

Abstract

Under-registration of Births in Latin America: Diagnosis of Problem and Mapping for Solutions

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I. Background

Approximately 14% of births are unregistered in Latin America according to UN estimates (UNICEF 2001). The lack of proper documentation has lifelong bearing on an individual's ability to fully participate in society. Access to school, social/health services, the ballot box, and the banking system are often denied to undocumented individuals. Governments and donors continue to focus a great deal of attention and resources in monitoring progress achieved toward the UN Millennium Development Goals. However if births are not registered and deaths are not recorded, the most vulnerable are often excluded from measurement and aggregate measures such as infant and maternal mortality rates may be biased. Given inaccurate vital statistics, targeting mechanisms used to determine how to distribute resources at disaggregated levels for specific social programs may also be biased and hence inefficient.

This paper will examine the magnitude of under-registration in three Latin American countries using recent Demographic and Health Surveys (DHS) data for Brazil, Colombia and the Dominican Republic.¹

The probability of not registering a birth will be estimated using a probit model. Community, household and individual characteristics associated with under-registration will be explored. The following characteristics will be included as explanatory variables:

Community:

Municipality- Urban/Rural status

Household:

Sex of household head

Household composition

Education of head

Religion of head

Access to water

Sanitation

Number of bedrooms per household member

Household amenities (refrigerator, washing machine, car)

Individual:

Sex

Race or ethnic identification

Disability status

Birth order

¹ Brazil DHS 1996, Colombia DHS 2000, Dominican Republic DHS 2002.

Although the questions “ ¿A usted le dieron el certificado de nacimiento de NOBMBRE / (Did you receive a birth certificate for NAME)?” and “El nacimiento de (NOMBRE) fue registrado / (Was the birth of NAME registered)?” are frequently included in the DHS questionnaires, a literature review reveals no published or distributed papers examining this outcome. The authors have already secured permission to analyze the DHS data for all Latin American countries.

The second objective of the paper is to create a disaggregated “mapping” of under-registration in Brazil by matching the 1996 DHS estimates with the 2000 census for Brazil. This technique, developed for detailed poverty mapping by Peter Lanjouw (2000) has only recently been applied to mapping demographic outcomes (e.g. Werner Hernani 2004, on nutritional outcomes). The technique takes household survey data which is rich in demographic, social, health, and welfare-related questions but not representative for small geographic units and combines it with census data which is rich in geographic detail. By restricting the explanatory variables to those that are found in both datasets (DHS and census), survey data from DHS are first used to estimate a model of birth under-registration. Using the parameter estimates from the first model, the expected level of birth under-registration for small geographic areas is then imputed using census data and the same explanatory variables. All of the variables previously listed are also included in the 2000 census for Brazil which is publicly available through the Integrated Public Use Microdata Series (IPUMS) housed at the University of Minnesota.²

While incomplete vital statistics consistently remain a problem in most Latin American countries, few studies have systematically investigated the extent of the problem along with the determinants at a geographically disaggregated level. This paper analyzes the under-registration of births for Latin America using DHS data for Brazil, Colombia and the Dominican Republic. In addition, the paper will provide a detailed geographic ranking of rates of under-registration for the case of Brazil, using an innovative technique that has typically been applied almost exclusively to mapping poverty. Being able to rank the individual communities within a country by their rates of birth under-registration will provide the government and other institutions with a way in which they can target interventions at a very disaggregated level.

References

UNICEF 2001. Progress Since the World Summit for Children- A Statistical Review.

Hentschel, J., Lanjouw, J., Lanjouw P., and J. Poggi. 2000. “Combining Census and Survey Data to Trace the Spatial Dimensions of Poverty: A Case Study of Ecuador.” *The World Bank Economic Review*. Vol 14 (1).

² The authors have already received permission from IPUMS to use the Brazil census for this research project.