

Demographic Transition and Economic Growth in Mexico

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1. Introduction

The role of the population in economic development is one of the oldest topics in economics, yet controversies range with similar passion and camps are divided on lines today broadly. Numerous theoretical perspectives that guide these research lines and have been supplemented several hypothesis regarding the effects of population on economic growth. In the particular case of Mexico, Coale and Hoover (1958) stressed the need for reducing its fertility level to reach high pace in economic growth. Recently, endogenous economic growth theory has renewed interest in the problems of economic growth and development by incorporating a more complete treatment of population as an endogenous variable in economic growth process. In this line, the purpose of this paper is to explore the interrelationships between demographic transition and economic growth drawing by new growth theory and provides a update concerning the topic of population and growth in Mexico. The motivation for this paper derives, on the one hand, from the view that demographic variables have received comparatively little attention by Mexican demographers and economist in the context of economic growth models and, on the other part, from the readily discernible importance attaching to such variables in Mexico.

2. Scope of analysis and analytical framework

The analysis will be based on recent types of models. One kind of them concern with convergence hypotheses using models advanced by Barro and Sala-i-Martin (1995). Traditional, or neoclassical, theory emphasizes capital accumulation and exogenous rates of change in technology and population. It predicts that an economy's growth rate will, in the-long run, simply equal of growth of labor and capital plus technological progress. It also suggest that over time the per capita incomes of the rich and poor areas will converge due to the law of diminish returns. Endogenous growth models, on the other hand, assume that states's policies, particularly the economic incentives offered, are import influences on the long-term growth rate. In this sense, endogenous models emphasize the importance of human capital, measured by educated work force. They conclude, in contrast to their counterparts, that convergence between the per capita incomes of rich and poor areas is not inevitable, because growth will tend to be faster in economies where workers are better educated and states implement policies that align social and private rates of return. On the other hand, among recent work on endogenous growth there is a very promising area of research which investigates the association between the level of fertility and the long run rate of economic growth. This negative association has been well documented since the pioneering works of Becker et. al. (1989 and 1990). Furthermore, recent models of endogenous growth investigated various mechanisms through which low fertility can improve the allocation of capital and accelerate the rate of economic growth. These mechanisms incorporate the welfare of children into the utility of their parents. (Becker and Barro, 1989), considering technological progress and human capital into the model (Benhabib and Nishura, 1993), or involve the possibility that changes in women's relative wages affects household decisions about the level of fertility and women's labor force participation, and these decisions turn feed back through the aggregate production mechanism to affect output growth. To analyze the interaction between demographic transition and economic growth in Mexico

onn states level analyses, I try to develop a kind of model which has as main characteristics include patterns of fertility and mortality, and human capital formation derives from Mexican data sources.

3. Methodology and data sources

This paper will be conducted in three stages. In first of them, I review of relevant literature among studies that deal with interrelationships between population and economic growth. This review provides a general background focuses on the impact of exogenous and endogenous fertility on economic growth, and permit to go directly to the core of theoretical model that will be presented in the following stages. In second stage, I am interested in test several convergence hypotheses on economic growth, and I try to answer the next questions: might demographic transition influence convergence on economic growth across Mexico's states?, Can these observations be explained by observable differences in the levels of fertility by the Mexico's states?. To properly asses fertility effect on economic growth, I must control for other theoretically important political and economic factors. These come from Barro's influential cross-national studies published in last years. This part of work uses data since 1960 to 1990 from the Mexican states and implements a panel data approach to deal with this issue. This stage involves analyses with fixed-effects and random-effects models. Because of rol that human capital plays in these exercises I try to build a better and more comprehensive measure of human capital. The factor analysis technique (principal components) will be used for that measurement. The basic data on all variables include in the two kinds of models will taken from population Census and Official Statistics of Mexico (the data to construct a new measure of human capital will be obtained from the same sources) .

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