

Contents lists available at [ScienceDirect](#)

Kasetsart Journal of Social Sciences

journal homepage: <http://www.elsevier.com/locate/kjss>

Top income shares and inequality: Evidences from Thailand

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ARTICLE INFO

Article history:

Received 30 January 2017

Received in revised form 4 June 2017

Accepted 19 July 2017

Available online xxxxx

Keywords:

Gini coefficient,
income inequality,
Pareto distribution,
top-income share

ABSTRACT

This paper attempts to improve a traditional measure of income inequality in Thailand, that is, the Gini coefficient, by incorporating information about top income groups from tax return data. Traditionally, the Gini coefficient is calculated by using individuals' income data from the socio-economic survey (SES). In the SES, the poor are relatively well-represented, while the rich or the top income groups are mostly absent. Therefore, the survey-based Gini coefficient may not give an accurate account of the true state of the income distribution in Thailand. We followed the Alvaredo methodology by making use of the tax returns data in estimating the share of the top income group and incorporating this group into the calculation of an alternative Gini coefficient. The "corrected" Gini coefficient overturned the prediction of the Kuznets hypothesis that foresaw an improved income distribution in Thailand to continue in 2007 and 2009. Our calculation showed that the income distribution worsened in 2009. This was in line with the findings on the top income shares from tax returns data.

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Introduction

This paper incorporated top income shares obtained from tax returns data with the household survey in order to improve a measure of income inequality. Traditionally, researchers use household survey data to calculate the Gini index in order to gauge the degree of inequality. However, most household income survey data lack proper coverage for the high income groups. The omission of the top income groups from the Gini calculation consequently shifts the mass from the right tail of the income distribution towards the center and results in a more equitable income or lower value of the Gini index. Our paper attempted to improve upon the traditional calculation by incorporating information about top income groups from tax returns data.

Tax returns data are regarded as a vital source of information about top income groups. As in [Feenberg and Poterba \(1993\)](#), [Piketty \(2003\)](#), [Piketty and Saez \(2003\)](#), and

[Atkinson \(2005\)](#), tax returns data are used to measure top income shares in the net national income. A higher fraction of national income accrued to the top groups indicating a widening gap of income between the rich and the rest of the economy. [Piketty and Saez \(2003\)](#) used tax returns data to construct a series of the top share of pretax income and wages in the United States from 1913 to 1998. They found that the top income and wage shares in the United States had gained more weight in recent times after dropping down during the Great Depression and World War II. [Piketty \(2014\)](#) showed that the share of the richest 1 percent in the United States has risen significantly since 1980, reaching nearly 20 percent in 2012. [Atkinson \(2005\)](#) found a rise in income inequality in the United Kingdom followed a similar pattern to that of the United States, while [Piketty \(2003\)](#) found the opposite trend in France.

[Alvaredo \(2011\)](#) showed how the top income share, obtained from the tax returns data, can be a supplementary source of information about the missing rich individuals in calculating the Gini coefficient. He showed that when the top income share is not infinitesimal in the income

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Peer review under responsibility of Kasetsart University.

<http://dx.doi.org/10.1016/j.kjss.2017.07.010>

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Please cite this article in press as: Vanitcharearnthum, V., Top income shares and inequality: Evidences from Thailand, Kasetsart Journal of Social Sciences (2017), <http://dx.doi.org/10.1016/j.kjss.2017.07.010>

distribution, one can use the estimates of top income share from the tax returns data to improve or “correct” the Gini coefficient obtained from the survey data.

In this paper, we applied the above method to Thailand data. We estimated the top income share from the tax returns data during 2004–2009. In particular, an income share of the top 1 percent and the top 0.1 percent were estimated. We found that the top 1 percent of taxpayers accounted for around 64.9–83.7 percent of total income, while the top 0.1 percent of taxpayers accounted for 46.1–61.6 percent of total income. This finding showed the concentration of income in a small group of rich individuals in Thailand. Though the share of those top income groups has come down recently, the degree of income concentration is still alarming.

We applied the [Alvaredo \(2011\)](#) methodology to compute the corrected Gini in 2004, 2006, 2007, and 2009. We found that the corrected Gini and the traditional Gini had similar patterns except for 2009. That is, both measures showed that the inequality rose in 2006 from the level observed in 2004, before lowering in 2007. However, the traditional Gini exhibited a continued decline in inequality in 2009 while the corrected Gini showed the opposite path. To my knowledge, this study was the first to use tax data to calculate top income share in Thailand.

In addition, our calculation showed great disparity between the traditional Gini and the one that incorporated the top income share. We found that the corrected Gini could be as high as 30–40 percent above the traditional measures. With that level of income inequality, Thailand could be ranked among the world's most unequal income distribution.

Our results provide a different perspective for policy discussion on inequality in Thailand. Recent studies, such as [Pootrakul \(2013\)](#) and [Kilenthong \(2014\)](#), related the declining trend in the Gini indices to the inverted-U shape Kuznets curve, which traces inequality indicators along the economic development process. According to the Kuznets hypothesis, income inequality rises during the early stage of economic development and falls down as the economy progresses. One implication from those studies is that we should see more equal income distribution to continue in the future. Our results provided a contrasting view. The income distribution might worsen as suggested by the estimation of corrected Gini coefficient. Thus, both policymakers and academics should not feel complacent with the past income redistribution policies and think more seriously about inclusive-growth policies.

The rest of this paper proceeds as follows. In the next section, we provide an overview of income inequality in Thailand. Section [Estimating Top Income Shares](#) describes the methodology for estimating the top income share applied with tax data from the Revenue Department. In Section [Recalculating the Gini Coefficients](#), we calculate alternative measures of income inequality by incorporating the income shares obtained from the previous section. The final section concludes the paper.

Income Inequality in Thailand

Despite impressive growth performances during the 1980s–2000s, income inequality in Thailand has hardly

changed. The Gini coefficient in 2013 was 0.484. This figure is not much different from the one previously observed in 1988, which equaled 0.487. After two decades of economic progress, Thailand's income inequality still lagged behind the levels in more advanced economies, such as the OECD group. In a recent cross-country comparison, only the Sub-Saharan African and the Latin American and the Caribbean group of countries fared worse than Thailand in terms of income inequality (See [Balakrishnan, Steinberg, & Syed, 2013](#)).

However, the previous paragraph provides only a rough picture of income inequality in Thailand by simply mentioning two end points. If one goes through the development process during 1988–2013, a different view would emerge. As the Thai economy took off on a rapid growth path in the late 1980s, its income inequality rose. The inequality peaked during the high growth period of 1988–1992, when the Gini reached a value of 0.536, before it subsequently fell toward the current level.

One can argue that this observation is consistent with the Kuznets hypothesis ([Kuznets, 1955](#)), which predicts that income inequality can worsen in the early stage of economic development before improvement in the income distribution takes over in the latter stage. Drawing on the Kuznets hypothesis, we may expect to see a more equitable income distribution in the near future.

In [Figure 1](#) below, we plotted the Gini coefficients in various years since 1988 together with the regression line that fitted the data with the linear function of time and squared-time. The fitted line seems to track the general tendency in the Gini coefficients quite well. The line not only exhibits recent decline in income inequality but can also be regarded as a part of the inverted “U” curve of the Kuznets hypothesis.

[Ikemoto and Uehara \(2000\)](#) explained that higher inequality during the 1980s was due to the emergence of export-oriented manufacturing industries supported by the influx of foreign direct investment. Those capital inflows were attracted by low-cost labor in Thailand. As a result, labor was mobilized from the low-earning agricultural sector to the better-paid manufacturing sector. Initially, this structural change caused more income disparity as only a few laborers made the transition. The economic development process envisioned by the Kuznets hypothesis would generate a better income distribution as the manufacturing sector absorbed more and more labor. The turning point would be reached and a more equal income distribution would be observed. However, such a prediction had not yet materialized in the early 1990s. [Ikemoto and Uehara \(2000\)](#) argued that the reason we did not observe a decline in inequality was due to the series of financial liberalization measures introduced in the early 1990s, such as the acceptance of Article 8 of the International Monetary Fund Agreement and the abolishment of the interest rate ceiling. Such changes triggered a boom in the construction and financial sectors and pushed even higher the wage rates of skilled laborers, like engineers or investment bankers. As the Thai economy entered the bubble phase leading up to the economic crisis in 1997, income inequality became more severe.

However, the economic crisis in 1997 brought about the turning point in the Kuznets curve. In the post-crisis era,

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