The determinants of income inequality in Thailand: A synthetic cohort analysis

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ABSTRACT

This paper presents tests and estimates of the human capital model of income inequality using synthetic cohort data for Thailand: 1992–2011. The model focuses on four primary determinants of income inequality: mean per capita income levels, the variances in years of education, in the number of children, and in the number of earners in the household. All of these factors are important sources of income inequality in Thailand, with relative impacts that differ across demographic groups and types of household structure. An inverted-U relation between mean per capita income levels and inequality is found, reflecting gender differences of the head of household, differences in household composition, and variation in access to finance. Although the human capital model emphasizes education, estimates presented here show other household characteristics, such as number of children and number of earners, can be even more important sources of inequality.

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1. Introduction

Many studies of income distribution dynamics and determinants have focused on macroeconomic issues. The Kuznets hypothesis concerning the relation between economic growth and income inequality has been prominent in numerous cross country and aggregate time series analyses. The current study begins from a microeconomic perspective, based on the human capital approach that emphasizes the relation between education and individual incomes. The driving question in this study is the extent to which education inequality determines the distribution of income. In particular, is this the most important source of income dispersion for an open, emerging economy, such as Thailand? To what extent are other demographic factors or household characteristics of equal or greater importance? How does the relative importance of education vs. other factors vary in the determination of income distributions across different demographic groups?

In this investigation, Thailand is chosen as representative of a small open economy that experienced several different growth episodes during this period of study: prosperity and strong growth in the early 1990s, the economic crisis of 1997, and the recovery after the crisis since 2000. The country's rapid economic growth during the 1970s and 1980s was accompanied by persistently high and rising income inequality (Deolalikar, 2002; Kakwani and Krongkaew, 2000, 2003). As

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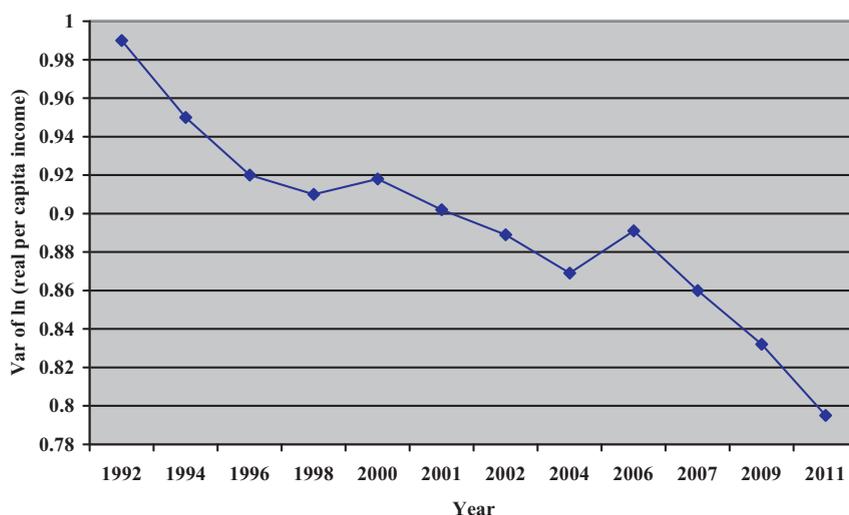
Fig. 1. Income inequality trend from 1992 to 2011.
Source: Authors' calculation.

measured by the Gini coefficient, inequality in Thailand in 1976 was considerably higher than the average for other East Asian and Pacific Rim countries (0.436 vs. 0.362), and this rose even further with continued economic growth, reaching a value of 0.515 by 1996 (Jeong, 2008). The relation between changes in the rate of economic growth and inequality and poverty is also addressed by Warr (2004), who concludes that economic growth in Thailand does contribute to reductions in poverty, but has not affected the overall distribution of income. Data presented by Jitsuchon (1987, 2001, 2002) and NESDB (1999, 2009)[1] suggest a decreasing trend in income inequality in Thailand since the early 1990s, and this is consistent with the trends from 1992 to 2011 shown by aggregating the household survey data of this study (Fig. 1). The distribution of the benefits of economic growth plays a role in the current political turmoil in Thailand, with lessons for other countries in similar stages of economic development.

While such macroeconomic trends have been the focus of most prior studies of income distribution in Thailand, the main objective of this study is to analyze the determinants of income inequality from its microeconomic foundations. Based on the human capital model, the variance of incomes across a cohort depends upon the mean level of education and its variance (De Gregorio & Lee, 2002). This linkage between education inequality and income dispersion provides one potential policy lever for evening the distribution of incomes, without the disincentives that accompany the usual means-tested tax and expenditure policies. Education policy can be directed to militate against the tendency for income inequality to increase during the early stages of economic growth (the Kuznets hypothesis).

In addition, if the relation between education inequality and income dispersion depends upon other demographic factors, such as urban vs. rural populations, testing for these differences may also guide decisions about the allocation of investments in education. Toward this end various demographic factors and household characteristics, as well as measures of the Kuznets hypothesis, are incorporated as controls in investigating the relation between education and the distribution of income.

The analysis behind this paper employs cohort means and variances of the key variables, constructed from the Thai Household Socio-Economic Survey (SES) (1992–2011). Cohorts consist of individual heads of household of the same age and from the same survey year. These age-year cohorts are the units of observation in the estimation, with income inequality defined as the variance of the log of incomes across the cohort. Synthetic cohort analysis provides some of the econometric advantages of panel data analysis, including the ability to control for individual heterogeneity with time and age fixed effects.

In addition to an overall picture of income inequality from the full data set, Kanbur (1998) suggests analyzing determinants of income inequality at a disaggregated level to provide more detail on income inequality for particular groups. Therefore, pseudo panels are constructed for the complete data set and for several disaggregations according to gender of the household head, family structure, living area, and home/land ownership status.

To highlight some of the key findings of this study, support for the human capital model of income inequality is found for both aggregated and disaggregated data sets. Dispersion in years of schooling, number of earners, and number of children affect income inequality although the relative importance of these effects differs across alternative disaggregations. For example, educational attainment of the household head, the number of children, and the number of earners are significant

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[1] Jitsuchon (1987, 2001, 2002) and NESDB (1999, 2009) use the Gini index as an income inequality measurement, while Fig. 1 is based on the variance of natural log of real per capita income.