

STRATIFIED MULTI-LEVEL COX MODEL WITH INTERACTION BY RICHNESS INDEX FOR RISK ANALYSIS OF DEATH OF CHILDREN UNDER FIVE YEARS – ENDSA 2008

Pamela Córdova Olivera y Marina Yurevna Nikolaeva

ABSTRACT

This study seeks to determine to what extent family socioeconomic status, linked to an indicator of wealth, affects the probability that children under five years old have to survive, using the information from the National Survey of Demography and Health of Bolivia 2008 (ENDSAB 2008). The population under study was children born alive, from women between 15 and 49 years old, in the five years prior to ENDSAB 2008. The dependent variable in this study is the mortality of children under five years old (5q0), defined as the risk of dying between birth and the fifth year of life. A stratified multilevel Cox model was estimated with interaction by the categories of a stratum variable called "Wealth Index". Three multilevel models were estimated, one for each stratum (poor, medium and rich). The estimated model for the poor stratum of the Wealth Index manages to explain a greater proportion of the variance between clusters, more than 60%, determined by the area of residence, characteristics at the child-mother, household and community-contextual level. The opposite occurs in the model estimated for the rich stratum of the wealth index since it only manages to explain 31% of the variance between clusters.

Keywords: Mortality, *Stratified Cox* Model with Interactions, Multilevel Model, Wealth Index.

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