

Report on Ph.D. Thesis Defense

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Dissertation Title	Regional Variation in Risk and Time Preferences and Impact of the Preferences on Educational Investment: Experimental Evidence from Rural Uganda

Result: Pass (subject to minor changes)

1. Abstract

Ms. Tanaka's dissertation realizes that the schooling decision is essentially an investment decision, in that it involves a large amount of outlay of time and money by both the parents and the children today for uncertain benefits accrued by the children in the future, and highlights the possibility that investment related preferences, namely risk and time preferences, could play a role in such a decision. Her study is the first study to conduct a large-scale experiment eliciting both the risk and time preferences of rural households in a developing country. This large dataset, together with the survey data of the children in the same households enabled the analysis on the potential impact of the parental preferences on the educational investment. In her study, she aims to bridge the gap in the literature first by investigating the determinants of the risk aversion and the patience of the rural Ugandans using individual, household and regional variables, and then by estimating the effects of the preferences on the investment decision for children's education.

The data used in her study are collected as part of the Research on Poverty, Environment and Agricultural Technology (RePEAT) Project in rural Uganda. The project team conducted three rounds of paneled household surveys in 94 villages in 2003, 2005 and 2009. The incentivized field experiment eliciting the preferences of the same households took place in 2009. The total number of respondents in the experiment is 1287. The villages were first stratified according to agricultural zones in the country

and then randomly selected. The northern region was excluded from the surveys due to security concerns, yet the samples are representative of the areas covered.

Chapter 2 reviews the theories and empirical evidence on the determinants and the measurement of risk and time preferences and how the preferences relate to human capital investment.

Chapter 3 explains the experimental design and estimation methodology that were used to estimate the risk and time preferences of the farmers, and identifies the regional and other characteristics that affect their risk aversion and patience. The first goal is then to estimate the risk and time preferences and the determinants of the preferences using the experimental data. The interval regression method was applied to estimate each of the parameters and the covariates. The main finding from Chapter 3 is that both the risk and time preferences correlate with regional characteristics such as agro-climatic conditions and infrastructure. Especially, the risk aversion and the impatience are stronger in the agro-climatically less favorable regions.

Chapter 4 investigates the relationship between the risk and time preferences of the household heads and the educational investment for the adolescents in the household. The second goal is to estimate the relationship between the preferences of the household heads and the schooling status of the children in the household. We estimate several educational outcome variables by applying the ordinary least squares method or categorical response model accordingly. In this chapter, she reports that while risk aversion increases the school attendance and the educational expenditure, impatience delays school enrollment resulting in slow progression through schooling. The first policy implication is that the regional characteristics may influence the investment decision behavior of rural households through their effect on risk and time preferences. Second, while the moderately risk averse parents may consider education as risk-coping mechanism, opportunity cost of time at school is hindering timely educational investment.

She discusses policy implications from her study in Section 5.

2. Result /Notes from the Examining meeting / Final Evaluation

平成 23 年 7 月 20 日 (水) の博士論文最終報告に引き続き、主査である山野峰教授、副査である、Alistair Munro 教授、山内慎子助教授、島村靖治教授 (立命館大学)、川口大司教授 (一橋大学)、および大山達雄教授による審査委員会が開かれた。この際、本論文について、次のような意見が出された。

1. 近年、大いに注目を集めている実験経済学の手法を開発経済学に取り入れた功績は

大きい。特に、これまでにない大規模な実験調査結果を用いていることは学会でも評価されるであろう。しかし、論文の内容に関しては以下のようなコメントが寄せられた。

2. 第3章、推計モデルに、これまでのモデルのレビューを追加し、さらに詳しい個人・家計レベルの変数を追加し、結果を政策提言に盛り込むべき。
3. 第4章、リスクに関する変数を **Quadratic** から **Linear** に変えて、なおかつ **Very Risk Averse** の人たちを分析からはずし、分析をやり直すべき。
4. 第4章、分析を男女別に行うべき。

全体として、本学の博士にふさわしい内容であると全員の意見が一致し、上記で指摘された諸点について修正したうえで、博士 (**Ph.D. in Development Economics**) の学位を授与すべきであるという判断が下された。論文修正後の措置に関して、主査が修正された最終版について承認することを審査委員が了承した。そして、修正された最終版が提出され、指摘された問題点が修正されたことを主査が確認した。