Pergamon

World Development Vol. 31, No. 7, pp. 1165–1178, 2003

Printed in Great Britain
www.elsevier.com/locate/worlddev 0305-750X/03/$ - see front matter
doi:10.1016/S0305-750X(03)00065-2

School Attendance, Child Labor and Local Labor Market Fluctuations in Urban Brazil

SUZANNE DURYEA
International American Development Bank, Washington, DC, USA

and

MARY ARENDS-KUENNING *
University of Illinois at Urbana-Champaign, USA

Summary. — While the income (poverty) effect on child labor is long established as a main determinant of child labor, there is a growing body of literature considering the pull of the labor market. This paper demonstrates that after controlling for household characteristics, employment rates for 14–16 year old boys and girls in urban Brazil increase as local labor market opportunities improve. Children are also more likely to leave school as local labor market conditions become more favorable. The relationship between children's schooling and work and local labor market conditions changes in years of crisis compared to other years. The effects of macroeconomic fluctuations on children's school and work behavior are examined with particular focus on whether the income effect or substitution effect dominates as macroeconomic conditions change over time. The study uses data from the Pesquisa Nacional Amostra de Domicilios, a large household survey that is conducted almost annually by the IBGE. We use variation in the urban areas of 25 states over 12 years to identify the aggregate effects.

1. INTRODUCTION

Recently, researchers have given renewed attention to the issue of child labor, with lively debates ensuing regarding the causes of child labor. One school of thought is that child labor is caused primarily by poverty. A severe recession would be expected to push children into work and out of school as parent's incomes fall. Some Latin American evidence however, casts doubt on the hypothesis that child labor is determined entirely by poverty. In Brazil, and to a lesser extent in other Latin American countries, evidence exists that rates of child labor are higher at times and in places where children have better work opportunities as measured by local labor market conditions. When children face favorable work conditions, the opportunity costs of schooling increase.

The question of whether child labor is caused by poverty is especially pertinent now, because the world seems to be headed for a recession. Argentina is in the middle of a severe crisis, and Brazil is at risk of falling into one. Given that

* The authors wish to thank Emmanuel Skoufias, Guilherme Sedlacek, Mark Thomas, Francisco Ferreira, and Emily Gustafsson-Wright for insightful comments. This document reflects the opinions of the authors and does not represent the opinions of the Inter-American Development Bank or its Board of Directors. This paper was prepared for the conference "Crises and Disasters: Measurement and Mitigation of their Human Costs" organized by the IDB and IFPRI. Early stages of the data analysis were supported by NICHD grant C035799 with travel financed by the Hewlett Foundation and the IADB. This material is based upon work supported by the Cooperative State Research, Education and Extension Service, US Department of Agriculture, under project no. ILLU-05-0310. Any opinions, findings, conclusions or recommendations expressed in this publication are those of the authors and do not necessarily reflect the view of the US Department of Agriculture.

governments have scarce resources during a crisis, should those resources be spent ensuring that children stay in school? If the effect of decreasing work opportunities for children has a stronger effect than the effect of decreasing household incomes, then children are likely to stay in school. By lowering the opportunity costs of schooling, the negative impact of a crisis on school enrollment is dampened. The government may wish to focus resources not on safeguarding enrollment, but perhaps on improving school quality or ensuring access to health care.

In order to analyze the impact of a crisis on children's schooling and child labor, it is important to recognize the relevant income and substitution effects. A change in labor market opportunities affects adult household members as well as children. If parents have smaller incomes, that has a negative impact on children's schooling. A change in the wage that a child can earn has both income and substitution effects on children's time allocation decisions. Children who work to meet a standard of consumption will work fewer hours when their wage increases, but the substitution effect implies that children will work more when the wage increases. In a crisis year, whether the income effect or substitution effect dominates might be different than in an ordinary year. Crises can affect access to credit, access to insurance, and household expectations about future returns to children's schooling. In this paper, we explicitly look to see whether the response of children's time allocation to labor market opportunities changes during a crisis.

In the literature, distinguishing between the income effects and substitution effects of increased child wages has been difficult because of a lack of variation in wages over time. Another problem is that local wages are correlated with other local unobservable characteristics in studies that use a single cross-section. We are able to distinguish between income and substitution effects by using time-varying data. The data, the Pesquisa Nacional por Amostra de Domicilios (PNAD), are repeated cross-sections covering 1977–98. Because the data span 21 years, we can control for state-level unobserved characteristics. The sample size is large enough so that good aggregate measures of local labor market conditions can be constructed. The analysis combines individual-level controls with controls for aggregate labor market conditions.

2. MACROECONOMIC FLUCTUATIONS IN SOUTHEAST ASIA AND IN LATIN AMERICA

Latin America experienced financial crises starting in the early 1980s. In the mid-1990s, the fast-growing Southeast Asian economies, previously considered immune to financial crises, began to experience severe ones. Crises are often characterized by the flight of short-term capital by international investors who have lost confidence in the economy and prefer to invest in less risky environments. A massive devaluation of the currency commonly follows, with an increase in interest rates to stem the flow of capital. The crisis and policies adopted to deal with crisis lead to declines in GDP (Fallon & Lucas, 2002). In Latin America, the tequila crisis started in Mexico in December 1994 and spread to Argentina in 1995. The Asian crisis began in Thailand in 1997 and spread to Indonesia, the Republic of Korea, Malaysia, and Thailand by 1998. In 2002, Argentina was experiencing a financial crisis and Brazil was at increasing risk of another crisis because of uncertainty surrounding the presidential election.

Crises differ in their magnitude and duration. In Asia in the 1990s, crises have been dramatic but of short duration, whereas in Latin America, crises tend to be less dramatic, but of longer duration. In Asia, the crises were especially jolting to households because their economies had experienced a decade of impressive growth. Fallon and Lucas (2002) present a table showing GDP growth rates before and after crises in seven developing countries. In Indonesia and in Thailand, GDP decreased by 13.7% and by 10.2%, respectively. The Southeast Asian countries have been able to recover quickly from their crises. By contrast, the crises in Brazil of the 1980s and 1990s have not resulted in drops in GDP of this magnitude in a single year, but crises tend to be of long duration. The response of children's schooling and work might differ in a country that experiences a large decline of short duration compared to a long period of stagnation.

Policy-makers in international organizations like the World Bank and Inter-American Development Bank and in national governments have responded to the crises by advocating social safety net programs (Hicks & Wodon, 2001; Lustig, 2000). Ensuring that poor children can continue to attend school is a high priority in these programs. Indonesia enacted the Scholarships and Grants Program in 1998,