

## *Analysis of Household Debt Inequality in Thailand*

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### **Abstract**

Inequality has been usually mentioned in term of income inequality to evaluate people's well-being. This research examined another dimension of inequality, which is debt inequality. Among people who have the same level of income, some of them have high debt while some people have not. Therefore, we should not neglect this aspect because indebtedness makes them vulnerable to unstable life.

This research mainly used household data, known as the Socio-Economic Survey (SES), compiled by the National Statistical Office of Thailand. To estimate the debt inequality, people were classified according to the level of income, and the distribution of debt was estimated for each income group. The results revealed that there was debt inequality within the same level of income group. Low debt inequality was not always good because it means that households have debt equally. Besides, it can be also positively interpreted that they have small amount of debt similarly. This depends on average household debt of each group, while high debt inequality can be implied that there are large differences between debts of each household in the same group. There were only some households with low debt, i.e., they did not borrow the money for living despite some households having high debt.

This research points out the issue that only the measure to elevate income level may not be enough to sustain people's well-being. Therefore, the government and policy makers should emphasize to implement the effective policies to lessen household debt together with increasing people's income that will lead to real well-being and self-sufficiency.

Keywords: Household debt inequality, Inequality, Well-being policy

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## Introduction

Thailand have been put highly effort to develop the country and passed from developing country to be a middle-income country since 2011. The statistic on household debt showed decreasing trend over the past three decades. The proportion of the poor in Thailand decreased from 65.17 percent of overall population in 1988 to only 7.2 percent or 4.8 million poor people in 2015 (NESDB, 2016).

However, in order to reduce more about the severity gap and increase the quality of life and well-being for people, the aspect of inequality is still serious issue. The government policy have focused on alleviate level of household income but among people who have the same level of income, some of them have high debt while some people have not. Inequality has been usually mentioned in term of income inequality to evaluate people's well-being. This research examined another dimension of inequality, which is debt inequality. The aspect of household debt should also be emphasized because indebtedness makes them vulnerable to unstable life. Therefore, the aim of this research is to examine debt inequality within the equal income group.

## Methodology and Data

This research mainly used household data, known as the Socio-Economic Survey (SES), compiled by the National Statistical Office of Thailand in 2015. To estimate the debt inequality, people were classified into 5 income groups according to each rational classification (Table 1). The same group represents the equal income level, but the aim of this research is to examine that among equality in term of income group, there may be inequality due to household debt.

Group	Level of Income (Baht/Month)	Classification
1	<2,644	➤ Refer to household under the poverty line of Thailand in 2015, reported by the National Economic and Social Development Board (NESDB, 2015)
2	2,644-8,999	➤ Based on the poverty line of 2,644 Baht per month.
3	9,000-14,999	➤ Based on the minimum wage of 300-310 Baht per day (Ministry of Labour, as of 1 January 2017)
4	15,000-24,999	➤ Refer to average starting income per month for Bachelor.
5	>=25,000	➤ Refer to average starting income per month for Master's Degree.

Note: around 34 baht equal to 1 USD

Table 1: Level of Income Group and Classification

Subsequently, the distribution of debt was estimated for each income group. The definition of debt used in this calculation was average debt repayment per month of household. The Gini Coefficient is employed to investigate in term of debt inequality instead of income.

Gini coefficient of debt inequality is derived from the following equation:

$$Gini = 1 - \sum_{i=1}^n [(D_i + D_{i-1})(X_i - X_{i-1})]$$

Where

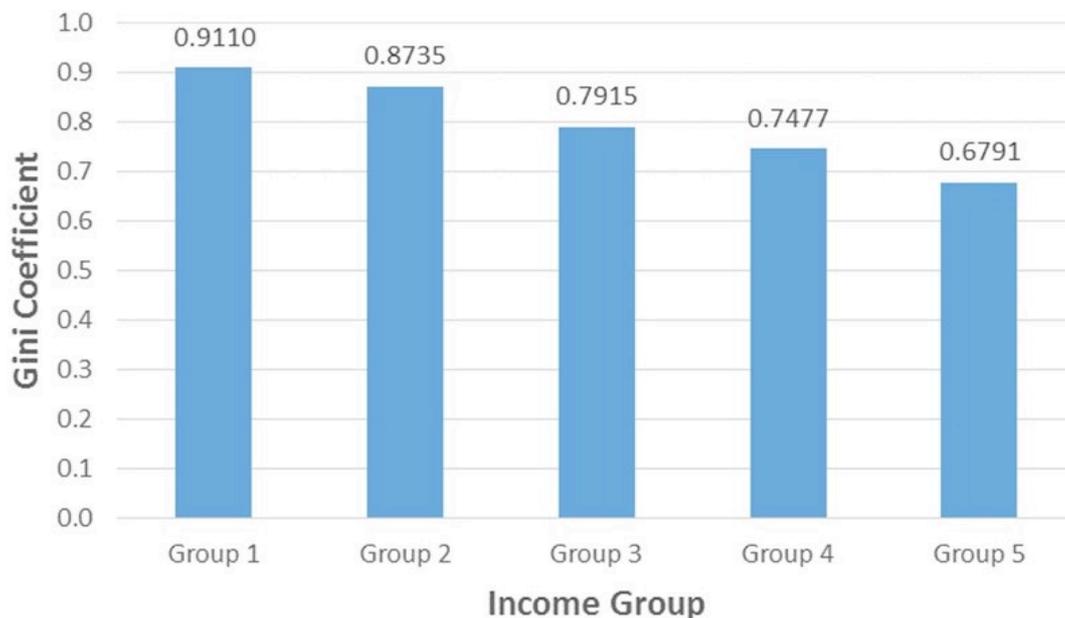
$D_i$  = cumulative proportion of household debt

$x_i$  = cumulative proportion of number of household

The Gini coefficient which known as an inequality index was developed by Gini, 1912. The scale of Gini coefficient result is between 0 (equal distribution) to 1 (complete disparity). The lower Gini coefficient indicates more equality. On the contrary, the higher Gini coefficient indicates more inequality.

### Results and Discussion

The results of Gini coefficient showed household debt inequality of each 5 income groups. As illustrated in Figure 1, Group 1 had highest debt inequality with the Gini coefficient at 0.9110. The Gini coefficient decreased respectively to Group 2 at 0.8735, Group 3 at 0.7915, Group 4 at 0.7477 and the lowest debt inequality in Group 5 with the Gini coefficient at 0.6791. The Gini coefficient of each group was rather high which indicated huge inequality among household in the same income group. This can be implied that there were large differences between debts of each household in the same group. There were some households with low debt or even no debt despite some households having high debt.



Source: Author's estimate

Figure 1: Household Debt Inequality by Income Group

Furthermore, percentage of indebted household and average household debt repayment per month of each group were estimated as well. The results showed that the groups which had lower level of income also had smaller percentage of indebted household from all household of those groups, while the groups which had higher level of income also had larger percentage of indebted household (Table 2). There was 19.52 percent of indebted household to all household in Group 1. There were 26.91, 42.68, 50.75 and 64.46 percent of indebted household for Group 2, Group 3, Group 4 and Group 5, respectively. Moreover, the average household debt repayment per month of each group resulted in the parallel direction except for average household debt of Group 2 that lower than that of Group 1. However, the highest income group had the highest average household debt repayment per month at 8218.77 Baht per month. This may be because low income group cannot afford large amount of debt easily, therefore, it is quite difficult to take on loan from formal sector. However, higher income group that seem to be self-reliance but from the data some household have had high debt. As estimation of Gini coefficient, the highest income group had the smallest difference amount of debt among the other income groups as a result of the lowest Gini coefficient, while percentage of indebted household was the highest. This implied that the lowest debt inequality of this group means they are indebted quite equally. Although people gain the high income, but indebtedness makes them vulnerable to unstable life.

<b>Group</b>	<b>Level of Income (Baht)</b>	<b>No Debt HH (%)</b>	<b>Indebted HH (%)</b>	<b>Average HH Debt (Baht)</b>
<b>Group 1</b>	<2,644	80.48	19.52	1134.30
<b>Group 2</b>	2,644-8,999	73.09	26.91	828.71
<b>Group 3</b>	9,000-14,999	57.32	42.68	1553.36
<b>Group 4</b>	15,000-24,999	49.25	50.75	2595.36
<b>Group 5</b>	>=25,000	35.54	64.46	8218.77

Source: Author's estimate based on SES data

Note: around 34 baht equal to 1 USD

Table 2: Percentage of Indebted Household and Average Household Debt Repayment per Month by Income Group

To investigate the percentage of indebted households by the purpose of loan, all indebted households of each income group were selected and divided into loan from formal (100% in total for each group) and informal sector (100% in total for each group). As shown in Figure 2, most of household in every groups needed the loan for household consumption.

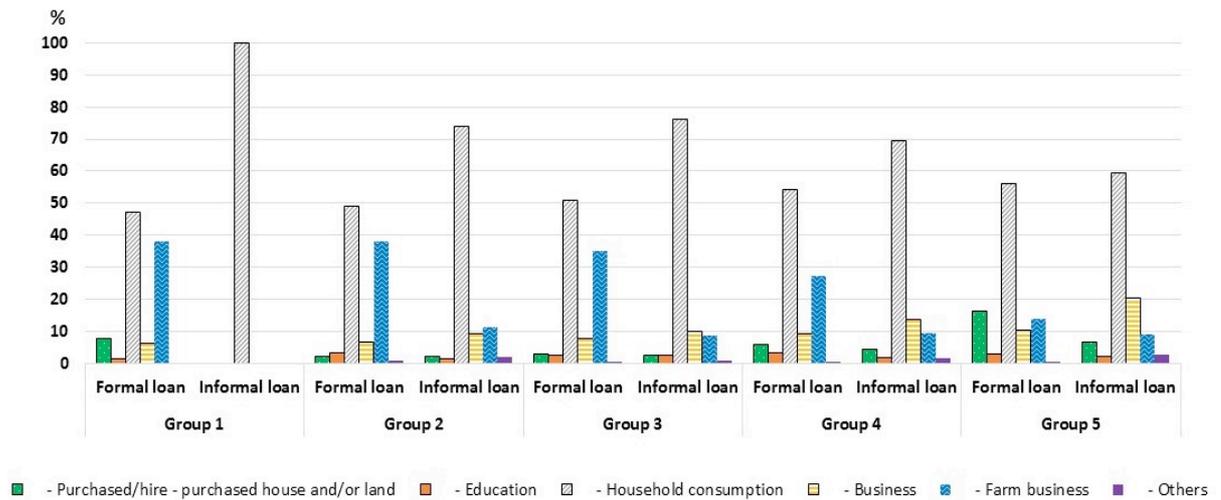


Figure 2: Percentage of Indebted Household by Purpose of loan

### Conclusions

This research points out the issue that only the measure to elevate income level may not be enough to sustain people’s well-being. Although people earn high income and seem to be self-reliance, they are still vulnerable to unstable life if they have high debt and have to repay large amount of money. As these results, the higher income group also have higher debt on average. Furthermore, the result of Gini coefficient revealed that the highest income group had the lowest debt inequality together with the highest percentage of indebted household. The results implied that they are indebted quite equally not no debt equally. The effective way to lessen household debt is a vital issue for all, especially for the low income household which tend to have low ability to repay the debt.

Therefore, the government and policy makers should emphasize to implement the effective policies to decrease household debt together with increasing people’s income that will lead to real well-being and self-sufficiency in the long term.

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