



Economic Premise

JANUARY 2011 • Number 46

How Do Women Weather Economic Shocks? What We Know

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Do women weather economic shocks differently than men?¹ First-round impacts of economic crises on women's employment should be more prominent in this recent economic downturn than historically because of women's increased participation in the globalized workforce. Second-round impacts result from the strategies that vulnerable households use to cope with declining income, which can vary by gender. In the past, women from low-income households have typically entered the labor force, while women from high-income households have often exited the labor market in response to economic crises. Evidence also suggests that women defer fertility during economic crises and that child schooling and child survival are adversely affected, mainly in low-income countries, with girls suffering more adverse health effects than boys. These impacts underscore the need for providing income to women in poor countries to help households better cope with the effects of economic shocks.

First- and Second-Round Impacts

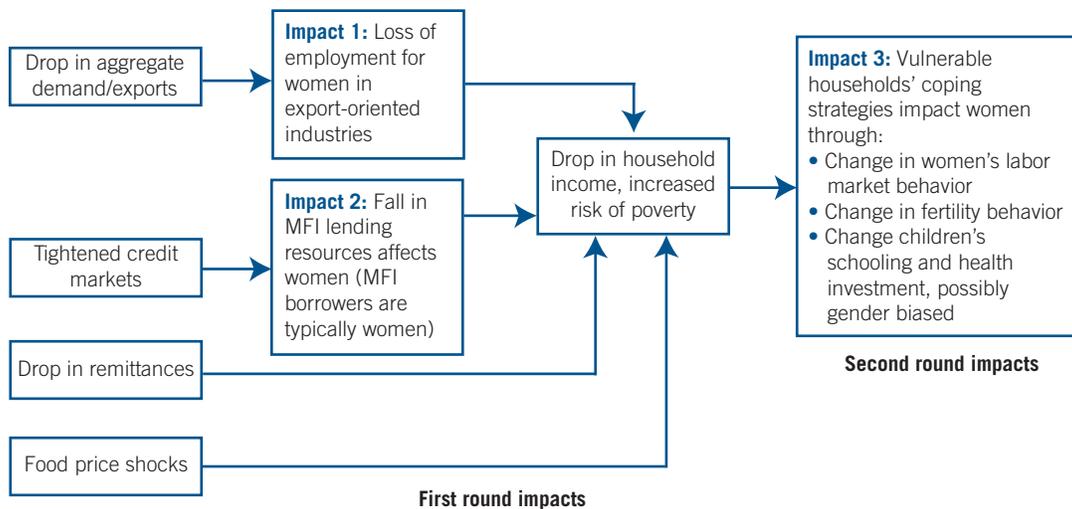
What, if any, are the gender-specific consequences of the recent global financial crisis for women and their children in poor countries? To help answer this question, this note reviews research from past crises on how women have been affected by and responded to aggregate shocks differently from men, including effects on fertility and children's health and schooling. We expect that the first-round impacts of the crisis will include: (a) a reduction in women's income and an increase in household poverty risk as a result of losses in employment in export-oriented industries; (b) a tightening of microfinance lending; and/or (c) a fall-off in remittances (figure 1). These first-round impacts should be particularly salient in the recent crisis compared to past crises, when export and credit markets were much smaller, women were less integrated into them, and when remittances were a much smaller part of household incomes.

The crisis will also have second-round impacts, because vulnerable households respond to the decline in household income with coping strategies that can have gender-differentiated effects. Women can respond to the drop in household income by increasing their hours of work (if they are already in the labor force), entering the labor force, or adjusting their time and effort in the home. Women can further cope by altering their fertility, and households can curtail (or increase) investments in children's health and/or education.

Added or Discouraged Workers?

The strongest evidence of women's labor market response to crises comes from the Latin American debt crises of the early 1980s and late 1990s.² Women's labor force participation rose in Lima, Peru (Francke 1992), during the crisis in the early 1980s and similar responses were observed in Chile in

Figure 1. Possible Transmission Channels for Impact of Economic Crises on Women



Source: Author illustration.
 Note: MFI = microfinance institution.

the 1974–75 crisis and in Costa Rica in the 1982 downturn (Leslie, Lycette, and Buvinic 1988). More recently, this effect was also present during the Latin American economic crisis of the mid 1990s in urban Argentina (Cerutti 2000). Using data from Argentina, Pessino and Gill (1997) apply different measures of the business cycle and estimate the impact on women's and men's labor force participation. They find that all women's labor force participation was countercyclical, while among men, labor force participation was countercyclical only for those aged 20–49. Analysis of household survey data from Mexico's Peso Crisis of the mid-1990s shows evidence of a female added-worker effect. Skoufias and Parker (2006) find that during the Peso Crisis, wives were 14 percent more likely to enter the labor force as a result of husband's transition to unemployment. Parker and Skoufias (2006) analyze the impact of the male household head's unemployment on the wife's probability of entering the labor force during the economic boom or recovery period in Mexico and compare the impact to that obtained during a recession. They find that the husband's unemployment increases the wife's probability of entering the labor force, during both economic crisis and economic prosperity, but this effect is larger during the crisis.

There is also some evidence of rising female labor force participation during the East Asian crisis of 1997. As male unemployment increased, female labor force participation rose in the Philippines (Lim 2000) and in Indonesia (Smith et al. 2002). Using household level data from the Demographic Health Survey from 66 countries and across 21 years (1985–2006), Bhalotra and Umaña-Aponte (2009) show that globally, on average, a 10 percent drop in country GDP is associated with a 0.34 percentage point (69 percent) increase in women's labor force participation.

Women's rising labor force participation during crisis emerges more reliably among low- and middle-income households than for those with higher incomes (Cerutti 2000; Humphrey 1996; Judisman and Moreno 1990; Lee and Cho 2005). Women who exhibit the strongest increases in labor force participation are those with low education, who traditionally experience the lowest rates of economic participation in these low- and middle-income economies (Cerutti 2000). Some studies also show that women who enter the labor market during crises are usually older (Aslanbeigui and Summerfield 2000; Cerutti 2000; Lee and Cho 2005) and have older children (Cerutti 2000; Lee and Cho 2005). However, in the case of the Philippines during the East Asian crisis, evidence suggests that young women may have joined the labor force instead of enrolling in high school (Lim 2000).

Despite the apparent predominance of increasing female labor force participation, under certain conditions, large numbers of women may instead withdraw from the labor force during a recession. Kim and Voos (2007) examine labor force participation rates among men and women in South Korea during the 1997 financial crisis. More women than men dropped out of the labor force and became discouraged workers. This discouraged-worker effect occurred primarily among young, single women working in clerical and service sectors and outweighed increased labor force participation among middle-aged married women, who entered the labor market to maintain family income. Employment dropped more in percentage terms for women than for men at the outset of the crisis, although women's employment rates recovered as the country started to emerge from the crisis. Interestingly, Kim and Voos (2007) also find that five years after the economic crisis, women's employment rates had recovered almost completely. Wom-

en's employment grew by more percentage points than men's over the five-year period from 1997 to 2002.

Evidence suggests that both labor market entry (added workers) and exit (discouraged workers) during crises may operate simultaneously, affecting different groups of women differently. Bhalotra and Umaña-Aponte (2009) find considerable heterogeneity in women's labor market responses by education. Specifically, women with more education often behave pro-cyclically, that is, they reduce labor market participation during economic downturns. This also agrees with Humphrey's (1996) analysis of women's labor market participation during Brazil's debt crisis of the 1980s. No aggregate added-worker effect was detected in the Brazil data due to the simultaneous occurrence of both added- and discouraged-worker effects, because poor women joined the labor force and nonpoor women exited. The two effects appear to have canceled each other out.

In summary, increasing labor force participation and exiting the labor force do not necessarily represent competing hypotheses, since they do not apply to the same sections of the population. In particular, entry into the labor force (added-worker effect) appears to be strongest for low-income households, among women with low education, and among older women, while the discouraged-worker effect appears to be strongest for the more educated, younger women in the labor force.

Evidence on the impacts of the 2007–9 financial crisis on women and families is not yet available. It is expected that some women in developing countries will be “protected” from the short-term impacts of this financial downturn because they do not have access to global markets (and are solely involved in subsistence or home production). In other cases, however, women dominate employment in export manufacturing (for example, in Bangladesh, Cambodia, Nicaragua, and the Philippines) and in high-value agriculture (for example, in Ecuador, Thailand, and Uganda). Women employed in these industries will likely suffer direct employment losses from the contraction of industrial countries' demand for developing country exports. For instance, in Thailand during the financial crisis of 1997, women were the majority of all retrenched workers in sectors such as garments, toys, knitting, electrical appliances, jewelry, plastic products, and shoes and leather products (Mahmood and Aryah 2001).

On the other hand, the ongoing banking crisis and formal credit squeeze might be expected to have a larger direct impact on men than on women, since men comprise the majority of formal financial services users and borrowers. However, women are the major clients of microfinance institutions (MFIs), comprising 85 percent of the poorest 93 million MFI clients in 2006 (Microcredit Summit Campaign Report 2007), and as credit dries out, their earnings from microbusinesses are expected to drop. This should be especially true in Latin America and Eastern Europe and Central Asia, where MFIs obtain a sig-

nificant portion of their lending resources from commercial rather than concessional (grant) sources (CGAP 2009).

Women Postpone Childbearing

Using panel data for 18 Latin American countries covering over 45 years and a separate analysis of transition to first, second, and higher order births using Demographic and Health Surveys, Adsera and Menendez (2009) find that women postpone and in some cases even reduce childbearing during economic crises. This fertility adjustment appears to respond to increases in unemployment rather than a slowdown in GDP growth. Adsera and Menendez (2009) find fertility postponement to be strong for younger, urban, and more educated women; however, the association between economic slowdown and likelihood of bearing a second or third child is strongest among the least educated women. Further, with the spread of family planning in Latin America, the relationship is most robust among the most recent cohort. Similarly, McKenzie (2003) finds evidence of deferred and/or lower fertility in response to the Mexican Peso Crisis of 1995. His analysis shows that about 1 in 20 households postponed or decided against having a child because of the crisis, among both educated and uneducated households, and both rural and urban households.

Some studies find that deferring fertility during economic crises is confined to a certain subset of women (mostly women who are more likely to be credit constrained), implying that economic crises change the composition of women giving birth, which may or may not be reflected in overall fertility rates. Using a large microdataset from India, Bhalotra (2010) shows that during periods of economic downturn, women at high risk of spontaneous abortions or stillbirths become more likely to defer fertility. Specifically, Bhalotra finds that in both rural and urban areas, illiterate women are more likely to avert childbearing during economic recessions. Further, in rural areas, this is also true for women with illiterate husbands and for women from scheduled tribes, which represent a disadvantaged ethnic group in India. In a similar vein, but from a developed country context, Dehejia and Lleras-Muney (2004) find that in the United States, there is a reduction in the fraction of black mothers who are high school dropouts during recession (periods of high, state-level unemployment). Since these women are more likely to have unhealthy babies, their deferred fertility during economic downturns translates into overall improvements in child health (Dehejia and Lleras-Muney 2004).

No Gender Differences in Child Schooling

The evidence from macroeconomic crises in Latin America and East Asia suggests that children's school enrollment can either increase or decrease, but gender differences appear to be minimal. In Mexico and Peru, for example, recessions increase children's schooling. There is also evidence of this effect in the United States during the Great Depression (Goldin 1999) and

from Mexico during the Peso Crisis of the early 1990s (McKenzie 2003). Focusing on the months around the onset of the Peso Crisis, Skoufias and Parker (2006) find that while the household head's unemployment did not lead teenage children to enter the labor force, it reduced teenage girls' school attendance (but there was no effect on teenage boys' attendance). Schady (2004) finds that Peru's economic crisis of the 1980s increased schooling for both girls and boys.

In Côte d'Ivoire and India, two lower-middle-income countries, income variability associated with weather shocks reduces children's schooling, but there are no significant gender differences (Jensen 2000; Jacoby and Skoufias 1997). Economic downturns were linked with declines in children's school enrollment and/or increases in child labor in the Philippines during 1997–98 (Lim 2000), Indonesia during 1997–98 (Frankenberg, Thomas, and Beegle 1999; Thomas et al. 2004), and Costa Rica during the 1980s (Funkhouser 1999). During the crisis in Indonesia, the gender differences in school enrollment declines varied by age group. In the Philippines, the decline in school enrollment at the elementary level was seen only for girls, while enrollment for boys increased substantially (Lim 2000). Thomas et al. (2004) show that poor Filipino households spent more on the education of older boys (ages 15–19) by cutting back on the education of younger children (ages 10–14, both girls and boys), and on the education of older girls (ages 15–19).

Girls' Health Particularly Affected

Unlike schooling impacts, however, there is strong suggestive evidence in low-income countries of gender differences in recession impacts on infant mortality (Friedman and Schady 2009). Baird, Friedman, and Schady (2007) use Demographic and Health Survey data from 1986–2006 on mothers' reports of births and deaths from 59 low-income countries in sub-Saharan Africa, Latin America, and South and East Asia. They combine these data with data on per capita GDP, and find that while boys and girls benefit from positive shocks to per capita GDP in a similar way, negative shocks are much more harmful to girls than to boys. On average, a 1 percent change in per capita GDP changes boys' infant mortality by 0.27 deaths per thousand births, and girls' infant mortality by 0.53 deaths per thousand births. Baird, Friedman, and Schady (2007) show that the association between negative GDP shocks and higher mortality for infant girls exists not just in South Asia, but also in the other regions not usually associated with a preference for sons.

Using a methodology similar to Baird, Friedman, and Schady (2007), Friedman and Schady (2009) focus on 30 sub-Saharan African countries to examine the potential impact of the current economic crisis on infant mortality. Combining data on mothers' reports of births and deaths with per capita GDP growth rates from the International Monetary Fund (actual between 1993 and 2008 and projected for 2009), Friedman and

Schady (2009) find that almost all infant deaths resulting from a shock to GDP are girls. A 1 percent deviation in GDP results in about 0.33 more male deaths per thousand births, and 0.62 more female deaths per thousand births. They estimate that as a result of the expected growth slowdown in 2009, there will be between 28,000 and 49,000 excess infant deaths in sub-Saharan Africa, and most of these deaths will be infant girls.

Although there is a fairly large literature linking localized income shocks to female health, this relationship between female infant mortality and economywide shocks deserves further investigation. One possibility is that households reduce health inputs to daughters and protect sons' health when GDP growth slows down. Another explanation could be the process of biological selection in births during crises. It is widely believed that female fetuses are more robust than male fetuses and more likely to be born, particularly during economic crises (Friedman and Schady 2009). Thus male fetuses who survive pregnancy are likely to be healthier infants than infant girls, so that among all *live* births, girls are less likely than boys to survive past infancy.

Gender Matters in Explaining Effects of Aggregate Shocks

It is clear from the review of the evidence that aggregate economic shocks do not have homogenous effects on the poor. Gender matters in explaining differential effects, both in terms of the direct or first-round effects of the economic shock and in terms of the coping strategies of households, or second-round effects. But these gender differences vary across countries and stages of development. Increased labor force participation for women is a robust response across countries, except for Brazil, where both added- and discouraged-worker effects appeared, and for the Republic of Korea, where women withdrew from the labor force. In the United States, over the 20th century, the magnitude of the added-worker effect appears to have diminished over time (Lundberg 1985; Maloney 1991; Moehling 2001). Juhn and Potter (2007) suggest that this diminished added-worker effect could be attributed to a sizeable increase in women's attachment to the labor force, so that they are affected as much as their husbands, and to the availability of social insurance such as unemployment or disability benefits. Additional evidence presented here suggests that added-worker effects prevail in low-income countries and among low-income households, while discouraged-worker effects prevail among high-income countries and high-income households. The recent global crisis, however, may alter these predictions, because for the first time in history, as a result of the contraction in global demand, women in low-income countries may be laid off from jobs and the informal economy may be equally affected and cease to be a safety net for the poor.

Workfare programs, when designed appropriately, have captured some of the added supply of female labor (from the fe-

male added-worker effect) during past economic downturns. Such programs may be even more necessary during this global crisis if, in fact, there are growing direct female employment losses from businesses tied to the global contraction in demand. But there are many unanswered questions regarding this added-worker effect and the impact of workfare programs on poor women. Do female added workers stay in the labor market or do they eventually revert to precrisis status?²³ Do they have more or less trouble than their male counterparts exiting from workfare programs? Is the stigmatization associated with these programs a concern for women as it is for men?

Similar to the effects on women's employment responses, the effects of aggregate economic shocks on child schooling and health outcomes vary by the country's stage of development. In high-income countries, children's schooling and health generally improve during economic downturns, while in poor countries the opposite occurs (in middle-income countries, outcomes are more ambiguous). In poor countries, there are no apparent gender differences in the decline in child school enrollments, but there is a clear gender difference in deteriorating health outcomes for children. Aggregate economic shocks have much larger impacts on infant girls' mortality than on boys across different cultures, and not only in regions where a strong bias for male children has been well documented. This suggests that families in low-income countries appear to make greater efforts to protect boys than girls during periods of economic stress, and calls for the need to devise public policies particularly targeted to protect girls' health and nutritional status. Cash transfers to mothers, with larger transfers to families to protect the health of girls, could be part of the answer—along with government protection of fiscal allocations to basic health and educational expenditures in periods of downturns. Concerns for these programs include: how easily can they be implemented and monitored in low-income countries; how easily can they adapt to changes during downturns; and are they able to counteract the preferences of poor families to protect boys' health first, and if so, how long would these changes last.

The gender differences that have emerged from this review of the evidence are partly a function of differences between men and women in access to labor and credit markets and in the allocation of household labor, and partly the result of households' coping strategies when faced with a drop in household income. These differences can be significant and largely predictable, and therefore can be addressed by policy interventions.

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Endnotes

1. See also Sabarwal, Sinha, and Buvinic [2010].
2. The added-worker effect refers to women's labor market entry in response to husbands' unemployment. However, most of the research from past crises reviewed here measures changes in trends in women's labor force participation during (and before) crises; this is a broad measure of women's labor market response to crises because it could include women who have entered the labor force for reasons other than husbands' unemployment. Exceptions to this include Skoufias and Parker (2006) and Parker and Skoufias (2006).
3. Posadas (2010) explores the long-term labor market behavior of women who entered the labor force during Indonesia's financial crisis of 1997. She finds that only between 6 and 13 percent of women leave employment once the shock is over, the majority remain in the labor market.

References

- Adsera, Alicia, and Alicia Menendez. 2009. "Fertility Changes in Latin America in the Context of Economic Uncertainty." Institute for the Study of Labor (IZA) Discussion Paper 4019, Bonn, Germany.
- Aslanbeigui, Nahid, and Gale Summerfield. 2000. "The Asian Crisis, Gender, and the International Financial Architecture." *Feminist Economist* 6 (3): 81–103.
- Baird, Sarah, Jed Friedman, and Norbert Schady. 2007. "Aggregate Economic Shocks and Infant Mortality in the Developing World." World Bank Policy Research Working Paper 4346, Washington, DC.
- Bhalotra, Sonia. 2010. "Fatal Fluctuations? Cyclical and Infant Mortality in India." *Journal of Development Economics* 93 (1): 7–19.
- Bhalotra, Sonia, and Marcela Umaña-Aponte. 2009. "Distress Work amongst Women? The Dynamics of Labour Supply in Sixty-Six Developing Countries." Paper presented at Fourth IZA/World Bank Conference on Economics and Development, Bonn, Germany, May 4.
- Cerutti, Marcela. 2000. "Economic Reform, Structural Adjustment, and Female Labor Force Participation in Buenos Aires, Argentina." *World Development* 28 (5): 879–91.
- CGAP (Consultative Group to Assist the Poor). 2009. "The Global Financial Crisis and Its Impact on Microfinance." Focus Note No. 52.
- Dehejia, R., and A. Lleras-Muney. 2004. "Booms, Busts, and Babies' Health." *Quarterly Journal of Economics* 119 (3): 1091–1130.
- Francke, M. 1992. "Women and the Labor Market in Lima, Peru: Weathering Economic Crisis." Paper prepared for the International Center for Research on Women Seminar on Weathering Economic Crises: Women's Responses to the Recession in Latin America, Washington, DC, August 11.
- Frankenberg, Elizabeth, Duncan Thomas, and Kathleen Beegle. 1999. "The Real Costs of Indonesia's Economic Crisis: Preliminary Findings from the Indonesia Family Life Surveys." Labor and Population Working Paper Series 99-04, RAND Corporation, Santa Monica, California.
- Friedman, Jed, and Norbert Schady. 2009. "How Many More Infants Are Likely to Die in Africa as a Result of the Global Financial Crisis?" World Bank Policy Research Working Paper 5023, Washington, DC.
- Funkhouser, Edward. 1999. "Cyclical Economic Conditions and School Attendance in Costa Rica." *Economics of Education Review* 18 (1): 31–50.
- Goldin, Claudia. 1999. "Egalitarianism and the Returns to Education during the Great Transformation of American Education." *Journal of Political Economy* 107 (6): S65–S94.
- Hirata, Helena, and John Humphrey. 1990. "Male and Female Workers and Economic Recession in Brazil." Mimeo, International Center for Research on Women, Washington, DC.
- Humphrey, John. 1996. "Responses to Recession and Restructuring: Employment Trends in the São Paulo Metropolitan Region, 1979–87." *Journal of Development Studies* 33 (1): 40–62.

- Jacoby, Hannan, and Emmanuel Skoufias. 1997. "Risk, Financial Markets, and Human Capital in a Developing Country." *Review of Economic Studies* 64 (3): 311–35.
- Jensen, Robert. 2000. "Agricultural Volatility and Investments in Children." *American Economic Review* 90 (2): 399–404.
- Judisman, C., and A. Moreno. 1990. "Women, Labor, and Crisis: Mexico." Mimeo, International Center for Research on Women, Washington, DC.
- Juhn, Chinhui, and Simon Potter. 2007. *Is There Still an Added Worker Effect?* Federal Reserve Bank of New York Staff Report No. 310.
- Kim, Haejin, and Paula B. Voos. 2007. "The Korean Economic Crisis and Working Women." *Journal of Contemporary Asia* 37 (2): 190–208.
- Lee, Kye, and Kisuk Cho. 2005. "Female Labor Force Participation during Economic Crises in Argentina and the Republic of Korea." *International Labor Review* 144 (4): 423–49.
- Leslie, Joanne, Margaret Lycette, and Mayra Buvinic. 1988. "Weathering Economic Crises: The Crucial Role of Women in Health." In *Health, Nutrition and Economic Crises: Approaches to Policy in the Third World*, ed. David E. Bell and Michael R. Reich, 307–48. Greenwood Publishing.
- Lim, Joseph. 2000. "The Effects of the East Asian Crisis on the Employment of Women and Men: The Philippine Case." *World Development* 28 (7): 1285–1306.
- Lundberg, Sally. 1985. "The Added Worker Effect." *Journal of Labor Economics* 3 (1): 11–37.
- Mahmood, Moazam, and Gosah Aryah. 2001. "The Labor Market and Labor Policy in a Macroeconomic Context: Growth, Crisis, and Competitiveness in Thailand." In *East Asian Labor Markets and Economic Crisis: Impacts, Responses, and Lessons*, ed. Gordon Betcherman and Rizwanul Islam, 245–92. Washington, DC: World Bank; and Geneva: International Labour Office.
- Maloney, Tim. 1991. "Unobserved Variables and the Elusive Added Worker Effect." *Economica* 58 (230): 173–87.
- McKenzie, David J. 2003. "How Do Households Cope with Aggregate Shocks? Evidence from the Mexican Peso Crisis." *World Development* 31 (7): 1179–99.
- Microcredit Summit Campaign. 2007. *Microcredit Summit Campaign 2007 Report*. http://www.microcreditsummit.org/socr_archive/.
- Moehling, C. M. 2001. "Women's Work and Men's Unemployment." *Journal of Economic History* 61 (4): 926–49.
- Parker, Susan, and Emmanuel Skoufias. 2006. "The Added Worker Effect over the Business Cycle: Evidence from Urban Mexico." *Applied Economics Letters* 11 (10): 625–30.
- Pessino, Carola, and Indermit S. Gill. 1997. "Determinants of Labor Supply in Argentina: The Importance of Cyclical Fluctuations in Labor Force Participation." CEMA Working Papers, No. 118, Universidad del CEMA.
- Posadas, Josefina. 2010. "Persistence of the Added Worker Effect: Evidence Using Panel Data from Indonesia." Mimeo, World Bank, Washington, DC.
- Sabarwal, Shwetlena, Nistha Sinha, and Mayra Buvinic. 2010. "How Do Women Weather Economic Shocks? A Review of the Evidence." World Bank Policy Research Working Paper 5496, Washington, DC.
- Schady, Norbert. 2004. "Do Macroeconomic Crises Always Slow Human Capital Accumulation?" *World Bank Economic Review* 18 (2): 131–54.
- Skoufias, Emmanuel, and Susan Parker. 2006. "Job Loss and Family Adjustments in Work and Schooling during the Mexican Peso Crisis." *Journal of Population Economics* 19 (1): 163–81.
- Smith, James T., Duncan Thomas, Elizabeth Frankenberg, Kathleen Beegle, and Graciela Teruel. 2002. "Wages, Employment, and Economic Shocks: Evidence from Indonesia." *Journal of Population Economics* 15 (1): 161–93.
- Thomas, Duncan, Kathleen Beegle, Elizabeth Frankenberg, Bondan Sikoki, John Strauss, and Graciela Teruel. 2004. "Education in a Crisis." *Journal of Development Economics* 74 (1): 53–85.

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