The impact of *Oportunidades* on human capital and income distribution in Mexico: A top-down/bottom-up approach

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**Abstract**

To analyze the effects of the Mexican *Oportunidades* conditional cash transfer program on school attendance and household income distribution, this paper links a microeconometric simulation model and a general equilibrium model in a bidirectional way, so to explicitly take spillover effects of the program into account. Our results suggest that partial equilibrium analysis alone underestimates the distributional effects of the program. Extending the coverage of the program to the poor increases school attendance, reduces child labor supply, and increases the equilibrium wages of children who remain at work. With a relatively low fiscal cost, Mexican social policy could further reduce income inequality and poverty.

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1. Introduction

The Oportunidades conditional cash transfer (CCT) program is estimated to transfer 14 billion Mexican pesos (Mexico and Ministry of Finance, 2011), or 1.1 billion U.S. dollars, per year, reaching 5.8 million households (SEDESOL 2012) and representing a substantial source of income for the poor. As such, it is a major social program of the Mexican government. A successor to PROGRESA (Programa de Educacion, Salud y Alimentacion, the Education, Health and Nutrition Program), Oportunidades has attracted national and international attention (World Bank, 2006). The program aims to develop the human capital of poor households (Skoufias, 2005) by providing cash transfers under the condition that households behave consistently with the accumulation of human capital. The program has three components—education, nutrition, and health—with education the largest (Azevedo & Robles, 2010). The program is operated by SEDESOL (Secretaría de Desarrollo Social, the Social Development Secretariat) and seeks to eliminate the intergenerational transmission of poverty. Oportunidades cash transfers are individually delivered to the mothers of children of school age and vary depending on the number of children enrolled in school and their grade levels, and their attendance at health centers. All mothers participating in the program are informed with individually delivered pamphlets that the benefits of Oportunidades are not conditioned on participation in any political event or voting for any political party, and the rules of the program and the number of beneficiary families by locality, municipality, and state are available on the Internet\(^1\) and in the Federal Register (Levy, 2006).

Extensive evaluation of the program (Behrman, Sengupta, & Todd, 2005; Levy, 2006; Parker, 2005; Schultz, 2004) has led to a consensus that the program enhances welfare in several dimensions: nutrition (Attanazio & Angelucci, 2009; Hoddinot, Skoufias, & Washburn, 2003); health (Gertler, 2004), and school attendance and incomes of the poor (Azevedo & Robles, 2010).

Azevedo and Robles (2010) examine the effects of Oportunidades using the microsimulation model developed by Bourguignon, Ferreira, and Leite (2003) (BFL henceforth) to analyze the partial equilibrium effects of the transfers on children’s time allocation, relaxing its identifying assumption, and applying it to Oportunidades. They find that increasing school attendance for higher-grade-level students could be relatively expensive, while shifting the subsidies from children in primary education to students in advanced grades could raise overall school enrollment in Mexico with no additional cost for the program.

However, national-scale CCTs in support of the poor can have important indirect general equilibrium effects. Only a combined macro–micro model is able to fully take these effects into account (Bourguignon, Bussolo, & Cockburn, 2010). This paper analyzes the impact of the educational Oportunidades transfer on child labor supply, income distribution, and poverty by explicitly taking the program’s spillover effects into account. To our knowledge, this is the first study to link the BFL behavioral microsimulation model to a countrywide computable general equilibrium (CGE) model that considers the general equilibrium effects of the program. Using this integrated model and a comparative statics approach, our study takes a series of snapshots of observed and counterfactual scenarios in order to shed light on the effects of the Oportunidades program—effects that are actually perceived over time by the Mexican inhabitants. Ultimately, this paper hopes to contribute to the design of social policy by informing the decisionmaking process using a combined macro–micro model.

\(^1\) Available at www.oportunidades.gob.mx.
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