The Linkage Between Child Poverty and Family Poverty with the Paradox of Education and Remittance: A Case Study in Chiang Mai, Thailand

Sun Gue Yang[1] and Komsan Suriya[2]

[1]*Graduate School of International Studies, Korea University, Seoul, Republic of Korea. Email: yang.sg.susani@gmail.com*
[2]*Corresponding author, Center of Excellence in Digital Socio-economy, Faculty of Economics, Chiang Mai University, Chiang Mai, Thailand. Email: suriya.goettingen@gmail.com*

ABSTRACT

This paper investigates the causes of child poverty through the linkage to family poverty. It takes Chiang Mai, Thailand as a case study with econometric methods and empirical analysis. It develops two hypotheses that, first, child poverty and family poverty are caused mainly from the expenditure that is spent on the education of the child, and second, older parents are more likely to be in poverty than younger parents. Two models are estimated, the poverty due to debt and remittance to family. The results from a door-to-door survey in villages in the suburb areas of Chiang Mai and three econometric methods reveal that poverty is mainly from the debt that families make in order to send their children to obtain higher level of education. Moreover, the chances of children remitting money back to their family, after going through the hardship to send them off to better education to change their future socio-economic status, are low. This paradox can be demonstrated as the negative impacts of education to poverty reduction.

1. INTRODUCTION

Child poverty is an international issue that occurs all around the world. Especially in developing countries, child poverty is not just a current condition but it is also an indicator of the future of the country. Children are the next generation that will lead the world economy. If children are not capable of changing and/or improving the world beyond the present, it is devastating to admit that there is no future to the world. As to discuss the importance of the children's future roles, it is not an understatement to say that the family of the children is the ones who influence greatly on their well-being. Since children are not capable of retaining their own standard of living, they are fully dependent on their families, especially their guardians. Betson

and Michael (1997) described that child poverty was dependent on both how his or her family provided available resources and how his or her family allocated these resources amongst the family members. Thus, in order to define child poverty, it was only appropriate to investigate on the underlying causes to family poverty.[1] Since children do not have the ability to self-sustain themselves like adults, it shows the reason why child poverty is seemed to be more in numbers compared to adult poverty.

The problem that family poverty brings to child poverty does not stop from economic issues, but it also brings in socio-psychological problems, which surprisingly impacts heavier than lack of monetary funds. Due to the fact that family poverty creates the hiatus in basic needs that are required for normal and essential growth of the child, it suppresses the child both from receiving proper development and from the requirements from society. Not only does it cause problems to the current living standards of the child, but it also influences on the future of the child per se passing down poverty to the next generations.

2. POVERTY IN THAILAND

After the MDGs (Millennium Development Goals), set by the United Nations to abolish extreme poverty by 2015, had reached its due date, UN had set another goal in order to continue on with the resolutions to poverty, but this one with broader spectrum. Thailand was in the progress to meet the MDGs and even developed its own MDG-Plus targets in order to make more improvements to the country's situation. Thanks to this active participation, poverty in Thailand had reduced from 21% in 2000 to approximately 12.6% in 2012.[2] Thailand made numerous improvements as to reduce poverty, and as a result, severe deprivations are less compared to other ASEAN countries. However, the problem of the poor were improved but never abolished. Still there are 7.1 million[3] who are living in the poor, where 88% of them are living in the rural area. Since many live in the rural, problems such as income inequality and lack of equal opportunities are faced daily to the residents of the rural. Particularly in the North and the Northeast of Thailand, another problem of minor ethnic groups lagging behind major ethnic groups is also prevalent. In the North, many illegal migrants and/or refugees from neighboring countries such as Myanmar, Cambodia, or Laos live among the residents. Again, the issue of inequality is frequent, which enhances poverty focused in the North and the Northeast.

3. HYPOTHESES

This paper will look upon the effects the family's lives have over child poverty and what the causes are to the poverty that is unbreakable by investigating upon the following hypotheses:

Hypothesis 1: Child poverty and family poverty are caused mainly from the expenditure that is spent on the education of the child.

Hypothesis 2: Older parents are more likely to be in poverty than younger parents.

This paper will be constructed firstly with literature review that will look upon the finds of other researchers' results for each hypothesis. Then it will look upon the regressions of two major models to test hypotheses, and will conclude with the implications.

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[1]   David M. Betson and Robert T. Michael, "Why So Many Children Are Poor", The Future of Children, 1997

[2]   UNDP: Thailand, http://www.th.undp.org/content/thailand/en/home/countryinfo.html

[3]   World Bank, Poverty headcount ratio at national poverty lines, http://data.worldbank.org/indicator/SI.POV.NAHC?locations=TH

4. LITERATURE REVIEW

Hypothesis 1: Child poverty and family poverty are caused mainly from the expenditure that is spent on the education of the child.

Many poor people believe that education is the key to escape from poverty, especially in their children's generations. This statement was and is true with many previous researches proving the fact, but it nonetheless can be stated that is also the fundamental cause to how many end up in poverty. Due to the high costs that are usually required when obtaining education (with more quality), many families end up being in debt.

Although many developing countries have the policy to provide education but these governments lack the financial resources and/or the political will to meet the citizen's educational desires.[4] To this, parents borrow money in order to organize and pay for their children's education by themselves. It does not only stop from there, but it continues onto post secondary education, where the tuition fee is no longer free and is triple or quadruple the amount that they had paid for their child's primary and secondary education. By granting student loan, it will cause the family to be satisfied at the time, but after the child graduates, the family is in debt with tremendous amount of money, and double or triple if there is more than one child in the family who attended university. By the time the child graduates, parents will be in their late 50s, which is a common age range of retirement unless their occupation is in the professional field. It makes it difficult for the parents to keep up with the amount that they have to pay back, which causes the cycle of poverty to continue on till the next generation and the following. The usual attempt of borrowing money in the first place is to make sure their child does not go through the same process of living in poverty by receiving high education to have a better SES (socio-economic status) than his or her parents.

An interesting factor was also introduced from research done by Lillis (2008) that family's SES not only causes the family to be in debt from educational spending, but it also influences the access and the choice of university or institute the child from the poor makes.[5] The main reasons why is because of the high tuition payment top universities require, where the results have been a "shift in the burden for paying for college from federal, state, and institutional support to students and their families" (ibit, p. 16-17). This can explain the consequences of those who graduated from smaller and less known universities and still have the difficulty in finding an adequate or high paying jobs, which leads them to still struggle in poverty.

Hypothesis 2: Older parents are more likely to be in poverty than younger parents.

Heslop and Gorma(2002) had explored on the relationship between old age and chronic poverty in developing countries.[6] Due to their old age, it plays as a systematic impact on their social condition. It not only hinders them from getting involved in economic activities but also pushes them away from the active social groups, which creates isolation. Poverty amongst old age is more prevalent compared to other poverties because both physical and mental capabilities become more restricted amongst the elders. They also are more vulnerable to the outcomes of society and therefore become unfavorable to the economy.

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[4]   Arye L. Hillman and Eva Jenker, "Educating Children in Poor Countries", International Monetary Fund, 2004.

[5]   Michael p. Lillis, "High-Tuition, High-Loan Financing: Economic Segregation in Postsecondary Education", Journal of Education Finance, University of Illinois Press, 2008.

[6]   Amanda Heslop and Mark Gorman, "Chronic Poverty and Older People in the Developing World", HelpAge International, January 2002.

Jensen and McLaughlin (1997) stated that since elderly people no longer can rely on labor force participation anymore, it only comes down to the savings that they have made while they were capable of doing so or through fixed income.[7] However, this would not be possible if they did not have a fixed income and/or stable occupation when they were capable. In many cases of the poor, neither of the cases was applicable, which makes them more vulnerable of living in poverty.

Lloyd-Sherlock (2000) have stated in his paper that the reduced capacity for income and increase in risk of serious illness are the likeliness for the elders to face that manages them to fall into poverty.[8] Another reason why that the elders are more likely to fall into poverty is because of the unjustifiable pension and social security reforms. Since these elders are not receiving either adequate or accurate pensions, or even both, they struggle more in poverty than the younger generation. Even if an individual does receive pension, it is sufficiently not enough for the daily livelihood.

5. METHODOLOGY AND RESULTS

A door-to-door survey was done to 30 households in Ban Donton village and Ban Nongwaii village in the suburb areas of Chiang Mai. Majority of the participants were female and were self-employed. They all live 30 km away from the main city of Chiang Mai.

This paper will be using quantitative research methods: logit model and non-parametric model. As the dependent variables in this paper are both binary, first model was done through logistic model and second by iterative non-parametric test of very small sample size.

Model 1: Poverty due to debt

Firstly, model 1 measured the possible inputs to people ending up in debt. The equation below demonstrates the regression[9]:

$$\ln\left(\frac{p_i}{(1 - p_i)}\right) = \beta_0 + \beta_{1x} + \varepsilon$$

where, ln is the natural logarithm, and p for the probability of y occurring ($y = 1$), therefore $\ln[p_i/(1 - p_i)]$ is the logit. β_0 is the constant coefficient while β_1 is the coefficient of the independent variables. X signifies the independent variables and ε is the error term. Now applying the equation for the model, it is as following:

$$\text{Debt} = \beta_0 + \beta_1 \text{Age}_1 + \beta_2 \text{ChiAge}_2 + \beta_3 \text{GovSat}_3 + \beta_4 \text{ChiEdu}_4 + \beta_5 \text{Job}_5 + \beta_6 \text{ChiNo}_6 + \beta_7 \text{Remit}_7 + \varepsilon$$

Where logit *Debt* is determined by the age of the participant, *Age*, the child's age, *ChiAge*, whether he or she is satisfied with the current government*, GovSat*, the final level of child's education, *ChiEdu*, what kind of occupation that he or she has, *Job,* the number of children, *ChiNo*, and whether their child(ren) send money back to their parents or not, *Remit*.

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[7]   Leif Jensen and Iane K. McLaughlin. "The Escape From Poverty Among Rural and Urban Elders", The Gerontologist, 1997

[8]   Peter Lloyd-Sherlock, "Old Age and Poverty in Developing Countries: New Policy Challenges", Elsevier Science Ltd., 2000

[9]   http://www.appstate.edu/~whiteheadjc/service/logit/intro.htm

The results to the above equation are shown in Table 1. As seen, it is divided into three columns: Linear Probability Model (LPM) coefficients, Logit coefficients, and Probit coefficients. The three columns show different results since the application was different in all three, but the results showed similar significance level. Age of the participant showed a negative correlation and insignificant level of significance in all three, which means that *Age* is not a determinant to families being in debt. The age of the eldest child, *ChiAge*, also did not show significance, and the same for the satisfaction with the government. The only significance that showed was child's final education, *ChiEdu*, by 1.31 ($p < 0.1$), 1.34 ($p < 0.1$), and 1.33 ($p < 0.1$). This means that the higher the final level of education that the child has obtained, the more likely for the family to be in debt. This can be shown as the outcome of poor families attempting to have their children receive higher education in order for them to obtain better paying occupations and the chance for them to live out of poverty. However, it can be seen here that the more education the child receives, it only creates more debt the family gets into. Other variables, *Job, ChiNo,* and *Remit* did not show any significance to debt.

Table 1
Binary Outcome Model Coefficients

In debt	LPM coefficients	Logit coefficients	Probit coefficients
Age	–0.0043	–0.0195	–0.0111
	(–0.27)	(–0.25)	(–0.27)
Eldest child age	0.0138	0.1258	0.0751
	(0.39)	(0.64)	(0.66)
Satisfaction with gov't	0.0564	0.0535	0.0431
	(0.21)	(0.86)	(0.04)
Child's final education	0.1657*	0.8961*	0.5420*
	(1.31)	(1.34)	(1.33)
Job	–0.0734	–0.3802	–0.2187
	(–0.67)	(–0.75)	(–0.75)
Number of children	0.0798	0.4098	0.2855
	(0.36)	(0.48)	(0.41)
Whether the child sends money back	–0.1661	–0.6978	–0.4275
	(–0.58)	(–0.55)	(–0.56)
Constant	–0.1593	–5.3878	–3.3562
	(–0.16)	(–0.80)	(–0.79)
R^2	0.2045	0.1691	0.1697

Source: Calculation.
Note: *indicates the significance at 10% level. Parenthesis indicates *t* statistics.

Model 2: Remittance to family

Secondly, model 2 demonstrates the likely inputs to having children send money back to their family after moving out of their homes, which is also known as remittance. This was regressed through iterative non-parametric test, which is to test the mean of both remittance (group 1) and no remittance (group 2). Thus, the following hypothesis will determine whether the result accepts or rejects:

H$_0$: $G_1 = G_2$

H$_1$: $G_1 \neq G_2$

If Group 1 and Group 2 have the same mean, it accepts the hypothesis but if it is different, it rejects. This test was done by randomly choosing four different observations one hundred times and if it rejects 95 times, it signifies that variant plays as a determinant to remittance. Nonetheless, if it rejects less than 95 times, in other words, if it accepts more than 5 times, the variable does not play significantly to remittance.

The results are shown on Table 2. It can be seen that only the eldest child's age and the age of the participant rejected more of than 95 times to show significance to whether the child sends money back to their family or not. Interestingly, the average ages of G1 was younger than the ages of G2, which means that the younger the child and participant is, the more likely it is the higher chance remittance. This can be explained through reciprocity effect, where the younger the child is, the more likely for them to "repay" of their parents' kindness and generosity to their care, which obligates them to send money back to them. This also comes from the social belief that younger parents still have the ability to give something back to their children since they are still capable of doing so, while the older parents cannot give anything back due to their incapability.

Table 2
Remittance to Poverty

Remittance	*Mean of G_1*	*Mean of G_2*	H_0	H_1
Eldest child's age	26.75	27.69	3%	97%
Attended University	0.75	0.7308	48%	52%
Satisfaction with Gov't	0	0.192	41%	59%
In debt	0.5	0.654	26%	74%
Age	62.25	63.58	4%	96%
No. of children	1.5	1.385	15%	85%

Source: Calculation

6. CONCLUSION

This paper looked upon some of the possible inputs that could lead to poverty in households of Chiang Mai, Thailand. As a door-to-door survey was constructed and taken place, the results of the hypothesis were interesting to state. Firstly, the first hypothesis, poverty is caused mainly from the expenditure that is spent on the education of the child, is accepted through Model 1. It showed that the higher the final level of child's education was, the more in debt the family was in due to the high tuition payments. Unlike the expectations that education leads only to positive outcomes, the circumstances of being in debt due to the education fee was inevitable to poor families. In order to pay for the educational fees, they had to borrow money both legal and illegal ways, which made them to be even poorer than they already were. It also rejects through the second model's outcomes, where being a University graduate did not have any significance to remittance back to their families. Second hypothesis about older parents are more likely to be living in poverty compared to younger parents was proven to be true through Model 2. It was shown that many children who graduated from university or moved out of their family home did not send money back to their parents and the age was older for those who do not remit than those who do. This shows that older the parents are, the more likely they are to live under poverty.

As a result of the regressions done for this paper, poverty in Northern Thailand is mainly from the debt that families make in order to send their children to obtain higher level of education. Unlike the common belief, the tuition fee that is required for them to gain education, it only causes them to live further into poverty. Also, unfortunately, the chances of children remitting money back to their family, after going through the hardship to send them off to better education to change their future socio-economic status, are low. This can be demonstrated as the negative impacts of education to poverty reduction.

References

Betson, David M. and Robert T. Michael, "Why So Many Children Are Poor", The Future of Children, 1997.

Heslop, Amanda and Mark Gorman, "Chronic Poverty and Older People in the Developing World", HelpAge International, January 2002

Hillman, Arye L. and Eva Jenker, "Educating Children in Poor Countries", International Monetary Fund, 2004

Jensen, Leif and Iane K. McLaughlin. "The Escape From Poverty Among Rural and Urban Elders", The Gerontologist, 1997

Lillis, Michael p. "High-Tuition, High-Loan Financing: Economic Segregation in Postsecondary Education", Journal of Education Finance, University of Illinois Press, 2008

Lloyd-Sherlock, Peter. "Old Age and Poverty in Developing Countries: New Policy Challenges", Elsevier Science Ltd., 2000