 12 months (Table 3). Around 36 percent of surveyed households were affected by such episodes, in particular by droughts, pests in rice fields, and livestock diseases. Health shocks were also common, with more than 25 percent of surveyed households reporting that they were adversely affected during the last 12 months. The reported health shocks varied from dengue fever in children to the onset of diabetes among adults and undiagnosed infection-like symptoms (World Bank, 2009m). In contrast, although natural and biological shocks also affected the majority of surveyed households in Timor-Leste, socio-political shocks were much more prevalent than in Lao PDR. The recurrent violence and socio-political instability in Timor-Leste over the last decade has been a major source of household vulnerability, and almost one-third of surveyed households had experienced socio-political shocks such as crime and robbery, political violence, or ethnic or religious conflict since 2006 (World Bank, 2009i).

Table 3: Types of shocks and proportion of sampled households experiencing shocks in Lao PDR and Timor-Leste

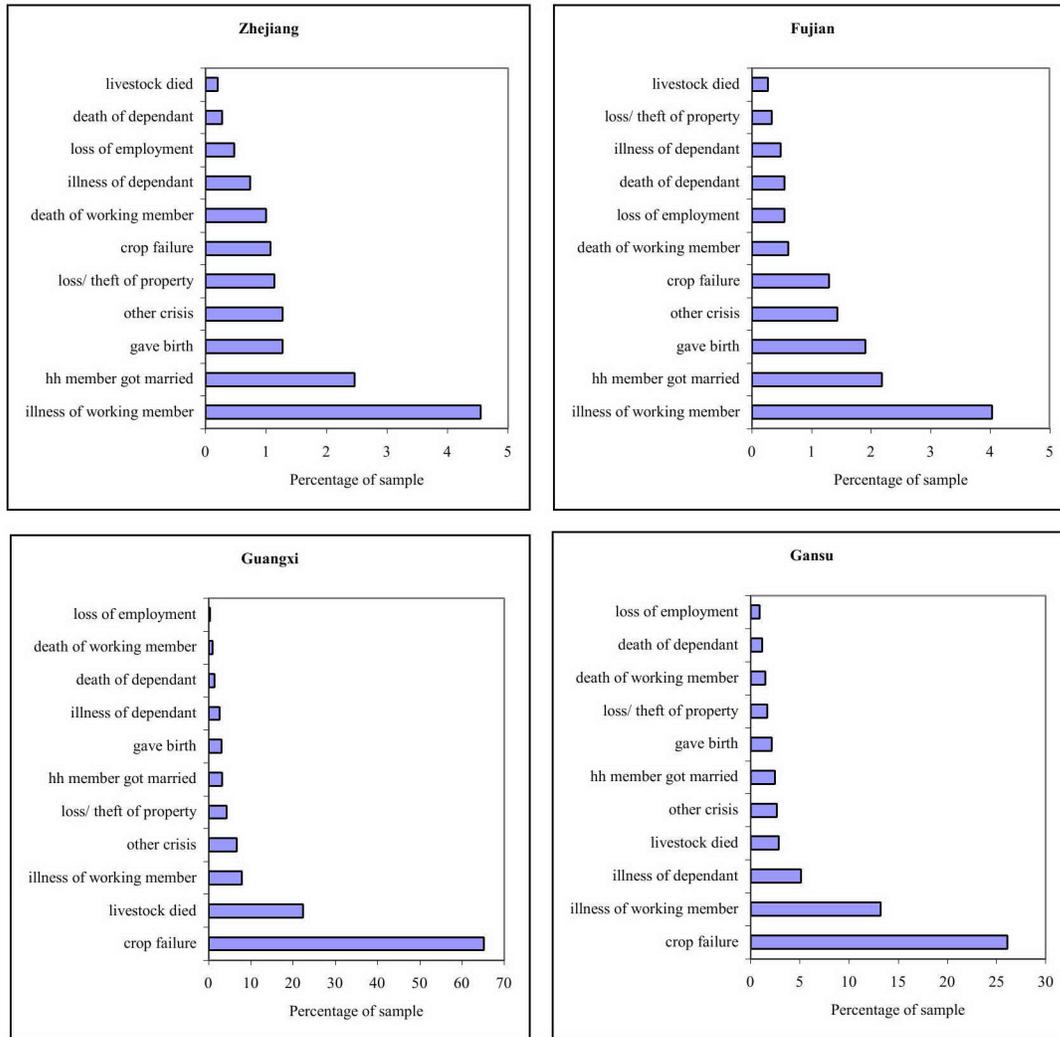
Type of Shock	Percentage of Households	
	Lao PDR	Timor-Leste
Natural & biological	36	79
Drought	16	63
Floods, mudslides, storms	7	21
Earthquakes, volcanic eruptions, tsunami	n.a.	2
Pest infestation, crop and livestock diseases	25	42
Frost, extreme cold, extreme heat, fire	2	n.a.
Economic	10	68
Unexpected decline in prices or demand for commodities that households sell	4	26
Unexpected increase in prices, shortages of inputs or services used	1	13
Unexpected increase in prices of food/other essential commodities consumed	0	56
Unexpected loss of job	1	2
Involuntary reduction in the number of hours worked	n.a.	0
Impossible to find work	3	n.a.
Non-payment or delay in payment of income	3	0
Socio-political	4	29
Crime (robbery, theft)	4	16
Ethnic or religious conflict	0	6
Political violence	n.a.	14
Confiscation of property or forced resettlement	1	0
Life cycle and health shocks	27	13
Divorce, abandonment, or internal or extended family disputes	0	1
Serious illness, injury or death (not included in above)	26	12

Note: For Lao PDR, households reported shocks that were experienced within the 12 months prior to the survey. Lao PDR data is from weighted sample. For Timor-Leste, shocks are since 2006 as reported by households. Timor-Leste data is from sample of 1496 households, weighted observations.

Source: Data for Lao PDR from Lao PDR Vulnerability Study (2008), as presented in World Bank (2009m). Data for Timor-Leste from the 2008 extension survey of the 2007 Survey of Living Standards, as presented in World Bank (2009i).

Exposure to risks may even vary significantly within a country at any given time. In China, for example, a 2005 household survey in the four provinces of Zhejiang, Fujian, Guangxi, and Gansu found considerable variation in the relative frequency of different types of shocks and life events (Figure 4).

Figure 4: Shocks and life events in four provinces of China in 2004



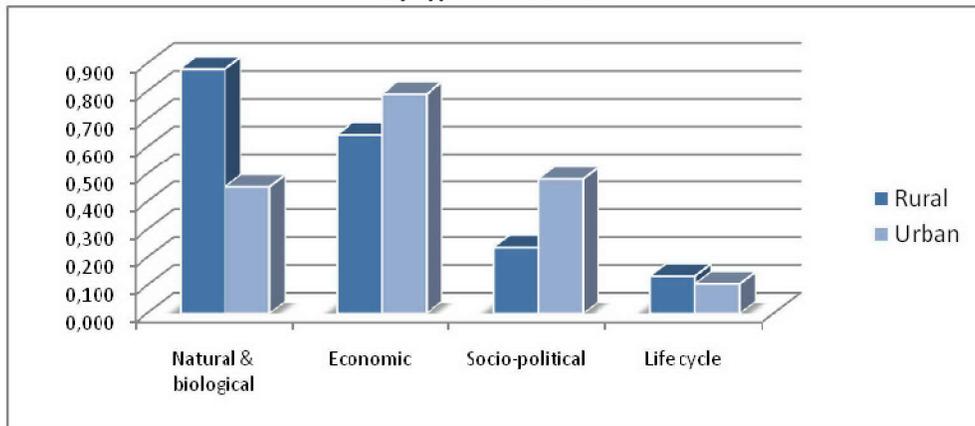
Notes: The graphs depict the frequency of shocks and life events experienced among surveyed households in 2004. Source: 2005 household survey conducted by the Institute of Social Development and Public Policy and the Beijing Normal University in Zhejiang, Fujian, Guangxi, and Gansu, presented in Cortijo (2006).

5. Factors related to exposure to shocks

In some cases, geographic location appears to be an important determinant of the types of shocks experienced. Data from the survey of 600 households in Lao PDR revealed a sharp contrast between urban and rural areas, with a positive correlation between remoteness and exposure to certain type of risks. In rural areas, 59 percent of surveyed households had experienced natural and biological shocks in the previous 12 months, which was 5.4 times greater than among urban households. This finding is not

surprising, since rural households are engaged in agriculture and are dependent on natural resources. In contrast, urban households are more exposed to economic and socio-political shocks, which are relatively rare (World Bank, 2009m). As in Lao PDR, the incidence of natural shocks in Timor-Leste was highest among the rural households surveyed, whereas households in urban areas were more likely to experience shocks related to adverse economic conditions or disruptive socio-political events (Figure 5). However, urban households in Timor-Leste reported more shocks overall, with 61 percent of surveyed urban households reporting more than three shocks over the previous two years compared to 54 percent of surveyed rural households (World Bank, 2009i).

Figure 5: Percentage of households in Timor-Leste reporting shocks since 2006, by type and location



Notes: Total sample: 1496 households. Weighted observations.

Source: Data from 2008 extension survey of the Survey of Living Standards. Presented in World Bank (2009i).

The relative incidence of shocks can also vary based on socio-economic characteristics.

A disaggregation of shock incidence in Timor-Leste by wealth quintile shows that the poorest households reported higher incidence of natural and biological shocks, while wealthier households reported higher incidence of economic and socio-political shocks (Table 4). A similar pattern can be seen in Lao PDR in a disaggregation of surveyed households reporting shocks in the previous 12 months by wealth quartile (Table 5).

Table 4: Share of households in Timor-Leste reporting shocks since 2006, by shock type and wealth quintile

	Natural & biological	Economic	Socio-political	Life cycle
Poorest 20%	87.4	59.3	23.4	10.8
2	87.9	66.8	25.4	13.4
3	86.2	68.8	26.9	14.4
4	77.7	73.0	32.4	15.5
Richest 20%	42.5	73.9	42.9	9.5
Total	78.5	67.8	29.3	12.8

Source: Data from 2008 extension survey of the Survey of Living Standards. Presented in World Bank (2009i).

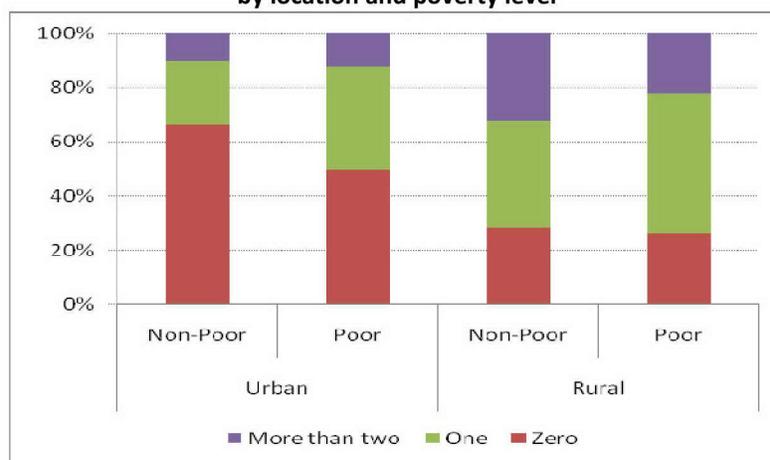
Table 5: Share of households in Lao PDR reporting shocks in previous 12 months, by shock type and wealth quartile

	Natural & biological	Economic	Social & political	Health
Poorest 25%	75.3	0	2.6	34.4
2	70.5	8.7	2.0	38.9
3	56.8	9.5	2.7	33.8
Richest 25%	15.4	13.4	6.0	19.5
Total	54.7	7.8	3.3	31.7

Source: 2008 survey of 600 households in Lao PDR.

However, the analysis of survey data from Lao PDR shows that higher incomes do not necessarily result in fewer shocks. The degree of exposure to shocks in a given location—such as rural versus urban, as discussed above—varies little between the poor and non-poor. The only significant difference between the poor and non-poor appears to be in the exposure to natural and biological shocks among urban households. As shown in Figure 6, the frequency with which households experience shocks seems to depend more on location than on wealth. In the Lao context, location appears to play a greater role than wealth in determining households’ exposure to shocks (World Bank, 2009m).

Figure 6: Predicted probability of experiencing multiple shocks in Lao PDR, by location and poverty level



Note: Weighted sample.

Source: 2008 survey of 600 households in Lao PDR. Presented in World Bank (2009m).

The degree of market integration can also determine exposure to shocks. As discussed in World Bank (2008a), how employment and earnings permeate through labor market sectors varies and depends crucially on the degree of market integration. For example, rural households in Thailand were much more severely affected during the 1997/1998 East Asian financial crisis than rural households in Indonesia, most likely due to a higher dependence on off-farm wage labor (Bresciani, et al., 2002). Similarly, in China, the extent of shocks varies among different industrial clusters along the eastern coastal regions. In the Yangtze River Delta area, where biotech industries are dominant, and in the northeastern region, where machinery and chemical industries are more focused

toward domestic markets, job cuts during the current global economic downturn have been less severe than in the Pearl River Delta, where economic development relies on low-technology manufacturing exports such as clothing, textiles, and processed goods (Wang, 2009).

To sum up, households in East Asia and the Pacific clearly face a wide range of shocks, and a key question is how such vulnerability affects poverty reduction and economic growth. The country examples discussed above show that households in the region are exposed to a variety of shocks, some of which appear to be growing in frequency or intensity. Do these shocks really matter, and do they have significant implications for household well-being, poverty reduction, and growth? The following section attempts to address these questions, looking at evidence from countries around the region to assess whether and how exposure to such risks affects households in East Asia and the Pacific.

Section III THE IMPLICATIONS OF VULNERABILITY

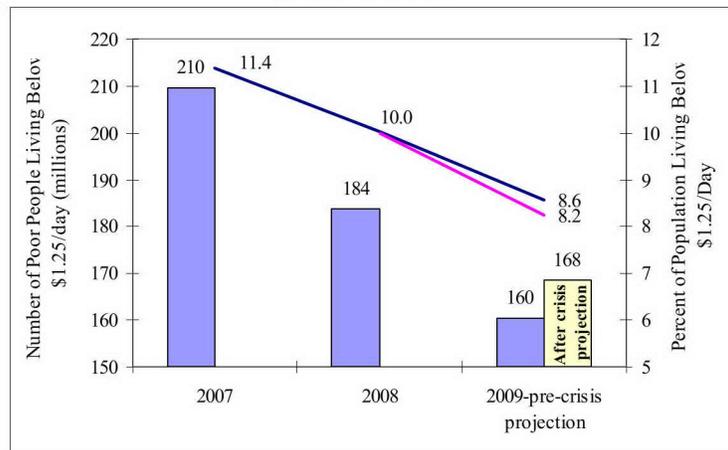
1. Introduction

The continuing vulnerability to shocks has important implications for household well-being, poverty reduction, and growth in East Asia and the Pacific. As discussed in the previous section, the exposure of households to potentially impoverishing risks could undermine the progress made to date in reducing chronic poverty. Individuals and households can use various mechanisms, for example adjusting their expenditures or borrowing from others, to help smooth their consumption and minimize the impacts of shocks. If such mechanisms could provide full protection or insurance against shocks, households would not experience a decrease in welfare when hit with a shock. However, without such mechanisms, income shocks may force households to decrease their consumption, which can have long-term and permanent effects on their well-being. This section discusses how shocks affect household welfare and how households attempt to manage such shocks, as well as the implications of vulnerability for poverty reduction and economic growth in the region.

Why does vulnerability matter?

The impacts of the current global economic downturn illustrate how such shocks affect poverty reduction in East Asia. Although the poverty rate for East Asia as a whole is expected to decline, growth projections indicate that all countries in the region are experiencing a slowdown in poverty reduction (World Bank, 2009a). For some countries such as Cambodia and Thailand, the number of poor people has actually increased. As shown in Figure 7, based on the growth projections, it was estimated that East Asia would have 8 million more people in poverty post 2008 crisis than was initially expected prior to the crisis (World Bank, 2009g). Even for countries with positive per capita income growth, significant hardships are expected as people move in and out of poverty due to rising unemployment (World Bank, 2009a).

Figure 7: Pre- and post-crisis poverty headcount and number of poor estimates



Source: World Bank East Asia Update poverty sheet, presented in World Bank (2009g).

Even before the 2008 crisis, the high degree of vulnerability has been reflected in the considerable ‘churning’ in and out of poverty in East Asia and the Pacific. As discussed in World Bank (2008d), annual series on poverty rates can be misleading as they do not capture the transient poor, or those who move in and out of poverty. A more accurate indicator of a country’s vulnerability to poverty may be the percentage of households that have been poor at least once during a specific time period. Using data spanning from 1992 to 2004 across five countries in East Asia, Table 6 shows a decrease in poverty in all countries. However, in most countries, the percentage of poor in the latest year was lower than the percentage of people who were poor at least once during the period.

A much larger population is usually at risk of falling into poverty than is captured by the country’s observed poverty rates. With a dollar-a-day consumption poverty line, over 30 percent of China’s rural population was poor in at least one year during 2001-2004, as evident from the analysis of the Rural Household Survey data. Within this vulnerable group, only 22 percent were poor in all three years (World Bank (2009e). Similarly, in the Medium-Term Philippine Development Plan 2004-2010, the government reported that while 22 percent of the Filipino population is chronic poor, 32 percent moves in and out of poverty (NEDA, 2004).

Table 6: Poverty in selected countries in East Asia

	Poverty Rate (%)
Indonesia	
Poverty rate in 1996	18
Poverty rate in 2004	17
Poor at least once between 2003-2004	24
Philippines	
Poverty rate in 1997	32
Poverty rate in 2000	40
Poor at least once between 1997-1999	32
China (rural only)	
Poverty rate in 2001	13
Poverty rate in 2003	18
Poor at least once between 2001-2004	31
Cambodia	
Poverty rate in 1994	47
Poverty rate in 2004	35
Poor at least once between 2001-2004	49
Vietnam	
Poverty rate in 1992	25
Poverty rate in 1998	15
Poor at least once between 1992-1998	19

Note: Poverty rates are based on country-specific poverty lines.

Sources: World Bank (2006); Reyes and Valencia (2004); World Bank (mimeo); World Bank (2006); Baulch and Masset (2003). Presented in World Bank (2008d).

Some East Asian countries have a large proportion of the population living near the poverty line, which also underscores the importance of addressing vulnerability. In the Philippines, for example, raising the poverty threshold from the official annual per

capita poverty line to an international poverty line of \$2 per day reveals that an additional 19.4 percent of the country's population in 2006 would have been classified as poor (World Bank, 2009h). The National Anti-Poverty Commission (NAPC) and the National Statistical Coordination Board (NSCB) recently estimated that around 45 percent of Filipinos face the risk of falling into poverty. A similar analysis using 2002 household survey data for China found that a 10 percent upward adjustment of the official poverty line would increase the rural poor population by 37 percent, and a 20 percent upward adjustment would increase the poor population by 74 percent (Li, 2006). The size of the population identified as near-poor does depend on which poverty line is chosen as a starting point, but nonetheless, it appears that a significant proportion of people in rural China are living not far above even the dollar-a-day poverty line (World Bank, 2009j).

2. The Impacts of Shocks on Household Well-Being and Household Coping Strategies

Shocks can have a direct impact on household welfare by affecting labor supply or income-earning capacity. The 1997/98 East Asia financial crisis provides a stark example of how such shocks can affect household incomes. In Indonesia, mean earnings across the economy had declined by an estimated 40 percent by the end of the crisis, with decreases being experienced over the entire income-earning distribution (Manning, 2000). Likewise, the current global economic slowdown has affected poor households in East Asia largely through deterioration in the quality of employment, with lower incomes and wages, higher unemployment rates, underemployment, and greater job insecurity in most countries. Even more isolated, idiosyncratic shocks can affect household incomes: using data from the China Health and Nutrition Survey, Lindelow and Wagstaff (2005) found that health shocks were associated with a large and significant reduction in income and labor supply, with a large negative health shock reducing income by 12.4 percent on average.

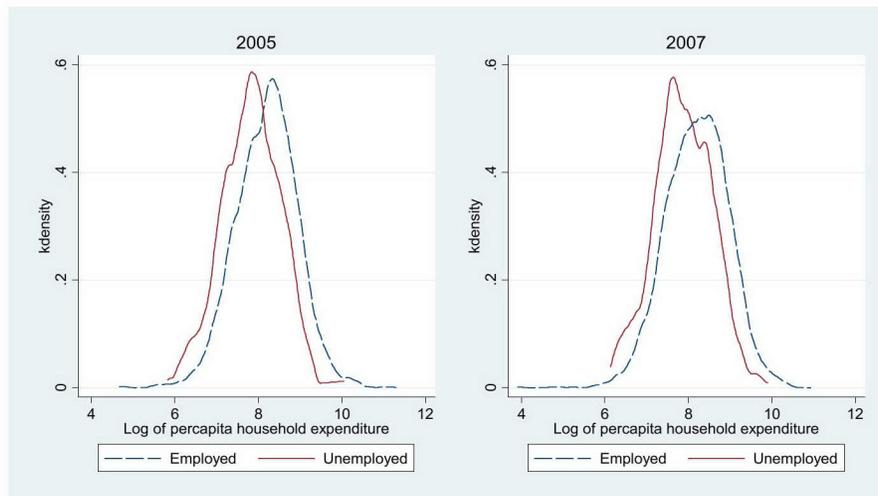
Migrant workers and low-skilled laborers, in particular, are likely to feel employment and income impacts since they are usually the first to be laid off in times of crisis. As discussed in World Bank (2009g), qualitative studies suggest that enterprise managers are very reluctant to fire skilled workers. Unskilled migrant workers are particularly vulnerable to being laid off, and qualitative evidence from the current economic slowdown shows that both internal and international migrants have already been affected. For example, Burmese workers in Thailand have reported large reductions in income and greater scarcity of available jobs. Migrant workers in Cambodia have reported the same phenomenon. It should be noted that aside from the impact on the incomes of migrant workers themselves, such shocks also affect the incomes of their families through lower remittances. The effects may be particularly pronounced in countries like the Philippines, which has around 10.1 million Filipinos or over one-quarter of its labor force working overseas, of which about half are working on temporary or irregular contracts. Around one-quarter of Filipino households receive

remittances from abroad, with such remittances amounting to US\$16.4 billion, or around 10 percent of GDP, in 2008 (World Bank, 2009f).

Evidence from countries across East Asia and the Pacific also shows that when faced with a reduction in income, households oftentimes lower their expenditure levels or adjust their consumption patterns. Using the 2005 and 2007 Household Socioeconomic Panel survey data for Thailand, World Bank (2009d) finds a positive association between employment shocks and expenditure levels based on a comparison of the logarithmic distribution of expenditure between workers who were unemployed at least once in the 12 months preceding each survey and those who were not (Figure 8). The analysis also finds that unemployment has a negative causal impact on household well-being as measured by expenditure, with such effects being more pronounced among the poor and persisting over time. In the 2008 household survey in Lao PDR, over half of households reported that they adjusted their consumption levels to cope with shocks.

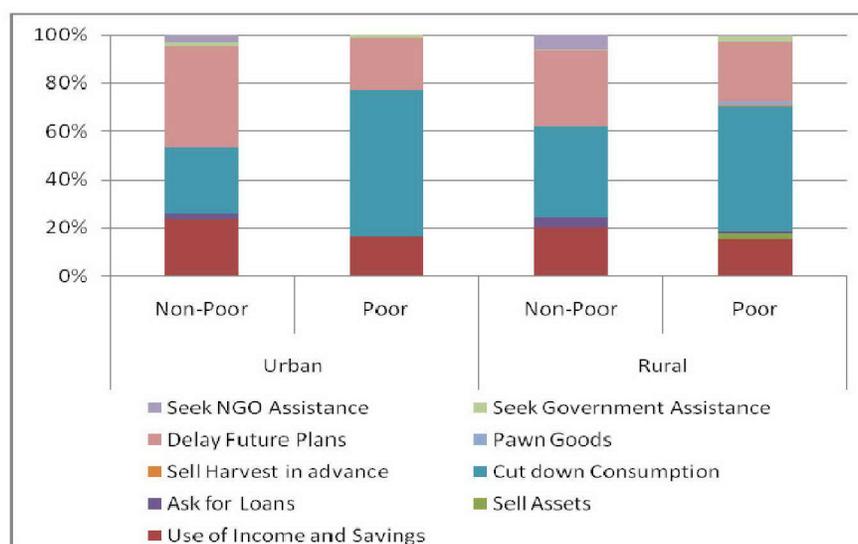
Households who faced unexpected income and asset losses from shocks had significantly lower consumption levels compared to those who did not experience shocks. As shown in Figure 9, these consumption effects were found among all income groups but were particularly prevalent among the poor (World Bank, 2009m). In Timor-Leste, a disaggregation of surveyed households by wealth quintiles showed that for every type of shock, a higher percentage of households in the poorest quintiles cut their consumption compared to households in the richest quintiles (Table 7).

Figure 8: Expenditure by employment status in Thailand



Source: Data from Thailand Household Socioeconomic Panel survey, 2005 and 2007 rounds. Presented in World Bank (2009d).

Figure 9: Major coping strategies in Lao PDR, by location and poverty level



Note: Weighted sample.

Source: 2008 survey of 600 households in Lao PDR. Presented in World Bank (2009m).

Table 7: Share of households in Timor-Leste who reported cutting consumption, by wealth quintile and type of shock (rural areas)

	Natural & biological	Economic	Socio-political	Life cycle
Poorest 20%	72.8	66.5	20.1	21.7
2	72.2	64.2	11.5	18.0
3	69.1	60.5	5.5	16.4
4	61.2	45.6	11.3	5.2
Richest 20%	59.3	34.0	0.00	0.0
<i>Total</i>	68.96	58.5	11.6	15.1

Source: 2008 extension survey of the Timor-Leste Survey of Living Standards. Presented in World Bank (2009i).

One of the most common but detrimental ways in which households modify consumption in the face of shocks is by reducing or changing the food they consume. A study of four provinces in different parts of China revealed that eating inexpensive foods or reducing food consumption was the most commonly used coping strategy among households faced with the illness, death, or unemployment of a working member (Zhang, 2006) and was prevalent across all income groups (Cortijo, 2006). A recent qualitative study of vulnerability in Lao PDR found that households reduced food costs by eating roots from the forest and, in times of starvation, mixed feed corn and cassava to replace rice, which was then manifested in child malnutrition (World Bank, 2009k). Evidence from the Philippines following the 1997/1998 financial crisis also shows that as household income shrinks, poor households, in particular, are likely to reduce their food expenditures and change their eating patterns. Food accounts for as high as 90 percent of total household expenditures for poor Filipino households, so a reduction in income oftentimes forces households to reduce food consumption or resort to changes such as lowering protein intake, eating less frequently, or substituting cheaper food items with lower nutritional content, all of which can have negative longer-term effects on health.

The prevalence of underweight children increased as a result of the 1997/98 financial crisis,³ although the causal effect has not been studied thoroughly (World Bank, 2009f).

A common response to health shocks among poorer households is to forgo medical treatment to avoid the costs, which can also have negative long-term consequences.

In the 2003 National Health Survey for China, half of the respondents who had been ill in the previous two weeks had not sought care. Around 30 percent of respondents said they had not been hospitalized despite being told they should be, with inability to afford hospitalization cited by 75 percent of those respondents in rural areas and 85 percent in the poorest quintile. Of the respondents who did go to the hospital, almost half discharged themselves early, contrary to the advice of doctors (World Bank, 2006d). Qualitative studies of the impacts of the recent financial crisis show that in Indonesia, people started going to public health clinics rather than private facilities, even if those public clinics were farther from home. Midwives in Indonesia saw fewer patients per day than before the crisis even after lowering their consultation fees significantly, since many people could no longer afford to pay (World Bank, 2009g). Postponing or avoiding professional medical care can prolong illness and have debilitating consequences, which may then require more costly care as well as lower the lifetime productivity of the individual.

Similarly, households may compensate for lower incomes by reducing investments in education. When faced with an income shock, poor households tend to de-prioritize education investments and pull children out of school to increase labor supply or avoid the costs of schooling.⁴ In Indonesia, the 1997/98 financial crisis was associated with significant declines in school enrolment among the poorest, especially in rural areas where the percentage of 7-12 years olds who were not enrolled in school doubled from 6 percent to 12 percent (World Bank, 2008a). Similarly, in the Philippines, the 1997/98 financial crisis is believed to have caused lower enrolments, higher dropout rates, and increased absenteeism. Between the 1997-1998 and 1998-1999 school years, growth in enrolment in Grade 1 declined by 3.4 percent, secondary level enrolment declined by 7.9 percent, and a much larger decline was observed in the first year of high school (Reyes, et al, 1999). Although the education impacts of the current economic slowdown

³ From 34.5 percent in 1990, the prevalence of underweight children declined to 30.8 percent in 1996, but it rose to 32 percent in 1998 and decreased again to 30.6 percent in 2001 and 20.7 percent in 2007. It can be argued that the increase in 1998 may have been due to the change of eating pattern in response to the crisis (World Bank, 2009f).

⁴ Ferreira and Schady (2008) find that the impacts of aggregate economic shocks (not idiosyncratic shocks) on child health and education outcomes vary among richer and poorer countries. School enrolment is likely to increase in richer countries since the income effect of a crisis is weaker for initially richer countries and for households with better access to credit markets, and declines in average wages tend to lower the child wage rate and thus the opportunity cost of schooling. Health outcomes may also improve since the marginal product of health expenditures is lower in rich countries and households, relative to the health contribution of additional parenting time. Ferreira and Schady (2008) find the opposite effect in poor countries, with education and health outcomes worsening during recessions, while the effects are mixed for middle-income countries.

are largely unknown since crisis effects are not manifested immediately in education indicators, qualitative studies reveal some signs of deterioration. In Mongolia, for example, some college students did not return to school due to the high cost of attending college (World Bank, 2009g). Again, while such measures may relieve pressure in the short run, they may have serious consequences in the longer run by lowering human capital.

Such changes in food consumption and lower investments in health and education affect women and children disproportionately. In East Asia as in other places, the groups most susceptible to weight loss and acute malnutrition when households resort to lowering food consumption are children under 24 months old, pregnant and lactating women, and those already suffering from malnourishment. Data on household food consumption in Cambodia indicates that women are likely to eat less rice, eggs, and fish than their husbands, particularly during times of crisis, and a similar pattern has been found in Indonesia (World Bank, 2008c). Households may also divert resources away from health investments for younger members to pay for the immediate care of other members. Evidence from past crises in East Asia and elsewhere show that children suffer long-term health consequences from short-term shocks: in Indonesia, the 1997/98 financial crisis increased infant mortality over 3 percentage points (World Bank, 2008a). Gender disparities can also be seen in reductions in education investments: in Cambodia, higher dropout rates of girls persist at the primary and the lower secondary levels, reflecting that the costs of education, distance to schools, and household work responsibilities continue to restrict girls' completion of basic education (World Bank, 2008c).

Another coping mechanism used by households in times of crisis is to sell their assets, which can also have detrimental long-term implications. In the case of Timor-Leste, among self-help and self-insurance mechanisms, selling assets is the strategy used by the vast majority of households, regardless of the type of shock. The household response varies by type of shock as well (Table 8). Interestingly, sale of assets appears to be much less prevalent in Lao PDR, where use of income and savings is the most commonly used coping strategy (Table 9).⁵ Among households surveyed in the Chinese provinces of Zhejiang, Fujian, Guangxi, and Gansu who experienced the illness, death, or job loss of a working member, 26.5 percent sold their stored grain, 12.7 percent sold livestock, 5.5 percent sold production tools, and 6.3 percent sold off furniture or other household property (Zhang, 2006). In some cases, households sold stored grain to pay school tuition costs or medical bills, then in turn borrowed grain for their own consumption (COHD, 2006). Although such sales of assets provide fast access to cash, they can also place greater strain on rural households by reducing subsequent incomes.

⁵ As noted in World Bank (2009m), a common reason for not using assets to cope with the effects of shocks is incomplete asset markets. Asset markets for livestock, in particular, are incomplete in Lao PDR. In-depth interviews with households who had sold their assets revealed that the assets were sold for up to 30 percent below the estimated market value. Furthermore, sale of land assets is relatively uncommon in Lao PDR since private ownership of land is very limited.

Because regaining such assets is extremely difficult, selling them for temporary relief may leave households worse off in the longer term and leave households more exposed to future shocks.

Table 8: Share of households in Timor-Leste reporting each coping mechanism, by shock type

	Natural and biological	Economic	Socio-political	Life cycle / health and socio
Used own income	46.6	45.6	16.4	34.7
Used cash savings	27.2	27.0	9.4	20.7
Delayed investments	16.6	16.8	11.2	14.8
Sold assets	69.1	65.8	33.5	55.7
Sold harvest in advance	29.7	36.7	19.1	32.3
<i>Borrowed from:</i>				
Friends	22.4	32.2	23.4	25.3
Family members	50.2	52.0	33.1	33.3
Money Lenders	26.0	11.1	38.0	40.3
Arisan (savings group)	0.0	0.2	0.0	0.7
Private Bank	2.4	3.3	0.0	0.0
State Bank	6.4	5.3	0.0	0.0
Pawned goods	6.0	7.4	2.5	3.9
Sought help from				
Government	12.3	8.8	7.0	4.5
Sought help from NGO	13.3	11.0	11.4	0.0

Source: 2008 extension survey of the Timor-Leste Survey of Living Standards. Presented in World Bank (2009i).

Table 9: Share of households in Lao PDR reporting each coping mechanism, by shock type

	Natural and biological	Economic	Socio-political	Life cycle / health and socio
Used income and savings	89	80	88	85
Sold assets	4	5	0	14
Sold harvest in advance	0	0	0	2
Asked for loan	19	53	2	41
<i>Borrowed from:</i>				
Friends	11	35	0	20
Family Members	64	35	100	59
Money Lenders	4	10	0	6
Private Bank	0	0	0	1
State Bank	7	10	0	1
Employer	0	5	0	3
Village Fund	13	5	0	9
School Reserve Fund	0	0	0	1
Pawned goods	1	0	0	4
Cut down consumption	64	54	27	67
Delayed future plans	21	15	30	35
Sought help from government	4	0	0	0
Sought help from NGO	2	0	0	2

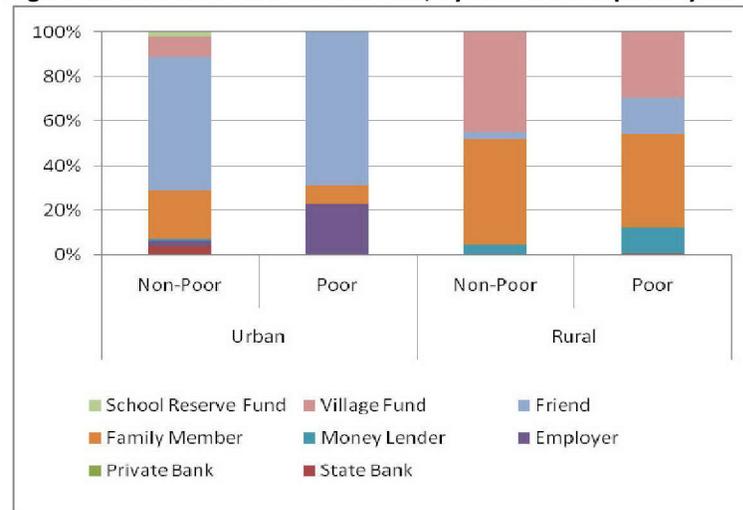
Note: Households were allowed to identify multiple strategies in the survey.

Source: 2008 survey of 600 households in Lao PDR.

When faced with shocks, households may also turn to informal safety net mechanisms such as assistance from community and relatives when available. As shown in Table 8 above, friends and family members serve as an important source of loans for households in Timor-Leste during all types of shocks. Similarly, the majority of surveyed households in Lao PDR—particularly poor households—pointed to family or friends as major sources of cash or in-kind loans. The qualitative study found that informal loans among kin or friends were preferred due to low or no interest and no conditions of collateral, in contrast to loans from money lenders who reportedly charged interest rates ranging from a few percent to as high as 20 percent per month (World Bank, 2009k). Urban households identified friends as the most common source of loans, while rural households indicated that family members were the most common source, reflecting the fact that the majority of rural households still live with kin (Figure 10). However, the qualitative study also found that informal mechanisms provided only partial insurance during shocks.

In extreme cases, trafficking of women and children or prostitution may be used as a last resort for coping with shocks. Evidence of trafficking being used when families have no other means of overcoming shocks has been found in Cambodia, one of the main sending and receiving countries of trafficked people in the region. The country has an estimated 100,000 trafficked women and children at any given time. Cambodian women and children are trafficked primarily to Thailand and Malaysia for labor and commercial sexual exploitation, and children are also trafficked to Vietnam and Thailand to work as street beggars (UNIFEM, cited in World Bank, 2008c). Young women may also turn to prostitution to maintain their income in times of scarcity. During the 1997/98 crisis, the increased number of commercial sex workers in Indonesia may have been related to the layoffs of women in the manufacturing sector (Wilipo, 1999 in Hopkins, 2005). There is also evidence of women entering the sex industry to cope with food insecurity in Cambodia (World Bank, 2008c).

Figure 10: Sources of loans in Lao PDR, by location and poverty level



Note: Weighted sample.

Source: 2008 survey of 600 households in Lao PDR. Presented in World Bank (2009m).

Notably, the reliance on government social assistance appears to be relatively low. As shown in Tables 8 and 9 above, very few households in Lao PDR and Timor-Leste seek help from the government when faced with shocks. Focus group discussions and in-

depth interviews in Lao PDR indicated that expectations of receiving government help are generally low, and interviews with district officials confirmed the limited availability of resources for SP programs. However, those households who had received support from the government—for example, through health insurance—reported that such support did have a significant impact on their lives (World Bank, 2009m). It also appears that a large proportion of households have received loans from the Village Fund, a government-led initiative to provide formal credit to poor rural districts, although as Figure 10 shows, a larger percentage of non-poor households seems to have benefited. Coverage and types of SP available in the East Asia and Pacific region are discussed later.

A wide array of ex-post coping strategies that may further undermine a household wellbeing in the longer term also highlights the importance of ex-ante risk management. Here, income smoothing at the household level (e.g. diversifying occupations, crop varieties cultivated, etc.) as a means of protecting household welfare in the presence of vulnerability to shocks plays an important role. But having even more effective mechanisms of SP at the country level would involve building disaster risk management systems that can deal with rising risks in the context of increased climate volatility. Several countries have been already experimenting with new (weather) index-based insurance mechanisms, but the potential in this area is only starting to be explored.

3. The Impacts of Shocks on Economic Growth

Beyond affecting household well-being, large-scale shocks such as the recent global economic slowdown can also have major implications for economic growth in the region. As discussed in Olaberria and Rigolini (2009), macroeconomic volatility has a negative and robust impact on GDP growth. The study estimates that if the standard deviation of the growth rate of per capita GDP in East Asia decreased from 1.4 percent (the volatility in the period 1996-2000) to 0.9 percent (the average level observed in OECD countries over the same period), the growth rate would increase by 0.48 percentage points. Reducing volatility is therefore important for household welfare as well as economic performance.

Similarly, other covariate shocks such as natural disasters can have major economic costs beyond the negative impacts at the household level. Table 10 shows the heavy costs imposed by natural disasters in East Asia in terms of economic damage and number of people affected. CRED (2007) reported that East Asia, with more than US\$21 billion worth of damage, was the sub-region which paid the highest price for natural disasters in 2007. However, although natural disasters can cause extensive damage and economic losses when they occur, different types of natural disasters can have very different impacts on economic growth and the overall economy in the medium term. Loayza et al. (2009) found that the relationship between natural disasters and growth depends on the type of disaster and the economic sector affected. The main findings of the study are summarized below in Box 3.

Table 10: East Asia – Natural Disasters (1960-2005)

Disaster Type	# of Events	Casualties	Injured	Total Affected Population	Economic Damage (US\$ '000)	Economic Damage per Affected Person (US\$)
Droughts	104	33765	0	2263027	195764	\$86.51
Earthquakes	175	6564	2226	99517	1146772	\$11,523.37
Floods	393	16892	2333	3608778	422447	\$117.06
Storms	449	674	455	850072	263944	\$310.50

Notes: "Total affected" includes people reported injured or homeless as well as people affected, who are defined as those requiring immediate assistance (i.e. food, water, shelter, sanitation, and immediate medical help) during a period of emergency.

Source: Calculations based on data from the CRED EM-DAT database.

Box 3: Natural Disasters and Economic Growth

Using a sample of 94 developing and developed countries over the period 1960-2005, Loayza et al. (2009) found that the relationship between natural disasters and growth depends on the type of disaster and the economic sector affected. The study arrived at these findings using empirical data from the Emergency Disasters Database (EM-DAT) maintained by the Center for Research on the Epidemiology of Disasters (CRED), then used the findings to explore the theory that disasters affect economic growth through their impacts on inputs and on capital-labor ratios. The effects of the different natural disasters are examined separately by economic sector—agriculture, industry, and services—and looked at four major categories of natural disasters as defined by CRED:

- **Drought:** An extended period of time characterized by a deficiency in a region’s water supply that is the result of constantly below-average precipitation.
- **Flood:** A significant rise of water level in a stream, lake, reservoir, or coastal region.
- **Storm:** Wind with a speed between 48 and 55 knots.
- **Earthquake:** Shaking and displacement of ground due to seismic waves, which includes only the earthquake itself without secondary effects.

Loyaza, et al (2009) found that disasters that reduce the provision of intermediate inputs for production appear to have an adverse impact on growth, while disasters that lower the capital-labor ratio may have a positive impact through increasing returns and investments in reconstruction. The study also found that the magnitude of the event matters. Severe disasters of any type—defined in the study as the top 10 percent of natural disasters according to intensity—intensify the negative effects on sectoral growth and therefore have an insignificant or even negative overall impact on economic growth.

In particular, the study concluded that:

- **Droughts** appear to have a negative impact across sectors. The reduced supply of water, a key input to agricultural production, may seriously undermine agricultural growth. Droughts may also lower industrial growth by reducing the supply of agricultural inputs to industry and by hampering power generation that relies on hydroelectricity.
- If they are not too severe or widespread, **floods** can have a positive impact across all sectors of the economy. Moderate floods may boost agricultural growth by raising land productivity and water supply for irrigation. In the industrial sector, floods may increase the supply of agricultural products and electric power, which are important intermediate inputs for industrial production. Floods may also have a positive effect on services given the strong inter-sectoral linkages with agriculture and industry, and disaster relief activities may temporarily raise demand for services in areas such as transportation, banking, and government.
- **Storms** can have opposite effects for agriculture and industry. Storms may negatively affect key inputs to agricultural productivity such as communications, public utilities, and transportation, thereby lowering agricultural growth. In contrast, in the industrial sector, storms may spur higher

growth as the destruction of physical capital lowers the capital-worker ratio, thanks to the lower capital-worker ratio resulting from the destruction of physical capital and to increased output during reconstruction.

- **Earthquakes** can have a positive impact on the industrial sector if they are not too severe. Industrial output may grow as the economy enters the reconstruction phase following an earthquake. Furthermore, factor productivity will increase if the capital destroyed by the earthquake is replaced by better quality capital, which will in turn boost growth.

The effects of these natural disasters on growth appear to be even more pronounced in developing countries.

Although certain natural disasters may have a positive effect on growth in the medium term, it should not diminish the negative impacts that natural disasters can have at the household level by destroying livelihoods and assets. Helping affected households manage the immediate impact of natural disasters is critical for reducing poverty and vulnerability.

Note: CRED defines a disaster as “a situation or event which overwhelms local capacity, necessitating a request to a national or international level for external assistance; an unforeseen and often sudden event that causes great damage, destruction and human suffering.” For a disaster to be included in the CRED EM-DAT Database which was used as the data source for Loayza, et al (2009), it must fulfill at least one of the following criteria: 10 or more people reported killed; 100 or more people reported affected; declaration of a state of emergency; or call for international assistance.

Sources: CRED (2007) and Loayza, et al (2009).

4. Implications of Vulnerability

The use of often detrimental coping behaviors to deal with shocks indicates that households in East Asia and the Pacific still lack adequate protection from the numerous risks they face. While a range of informal safety net mechanisms such as assistance from community and relatives still exist, these safety nets alone may not be sufficient for helping households manage shocks. Moreover, although it is difficult to measure the effectiveness of informal safety nets, anecdotal evidence suggests that such mechanisms have weakened over time. In China, for example, it is widely believed that the traditional family- and community-based support has started to erode, with migration, in particular, being blamed for undermining social cohesion in villages and reducing mutual help. Although this issue needs further investigation, some assessments support this assertion, noting that community participation and cohesion may be decreasing as people become more mobile and communicate less with other villagers (CASS-IOS, 2006 cited in World Bank, 2009e). The fact that some households must resort to coping mechanisms that may have long-term harmful consequences suggests that further measures are needed to help households manage risk and protect themselves from shocks.

Formal SP programs could help address weaknesses in informal mechanisms and provide critical assistance to individuals and households who lack other sources of support. Well-designed formal social assistance and social insurance programs can play an important role in reducing poverty and vulnerability and helping households manage risks. Such programs can also be important for rebalancing growth and stimulating domestic demand, for example by reducing the need for households to engage in

precautionary savings to lower risks. World Bank (2006c) describes the opportunity-enhancing role of SP, noting that unequal capacity to manage risk means unequal opportunities to engage in high-risk, high-return activities and that certain coping behaviors may narrow future opportunities for households.⁶ However, public programs should be designed to minimize crowding out of existing informal mechanisms and private measures. Some countries in East Asia and the Pacific have made considerable progress in developing such programs, although overall, the SP systems remain weak. The following section discusses a framework for thinking about risk management and provides an overview of SP programs and policies in the region.

⁶ The development literature on the growth-enhancing role of social protection is extensive. For example, Alderman and Hoddinott (2007) describe five channels through which social safety nets can promote economic growth: by creating individual, household, and community assets; by helping households protect assets when shocks occur; by helping households cope with risks, thereby permitting households to use their existing resources more effectively; by facilitating structural reforms to the economy; and by redistributing resources within an economy and reducing inequality.

Section IV

RISK MANAGEMENT AND CURRENT SOCIAL PROTECTION POLICIES AND PROGRAMS

1. Introduction

Countries in the East Asia and the Pacific region have made considerable progress in developing risk management programs. Particularly following the 1997-1998 financial crisis, countries gave renewed attention to developing social assistance and social insurance programs aimed at helping households manage risk. The importance of such formal programs was underscored with the more recent food, fuel, and financial crises. Social protection interventions have played a significant role in many country stimulus packages, including efforts to strengthen and expand existing programs or introduce new programs.

Overall, however, SP systems in the region remain relatively weak. Although significant progress has been achieved in strengthening SP, a number of challenges remain. Some countries still do not have a real risk management “system” in place. There is an insufficient coverage and fragmentation among programs that still leave many of the poor and vulnerable without support. Even countries with fairly comprehensive programs are still grappling with issues such as targeting, financing, and implementation capacity.

The structure of this section is as follows. The section begins with a general discussion of risk management systems, describing the different types of mechanisms and key issues to be considered in the design of such systems. It then provides an overview of publicly provided SP policies and programs in East Asia and the Pacific, including those introduced in response to the recent food, fuel, and financial crises. Where relevant, it also draws comparisons with SP approaches in other areas of the world. The section concludes by summarizing some cross-cutting challenges that have arisen in the design and implementation of such programs in the region.

2. Risk Management Systems

A system of risk management is comprised of an array of informal and formal risk management mechanisms that are available to households in a society. Mechanisms provided by the state are considered to be formal, public risk management mechanisms, while those supplied by private institutions are referred to as market-based risk management mechanisms. Other risk management mechanisms may be the result of informal arrangements between individuals, communities, groups, or family members who support each other. Given the importance of informal risk management arrangements in the East Asia and the Pacific region, they constitute an important element of this characterization of risk management systems⁷.

⁷ Holzmann and Jorgensen (2000) developed a very useful framework for thinking about social risk management. This section draws on their work and brings in some of the particularities of the context of

The main objectives of a risk management system are to help individuals and households reduce and mitigate risks and cope with shocks. Risk reduction involves decreasing the probability that a shock occurs before it happens, so activities in this area are preventive in nature (e.g., immunizations). Risk mitigation actions are also taken before a shock happens, but they aim at decreasing the potential impact a shock would have if it happened (e.g., insurance). Finally, risk coping occurs only after a shock has hit, and it consists of activities aimed at reducing the impact of the shock on the household's livelihood (e.g., using savings).

Formal and informal risk management mechanisms come into play when families make choices or take actions to reduce or mitigate risks and to cope with shocks. Table 11 proposes taxonomy of different types of risk management mechanisms and illustrates the specific purpose that these mechanisms serve at different moments in time. For example, informal risk reduction mechanisms include initiatives that individuals may take to reduce their probability of being exposed to a health shock, such as preventive health measures like hand-washing. Alternatively, the provision of infrastructure is a publicly provided formal risk reduction mechanism that decreases the chances that rain will have devastating consequences for a community in a flood-prone area. Table 11 also illustrates the differences between preventive mechanisms and those aimed at mitigating risk. An informal mechanism such as crop diversification can reduce the impact that a negative shock on income can have on a household. A market-based formal mechanism such as crop insurance can serve the same purpose by reducing the impact of an income shock. The third type of risk management mechanism, illustrated at the bottom of the table, helps households cope with a shock after it has occurred. For example, informal loans are a very common resource of cash to cover out-of-pocket expenses when a health shock has occurred. There is also evidence that publicly provided safety nets such as cash transfers can help households cope with the effects of shocks that reduce their incomes.

Table 11: Taxonomy of risk management mechanisms

Objective	Informal mechanisms		Formal mechanisms	
	Individual and household	Group-based	Market-based	Publicly provided
Risk reduction				
Prevention	<ul style="list-style-type: none"> - Preventive health practices - Migration - More secure income sources 	<ul style="list-style-type: none"> - Collective action for infrastructure, dikes, terraces - Common property resource management 		<ul style="list-style-type: none"> - Sound policies: macroeconomic, environmental, education and training, public health and immunizations, active labor market policies - Infrastructure (dams, roads)
Risk mitigation				
Diversification	<ul style="list-style-type: none"> - Crop and income diversification - Investment in physical and human capital 	<ul style="list-style-type: none"> - Occupational associations - Rotating savings and credit associations 	<ul style="list-style-type: none"> - Savings accounts in financial institutions - Microfinance 	<ul style="list-style-type: none"> - Agricultural extension - Liberalized trade - Protection of property rights
Insurance	<ul style="list-style-type: none"> - Marriage, extended family - Sharecropper tenancy - Buffer stocks 	<ul style="list-style-type: none"> - Investment in social capital (networks, associations, reciprocal gift giving) 	<ul style="list-style-type: none"> - Old age annuities - Accident, disability and other insurance 	<ul style="list-style-type: none"> - Pension systems - Mandated insurance for unemployment, illness, disability and other risks
Coping with shocks				
Remediation	<ul style="list-style-type: none"> - Sale of assets - Loans from moneylenders - Child labor - Reduced food consumption - Seasonal or temporary migration 	<ul style="list-style-type: none"> - Money and in-kind transfers from networks of mutual support 	<ul style="list-style-type: none"> - Sales of financial assets - Loans from financial institutions 	<ul style="list-style-type: none"> - Social assistance - Workfare - Subsidies - Social funds - Cash transfers

In designing a system with the right mix of risk management mechanisms for a society, it is crucial to understand the main sources of risks or the types of shocks that occur most frequently in that particular context. As discussed in Section II, broadly speaking, the different countries in the East Asia and Pacific region face similar types of risks. However, there is wider variation in the frequency with which specific types of shocks affect different regions within those countries. The urban-rural divide is a dimension across which some of the most salient differences are observed. At the same time, particular regions or groups of individuals may also be more vulnerable to specific types of shocks. From a policy standpoint, understanding these differences is very important for identifying an effective risk management system that can adjust to the different types of circumstances and needs.

In thinking about a risk management system, it is also important to understand how the diverse risks faced by households have the potential to affect different aspects of households' livelihoods. From a policy standpoint, three such aspects are of particular relevance: shocks can deplete or destroy households' endowments and assets; affect their capabilities; and/or reduce their welfare. Within each of these aspects, a wide range of losses can result from a shock. Table 12 illustrates some examples. It is important to note that risk management mechanisms (especially risk mitigation and risk coping instruments) may provide protection along some of these dimensions and still leave other aspects of households' livelihoods uncovered.

Table 12: Examples of the multiple dimensions of the effects of shocks

Type of shock	Effect on households'...		
	Endowments and assets	Capabilities	Welfare
Health	Loss of skills, human capital	Physical, intellectual, income	Cuts in expenditure (including on health and education)
Unemployment		Income	
Natural	Asset damage	Output risk	Food availability
Socio-political	Asset damage, depletion of social capital (commitment, trust), land tenure insecurity or uncertainty in property rights, unclear access to public goods	Output risk, output price risk, imperfect enforcement of contracts, uncertainty about enforcement of informal arrangements, risks in policy environment	Rationing of food, uncertain quality of publicly provided services like health and education, rationing of publicly provided services like health and education
Macro-economic	Loss of value in assets or pension funds	Output price risk, risk in asset returns from savings and investments, uncertain access to inputs or cash flow during production	Food availability and rationing, uncertain quality of publicly provided services like health and education, rationing of publicly provided services like health and education

In designing risk management systems, each country must try to strike the right balance among different types of mechanisms. No "one size fits all" model exists for risk management systems. Based on the country context, policymakers must determine what the appropriate mix of public and private mechanisms might be. The decision will depend in large part on the availability and effectiveness of market-based and private mechanisms in helping households manage risks. If such mechanisms are functioning well and can provide an adequate level of support, little or no public interventions may be needed.

For countries where public interventions are necessary, policymakers must also consider how to balance and integrate risk reduction, risk mitigation, and risk coping mechanisms. All three types of mechanisms play important roles in helping households manage shocks before and after they occur. Notably, integrated approaches to risk management are sometimes required. For example, insurance against catastrophic illness may only cover medical expenditures, but households may still suffer due to loss of income from having a family member who is unable to work. Some type of income

support may be necessary to prevent those households from engaging in coping behaviors that could have long-term detrimental impacts to their well-being.

For each program within a risk management system, policymakers must determine the type of targeting and the scope of coverage to be used. Policymakers must decide whether a program should have universal coverage, meaning that everyone is eligible for benefits regardless of need, or whether it should be targeted more narrowly at a certain group, such as the poor population. If the program will be targeted, important decisions must be made on what the criteria for eligibility will be and what types of targeting mechanisms will be used.

Different types of targeting are used. Types of targeting include: means-tested, in which eligibility is based on a household's level of income and assets; proxy-means tested, in which a variety of observable household socio-economic characteristics is used to derive a proxy (score) for the level of well-being; community-based, in which communities are involved in the selection of beneficiaries; geographic, in which households living within a particular locale are eligible; or self-targeting, in which program benefits are set such that only the targeted group would want to participate, for example when wages for public works programs are set at a low level to discourage better-off individuals from participating.

Ensuring sufficient financing is critical to the success of a risk management program. To maximize impact, governments must ensure that risk management programs have enough financing to provide the intended support to the targeted groups. Particularly for programs that are not for short-term crisis relief but are intended to be part of the longer-term safety net, financial sustainability is a key. As discussed in the following section, countries oftentimes grapple with this issue when implementing pension systems. Policymakers must decide how programs will be financed and whether they will rely on contributions—for example, from employers and/or individuals—or whether they will be financed from general government revenues.

Policymakers must also consider how risk management mechanisms may affect job creation and incentives to work. If programs require a high level of contributions from employers, firms may be less likely to hire new workers, thus hindering job creation. The design and benefits of a program can also affect the decisions of beneficiaries to work or not work. If benefit levels are higher than what beneficiaries would otherwise earn from working, they may not feel compelled to seek employment. Alternatively, programs may offer lower levels of benefits or benefits for a shorter period of time to boost incentives for beneficiaries to look for jobs. Some programs, such as unemployment insurance, require that beneficiaries demonstrate that they are actively participating in job search and retraining activities to maintain their eligibility for the program.

The gender dimensions of risk management also merit close attention. As discussed in World Bank (2008c), the sources of idiosyncratic risks may differ for women and men based on their biological roles in reproduction and socially and culturally ascribed constraints. The roles of men and women in risk management, as well as their access to formal and informal mechanisms, also differ. Therefore, interventions that do not take into account the gender implications of risk and vulnerability may be ineffective and may even exacerbate or create inequalities. For example, access to formal social insurance mechanisms are oftentimes more limited for women because the programs are linked to earnings in formal employment and contributions, and women in East Asia are mostly engaged in the informal sector. Even gender-sensitive SP mechanisms may have unintended gender-related negative consequences. Evidence indicates that the establishment of different retirement ages for women and men or maternity benefits may be a disincentive for employers to hire women.

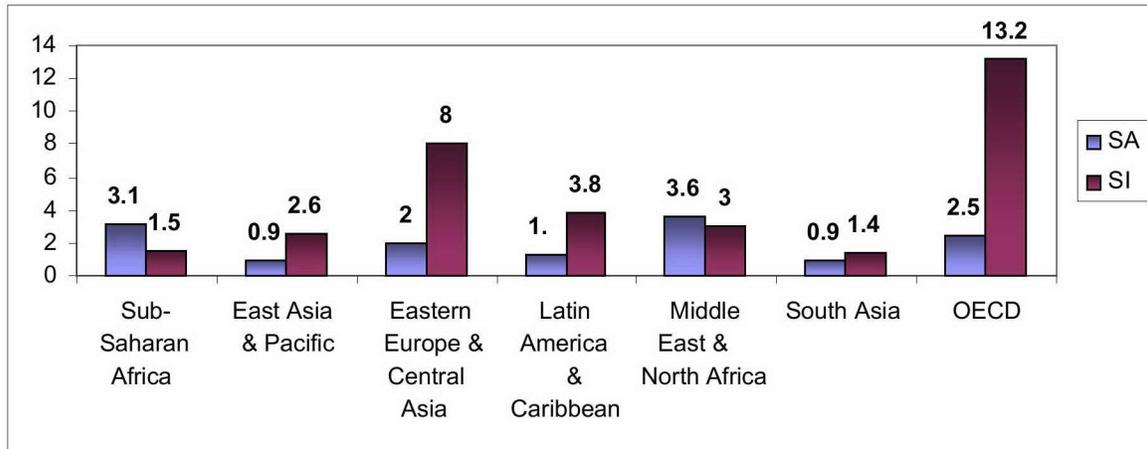
3. Overview of Social Protection in East Asia and the Pacific

Social protection systems vary considerably across East Asia and the Pacific. As would be expected, the degree to which the SP system of each country has developed largely reflects the country's income level, poverty and vulnerability profile, labor market features, and administrative capacity. Japan and Korea, the two OECD countries in the region, have extensive SP programs. For example, business employees as well as the self-employed in both countries receive comprehensive pension benefits (Kwon, 2005). In contrast, the low-income country of Lao PDR has a much more limited menu of SP programs, partly due to severe capacity and resource constraints. Aside from a Social Security Fund for government employees, the country does not have a pension and contractual savings system, and programs for formal sector employees are almost nonexistent (World Bank, 2008d). External resources, which have been critical for supporting SP initiatives, have been channeled increasingly through community-based projects in rural and remote areas (World Bank, 2006g).

The levels of spending on SP in the East Asia and Pacific region appear to be low relative to other regions. The "right" amount of spending on SP is difficult to pinpoint and depends on factors such as poverty levels, the need for SP programs, and overall government resource constraints. However, the levels of spending on social assistance and social insurance in the East Asia and Pacific region appear to be low relative to other regions (Figure 11).⁸ Only South Asia spends less on SP as a % of GDP than EAP.

⁸ With an exception of Japan, South Korea and Mongolia.

Figure 11: Regional Comparison of Social Assistance and Social Insurance, % of GDP



Source: Weigand and Grosh (2008).

However, countries in the region have historically shared some common principles and features in their approaches to SP. Particularly before the 1997/98 financial crisis, East Asian countries placed a strong emphasis on self-reliance through employment and on informal support from family and other networks, with the state being the “provider of last resort.” Public spending generally tended to focus more on human capital development than on welfare transfers, and social insurance coverage was concentrated mainly in the civil service and formal private sectors (ASEAN Secretariat and World Bank, 2009).

Social protection interventions have become more mainstreamed in the region since the 1997/98 financial crisis. The financial crisis revealed numerous weaknesses in the SP frameworks and response capacities in the region, particularly in terms of limited social insurance coverage and lack of core social assistance programs for those groups most affected by the crisis. The crisis also showed that informal mechanisms such as family and community support alone may not provide sufficient protection in the face of major shocks. Since then, most countries in the region have been working to improve the comprehensiveness, coverage, and robustness of their risk management systems.

The recent food, fuel, and financial crises have given SP policies and programs in the region more impetus. For most countries, SP interventions have been an important part of the crisis response. In the Philippines, for example, the government nearly tripled its spending on SP when the food and fuel crises hit (World Bank, 2009h). For countries with economic stimulus packages, SP interventions have been a significant part of the overall packages in most cases. However, the shares of SP in the total stimulus packages and the types of interventions supported differ from country to country. For example, Singapore has focused substantial shares of its stimulus package on various types of job subsidies, while Thailand has focused its first wave of stimulus on direct transfers and incentives to sustain human capital investments. Some countries such as Thailand and Malaysia have had more than one round of stimulus, with the relative importance of SP

interventions shifting between rounds. Even countries that have not introduced explicit stimulus packages to date have nonetheless strengthened their SP programs to mitigate the impacts of the global financial crisis (ASEAN Secretariat and World Bank, 2009).

3.1 Types of Social Protection

A wide range of SP programs is being implemented in East Asia and the Pacific. Table 13 summarizes the key SP interventions that were in place before the current global economic slowdown as well as incremental measures that were introduced in response to the slowdown in selected countries.⁹ It should be noted that the table does not distinguish between the relative degrees of coverage and adequacy in different programs, so even for countries listed as having similar programs, considerable heterogeneity may exist between those programs.

⁹ As discussed in ASEAN Secretariat and World Bank (2009), given the sequential nature of the recent food, fuel, and financial crises, it is not always clear whether policies should be categorized as responses to the global economic slowdown specifically or as carryover policies from the food and fuel crises. Social protection responses should be viewed as an evolving response rather than as entirely distinct measures.

**Table 13: National SP policies and programs in selected East Asia and Pacific countries
(pre-existing programs and responses to the recent global economic slowdown)**

		Social Assistance			Labor market/ Income generation			Social Insurance
		Cash transfers	Price subsidies & in-kind transfers	Human capital (health/ education)	Public works	Other active labor market	Livelihoods	Social insurance for formal sector
Cambodia	Pre-existing	X	X	X	X			X
	Response		X			X		
China	Pre-existing	X	X	X	X	X		X
	Response							
Indonesia	Pre-existing	X	X	X	X	X	X	X
	Response	X			X			
Lao PDR	Pre-existing	X	X		X		X	X
	Response							
Malaysia	Pre-existing	X		X				X
	Response	X	X		X	X		
Mongolia	Pre-existing	X	X	X	X	X	X	X
	Response	X						X
Philippines	Pre-existing	X	X	X	X			X
	Response	X	X		X	X	X	X
Thailand	Pre-existing	X	X	X	X		X	X
	Response	X		X		X	X	X
Timor-Leste	Pre-existing	X	X	X		X	X	
	Response	X	X	X	X	X		
Vietnam	Pre-existing	X		X		X	X	X
	Response	X			X	X	X	

Note: "Response" refers to incremental response through new programs and/or increased funding of existing SP programs. If an existing program was continued but did not receive additional funding, it is not reported.

Sources: Information on Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Thailand, and Vietnam from ASEAN Secretariat and World Bank (2009). Information on Mongolia from ADB (2006). Information on Timor-Leste from World Bank (2007b).

In Mongolia, a cash transfer program was established in 2010 after the crisis but wasn't in response to the crisis. Rather, the program was established as a political promise to distribute mineral revenues to all citizens.

A. Social Assistance

Cash transfers. Cash transfers are a common program across East Asia and the Pacific.

As shown in Table 13, all countries in the region have some form of a cash transfer program, which in many cases has become the main type of social assistance available. In China, for example, the *dibao* or minimum living standard guarantee program plays a central role in the SP system for both urban and rural areas. Under this program, poor households are given direct transfers up to a locally defined minimum living standard.¹⁰

¹⁰ For more information on the rural *dibao* program and other social assistance programs in China, see World Bank (2009j). For more information on the urban *dibao* program, see World Bank (2007a).

Indonesia has also implemented an unconditional cash transfer program, called Bantuan Langsung Tunai (BLT). The BLT, which was introduced in 2005 to help mitigate the social impacts of fuel price reforms on poor and non-poor households, was intended as a temporary one-time assistance program, and it ended in late 2006 as fuel prices retreated.¹¹ Notably, the broadly targeted nature of the BLT, along with the government's successful ability to discontinue it when economic conditions changed, made the BLT one of the key response options available to Indonesia when the food price crisis hit in 2007-08. As part of the food crisis response, a targeted cash benefit—a revamped version of the BLT cash transfer used in 2005—was introduced in 2008.

Some countries in the region are experimenting with conditional cash transfer (CCTs) programs. CCTs provide assistance to poor households contingent upon certain behaviors, usually investments in human capital such as sending children to school or bringing them to health centers on a regular basis. Evaluation results from CCT programs in Latin America and the Caribbean region, which pioneered the CCT approach, show that such programs have helped increase school enrollment rates, improve preventive health care, reduce morbidity rates, and raise household consumption (World Bank, 2009b). Notably, CCT programs are increasingly targeting women, based on extensive evidence that transfers controlled by women are more likely to be spent on childrens' food, health, and education (World Bank, 2008c). In East Asia, the Program Keluarga Harapan (PKH) in Indonesia provides considerable financial support that is conditional on child school attendance and obtaining preventive basic health and nutrition services (World Bank, 2009I). Cambodia is also experimenting with CCTs, including a CCT educational program that is limited to girls who are making the transition from primary to secondary school. This program has increased enrollment and attendance at eligible schools by approximately 30 percentage points (World Bank, 2008c).

The recent food, fuel, and financial crises have boosted the role of cash transfer programs within the SP systems of many East Asian countries. Several countries have implemented incremental measures to supplement household incomes, mostly through cash transfers of various types. Although the emphasis on cash transfers has clearly increased, the extent to which it represents a longer-term shift in priorities beyond the crisis response remains to be seen. In some cases, countries have introduced crisis-specific transfer programs without necessarily planning to continue them as a longer-run safety net. Vietnam provided a Tet holiday payment of VND 200,000 per poor person (up to a maximum of VND 1 million per household), designed explicitly as a one-time, fast-disbursing income support measure. Similarly, in Thailand, allowances of 500 baht for a period of six months were distributed to an estimated 5 million senior citizens who did not receive support from other government institutions and who registered at local administration offices. In other countries, the cash transfer initiatives used during the crises are part of a longer-run structural reform of transfers. For example, the

¹¹ For more information on the BLT, see World Bank (2009I).

programs budget for the existing CCT program in the Philippines, known as the Pantawid Pamilyang Pilipino Program or 4Ps, was increased tenfold in 2009 to expand coverage to more households (ASEAN Secretariat and World Bank, 2009).

Given the challenges in reforming a cash transfer program once it has started, it is critical to get the design aspects correct from the outset. The initial design of a cash transfer program sets expectations for the public and beneficiaries which may be difficult to manage when the program is later modified. For example, the recent experience of Mongolia with its ongoing reforms illustrates the challenges in transitioning to a targeted approach to social welfare. Similarly, moving from an unconditional to a conditional program, changing the size of the transfer, and even “graduating” beneficiaries as done in many countries’ experiences around the world can negatively affect perceptions of the program, particularly among those who may lose eligibility as a result of the changes. Therefore, careful planning is needed in the design of such programs before they are launched. Clear communication on a program’s intended scope, eligibility criteria, and duration is also critical for setting expectations.

Food/fuel subsidies. Although food/fuel subsidies remain a significant element of some SP systems, they suffer from numerous problems. As discussed in Grosh, et al (2008), generalized subsidies have rarely been used effectively to help the poor. They tend to create distortions in the food and fuel markets and often have high administrative costs and leakage of benefits to the non-poor. For example, studies of the Beras Miskin subsidized rice program in Indonesia found that although the program is meant to target poor households, it has suffered from a high degree of leakage to the non-poor. Poor and near-poor households represent only 53 percent of all beneficiaries (Smeru 2007), and the subsidy received by the non-poor has been estimated to be 2.5 times greater than that received by the poor (World Bank 2006e).

To address these issues, some countries are replacing or supplementing food subsidies with cash transfers, as seen during the recent crises. Some countries have still relied on providing incremental resources to food-based programs. Cambodia and Malaysia, for example, significantly increased their food subsidies in late 2008 and early 2009. However, the use of food subsidy programs in response to the recent crises has generally been less widespread than might be expected. In Indonesia, although the rice subsidy program has been retained, the marginal increments in social assistance have been through cash. In the Philippines, rice subsidy spending was increased in 2008 in response to the food crisis but then reduced and offset by a targeted cash benefit in 2009 in the global financial crisis response (ASEAN Secretariat and World Bank, 2009). Such cash transfers have grown in relative importance, given the cost-effectiveness and flexibility of cash for delivering quick assistance to help poorer households as well as the targeting problems in the rice price subsidy, as discussed below (World Bank, 2009h).

Programs to promote access to social services. Facilitating access to social services has been a key element of efforts to help the poor and vulnerable and build human

capital. As discussed in section 3, the employment and secondary impacts of shocks may compel households to engage in coping strategies such as withdrawing children from school and avoiding necessary medical treatment, which can have detrimental implications over the longer term. Recognizing the importance of building human capital to break the cycle of poverty, a number of countries in the region have been implementing measures to help reduce or eliminate schooling and health fees for poor households.

Countries are increasingly using scholarships and fee waivers to protect access to education. Indonesia has a school assistance program that provides block grants to schools in exchange for their reducing or eliminating school fees up to the amount of the grant (World Bank, 2009l). In Mongolia, the Government has used the resources of the Human Development Fund (linked to the revenues from exploring natural wealth resources) to subsidize school fees. In China, the draft Social Assistance Law stipulates that the necessary education subsidies and living allowances for compulsory education should be provided to students from poor families. For high school students from poor families, grant aid and scholarships will be implemented, while an assistance system combining grant aid with school scholarships, work-study programs, work placement, and tuition waivers and reductions will be established for secondary vocational schools. Similarly, for higher levels of education, the government will provide scholarships, grants, tuition waivers and reductions, student loans, subsidies, and other assistance to students from poor families (World Bank, 2009j).

Low-income countries such Cambodia and Lao PDR have been using school feeding programs to support nutrition as well as promote school attendance. School feeding programs have emerged as a common social safety net response in the poorest countries around the world and have received incremental financing in response to the recent food, fuel, and financial crises. In Lao PDR, these programs provide food, especially to girls, to stay in school as well as to their families to compensate for the loss of labor (World Bank, 2009m). As discussed in World Bank and WFP (2009), evidence indicates that school feeding programs can help increase school attendance, cognition, and educational achievement, particularly if supported by complementary measures such as deworming and micronutrient fortification. Program effectiveness depends on numerous factors, including the modality used to provide the food (i.e. in-school meals, take-home rations), the effectiveness of targeting, and the associated costs. In many contexts, well-designed programs can be targeted moderately accurately, although rarely as effectively as the most progressive of cash transfers. World Bank and WFP (2009) also notes that school feeding programs come with potential costs in terms of opportunities foregone, an increased burden on the education sector, and the fiscal challenge of long-term commitment. Therefore, it is critical to design and implement such programs in a cost-effective and sustainable way.

Countries are also experimenting with programs to provide basic health services to the poor. In 2005, Indonesia implemented a program that distributed health cards to 16

million households, entitling them to free health care at local public health clinics, as well as in-patient treatment in third-class public hospital beds. In Cambodia and Lao PDR, Health Equity Funds (HEFs) are being used to improve access for the poor. The HEFs in Cambodia, which are established by participating international donor agencies and usually managed by local NGOs, involve an independent organization identifying poor people and reimbursing service providers on their behalf, although the procedures for identifying beneficiaries and program benefits vary considerably among funds. The most common benefit offered by HEFs is payment of user fees, although covered expenses may also include transportation fees, the cost of items needed during hospital stays, and in some cases social welfare. Most HEFs deal primarily or exclusively with fees charged for services in district hospitals, which are considerably higher than those charged for primary care at lower-level facilities (World Bank, 2008e).

Anti-poverty/community-based programs. “Anti-poverty” or community-based programs using an integrated rural development approach are particularly prevalent in low-income and rural settings. These projects focus on providing multi-dimensional support to poor areas rather than on targeting poor people within those areas. Such programs usually have a strong infrastructure emphasis and frequently give communities a role in prioritizing program activities. Indonesia has implemented a series of community-based programs, including the Kecamatan Development Project (KDP) under which villages in a targeted kecamatan (sub-district) can apply for funds to be used for infrastructure, social, or economic activities. By 2007, Indonesia’s community development programs had been brought together as the National Programme for Community Empowerment, which incorporated previous community development programs under a single umbrella (World Bank, 2009l). Notably, community-driven development initiatives in the region have increasingly incorporated gender aspects. The Lao PDR Poverty Reduction Fund established separate groups of male and female villages for discussions and decisions on investment priorities, and the revolving credit funds set up under integrated rural development projects frequently channel credit targeting women through the Lao Women’s Union (World Bank, 2008c).

Increased funding for ongoing community-based programs has also been part of the recent crisis response. In Thailand, the Small Medium Large (SML) Community Scheme (now renamed the Sufficiency Economy Community Project) has provided direct transfers for development infrastructure investments depending on the size of the community. In response to the recent crises, the resources for projects were doubled from 200,000-300,000 baht to 400,000-600,000 baht per year. Use of the remaining SML project budget of 6 billion baht was expedited, while another 15 million baht was tapped from the initial stimulus package (Sciortino, 2009).

Although decentralized decision-making can help ensure the relevancy of subprojects to the targeted communities, broad participation within the community is needed to ensure that programs achieve their intended impact. A key rationale for community-based programs is that communities have better knowledge of local needs and

therefore can make informed decisions about which subprojects would be most appropriate for meeting those needs. However, there is a risk that if communities are given the responsibility of appointing a commission to handle subproject selection, problems of elite capture—i.e. when a powerful minority uses the program for their own benefit, usually at the expense of other groups such as the poor—could arise. Some studies suggest that even in a program targeted to the poor and offering a menu of subprojects designed with poverty reduction in mind, elites can affect the outcomes of participatory processes (Araujo, et al 2008). Therefore, how programs are delivered to the community and how subprojects are chosen are tricky design elements that must be addressed carefully.

Disaster relief. Countries also have disaster relief programs, although coverage and benefit levels are usually very limited relative to the scale of the problem. China, for example, provides two types of disaster relief: direct government disaster relief, which provides temporary one-time relief to affected areas, and indirect government relief or self-help policies, which provide incentives to the affected population to return to agricultural production or create new employment opportunities. Total disaster relief from all levels of government was 61.0 billion yuan in 2008 (USD 8.8 billion) (MOCA, 2008). Nonetheless, relative to the losses caused by natural disasters, the current programs still do not provide sufficient relief for the many households affected by natural disasters each year. The United Nations International Strategy for Disaster Reduction estimated that in 2008 alone, natural disasters caused nearly US\$110 billion of damage in China (Reuters, 2009).

B. Social Insurance

Pensions. The question of old age security is quickly growing in importance in East Asia and the Pacific, drawing greater attention to the need for well-designed social insurance schemes. As discussed in World Bank (2006b), the political demand for effective pension coverage is likely to grow as population aging proceeds. However, long-term and contractual savings schemes are underdeveloped in most countries. Most systems are linked to formal employment, although some include voluntary components that target the self-employed, such as the China rural pensions program or the voluntary social insurance scheme in Vietnam (World Bank, 2008c). Three main approaches to mandated pensions can be seen in the region: partially funded defined benefit schemes (i.e. Korea, Thailand); centrally managed defined contribution schemes (Malaysia, Singapore); and decentralized private defined contribution schemes (Hong Kong).

The coverage of pension schemes varies widely among countries. As noted above, coverage is extremely limited in low-income countries such as Lao PDR, which has an estimated 870,000 members in the scheme for public employees and only 70,000 members in the scheme for private employees (World Bank, 2009m). Even countries such as China, which has been working to develop a national rural pension scheme following unsuccessful previous attempts, are grappling with issues related to coverage,

levels of contributions and benefits, and funding and fund management. As of 2008, the scheme had 56.0 million participants, covering about 7.8 percent of the rural population (NBS, 2008).

Unemployment insurance. Some countries are using unemployment insurance to provide temporary income support to the unemployed. China's current unemployment insurance system, for example, covers all enterprises and institutions in urban areas as well as rural contract workers employed by urban enterprises. It aims to provide a basic level of income protection to the unemployed as well as help them gain new employment through related active labor market programs. However, program coverage has been limited, reaching only 14.1 percent of the total labor force in 2005, and is more prevalent among richer segments of the population (World Bank, 2007a). Some countries have also used unemployment insurance as part of their response to the recent global financial crisis. In Thailand, the duration of unemployment insurance benefits was extended from six months to eight months for formal sector employees under the Social Security Fund scheme (Sciortino, 2009). Notably, the large size of the informal sector in most East Asian economies reduces the capacity of some of these labor market policies to reach the poor, an issue discussed further below.

Health insurance. The region is experimenting with multiple approaches to health insurance. A notable example is the scheme in Thailand, first introduced in 2001, which guaranteed health insurance to all people without social security benefits, at a cost of 30 baht per treatment. The 30-baht scheme was then extended after being renamed the Universal Coverage Insurance Scheme and made completely free of costs (Sciortino, 2009). China has also been working to develop a voluntary health insurance scheme, called the New Rural Cooperative Medical Scheme (NRCMS), for residents not employed in the formal sector. The scheme is funded by enrollee contributions and central and local government subsidies (World Bank, 2009j). Health insurance is at a more nascent stage in Lao PDR, where development partners are implementing pilot schemes in selected districts (World Bank, 2009m).

Natural disaster insurance. Although natural disaster insurance has the potential to play an important role in assisting affected households, such schemes have been quite limited. As described in ADB (2008), catastrophe risk pooling is a relatively recent initiative in transitional and developing economies and has typically been a response to catastrophic events. In Indonesia, the government undertook an initiative in 2003 requiring all licensed general insurance and reinsurance operators to cooperate in insuring special risks through a joint undertaking of all companies known as the Indonesian Reinsurance Pool. China has been considering the establishment of an earthquake insurance pool, which could be based on some form of public-private partnership among insurers, reinsurers, and government. One problem with China's current natural disaster/agricultural insurance scheme is that farmers cannot afford market-price insurance premiums, while insurance companies cannot afford to set low premium prices (Xinhua News Agency, 2004). Furthermore, most agricultural insurance

companies lack the necessary resources, management, and supporting regulations. The level of protection provided by agricultural insurance is therefore minimal (Yang, 2004).

C. Labor Market Policies

Active labor market policies (ALMPs). Some countries are using ALMPs to help mitigate crisis impacts on the unemployed as well as enhance the productivity of workers. Middle- and high-income countries in the region, in particular, have been implementing active labor market interventions targeted at formal sector workers. In response to the current global economic slowdown, Singapore and Malaysia have provided subsidized training and/or monetary incentives for employers to encourage worker retention and rehiring of retrenched workers. Thailand has devoted significant stimulus funds to an intensive vocational training program that aims to train 500,000 unemployed, soon to be unemployed, and new graduates during 2009-2010, providing one month of training and three-month cash allowances to help them find jobs or start businesses (Sciortino, 2009). To address the problem of unemployed urban workers, Cambodia implemented a cash-for-training program that provides vocational training in agriculture, industry, and mechanics. Lao PDR has experimented with food-for-training, with a particular focus on women (ASEAN Secretariat and World Bank, 2009). Again, as in the case of unemployment insurance, the overall effectiveness of ALMPs in reaching the poor and vulnerable may be limited, since many of these programs are targeted at the formal sector.

Public works. Public works programs are also being used in East Asia, although to a lesser extent than in other crises and compared to other regions. In general, public works have played a smaller role in SP systems in East Asia and the Pacific compared to other developing regions such as South Asia. Nonetheless, the East Asia and Pacific region does have experience with public works, particularly in rural areas and in low-income countries that have been trying to institutionalize public works as a productive safety net. Some programs have been donor-supported cash- and food-for-work schemes, such as in Cambodia and Lao PDR, while others have been institutionalized in regular programs, as in Indonesia. In China, the government has encouraged use of public works and public works community systems as a means of providing retrenched workers with employment opportunities. According to the All-China Women's Federation, around 40 percent of laid-off women, who accounted for over half of the country's unemployed in 2002, found jobs in community positions in their neighborhoods (World Bank, 2008c). In some countries, public works have played an important role as rapid response mechanisms in past crises. Although such programs have been less prevalent during the more recent food, fuel, and financial crises, a number of stimulus packages have included significant allocations to small infrastructure programs.

3.2 Key Issues and Challenges

Although the average level of expenditure on SP has increased, spending levels still lag behind those in other regions. Countries in East Asia and the Pacific have historically had low expenditures on SP, particularly during non-crisis periods. In more recent years, government spending on SP in the region has increased on average, although the pattern among individual countries is mixed (Table 14).

Table 14: Expenditure on SP as a percentage of GDP in selected countries

Country	2000	2003	2005
Cambodia			0.8
China	3.5	4.5	4.5
Indonesia	2.1	1.4	1.9
Japan	17.9	18.6	16.0
Korea, Rep	3.3		7.5
Lao PDR	2.1	2.6	0.8
Malaysia			3.9
Mongolia	7.3		9.6
Philippines			1.8
Singapore	1.7	1.9	
Thailand	2.6	4.2	
Vietnam	3.2	2.7	3.5

Sources: For years 2000 and 2003, the data comes from the Public Social Protection and Health Expenditure indicators from IMF (2000, 2003). For year 2005, data on SP comes from the ADB (2005).

Furthermore, coverage rates in the region have generally remained low. Table 15 shows the percentage of the population in selected countries of the East Asia and Pacific region who were covered by SP programs as of 2005. As mentioned above, in some countries, the main SP programs cover formal sector workers who are mostly concentrated in urban areas, leaving a large proportion of the remaining population in rural areas and the informal sector without any coverage. In China, for example, social security and social assistance programs for urban areas have been much more developed than those in rural areas, although efforts are being made to extend similar initiatives to rural areas.

Table 15: Coverage rates of SP in selected countries (2005)

Country	% of population covered
Cambodia	12.0
China	39.0
Indonesia	41.0
Japan	88.1
Laos	12.0
Malaysia	37.0
Mongolia	72.0
Korea	80.0
Philippines	31.0
Vietnam	38.0

Note 1: ADB used mostly administrative data from government agencies to compute the aggregate coverage rates. One main concern is that estimates of coverage using administrative data are often unreliable and overestimate the number of beneficiaries. A preferred instrument to compute coverage would be household surveys. However, program information is not always available.

Note 2: ADB's definition of SP includes the following types of programs: labor market programs, insurance (including health, agricultural insurance and programs to cover the risks associated with unemployment, sickness, maternity, disability, industrial injury and old age), social assistance and welfare, and child protection. ADB's definition included also microfinance programs but for comparability with the definitions used for this regional study, the numbers reported in the table exclude those.

Source: Asian Development Bank (2005), presented in World Bank (2008d).

In some cases, lack of knowledge amongst population about available support may be contributing to low coverage. As discussed previously, very few surveyed households in Lao PDR reported that they sought support from the Government and/or NGOs when faced with shocks, and the proportion of surveyed households who knew about particular programs was quite low (Table 16) (World Bank, 2009m).

Table 16: Knowledge of Social Protection Programs and Participation in Lao PDR

Program	Households that knew about the program		Households that benefited from program in past 12 months	
	Proportion	N	Proportion	N
School Feeding Program	0.31	600	0.40	249
Food for Work	0.13	600	0.16	94
Ethnic Schools	0.37	600	0.02	287
Civil Service Medical Benefit Scheme	0.32	600	0.09	152
Community Based Health Insurance	0.24	600	0.03	118
Social Security Scheme	0.45	600	0.10	190
Health Equity Fund	0.47	600	0.03	276
Mutual Assistance Fund	0.26	600	0.02	147
District Disaster Program	0.25	600	0.02	117
Fund for Disabled	0.38	600	0.01	190

Notes: Weighted sample. Data on households that benefited from the program is available only for those who knew about the program.

Source: 2008 survey of 600 households in Lao PDR. Presented in World Bank (2009m).

Since providing universal coverage is difficult fiscally, it is important to assess program effectiveness in targeting the poor and vulnerable, on which results have been mixed. Table 17 presents the targeting rates of SP for selected East Asia and Pacific countries in 2005, as calculated by the ADB.¹² Country-level analyses have revealed problems of under-coverage of the poor (errors of exclusion) and leakage to those classified as non-poor (errors of inclusion), indicating that targeting of programs has been difficult. For example, although Thailand has an extensive SP system, only 13 percent of the elderly in the poorest quintile are program beneficiaries, while 64 percent of the recipients are in the two wealthiest quintiles (World Bank, 2006h). In the Philippines, leakage rates for the major SP programs range from 20 to 72 percent (World Bank, 2009h). As shown in Figure 12, the poorest income decile consumes only 14 percent of the total NFA rice subsidy, while around 2 percent of the subsidy goes to the richest income decile. In addition, the geographic distribution of NFA rice is not sensitive to poverty incidence (Table 17).

¹² It should be noted that these numbers were drawn mainly from administrative records rather than household surveys, and therefore should be interpreted carefully.

Table 17: Targeting of SP in selected countries (2005)

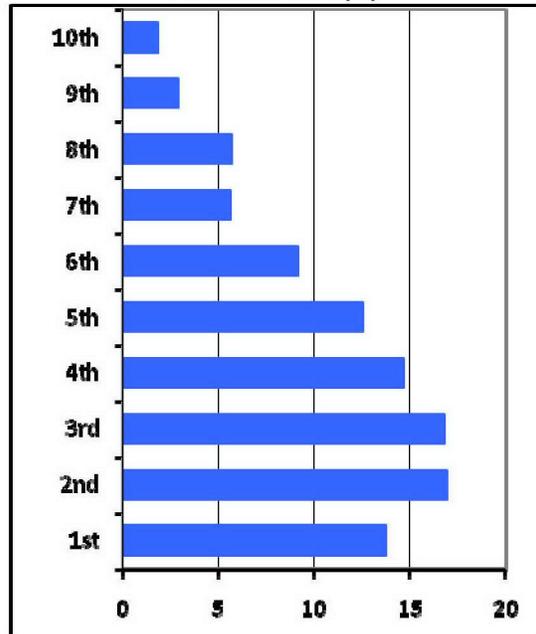
Country	Targeting rate (%)
Cambodia	43
China	69
Indonesia	73
Japan	100
Lao PDR	40
Malaysia	44
Mongolia	60
Philippines	30
Vietnam	51

Note 1: ADB calculates the targeting rate by dividing the number of SP beneficiaries who are poor by the number of poor people in each country. ADB collected the data mostly from local and central government administrative records.

Note 2: ADB's definition of SP includes the following types of programs: labor market programs, insurance (including health, agricultural insurance and programs to cover the risks associated with unemployment, sickness, maternity, disability, industrial injury and old age), social assistance and welfare, and child protection. ADB's definition included also microfinance programs but for comparability with the definitions used for this regional study, the numbers reported in the table exclude those.

Source: Asian Development Bank (2005), presented in World Bank (2008d).

Figure 12: Incidence of NFA rice subsidy by national income deciles (%)



Source: World Bank staff estimates using Family Income and Expenditures Survey 2006. Presented in World Bank (2009h).

Table 18: NFA rice distribution and poverty incidence (%)

Regions	NFA rice, % of total consumption	Poverty incidence %
Philippines	20.4	32.9
National Capital Region	40.5	10.4
Ilocos Region	13.1	32.7
Cagayan Valley	9.9	25.5
Central Luzon	20.4	20.7
Southern Tagalog	12.0	36.8
Bicol Region	24.5	51.1
Western Visayas	5.9	38.6
Central Visayas	29.5	35.4
Eastern Visayas	19.6	48.5
Western Mindanao	30.3	45.3
Northern Mindanao	26.5	43.1
Caraga Region	20.0	52.6
Southern Mindanao	27.4	36.6
Central Mindanao	11.0	40.8
ARMM	7.1	61.8
CAR	24.3	34.5

ARMM = Autonomous Region of Muslim Mindanao

CAR = Cordillera Autonomous Region

In terms of specific target groups, all countries in the region are facing the challenge of how to handle informal sector workers. Many countries have a large proportion of workers in the informal sector, who have no formal mechanisms to help them manage risks. The lack of access to formal social insurance has a gender dimension, as women in East Asia are mostly engaged in the informal sector (World Bank, 2008c). A number of countries in the Latin America and Caribbean region, which has also struggled with the question of how to expand coverage to the poor and informal sector workers, have been trying to address these issues through non-contributory schemes in pensions and in health. Bolivia, for example, has an ambitious non-contributory pension program that transfers benefits to all Bolivians age 65 and over, and the program has extended pension coverage to 58 percent of the elderly who are not otherwise covered by formal protection. In Peru, when coverage provided by the non-contributory health insurance system is taken into account, health coverage in the lowest income quintile jumps from 3 to 63 percent. This system has improved the use of health care services and fostered increased demand among women, children, and the elderly (World Bank, 2009b). However, it should be noted that the issue of the informal sector raises challenges in terms of financing, since non-contributory programs are financed out of the taxes of those in the formal sector. Furthermore, programs designed to reach the poor in the informal sector involve tradeoffs in terms of the incentives they create and their sustainability.

Similarly, the SP framework for dealing with migrant workers is generally underdeveloped. Since many migrants work in the informal sector, they are unlikely to have SP coverage, either because they are foreign nationals or because eligibility in safety net schemes for nationals is linked to residence and identification systems that link the migrant worker to the place of origin rather than working location. This issue is starkly illustrated by the case of China, where the expansion of employment opportunities in cities has attracted millions of migrants from rural areas and where the informal sector comprises about one half of total employment (World Bank, 2007a). Because benefits for most SP programs are tied to each person's household registration (*hukou*), workers who leave their official place of residence lose their eligibility for benefits. A key issue going forward is how to provide access to SP as well as employment benefits for these workers and how to make such benefits portable so that workers can retain the benefits when they move, which is challenging administratively.

One factor that threatens to undermine the effectiveness of SP programs is weak implementation capacity. When faced with shocks, households oftentimes need support on an urgent basis. However, some countries do not have the capacity or well-functioning administrative procedures in place to provide timely support. In Lao PDR, for example, the Village Authority can request support from the provincial level or central level to cope with rice shortages that result from covariate shocks such as droughts. However, focus group discussions and in-depth interviews revealed that a number of barriers to such support exist, such as limited rice available for distribution at the

provincial level, slow administration, and lack of transportation to rural areas (World Bank, 2009m).

Lack of institutional coordination also poses a challenge to the development of SP systems. Not all countries have a central agency responsible for coordinating SP programs, and program implementation may be the responsibility of separate Ministries and *ad hoc* program units. Such arrangements have resulted in fragmentation and the use of different targeting approaches across programs, often with unlinked beneficiary databases and parallel monitoring systems. For example, Indonesia has more than 15 social assistance programs that are independently implemented by 5 different central agencies, which have a high degree of autonomy in policy making and program execution. Coordination is weak both across ministries at the national level and downstream with local governments and service providers, undermining the efficiency and effectiveness of the SP system (World Bank, 2009l). As discussed in ASEAN Secretariat and World Bank (2009), lack of institutional coordination and coherence can make it very difficult to respond rapidly in the face of a crisis, particularly when programs are spread across various agencies that are responsible for different segments of the population.

Another issue that may be undermining the effectiveness of SP programs is lack of monitoring and evaluation. Programs require continuous monitoring and evaluation to pinpoint implementation issues and improve effectiveness. While some programs do have basic monitoring systems in place, the focus of such monitoring has generally been on simple data recording and reporting rather than on analyzing information to inform policy decisions. In many cases, a system for rigorous program evaluation to determine whether the program achieved its intended impacts is also missing. In addition, as discussed in ASEAN Secretariat and World Bank (2009), countries in the region do not have systems in place to monitor vulnerability and shocks on a regular basis, leaving countries ill-prepared to mobilize in a timely manner when crises occur.

Clearly, although considerable progress has been made in strengthening SP in East Asia and the Pacific, greater efforts are needed to improve the effectiveness and efficiency of programs. The following section discusses how the region can move forward in the development of SP systems and address some of the challenges highlighted above.

Section V PRIORITY AREAS IN IMPROVING SOCIAL PROTECTION

Although countries in the East Asia and Pacific Region have made significant progress in developing SP programs, much more remains to be done. As discussed in the previous sections, households in the region are still vulnerable to a range of shocks that can push them into poverty. However, the current range of informal and formal mechanisms available for helping households manage such shocks does not seem to provide sufficient protection for the poor and vulnerable, as evidenced by the continued use of coping mechanisms that have negative long-term consequences. Measures to improve the design and implementation of formal SP programs could help fill the gap and provide a higher level of protection against future shocks.

While the particular needs and gaps in SP vary from country to country, many countries in the region are facing a similar set of challenges. In general, greater efforts are needed to improve the comprehensiveness, coverage, and effectiveness of the SP programs and to strengthen overall risk management systems. Based on the issues and lessons learned that emerged from the previous sections, this section highlights some cross-cutting priority areas for SP in the region going forward.

1. Putting SP systems in place before crises hit

Having a sound SP system in place is important as a foundation for a rapid crisis response when necessary. As discussed in World Bank (2008f), workable systems for enrolling beneficiaries, providing payments or other benefits, and monitoring are critical for good SP programs, but such systems take time to develop and require an up-front investment. Establishing a sound safety net program from scratch usually requires at least four to six months, with a longer period for refinement. A country with well-targeted programs can react swiftly to crises by increasing the value and/or coverage of benefits, while countries without such programs in place will have to rush to design and launch crisis responses. In the meantime, urgent needs may be left unmet, or policymakers may need to use less desirable or effective methods to deliver assistance quickly.

The importance of having a pre-existing system in place was highlighted during the recent food, fuel, and financial crises, particularly in the case of social insurance. Social insurance programs, particularly those seeking to extend coverage to the informal sector, require more time to design and roll out than other SP instruments, such as public works. Social insurance programs therefore played a more useful role in the more formalized economies of the region that had significant pre-existing coverage of social insurance, allowing them to use measures such as extension of unemployment insurance benefits and more lenient treatment of social insurance contributions as discussed in the previous section. In contrast, the role of social insurance in the crisis response was much more limited in countries with nascent programs.

A sound SP system is important in the long run not only for managing large-scale, covariate shocks but also for helping households manage all types of shocks. As discussed earlier, households are vulnerable not only to large-scale shocks such as financial crisis but also idiosyncratic shocks such as illness, which can have devastating impacts on household welfare. Ideally, a sound SP system would be in place to help households manage such shocks as they arise. However, World Bank (2008f) notes that some governments, lacking SP programs that can be scaled up to cover an adequate number of people, have been using general price subsidies, tax cuts, and other short-term measures that can be regressive and expensive. In such cases, it will be important to focus on developing sounder SP systems for the long run, utilizing effective methods of household targeting, payments, management, and monitoring.

2. Improving targeting and coverage of programs

Targeting of SP programs could be strengthened considerably. International experience shows that directing resources toward the poor and vulnerable can increase the benefits that can be achieved within a given budget or can achieve a given impact at the lowest cost (Grosh et al, 2008). One reason for varied targeting performance across programs is that they oftentimes use different targeting approaches and rely on separate recipient databases, resulting in duplication of efforts, inconsistency in application, and lower program impact. Using a more unified, best-practice targeting system would help improve the efficiency and effectiveness of programs in reaching the poor and vulnerable. Notably, having targeting systems in place was what allowed countries in the Latin America and Caribbean region to respond to the recent crises more quickly and efficiently than other regions.

One promising approach to targeting is the proxy means test methodology. In the Philippines, the use of proxy means testing for the 4Ps CCT program, described in Box 4, appears to have resulted in higher coverage of the poor and potentially higher poverty impact in the pilot areas. It has been estimated that 87 percent of households classified as poor were identified as potential program beneficiaries. The 4Ps is expected to increase the total incomes of poor and eligible households by an average of 23 percent and to reduce poverty incidence in targeted areas by 6.1 percentage points.¹³ Although these estimates are preliminary, they are consistent with the results of impact evaluations of comparable CCT programs in countries such as Mexico and Colombia. To improve the targeting of its SP programs, the Philippine government is now putting in place a national household targeting system that uses the proxy means testing methodology as part of its SP reform agenda (World Bank, 2009h). However, PMT is not a panacea, and careful design and implementation are crucial for achieving good

¹³ World Bank staff simulations based on the total cash transfer (health plus education component), computed according to the actual demographic composition of potential beneficiary households and per capita income predicted using the proxy means testing methodology.

targeting outcomes. Other targeting approaches should also be considered depending on a specific case.

Box 4: Proxy Means Testing in the Philippines 4Ps Program

The Pantawid Pamilyang Pilipino Program (4Ps), a conditional cash transfer (CCT) program, uses a Proxy Means Test (PMT) approach to select poor beneficiaries. During the pre-pilot and initial phase of the roll-out to 360,000 households in 2008, targeting included two steps: (i) selection of poor provinces based on poverty incidence according to the Family Income and Expenditure Survey (FIES) in 2006 and selection of municipalities based on poverty incidence according to Small Area Estimates in 2003 and (ii) assessment of households through the application of PMT, in which household incomes are predicted on the basis of demographic, educational, and socio-economic characteristics. The information for estimating the PMT is gathered in a two-page questionnaire with relevant variables that predict household income. The PMT model was estimated using the FIES and Labor Force Survey.

The information for calculating the PMT is collected using a number of data-collecting strategies such as survey sweeping (i.e. all residents in a given area are surveyed), on-demand application, or a combination of both methods depending on the poverty incidence and the urban/rural classification of the areas to be surveyed. The information is processed in a standardized way using software developed for that purpose and is validated routinely. A PMT model is then calculated to classify households as poor or non-poor based on the provincial poverty thresholds established by the National Statistical Coordination Board for 2006.

This targeting method has been used in other middle-income countries such as Mexico, Colombia, Chile, and Costa Rica, where reported income is hard to verify as a large number of people work in the informal sector and there are few databases available to cross-check incomes or assets.

Source: World Bank (2009h).

Further efforts are needed to expand program coverage to groups such as migrants and informal sector workers. As discussed in the previous section, in many countries, large segments of the population do not have access to SP programs because they are working in the informal sector or have migrated from their official place of residence. Policymakers will need to explore ways to extend coverage to these vulnerable groups, for example by introducing non-contributory schemes or providing channels through which informal sector workers can participate in contributory schemes. In countries where internal migration and labor mobility are on the rise, governments may wish to consider how to make benefits portable from one place to another.

3. Strengthening monitoring and evaluation

To help ensure that programs are functioning properly and delivering the intended results, greater efforts are needed to strengthen monitoring and evaluation. Monitoring and evaluation must be done on a regular basis to help inform mid-course improvements to program implementation and the design of future policies. As suggested in ASEAN Secretariat and World Bank (2009), as a starting point, evaluation units could be established in ministries to work with statistical offices in tailoring surveys that could capture the effectiveness of SP programs. The results would then need to be

analyzed and conveyed to policymakers in a timely manner to help inform their decision making.

Better monitoring of shocks and vulnerability is also needed to help ensure that programs are responsive and that countries are well-prepared to respond in times of crisis. Country experiences during the recent crises have underscored the need for more timely and good quality social sector and employment data. A permanent shock and vulnerability monitoring system could be established to track key indicators such as labor, education, and health outcomes, provide an up-to-date picture of household vulnerability, identify needs, and pinpoint crisis-hit regions and households. ASEAN Secretariat and World Bank (2009) also propose the development of new rapid surveys to fill critical information gaps during crises. These surveys could help capture critical indicators in key sectors and regions and could be collected at relatively low frequency in normal times, with the frequency being increased during crises. Early warning systems and use of mapping tools to identify potential shocks and areas of vulnerability would also be useful. A recent exercise to map the occurrence of weather-related shocks in different parts of Vietnam from 1975 to 2006 provides a useful example of how this could be done (Thomas, 2009).

4. Improving institutional coordination

Fostering better institutional coordination across agencies implementing SP programs is also important, both for crisis and non-crisis periods. Since multiple agencies are oftentimes involved in policy development and program delivery, the level of coordination among these agencies is critical in developing a coherent SP system as well as in determining the possible response to a crisis. ASEAN Secretariat and World Bank (2009) found that those countries in the region that had stronger coordination mechanisms in place appear to have been able to react more quickly and implement a more integrated set of responses to the recent crises than other countries. The Philippines has made important progress in fostering institutional and policy convergence by passing an operational definition of SP in 2007 to help establish a common framework for designing and implementing a national SP strategy. Another important development was the creation of the inter-agency National Social Welfare Program in 2008 to consolidate over 60 existing programs led by various government agencies into a single national social welfare strategy. This inter-agency body has been undertaking an assessment of the existing SP programs, with a view to scaling up and reallocating resources to the most effective and efficient ones (World Bank, 2009e).

Having a central database system in place would also strengthen program management. In some countries with multiple programs targeting the poor and vulnerable, the separate administration of programs has resulted in overlapping and/or insufficient coverage of eligible households. Lack of clarity on whether benefits from other programs should be taken into account when determining eligibility for a particular program can also be problematic. To maximize efficiency and ensure that the

targeted groups receive the intended level of benefits, it is important to manage data on beneficiaries and benefits out of a central database. Such a database could be linked by unique individual/family identification numbers for ease of reference across programs.

5. Sharing and consolidating regional and cross-regional experience

There is an increasing interest from countries in learning about successful experiences with SP programs in other countries and regions. Such sharing of knowledge is important for policy makers to learn about good program designs, targeting approaches and the operational side of program implementation. Knowing what worked and what did not work, and how the country institutional context and implementation arrangements contributed to observed outcomes would further contribute to designing SP systems that satisfy social policy objectives.

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