Coping with Crises: Policies to Protect Employment and Earnings

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The continuing failure of many countries to adequately mitigate the adverse labor market impacts of economic downturns is of concern, since labor market volatility can exacerbate poverty and stunt growth. This article aims to identify potentially effective policies responses to crises by navigating the potential tradeoffs between offsetting adverse short-term impacts of economic downturns on the quantity and quality of jobs, and preserving incentives for economic recovery. The authors propose a taxonomy that categorizes interventions depending on whether they mitigate the negative short-term impact of crises or whether they stimulate recovery. The taxonomy helps policymakers to identify “win–win” policies that avoid potential tradeoffs between these objectives by simultaneously serving both. Common elements of effective interventions are feasibility, flexibility (for example the capacity for scaling up and down), and incentive compatibility—and there is no substitute for being prepared. Having sound safety nets in place before a crisis is superior to haphazardly implementing responses after a crisis hits. JEL codes: E24, I38, E61, D9, J02

Although economic crises are difficult to predict, their recurrence is a salient feature of emerging and developing economies. Nevertheless, many countries continue to lack an effective policy infrastructure that can mitigate the impacts of economic downturns on workers and their families while fostering recovery and long-run growth. This was painfully highlighted by the quest for quick responses to the global downturn of 2008–09 and by the ad hoc and reactive nature of many of the policies implemented.

The weak ability of governments to systematically foresee, monitor, and contain the adverse labor market impacts of crises is of particular concern. The labor market is a prime channel through which shocks are transmitted to households,
and even temporary deteriorations in employment opportunities can leave lasting scars on human capital accumulation, household welfare, and future labor productivity. Moreover, the share of aggregate income that goes to labor tends to fall precipitously during crises and recovers only slowly and partially (Diwan 2001) so that early signs of recovery in indicators such as GDP growth may obscure protracted pain in the labor market (Agenor 2002; Reinhardt and Rogoff 2009). This concern is especially relevant for developing countries where poverty incidence is high, labor is typically the only asset for the majority of the population, and where economic shocks can be particularly pernicious for the poor (Lustig 2000). In addition, the ability of developing country governments to respond quickly and effectively to shocks is often limited by poor governance, weak institutional capacity, and by widespread market imperfections (see for example Fields 2007).

The main objective of this paper is to guide policymakers through the challenges inherent in crafting effective packages to limit earnings volatility and maximize household welfare in the presence of these imperfections and constraints. The focus is on navigating tradeoffs between offsetting adverse short-term impacts and preserving incentives for economic recovery and future growth. We review the effectiveness of policies commonly enacted in response to crisis using a taxonomy that classifies policy interventions depending on whether (i) their most immediate objective is to contain the impact of the shock or to accelerate recovery and (ii) they are designed to protect firms and employment (that is, the demand side) or workers and earnings (that is, the supply side). This classification highlights the potential tradeoff between mitigating short-term impacts and maximizing long-term efficiency. It also helps to identify potential win–win policies that avoid this tradeoff.

The paper contributes to the literature by reviewing evidence on the effectiveness of labor market and social protection policies commonly used during times of crisis, and by highlighting the importance of intertemporal tradeoffs. The synthesis is useful since the empirical evidence on the effectiveness of these policies in times of crisis is surprisingly sparse and scattered. Moreover most of the evidence focuses only on interventions that protect workers’ earnings and often neglects those designed to maintain firms’ productivity and employment. Finally the paper highlights the crucial role of country-specific and crisis-specific characteristics—such as available fiscal space, dominant labor market transmission mechanisms, administrative capacity, and political economy conditions—in determining the elements of an effective policy package.

The remainder of the paper is organized as follows. The next section presents the economic rationale for government intervention during times of crisis by reviewing evidence on how households and firms may otherwise respond to shocks with unnecessarily costly adjustments. We then propose a policy taxonomy which (i) highlights intertemporal tradeoffs between providing short-term
protection and maximizing long-run welfare and (ii) assesses the evidence on the effectiveness of commonly used interventions under each of the proposed categories. Following this we discuss how country and crisis-specificity determine which policy packages are optimal.

The Need for Policy Interventions

The main challenge for policymakers during crises is to implement a set of policies that maximize long-run household welfare whilst minimizing short-run negative impacts (Lustig 2000; Holzmann and Jorgensen 2001; Skoufias 2003). Although the reduction in aggregate income that is a defining feature of crises is inevitably painful (Kanbur 2009), the rationale for policy intervention depends on whether or not the adjustments made by households and firms in response to shocks are consistent with intertemporal optimization of household welfare and growth prospects. If they are, interventions to offset short-term shocks can backfire in the long run, as they may interfere with the necessary adjustment process, although it may be desirable to smooth the burden of adjustment over time. If they are not, short-term interventions are not only fully consistent with maximizing long-run household welfare, they are actually necessary to prevent long-run efficiency costs.

Whether or not crisis-related adjustments are efficiency-enhancing depends crucially on the pre-existence of market imperfections and failures. This section provides a detailed discussion of the implications of how the common occurrence of market imperfections in developing countries reduces the scope for efficient adjustment by households and firms. It also describes the negative long-term impacts of inefficient responses on the quality of labor supply (through its impacts on human capital accumulation) and on the quantity of labor demand (through its impact on firm survival and growth).

Adjustment by Households: Long-Term Consequences of Short-Term Crises

Experience from previous crises suggests that in the presence of market imperfections, even short-term crisis-induced reductions in earnings may force households into actions that are detrimental to their long-run welfare and can seriously undermine the quality of labor supply in the long run. Such actions include reducing investments in physical and human capital, depleting productive assets, and reducing essential consumption.

Confronted with economic stress, households tend to cut back on investments in education. They are especially likely to do so if they are poor or credit constrained (Ferreira and Schady 2009). In Indonesia, for example, the 1997
economic crisis was associated with significant declines in school enrolment among the poorest, particularly in rural areas where the percentage of 7–12-year-olds not enrolled in school doubled from 6 to 12 percent (Thomas and others 2004). However, the impact of crises on schooling outcomes need not necessarily be negative on average, as during crises the opportunity cost of children staying in school diminishes due to reductions in wages and deteriorating employment prospects (De Ferranti and others 2000). During the 1987–90 Peruvian crisis school enrolment rates rose on average, despite a drop in public spending on schooling by almost 50 percent (Schady 2004). Similarly, overall, secondary school attendance rates increased in response to the crisis in Argentina (Lopez Boo 2008).

Poor households may also spend less on health and nutrition and be forced to cut back on calorie intake, leading to weight loss and acute malnutrition. For example, estimates suggest that the 1988–92 Peruvian crisis led to 17,000 additional infant deaths (Paxson and Schady 2005), and that the 1997–98 financial crisis in Indonesia increased infant mortality by over 3 percentage points. Under-5-year-old mortality in Cameroon went from 126 per 1,000 in 1991 to 152 per 1,000 in the 1998 economic downturn, and mortality rates for the very young and the elderly increased (or declined less rapidly) during the Mexican crises (Cutler and others 2002).

Crisis may also interrupt on-the-job human capital accumulation and destroy firm–worker specific human capital gains. Microeconomic studies of job loss show significant downstream effects on individuals’ employment trajectories. Loss of a long-term job leads to periods of episodic employment, job search or time out of the labor market, and lower lifetime earnings (Hall 1995). These effects can be especially severe for those laid off during recessions (see, for example, Verho 2008). Finally, with limited or no access to insurance and credit, households may have no choice but to sell productive assets (for example livestock or household enterprise inventories), thereby sacrificing future income. Even if asset sales are able to soften the blow to consumption in the short term, physical capital losses jeopardize households’ long-run earnings. In addition, the increased uncertainty that typically accompanies crises can cause households to forsake profitable opportunities for safer ones that have a lower but steadier return. A more detailed review of the literature on the impact of risk and shocks on household decision-making in developing countries is provided in Fafchamps (2003) and Dercon (2001).

Thus, in the presence of market imperfections, household responses to short-lived shocks can have long-run negative consequences on the future quality of labor. These consequences are often especially severe for the poor, who lack the capacity to cope with such shocks.
Adjustment by Firms: “Cleansing” or “Scarring”?

The long-term impact of economic downturns on aggregate efficiency in general and firm adjustment in particular is the subject of a lively debate. In the absence of market imperfections, adjustments undertaken by firms will be efficiency-enhancing in the long run. This observation forms the basis for the “cleansing” hypothesis: the idea that crises may accelerate the Schumpeterian (1939) process of creative destruction by weeding out unproductive arrangements and freeing up resources for more productive uses. This view features prominently in a host of macromodels (see for example Caballero and Hammour 1994, 1999; Hall 1995; and Gomes, Greenwood, and Rebelo 1997). While there are many mechanisms through which the “cleansing” effect can materialize, the basic insight is that the additional competitive pressure caused by crises facilitates efficiency-enhancing reallocation. For example, firms may be able to attract more highly skilled workers as the number of applicants rises or, conversely, they will fire the least productive employees. Banks may allocate credit more efficiently as a result of increased scrutiny; labor unions may be more willing to accept employment losses or wage cuts. These models do not predict that crises will enhance aggregate welfare or claim they are inherently desirable. Rather they suggest that, by improving the efficiency of resource allocation, they may have a silver lining.

However, in the presence of market imperfections, this cleansing effect may not materialize. Barlevy (2003), for example, points out that crises may well obstruct the process of creative destruction by exacerbating pre-existing labor and credit market imperfections. He argues that credit market imperfections are more likely to bind for relatively efficient producers, as—due to their higher fixed costs—highly efficient production arrangements are more vulnerable to financing constraints. Crises-induced tightening of credit constraints would thus hurt efficient firms disproportionately. In addition, crises may increase labor market frictions by increasing search costs and lowering average worker–firm match quality. This is because it takes longer for workers to move into suitable jobs, and relatively unproductive workers become less likely to quit their jobs to search for better alternatives (Barlevy 2002).

The empirical evidence is ambiguous. The available longitudinal firm-level data support the claim that firm dynamics and resource allocation are crucial determinants of countries’ comparative economic success and long-run productivity growth (Restuccia and Rogerson 2008; Hsieh and Klenow 2009; Syverson 2010). However, evidence from studies of manufacturing firms provides only weak support for the idea that allocative efficiency increases during downturns. If the cleansing hypothesis is correct, one would expect inefficient producers to be hurt disproportionately during downturns, resulting in a substantial reallocation of market shares from inefficient to efficient firms. Studies of aggregate
productivity dynamics during the 1980s’ downturns in the United States and Israel do not find evidence of an increased contribution of reallocation to productivity growth (Baily, Hulten, and Campbell 1992; Griliches and Regev, 1995). Moreover jobs created during recessions are usually less productive, less well-paid, and less likely to last (Bowlus 1993; Davis, Haltiwanger, and Schuh 1996), suggesting that crises slow down the creation of productive matches and that the quality of jobs is pro-cyclical. Finally, economic downturns are typically associated with excess churning of firms and workers (Davis and Haltiwanger 1990, 1992; Davis, Haltiwanger, and Schuh 1996).

The few studies that test the cleansing hypothesis directly using plant-level data also yield conflicting results. Liu and Tybout (1996) find no evidence of systematic covariance of an efficiency gap between continuing and exiting plants over the 1980–85 business cycles in either Chile or Colombia, even though Chile suffered a recession in 1982. Casacuberta and Gandelsman (2009) conclude that the 2002 banking crisis in Uruguay had a cleansing impact since, even during the crisis, productivity was negatively correlated with exit. They also find some evidence that the crisis attenuated the link between productivity and exit. By way of contrast, comparing cohorts of entrants and survivors, Nishimura, Nakajima, and Kiyota (2005) find that the 1996–97 banking crisis in Japan induced the exit of relatively efficient firms amongst entering cohorts. Similarly in Indonesia the link between plant productivity and plant survival was significantly weaker during the East Asian Crisis than during both the pre- and post-crisis periods (Hallward-Driemeier and Rijkers 2010).

The ambiguity of the empirical findings has much to do with the fact that the long-term impact of downturns on firms’ performance depends on a host of initial conditions—including the prevailing policy regime and political economy conditions, the nature of the shock, and the characteristics of the policy response. The last two points are elaborated upon later.

In terms of initial conditions, there is some evidence that policies that regulate labor market and firm dynamics are important determinants of both the depth of a downturn and the speed of recovery. Bergoeing, Loayza, and Repetto (2004) find that countries with more distortionary regulations experienced more severe downturns than those with more neutral regulatory regimes. Collier and Goderis (2009) assess how the ability of developing countries to cope with aggregate shocks varies depending on the structural policies implemented. Considering a wide variety of policies—including trade policies, financial depth, labor market regulation and openness—they find that regulations that delay the speed of firm closure are the most important determinant of short-term growth losses from adverse price shocks in mineral exporting countries.

Thus, in the presence of market imperfections, household and firms responses to crises may prove to be unnecessarily costly in the longer run. Since market

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imperfections are a defining feature of most developing countries, the question for policymakers is not whether to intervene to minimize the adverse impacts of crises on employment and earnings, but how to intervene.

A Typology of Policy Options

This section reviews empirical evidence on the effectiveness of interventions enacted during past crises using a taxonomy that brings to the fore the potential intertemporal tradeoffs between minimizing short-term impacts and preserving incentives for recovery and long-run growth.

Labor-market-related policy interventions can be classified according to whether their main objective is to (i) contain short-term impacts of the shock or (ii) accelerate the recovery process and promote long-term growth. A key difference between the two categories of policies is their time horizon. This difference expresses itself in two ways. The first is the expected lifetime of the policy and the second is the lag between the time the policy is implemented and when the beneficial impact materializes. Policies designed to temper the short-term impact of crises are typically temporary in nature. Thus post-crisis reversibility is a critical feature of their successful design. Policies that can be scaled up quickly and effectively as crises evolve, and scaled down as recovery begins, fare well within this category; as do automatic stabilizers such as unemployment benefits or cash transfers systems that allow for the number of beneficiaries to change in response to need.

Policy interventions geared toward fostering recovery and accelerating long-run growth tend to be more permanent in nature and typically center on rectifying market imperfections. Their beneficial impact may take a while to emerge as they operate by enhancing allocative efficiency and stimulating productivity growth. Because of adjustment costs, firms’ responses to such policies are typically slower than responses to more direct interventions. Similarly the full benefits of policies that aim to remedy imperfections in the market for skills may take a while to manifest themselves since skills formation takes time.

If not carefully designed, policies that focus on mitigating immediate impacts, while beneficial in the short run, may aggravate market imperfections and thus be counterproductive in the longer term. In Indonesia, for example, the 1997–98 crisis sparked pro-labor pressures that led to better enforcement of minimum wages and to the introduction of severance pay and dismissal regulations, leading to more severe rigidities in hiring and firing (Manning 2000). While more stringent regulation helped to raise earnings and employment stability of manufacturing workers, the employment elasticity of manufacturing output growth declined sharply after the crisis period, hampering job creation and the recovery (Narjoko and Hill 2007; Hill and Shiraishi 2007).
Conversely policies that are conducive to long-run growth, when incautiously implemented, may do unnecessary damage in the short run. Thailand’s recovery from the Asian crisis is a case in point: while the government introduced reforms conducive to long-run growth, the adjustment program proved to be too harsh, leading to an unnecessary decline in output (Dollar and Halward-Driemeier 2000).

However, there are also win–win policies that are beneficial both in the short and the long run. They tend to combine elements of both categories of interventions and simultaneously serve to minimize short-term impacts and accelerate the recovery. Figure 1 presents a rough grouping of commonly used policy interventions using the broad categories described above, and highlights how combining elements of different interventions may lead to such win–win policies.

Within each of the categories described above it is possible to further distinguish policies depending on whether they focus on maintaining jobs and productivity on the one hand, or on supporting labor income and fostering employability on the other hand. That is whether they work on the demand or the supply side. The proposed categorization is not intended to be rigid as

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**Figure 1. Policy Taxonomy**

![Policy Taxonomy Diagram](image-url)
providing direct support and fostering the recovery can go hand-in-hand. Rather
the key virtue of this taxonomy is that it alerts policymakers to the existence of
potential tradeoffs between these objectives and helps them to identify win–win
policies which can avoid these tradeoffs.

The two boxes on the left-hand side of figure 1 list commonly used policies to
contain the impact of the crisis. Demand-side interventions are presented in the
top-left box, and interventions to protect labor income are presented in the
bottom-left box. The demand-side policies are typically designed to limit job
destruction, to facilitate job replacement, or to do both. They include payroll tax
holidays, wage subsidies, policies that facilitate temporary reductions in hours
worked, and ad hoc interventions to provide credit to enterprises in difficulty due
to sharp drops in output demand. Most of these policies operate by temporarily
reducing the price of labor or providing financial resources to cover temporary
and unanticipated declines in profit. These supply-side policies are presented in
the bottom box.

Public works programs are a somewhat different but very commonly used form
of demand-side intervention. These programs provide alternative sources of tem-
porary, low-paid, publicly financed employment to workers displaced by the
private sector. However, the most commonly used interventions to mitigate short-
term impacts aim directly to support labor income via a range of social protection
benefits, such as unemployment benefits and other cash transfers.

The boxes on the right-hand side of figure 1 list interventions to accelerate
recovery and foster growth by enhancing efficiency and facilitating job creation
(top box) or enhancing worker’s employability and human capital (bottom box).
This category of policies is more varied in nature and a comprehensive review is
beyond the scope of this paper. However, salient demand-side interventions in this
category include (i) policies to enhance access to credit and improve the working
of the credit market more broadly; (ii) reforms to reduce labor market rigidities
and imperfections, including policies to facilitate business entry and to improve
bankruptcy laws and so on. Prominent supply-side interventions in this category
include training, job-search, and self-employment assistance programs. While
growth enhancing in the long run and consequently commendable, the
implementation of policies aimed at accelerating recovery at times of crises may
prove to be excessively costly as they may aggravate the short-term burden of a
crisis. On the other hand, the occurrence of a crisis may act as a catalyst for the
political momentum required to implement unpopular reforms, such as increasing
the retirement age.

Finally the rectangular boxes in the center of the figure highlight the win–win
policies on the demand (top) and supply (bottom) side of the labor market. These
policies typically combine elements of both broad categories of interventions. Of
particular relevance on the demand side are productivity-enhancing public work
programs such as those that focus on building infrastructure. New and well-targeted financial support to the self-employed can also fit in this category together with temporary measures to replace some work hours with paid part-time training. On the supply side the most common policies in this category are conditional cash transfers (CCTs) that provide compensation for income shortfalls while nurturing human capital investment. Some would argue that unemployment benefits also fall into this category as, in addition to replacing lost income, they can also enable workers to pursue riskier, yet potentially more productive, options and thereby contribute to the efficient allocation of resources (Acemoglu and Shimer 2000).

On the other extreme of the spectrum—but not included in the figure—are a small set of policies occasionally used during economic downturns in response to pressures from powerful vested groups, which are not only ineffective in mitigating the crisis but can also harm recovery prospects. On the demand side they include the indiscriminate bail-out or nationalization of unviable firms, and increases in standard public sector employment. On the supply side they include interventions that interfere with the natural adjustment of the price of labor, such as increases in public sector salaries. These policies are undesirable in the long term as they tend to increase frictions and retard efficiency-enhancing adjustments. They are also ineffective in minimizing the negative short-term impact of the crisis as they tend to target groups that are the least affected, such as civil servants and the fortunate workers who have maintained their employment. Moreover they are extremely difficult to revert once the crisis is over.

What Works and What Does Not

Having presented the policy taxonomy above, we will now review the existing empirical evidence on the effectiveness of different commonly used interventions. Two striking findings emerge from a first glance at the literature: (i) the evidence is sparse and sometimes based on shaky data and methodology; (ii) it is also often inconclusive. These inconclusive results are explained by a variety of factors including the difficulty of adequately evaluating the impact of programs set up to achieve multiple objectives, the lack of clarity about the most appropriate counterfactual, and a tendency to evaluate policy responses as individual interventions rather than as part of broader policy packages.

Previewing the main findings we find that, on average, most interventions have limited impact. However, the estimates of their effectiveness are heterogeneous suggesting that context and design matter. Common elements of interventions that are effective are feasibility, flexibility, reversibility, and incentive compatibility. The effectiveness of policy responses is also enhanced if they are implemented in conjunction with other policies, if their design addresses directly the potential
trade-off between short-term impact mitigation and long-term efficiency enhancement, or does both. Unfortunately, since most evaluations assess policy interventions in isolation, it is difficult to draw precise conclusions regarding the nature of the complementarities between different policy interventions.

Policies to Contain the Negative Impacts of the Crisis. Policy interventions aimed at containing crisis impact can be crudely categorized as being aimed at protecting employment or providing replacement jobs, or as being focused on maintaining labor income.

Protecting Existing Jobs and Providing “Replacement” Jobs. Tax and wage subsidies are commonly used during economic downturns and their theoretical appeal is clear (see for example Pauw and Edwards 2006): they limit short-term labor retrenchment and can, in principle, be targeted to maximize protection for the most vulnerable groups, such as women and young workers. However, the available evidence (summarized in table A1) suggests that in practice implementing incentive compatible schemes is difficult. Wage subsidy schemes typically have high deadweight and substitution effects (in the order of magnitude of 20 percent). Their effectiveness also seems limited, although it varies with sector and firm size (Abrahart, Kaur, and Tzannatos 2000). For example, they have been found to be less effective in highly capital intensive sectors but are relatively more effective when targeted at small firms, perhaps because these firms pay lower wages (Kang and others 2001). Their impact may be (marginally) enhanced if they are combined with job search assistance (Betcherman, Olivas, and Dar 2004), underscoring the importance of implementing comprehensive policy responses. In the medium to long term, however, subsidies are unlikely to be economically or politically sustainable.

Public works programs are an even more common feature of crisis response packages (Grosh and others 2008; ILO 2009) and the existing empirical evidence on their effectiveness as absorbers of excess labor during downturns provides scope for modest optimism. For example, the Argentinean Jefes y Jefas program—introduced during the Argentine crisis to provide support to unemployed household heads conditional on a work requirement—helped to reduce unemployment by 2.5 percent and could have been even more effective if better targeted (Galasso and Ravallion 2004). The limited available evidence also suggests that self-selection into public works programs provides a fairly efficient instrument for targeting those most impacted by a crisis (Ravallion 2008). Self-targeting through low wages assures that leakages tend to benefit the poor and also assures a credible exit strategy.

Yet the cost effectiveness of public works programs depends on their labor intensity, their targeting performance, their net wage, and possible indirect gains.
to participants and their budget leverage, that is the extent to which the government is able to mobilize cofinancing from beneficiaries. Ravallion (1999) estimates that the cost of a $1 gain in current earnings to the poor using public employment programs is about $5 in middle-income countries and $3.50 in low-income countries. According to these calculations, while the cost effectiveness of public works programs may be better than that of other transfer mechanisms, it is likely to be inferior to that of direct transfer programs. However, these cost–benefit calculations assume that all wages are resource costs and do not treat them as transfers. As such the estimated cost–benefit ratios are lower than the true social value of these programs. If they are set up to enhance productivity, for example by improving infrastructure, public works policies can also be win–win. That is, they can be designed to both minimize short-term impact and accelerate long-run growth. However, as will be explained in more detail below, when labor market adjustments to shocks occur primarily via a reduction in wages, public works programs will be less useful as a crisis response.

Maintaining Labor-related Income. When the labor market transmission of shocks occurs primarily via a reduction in formal sector employment and an effective unemployment insurance system is in place, unemployment benefits can act as an automatic stabilizer, effectively compensating those who lose their jobs. In times of crisis, an extension of the duration of the entitlement may be appropriate, and coverage can be extended to previously unprotected groups, such as workers with short employment histories, those completing prolonged training courses, or those exiting from public works. The introduction of unemployment benefits targeted to low skilled workers and those on low wages may also be an option in middle-income countries with good administrative capacity or to workers in small enterprises, as shown in Korea during the Asian financial crisis.

When in place, unemployment benefits can furthermore be used to compensate workers for a reduction in the number of work hours, with a view to allowing employers to retain workers in times of weak demand. Typically, those who reduce their work hours receive unemployment insurance benefits pro-rated for the hours lost. Benefit duration is limited to 20–30 weeks, and there is a floor (and sometimes a ceiling) for the percentage of the workforce affected by the policy (Abraham and Houseman 1993). In addition, where unemployment benefits are anchored to individual savings accounts—as in Chile and Colombia—their crisis mitigating potential can be further enhanced by allowing individuals to borrow from the accumulated funds, using pension wealth as a guarantee (Robalino, Milan, and Bodor forthcoming).

However, an effective system of unemployment insurance requires time and substantial institutional and fiscal capacity to implement and monitor (Vodopivec 2006). This is why only a small number of developing countries have such
systems in place with widespread coverage. For many developing countries unemployment benefits are simply not a viable instrument to protect the losers of a crisis and stabilize the economy. For such countries public works programs remain the only option.

Although they are not specific labor market interventions, targeted cash transfers can be an effective method to compensate losers when labor market adjustments occur primarily via wage reductions. Provided that they have adequate coverage and are sufficiently generous, they have also been found to be very cost-effective options for protecting the most vulnerable, especially in low-income countries (LICs), as they have low administrative costs and do not distort prices. Unlike *conditional* cash transfers (CCTs), which are discussed below, unconditional cash transfers do not serve the dual objective of dampening income shocks and promoting investments in human capital. But, as elaborated upon in more detail below, unconditional cash transfers are easier to implement, especially in low institutional capacity settings, and can be rolled out more quickly. In general, in-kind transfers are less desirable than cash transfers, because they have higher administrative costs and limit the recipient’s choices. “Near-cash” instruments (for example food stamps) represent a middle ground, but their administrative costs tend also to be significantly higher than cash transfers. A potential drawback of cash transfers is that political pressures may make it difficult to reverse these programs once the crisis is over.

*Policies to Accelerate Recovery and Promote Growth*

Policies that aim to accelerate recovery and promote growth can be classified as focusing on creating jobs, facilitating matching and reducing frictions, or as attempting to increase labor productivity by promoting employability.

*Creating Jobs and Facilitating “Matching” of Jobs and Workers.* The literature on the impact of the investment climate on firm performance during more stable times provides empirical support for the view that market imperfections hamper growth and affect the quality of job creation. Hallward-Driemeier (2009), for example, shows that red tape, corruption, cronyism, and weak property rights may undermine the Schumpeterian process of creative destruction by attenuating the link between productivity and exit. Policies that affect the ease with which business can enter and exit, and how costly it is to hire or fire workers, obviously also have a major impact on how crises impact on labor demand. Gallego and Tessada (2009) analyze job flows in Latin America in response to sudden stops and find a negative correlation between firing and dismissal costs, and labor destruction.

The evidence on the effectiveness of job search assistance programs and sanctions for failing to search during crisis times is also limited. While such
interventions generally have favorable impacts during normal times (Card, Kluve, and Weber 2009), a review by Betcherman, Olivas, and Dar (2004) suggests that they are unlikely to be useful during times of mass unemployment. Credit market intervention policies have received relatively more attention in the literature. Of particular relevance to the developing world are microcredit schemes, which are likely to be especially important in countries characterized by high levels of informality and a high prevalence of self-employment. These will be reviewed more extensively below.

**Promoting Employability.** Evaluations of training programs during less volatile economic times suggest that their impacts are highly heterogeneous and strongly dependent on context and implementation (Auer, Efendioglu, and Leschke 2005). While they have been utilized in a variety of forms during past crises, the fragmented evidence reviewed in table A2 suggests that, on average, the usefulness of training programs is limited. More specifically, the net impact of training policies implemented in response to crises on re-employment rates is in the range of 10 to 20 percent (see table A2). However, in a meta-analysis of active labor market programs, Card, Kluve, and Weber (2009) demonstrate that many programs that exhibit insignificant or even negative impacts after only a year have significantly positive impacts after two or three years, indicating that the impacts may increase with time. A plausible explanation for this finding is that the gains from skills development may take a while to materialize and may manifest only after the crisis is over. Thus training programs might be conducive to long-run growth, yet fail to yield substantial short-term gains.

Since human capital formation is a cumulative process, training is likely to benefit the most able workers most, making it a weak tool for protecting the most vulnerable. Moreover training seems to be most effective when used in conjunction with other policies—providing further evidence for the contention that comprehensive policy packages are likely to be more effective than policies implemented in isolation.

**Self-employment assistance programs** usually have high deadweight and displacement effects and only help a selected subset of the vulnerable population. During “normal” times, businesses created under self-employment policies have failure rates that often exceed 50 percent (see Abrahart, Kaur, and Tzannatos 2000). Subsidies for self-employment initiatives normally reach less than 5 percent of the unemployed and take-up is concentrated amongst individuals with entrepreneurial skills, many of whom would have started up their own enterprise regardless of the introduction of self-employment support (Abrahart, Kaur, and Tzannatos 2000; Betcherman, Olivas, and Dar 2004). For instance Almeida and Galasso (2007) find that only a very small subset of former welfare beneficiaries from the Jefes y Jefas program—those who were younger, more educated, and
Win–Win Policies

Win–win policies are designed to be beneficial both in the short and the longer term. Whether they are in practice depends on their design and implementation. We have already reviewed public works programs, which can be designed to be win–win, and we focus here on CCTs and credit market interventions.

Conditional Cash Transfers (CCTs). Conditional transfer programs may improve on the performance of unconditional cash transfers by channeling help to the most vulnerable and nurturing human capital accumulation, which is likely to be beneficial in the long run. In countries where CCTs are already established, raising benefits or expanding coverage may be an effective crisis response. Evidence from Mexico’s Oportunidades and Indonesia’s scholarship program Jaring Pengamanan Sosial shows CCTs can protect poor children’s school enrollment against shocks (Cameron 2002; de Janvry, Finan, and Sadoulet 2006). However, where cash transfer programs are not already in place, as is the case in many LICs, CCTs will take longer to set up than unconditional schemes. They also demand significantly more institutional capacity to run and administer, as conditionality must be carefully assessed. Poorly designed schemes may actually exclude the most vulnerable, such as those who do not have access to the public services upon which transfers are conditioned. As a rapid crisis response, targeted unconditional cash transfers may therefore yield better results, especially in LICs.

Credit Market Policies. Policies to rectify failures in the credit market may pay handsome dividends during crises. The importance of such policies is illustrated by the different recovery paths of Mexico and Chile after the 1980s debt crisis. While both countries suffered severe economic shocks and had broadly similar initial conditions, Chile recovered much faster than Mexico. Bergoeing and others (2002) argue that this was because of credit market regulation: “The crucial differences between Mexico and Chile were in banking and bankruptcy laws; Chile was willing to pay the costs of reforming its banking system and of letting inefficient firms go bankrupt; Mexico was not” (p. 169).
Facilitating access to credit—for example by facilitating access to trade finance—can prevent otherwise viable firms from going out of business due to cash-flow problems. However, in order to prevent long-term damage to growth prospects, the interventions need to be carefully designed in order not to encourage moral hazard or the bailing out of firms that are not viable. Short-term fixes such as loan forgiveness, subsidized lending, or interest caps may also negatively affect long-term access to financial services. Thus they could serve as another example of an intervention which might create potential tensions between achieving short-term goals and preserving long-run efficiency (McGuire and Conroy 1998). The evidence, summarized in table A4, points to the importance of the careful design of credit extension schemes. When facilitating sustainable access to credit, the devil is in the details.

The experience with the Korean credit guarantee policies towards small and medium-sized enterprises (SMEs) instituted in response to the Asian crisis provides an illustrative example. Credit was disproportionately provided to relatively unproductive SMEs, which undermined the effectiveness of the creative destruction process for small firms (Oh and others 2009). However, Borensztein and Lee (2002) find that, within larger firms, banks reallocated credit from conglomerate (chaebol) firms to relatively more efficient firms, thereby paving the way for long-run recovery.

The importance of careful design of credit extension policies is also underlined by the Japanese banking crisis during the 1990s when banks levied additional credit to the weakest firms in order to avoid balance sheet losses (Peek and Rosengren 2005; Okada and Horioka 2008). While they helped to minimize the short-term impact of the crisis, these practices also stifled recovery. These results are a plausible explanation for the finding that relatively efficient firms were driven out of business during the Japanese banking crisis, as already discussed (see Nishimura, Nakajima, and Kiyota 2005). Rather than facilitating “cleansing,” the crisis exacerbated credit market imperfections, which hampered the creative destruction process. The Japanese experience thus supports the argument that myopic policies to protect firms in the short run can be disadvantageous in the longer run.

**Microcredit.** A review of the studies evaluating the performance of microcredit schemes during previous crises, summarized in table A4, shows that they have performed relatively well. For example, while many large banks suffered major problems, microfinance institutions (MFIs) in Indonesia were remarkably resilient to the East Asian crisis (Patten, Rosengard, and Johnston 2001) because of their unique design features, including tailoring loans to firms’ cash-flow requirements and targeting entrepreneurs with a high willingness to pay for continued access to credit.

In Bolivia too some microfinance institutions appear to have been remarkably resilient to crises. For example the microfinance branch of the Caja Los Andes
Bank was not significantly impacted on by the 1998 crisis, unlike other branches. However, Marconi and Mosley (2006) contend that the performance of this micro-credit branch was a positive outlier and point out that other Bolivian banks and microfinance institutions were forced to reduce their lending. They argue that the pro-cyclical nature of lending by microfinance institutions might in fact have exacerbated the crisis. Furthermore the ability of microfinance credit schemes to mitigate downturns may be hampered by credit market interventions. During the East Asian crisis for example, rural MFIs were adversely affected by governments’ reluctance to extend rural credit guarantees (McGuire and Conroy 1998; Patten, Rosengard, and Johnston 2001).

**Designing an Effective Policy Package: Navigating Thorny Tradeoffs**

Moving from the broad categories of policies discussed in the previous section to a more detailed list of interventions that could comprise an effective crisis response is a complex matter that requires careful country-level diagnostics. Which policies yield the highest return in terms of minimizing short-term impacts and maximizing growth prospects depends among other things on (i) the available fiscal space; (ii) the nature of the shock and the prevailing labor market transmission mechanism; and (iii) the existing institutional capacity and political economy conditions,—for example, programs that are already in place and can be built on, expanded quickly, or both.

**Fiscal Constraints**

Unless governments have prepared for crises by accumulating reserves, the scope for financing additional interventions is likely to be limited. Government budgets typically come under strain during economic downturns as tax revenues decline and borrowing constraints bind. For example, on average, public debt rose by over 86 percent during the post-war financial crises (Reinhart and Rogoff 2009). Thus in many cases the relevant question might be which policies and safety nets are to be protected, rather than which additional interventions should be undertaken.

The social protection system has the potential to act as an automatic stabilizer because demand for safety nets increases as incomes fall and spending on safety nets should rise when the economy contracts. A well-designed safety nets system that meets these demands would be countercyclical, but empirical evidence suggests that it is typically pro-cyclical (De Ferranti and others 2000; Braun and Di Gresia 2003; Grosh and others 2008, p. 55). This is because even pro-poor
governments are typically unable to protect social spending during downturns (see for example Hicks and Wodon 2001). Thus, the best option to finance safety net programs during crises is to pre-fund them (Grosh and others 2008). Countries can also try to reallocate expenditures to more effective programs, and such budget reallocations can have a pro-poor distributional impact. A good example is given by Jamaica, which eliminated general food subsidies in 1984 and used a share of the resulting savings to fund its Food Stamp Program (Grosh and others 2008, p. 56), with a positive impact on poverty reduction (Ezemenari and Subbarao 1999).

Nature of the Shock and the Prevailing Labor Market Adjustment Mechanism

The nature of the shock is also important in determining which policies are optimal in the long run. When dealing with short-lived downturns associated with the business cycle, countercyclical fiscal policy aimed at increasing spending on temporary mitigation measures is a commendable strategy. However, when crises are more structural in nature, priority should be given to policies that facilitate recovery, and short-term mitigation measures should be kept to a minimum as they might distort adjustment and lead to increases in public debt. Competitiveness might also be undermined by artificial appreciation (or a lack of depreciation) of the exchange rate, as a result of increased public spending, leading to further deterioration in growth and recovery prospects.

The labor market adjustment mechanism also matters in determining the relative effectiveness of different policy levers since it determines who shoulders the burden of the crisis. In broad terms, labor market adjustment can occur through two main channels: (i) via a reduction in the number of people employed or in the number of hours worked per person (quantity adjustment); or (ii) via wage declines (price adjustment). Of course, it is important to recognize that the typical labor demand schedule is downward sloping and thus imposes a tradeoff between the two, making it difficult to protect both simultaneously. Wage adjustment can be accomplished by an across the board reduction in wages—a shift of the wage distribution to the left—or by a change in the composition of employment toward less well-paid jobs (see Fallon and Lucas 2002).

Identifying the labor market channels through which the economic downturn is transmitted is a precondition for effective targeting of policy interventions. If first-round labor market adjustments are concentrated in specific jobs, sectors, or geographic areas, targeted employment interventions to protect those most immediately affected may yield handsome payoffs. If most of the adjustment occurs through generalized wage declines, policies aimed at helping the chronically poor and those most vulnerable may yield relatively higher returns. These are the policies highlighted in the bottom part of figure 1.
A complicating factor in addressing these tradeoffs in targeting is the fact that impacts will vary over time as the effects of the initial shock reverberate through the economy. Indeed evidence from previous crises suggests that those who ultimately suffer the largest welfare losses may not be the ones who are initially the most affected. Financial downturns, such as the 1994 Tequila crisis or the 1997 East Asia crisis, have rapidly spread from the directly affected sectors—typically urban-based exporters, construction, and manufacturing—to other parts of the economy via reduced demand and a reallocation of labor (Manning 2000; McKenzie 2002). Thus even those not immediately impacted by a crisis are likely to suffer substantial earnings losses as increased entry of workers into such sectors erodes earnings and profitability.

**Institutional Capacity and Political Economy Conditions**

Crisis-response programs need to be quick. Hence implementation capacity and existing programs will constrain both the choice of programs and their impact. Whether or not governments can respond promptly and effectively in a crisis largely hinges on their capacity to target. This in turn depends on the availability of reliable and timely information. When targeting workers, policymakers in low-income settings often lack up-to-date information on household incomes and consumption. The characteristics of those most impacted by the crisis (the newly poor) may be very different from those of the “structurally” poor. Consequently decisions on the policy response and who to target are often made against a backdrop of extreme uncertainty, on the basis of very partial and often outdated information. For instance data may track formal sector wages only, even though the vast majority of the workforce is employed in the informal sector. Governments will often have to find a compromise between quality of targeting and design on the one hand and speed and scale of implementation on the other (Grosh and others 2008).

In addition, mechanisms which are mainly designed to identify the structurally poor—like proxy means testing or categorical targeting—may fail to identify the temporarily poor in a crisis context. Self-targeting mechanisms, such as public works, and possibly community-based targeting, are likely to work better (Skoufias 2003). Moreover empirical research also suggests that too fine targeting can undermine political support for redistributive programs (Gelbach and Pritchett 2002; Kanbur 2009). On the other hand, evidence from Brazil suggests that targeting is often considered fair and is electorally rewarded (de Janvry, Finan, and Sadoulet 2009).

Targeting firms is perhaps even more difficult, since it involves picking “winners” and discriminating in their favor, although, in certain scenarios, sector-wide protection policies may be advisable. Arguably the costs of targeting errors may also be higher for policies protecting firms since they may give
uncompetitive firms an advantage and thereby lead to growth losses. For example, in Latin America, import substitution policies instituted in response to the 1930s crisis have often been blamed for stifling its subsequent growth (see for example Robinson 2009).

The ability of countries to cope with shocks increases considerably when appropriate safety nets are in place before a crisis hits. This is because expanding existing programs is typically more effective than implementing new and untested ones (Ferreira, Prennushi, and Ravallion 1999; Grosh and others 2008; World Bank 2008). In fact, in reviewing the performance of safety nets during crises in Latin America and East Asia, Blomquist and others (2001) observe that, given the time required to set up systems from scratch, spending on safety net programs ended up being pro-cyclical rather than countercyclical.

Alderman and Haque (2006) provide similar arguments as to how, in financially constrained low income settings, public safety nets that target the chronically poor can be scaled up with external support to serve an insurance function. The usefulness of permanent, countercyclical safety net is also illustrated by the performance of the Russian social safety net during the 1998 crisis, which helped to provide protection against poverty, although it fell short of fully protecting living standards (Lokshin and Ravallion 2000).

While responding adequately is no substitute for having a systematic safety net system in place, some believe that crises provide a window of opportunity to reform unwieldy institutions and make political decisions that would in “normal” times be unfeasible (Robinson 2009). The experience of Mexico in the aftermath of the Tequila Crisis demonstrates that stabilizers and safety nets set up under emergency conditions can in turn serve as a stepping stone for the development of more permanent income support systems (see Grosh and others 2008). However, whether or not crises indeed catalyze reform is an open empirical question (Drazen and Grilli 1993; Drazen and Easterly 2001; Robinson 2009).

Summary

Crises are a recurring phenomenon in the developing world. As has become painfully evident over the last two years, developing countries remain largely unprepared to deal effectively with labor market volatility. This is unfortunate not only because of the immediate increase in the incidence and depth of poverty which is associated with sudden drops in earnings, but also because the costs in terms of loss of potential for growth and poverty reduction tend to be particularly high in poor countries. In the presence of market failures and imperfections, even a temporary loss of employment or reduction in earnings can significantly reduce the quality of the current and future labor supply. A crisis can also reduce long-term
labor demand and productive efficiency through the “over-churning” of workers and firms. As a result, short-term fluctuations in employment opportunities can leave deep and long-lasting scars on labor productivity, growth, and poverty reduction.

Imperfect markets are common in developing economies where labor markets tend to be highly fragmented (Fields 2007) and access to credit limited, especially for the most vulnerable segments of the population and for small enterprises. Therefore in developing countries the potential “cleansing” effect of crises is likely to be heavily outweighed by their negative long-term impact. This calls for effective action to minimize volatility in the first place, and for prompt interventions to mitigate the impact of a downturn when it is unavoidable.

In this paper we have proposed a taxonomy of possible interventions, distinguishing between those designed to offset short-term impacts and those aimed at fostering long-run recovery. A further distinction between policies that operate on the demand for labor by firms and those that focus on earnings and employability of workers has also been drawn. The taxonomy is not rigid, but serves to highlight how tradeoffs between different objectives might arise and helps policymakers to identify win–win policies that avoid such intertemporal tradeoffs. Using this basic taxonomy, we have reviewed past experiences with commonly used crises responses. Our analysis points to a number of basic principles that could guide policymakers in navigating the challenges of crafting effective and comprehensive packages to limit earnings volatility and promote long-run growth.

The first and arguably most important conclusion is that being prepared pays off. Countries with prudent fiscal management and effective stabilizers in place tend to suffer comparatively less. Moreover, the depth and duration of shocks is lower if credit and labor market policies are sound. That is they should be designed to facilitate efficiency-enhancing adjustments such as allowing the exit of unsustainable firms, sustaining those that are viable in the long run, and nurturing human capital investments by vulnerable workers. In addition, setting up safety nets during times of crisis is difficult and time-consuming and the speed with which programs need to be implemented often requires compromises in terms of design and effectiveness. This could seriously limit the effectiveness of such interventions.

Second, the policy taxonomy helps to highlight how designing an effective crisis-response package requires careful consideration of the policy objectives in terms of deciding how to value the welfare of future and current generations. It also requires judicious selection, timing, and sequencing of individual reforms. Policies that minimize short-term impacts, such as wage subsidies and increasing severance pay, can provide short-term relief, yet they may exacerbate frictions and thus prove counter-productive in the long run. On the other hand, reckless implementation of policies conducive to long-term growth may cause excessive short-run damage. On the
bright side, complementarities between different interventions often exist and win–
win policies capitalize on these. Successful policy packages tend to be coherent and
comprehensive because policies that are carefully coordinated typically outperform
piecemeal responses.

Third, evaluations of the effectiveness of individual policy responses suggest
that common elements of effective interventions are feasibility, flexibility (for
example capacity for scaling up and down), and incentive compatibility. Starting
with feasibility, it is important that the choice of interventions is tailored to
country circumstances and the characteristics of the shock. While certain policy
options may be theoretically superior, they may not be practically feasible given
certain fiscal, administrative, and political constraints. For example, conditional
cash transfers can in principle improve upon the performance of unconditional
cash transfers, yet successful implementation of such schemes requires substantial
administrative capacity, and in settings where this is absent, unconditional trans-
fers may be more efficient. Flexibility pays off. Given the enormous uncertainty
that typifies crisis situations, being able to scale up programs quickly (and
perhaps equally importantly being able to scale them down quickly) enables gov-
ernments to respond quickly and efficiently.

Finally, in designing policies, it is important to get incentives right. This mini-
mizes leakages and ensures market imperfections are not aggravated. Setting low
wages in public work projects, for example, ensures that only those willing to
work for very low wages, which are likely those most in need, will benefit; smart
targeting enhances effectiveness.

A standard “fit-for-all” policy package that is optimal under all circumstances
simply does not exist, since the particular policy that yields the highest return in
terms of minimizing short-term impacts and maximizing growth prospects is
highly country- and crisis-specific. However, most effective packages will need to
combine measures to stimulate growth by reducing market imperfections with
efforts to protect workers and firms.

In summary, the analytical arguments and empirical evidence advanced in this
paper suggests the need to go beyond myopic and isolated policy responses which
may be costly and counterproductive. We advocate instead a more comprehensive
approach aimed at delivering a coordinated and coherent policy package. This
would focus on reducing market imperfections and building institutions to miti-
gate the impact of downturns on both the supply-side and the demand-side of the
labor market in the short and the long run.
### Table A1. Wage Subsidies/Payroll Tax Subsidies

<table>
<thead>
<tr>
<th>Crisis and context</th>
<th>Authors</th>
<th>Methodology</th>
<th>Main findings</th>
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<tbody>
<tr>
<td><strong>Czech Republic and Hungary (1990–2005)</strong>&lt;br&gt;Wage subsidies to help the long-term unemployed</td>
<td>Fretwell, Benus, and O’Leary (1999)</td>
<td>Matching in combination with regression methods.</td>
<td>Employment impact was an increase of 10 percent in the Czech Republic and 12 percent in Hungary.</td>
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</table>
  - Deadweight effects range between 20–70%;  
  - Substitution effects range between 10–80%. |
Table A2. Training and Self-employment Assistance

<table>
<thead>
<tr>
<th>Crisis and Context</th>
<th>Authors</th>
<th>Methodology</th>
<th>Main findings</th>
<th>Comments</th>
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<tbody>
<tr>
<td><strong>Korea (began October 2007)</strong></td>
<td>Kang and others (2001)</td>
<td>(Descriptive) comparison of participants and nonparticipants to determine effect of training on the unemployed and unemployment duration analysis using a hazard model.</td>
<td>Re-employment rate: No significant differences between the two groups: 49.6% of participants vs. 53% of nonparticipants have been re-employed and 38% of participants vs. 40% of nonparticipants were employed at time of study.</td>
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<tr>
<td>Training programs for the unemployed</td>
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- Performance after active job search: Training participants were more successful in finding jobs: one-third was re-employed within a month, 54.3% within the first three months, and 23.4% found re-employment after seven months (compared to rates of 21 and 60% for nonparticipants).
- Participants spent on average 4.3 months before re-employment compared to an average of 8.6 months for nonparticipants.
- After completing training, higher percentage of participants held full-time wage employment compared to nonparticipants, while a larger percentage of nonparticipants held part-time jobs.
- Training increases the probability of re-employment by 28% and the impact was particularly significant for women: training participation increases the probability of re-employment (63% higher).

Continued

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<table>
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<tr>
<th>Crisis and Context</th>
<th>Authors</th>
<th>Methodology</th>
<th>Main findings</th>
<th>Comments</th>
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| **China (1998–2000)**<br>Retraining programs for laid-off workers in the cities of Shenyang and Wuhan | Bidani and others (2003) | Propensity score matching in conjunction with regression methods. The training and comparison groups were constructed using official 1998 census data. The final sample was administered in 2000. | • Positive impact on employment in Wuhan. Little impact in Shenyang.  
• Participation higher for unemployed younger females, previously working in nonstate owned manufacturing who had visited an employment service center in the past (indicating targeting was effective). | |
• Impact on employment only statistically significant for adult females.  
• Statistically significant impacts not sensitive to different specification but cost–benefit analysis indicates it takes nine years for the net present value to become positive.  
• For all of the beneficiaries 1.2 years are required for the program to have a positive net present value. | |
| **Argentina (1994)**<br>Programa Joven | Almeida and Galasso (2007) | Difference-in-difference methodology to participants with non-participants before and after the intervention. A baseline household survey was administered to 309 participants and 244 nonparticipants. | • Those with entrepreneurial skills, female household heads and more educated individuals are most likely to take up self-employment.  
• No evidence of average income gains to participants and their households in the short run. | |
Comparison group analysis with quarterly National Urban Employment Survey administered to the 1990 cohort of PROBECAT participants with the nonparticipants comprised of unemployed individuals. Heckman’s Two Stage Selectivity Correction Procedure is used to correct for selectivity into the program. Cox Proportional Hazards Model of unemployment duration on the pooled trainee and comparison group samples.

- PROBECAT fairly effective in shortening the duration of unemployment but only for trainees with prior work experience.
- It also improved the likelihood of employment over the longer run.
- It raised post-training earnings of men but not women: the effects were greater for males with seven to nine years of schooling.
- For both men and women, training induced an increase in the number of hours worked per week.
- The study confirms that program evaluation results can be sensitive to the way in which training effects are measured. A key source of bias is that arising from nonrandom selection of participants into the training program.
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<th>Methodology</th>
<th>Main findings</th>
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<tr>
<td><strong>Mexico (1982)</strong></td>
<td>Wodon and Minowa (2001)</td>
<td>The availability of PROBECAT at the state level is used as an instrumental variable to control for endogeneity of program placement to compare a sample of PROBECAT participants and a sample of unemployed individuals from Mexico’s urban employment survey. Heckman’s Sample Selection Model is used to estimate the impact of PROBECAT while correcting on monthly earnings for selection into the program. Cox Proportional Hazard Models are estimated to assess the impact of training on the time necessary to find employment.</td>
<td>• No impact on employment and wages found.</td>
<td>This result contrasts with earlier evaluations; this study concludes that the positive results in the past evaluations were obtained because limited attention was given to sample selection bias.</td>
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<tr>
<td>Crisis and context</td>
<td>Authors</td>
<td>Methodology</td>
<td>Main findings</td>
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| **Indonesia (1997–2000)** | Pritchett, Sumarto, and Suryahadi (2003) | Dynamic benefit incidence analysis using representative household panel data. | • The job creation program was much better at targeting the most affected than the rice subsidy program;  
• The rice program was better at targeting the poorest. |
| Two social safety net programs: the Jaring Pengaman Sosial and a rice subsidy program | | | |
| **Argentina (1994–2003)** | Galasso and Ravallion (2004) | Matched subsets of applicants who are not yet accepted into the program are used as a control group using matching methods to control for selection on observables. Matched double-differenced estimates of program impact are used to minimize bias due to selection on unobservables, but estimates are imprecise, rendering the matched single-differenced estimates the preferred estimation method. | • Program reduced unemployment by 2.5% and had a small impact on poverty rate, but a large impact on the number of people in extreme poverty which would have been 10% without the program.  
• The impact could have been higher if the program had been better targeted, since the program attracted many inactive people into the workforce. |
| Jefas Y Jefas program | | | |
| **Argentina (1994–2003)** | Iturriza, Bedi, and Sparrow (2008) | Comparison of probability of exiting unemployment of participants and nonparticipants using logit and multinomial logit models, single-differenced and double-differenced matching estimators. | • Participation is associated with a 12–19% lower probability of transiting to employment;  
• Women are especially less likely to exit the program. |
<p>| Jefas Y Jefas program | | | |</p>
<table>
<thead>
<tr>
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<th>Authors</th>
<th>Methodology</th>
<th>Main findings</th>
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<tr>
<td><strong>Korea (2000–03)</strong></td>
<td>Oh and others (2009)</td>
<td>Analysis of the impact of the Korean credit guarantee policy (implemented in response to the East Asian crisis) on SMEs’ productivity, sales, employment, investment, R&amp;D, wage growth, and firm survival using propensity score matching of firms in the Korean Mining and Manufacturing Survey, which is a census covering all manufacturing plants with more than five employees.</td>
<td>The scheme had a positive impact on firms’ employment and sales growth, but a limited impact on their R&amp;D and investment spending. There was adverse selection; firms with relatively low levels of productivity were receiving guarantees, suggesting that the schemes may have hampered the creative destruction process.</td>
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<td><strong>Bolivia (1998–2004)</strong></td>
<td>Marconi and Mosley (2006)</td>
<td>(Descriptive) comparative analysis of banks and microfinance institutions + simulation exercise. Focus on the value of the outstanding portfolio and arrears rates. Simulation analysis based on a structural macromodel that endogenizes the microcredit sector calibrated by means of OLS regressions estimated using a sample of 48 observations drawn from 8 microfinance institutions (1997–2002).</td>
<td>While banks and microfinance institutions reduced their lending and witnessed increasing arrears, institutions providing savings, training, and quasi-insurance did relatively well. Simulation suggests: (i) microfinance institutions acted as a crisis catalyst; (ii) improvements in the design of microcredit schemes (such as the introduction of complementary insurance and savings schemes) enhance the effectiveness of microcredit institutions.</td>
<td>The simulation relies on strong structural assumptions. In addition, the econometric analysis suffers from small sample and omitted variable bias.</td>
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### Bolivia (1998)
Crisis performance of Caja Los Andes, a registered savings and loan company using information on default and late payments

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<th>Vogelgesang (2003)</th>
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<td>Bivariate probit model of (i) defaults and (ii) late repayment, correcting for selection bias. Exclusion restrictions: (i) for first-time loans = the amount requested; (ii) for prior loans = the length of prior loans. Sample: 76,000 clients and 28,000 rejected loan applications (May 1992–June 2000).</td>
</tr>
<tr>
<td>The crisis had a negative, but insignificant, impact on the probability of repayment.</td>
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### Indonesia (1997)
Performance of different parts of Bank Rakyat Indonesia (BRI) during the Indonesian crisis (1997–2000)

<table>
<thead>
<tr>
<th>Patten, Rosengard, and Johnston (2001)</th>
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<tr>
<td>(Descriptive) comparative analysis of the performance of different parts of BRI during the East Asian crisis including corporate banking, retail banking, and microbanking.</td>
</tr>
<tr>
<td>The microcredit branch of BRI was remarkably resilient to the crisis and which outperformed other parts of RBI.</td>
</tr>
<tr>
<td>• Microcredit repayment rates &gt;97%;</td>
</tr>
<tr>
<td>• Average growth of microfinance lending = 14% p.a. (1997–99);</td>
</tr>
<tr>
<td>• Ratio of savings accounts to loan accounts = 1 to 1 (1997–99).</td>
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</table>
Appendix Review of Evidence on Main Policy Interventions

Notes

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1. These include financial restrictions, trade barriers, firm entry costs, inefficient bankruptcy procedures, bureaucratic red tape, tax burden, and labor regulations.

References

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