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Discussion Paper BRIEFS

Food Consumption and Nutrition Division of the International Food Policy Research Institute

Discussion Paper 129

Labor Market Shocks and Their Impacts on Work and Schooling: Evidence from Urban Mexico

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Macroeconomic crises may lead to significant changes in household income as salaries fail to keep up with inflation or workers are laid off. In response, households may reallocate their available resources. For example, during periods of relatively low wages, households may allocate their time to nonwork activities. The lower opportunity cost of time might also induce families to invest in children's schooling. On the other hand, lower household income combined with increased uncertainty about future returns to investments may have the opposite effect, *decreasing* the demand of families for education.

Despite the existence of evidence on the relationship between schooling and indicators of macroeconomic activity, there is little empirical evidence at the individual level on how labor market conditions affect the intertemporal use of time of both younger and older family members. This paper attempts to shed some light on the issue. This analysis allows for the possibility that labor markets can play simultaneously a dual role for households as a source of risk and a means of insuring against some types of risk.

The Data

The analysis relies on the National Mexican Urban Employment Survey (*Encuesta Nacional de Empleo Urbano—ENEU*), a large, longitudinal survey in urban areas of Mexico. The ENEU contains repeated observations over a period of five quarters on the time use of individuals 12 years of age or older in six main activities for the week prior to the interview. The survey also contains demographic and socioeconomic information as well as a standard set of questions on employment, wages, and job-search activities.

With few exceptions, research in this area has been constrained by the scarcity of longitudinal data on hours devoted to domestic activities in addition to market work. Relying on hours of wage work only is likely to yield estimates that reflect substitution away from work at home as well as leisure. Estimates based on broader measures of work provide a more accurate estimate of the household preferences toward leisure. In addition, provided that an appropriate measure of time is available for all members of the sample, the empirical analysis is not affected by problems arising from corner solutions and labor market entry and exit decisions.

Methodology

Using the intertemporal model of labor supply as the basis for the empirical analysis, the authors regress individual specific changes in time allocated to work and schooling on a set of variables describing changes in the value of time of household members, and shock variables such as the growth rate in the local unemployment rate corresponding to the age of the household head and his spouse. The analysis is conducted separately for adult (18–65 years) males and females and for boys and girls (12–17 years) to capture the potential differences in the effect of the shocks according to sex and age.

The study is one of the first to estimate the cross effects on time allocation within an intertemporal model.

The authors analyzed two household panels. One panel was followed for five quarters during the peak of the economic crisis of 1995 in Mexico. The other panel covered the period 1998–1999, which was characterized by low and decreasing unemployment and general economic recovery.

At the time of crisis, hours worked increases significantly, especially for adult females of poorer or constrained households and, in some cases, children.

By using two time periods, the authors could test whether the nature of the aggregate shocks in the economy interacted significantly with the potential insurance arrangements among households.

Results and Discussion

Labor market shocks affecting the marginal utility of wealth of a household can lead to increases in the work hours (added-worker effects) intended to compensate for the adverse economic conditions faced by the household. One critical question is whether these shocks and the accompanying added-worker responses take place only among adult members or also affect the hours children devote to work and school.

The evidence presented here, allowing for potential differences in responses due to household credit constraints, suggests that at a time of crisis, significant added-worker effects are in operation, especially for adult females of poorer or constrained households and, in some cases, children.

Rather surprisingly, the authors also find that the time that boys and girls devote to schooling is largely unaffected by market shocks. This finding implies that the increased work time by adult women in poor households appears to be adequate, at least in the short run, for preventing these shocks from having an adverse impact on the weekly school attendance of children.

However, this does not turn out to be sufficient for protecting the human capital stock invested on children. When examining the effect

of the same shocks on children's school attendance in the next school year, the authors find that they decrease significantly the probability that the children will continue.

There was also evidence to suggest some differential treatment based on the sex of children, i.e., efforts to protect family investments on children's human capital are more effective for boys than girls. Thus economic crises not only play a critical role in the intergenerational transmission of poverty but also tend to reinforce any gender-based preferences and inequalities.

The results highlight the fact that the same labor market shocks may have different effects, depending on the prevalent macroeconomic conditions. Clearly, safety net programs have a critical role to play, especially in periods of economic crisis. The evidence from our study suggests that safety net programs can become more effective in protecting families if, by design, they are flexible enough to adjust based on the magnitude and the nature of the aggregate shock.

Keywords: unemployment, economic crisis, work, schooling, added-worker effect, insurance, labor market, Mexico

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