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論文内容の要旨

氏名 (若野綾子)

論文題名

Essays on working motivation of civil servants, parents' education investment, and early and primary education
 (行政職員のワークモチベーションと親の教育投資行動に関する実証論文)

論文内容の要旨

In this thesis, we put the primary focus on two issues. First, we address the impacts of free primary education policy in developing countries. As large number of developing countries started to introduce the primary education free in twentieth century, we address one substantially important issue in our thesis. It is the quality of education, especially teachers in primary schools. In our first section, we address the performance difference between the civil servant teachers and locally hired teachers.

[The first chapter]

The performance of locally hired contract teachers is one of the concerns for educational sector in developing countries. In Republic of Kenya, 75% of public primary school employ at least one locally hired teacher. In past literature, randomized experiments show that the marginal product of teacher is positive and significant when pupils are taught by locally hired teachers (Duflo et al. 2015, and Bold et al., 2013), although they are typically less qualified in terms of educational background and are paid substantially less than civil servant teachers (government-employed teachers).

The purpose of this paper is to estimate the effect of the locally hired teacher ratio on school outcomes. If locally hired teachers have superior performance than government-employed teachers, we expect that a higher ratio brings better educational outputs. Provided that government teachers' allocation and school selection by parents are endogenous to pupils' school outcomes, using a nationally representative data set from the Republic of Kenya, this paper utilizes the generalized propensity score method by Hirano and Imbens (2004) for identification. With rich covariates for educational school inputs and individual pupils' background and household information, this paper estimates the dose-response function of test score outcomes at each treatment level. The result consistently shows that the locally hired teacher ratio affects school outcomes non-linearly. Particularly, when locally hired teachers work as substitutes for civil servant teachers, the school outcomes are significantly improved.

[The second chapter]

Related with the performance of locally hired teachers, we address the working motivation of those aid workers in Cambodia Post-Harvest technology project. In the first study, we clearly provide the evidence that locally hired teachers affect the school outcomes with statistical significance. However, it is not certain the mechanism of it. From the household datasets in Cambodia, the study shows that social preferences could be one of the factors in determining the effort level of workers. We employ the dataset collected for the assessment of a post-harvest technology project in rural Cambodia and focuses on the heterogeneous preferences of project implementers, frequently overlooked in the literature on program evaluation studies. We focus on the "implementer effect" on the program participation of the treated farmers.

We demonstrate that the heterogeneous program participation of ordinary farmers could be induced due to heterogeneity in the characteristics of the project staff. In particular, we indicate that the baseline altruism of the project staff, measured by the dictator game, consistently increases the participation rate and the number of participations in the training sessions of beneficiaries. This type of heterogeneity in project staffs' preferences across treatment sites could be a source of treatment heterogeneity for programs conducted at a certain cluster level. While few studies have focused on the heterogeneity of program implementers, our empirical results indicate that the preference of implementers could be a source of treatment heterogeneity and imply the importance of implementation of an actual project.

[The third chapter]

Third, we conclude with an essay about the investment decision of parents on the early education. This study does not particularly consider the issue of workers' motivation; however, it shows that the heterogeneous impacts of free primary education.

With datasets from Kenya, this study uniquely investigates the causal association between parents' years of education and their investment behavior toward their children's education. The study addresses early education investment prior to compulsory education. When mothers' schooling levels are exogenously increased from seven to eight years by the policy reform, our paper shows that parental investment in early education also increases. In addition, the study finds a consistent positive effect of compulsory school cost reduction since 2003. Prior to the free primary education policy in 2003, the years of education affect the significant increase in investment decision. However, right after the free primary education policy in 2003, the impact does not differ between the high and low education level of mothers. In five years passed, the impact heterogeneity between the high and low education level appears.

論文審査の結果の要旨及び担当者

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論文審査の結果の要旨

〔論文内容の要旨〕

本博士論文は開発途上国における教育や援助プログラムの効果をマイクロ計量分析アプローチにて解明しようとする3つの実証論文で構成されている。

1つめの論文では、ケニア共和国における教員雇用形態の子どもの学力に与える影響の推定を行った。ケニア共和国の各学校での地元契約教員の全教員に占める割合を処置変数と考えその子どもの学力に与える影響を推定し、非線形の影響が存在することを示した。賃金の低い地元契約教員を採用することにより教育予算の削減が見込まれるが、政府教員と地元契約教員のワークパフォーマンスの違いがあれば、その効果は予見が難しく、また比率により単調に変化するとは限らない。本論文では連続的な値をとる処置についての平均処置効果の関数を推計することにより、地元雇用教員の学力への影響が非線形であり、また、ある区間において有意な正の影響があることが示された。

2つめの論文では、カンボジアの農村における援助プログラムに従事する担当者の異質性が農村家計の援助プログラムへの参加に与えるかどうかを農村家計データを用いて推定した。既存の実証研究では処置は処置群内で一定で均質だと仮定されるが、実際に低所得国での援助プログラムについては、処置異質性が存在する可能性は高い。開発途上国において能力を異にするプログラム実施者が存在することで、同一内容のプログラムでも他地域では同じ効果が期待できない場合がある。分析では、政策実施者の異質性に着目し、またこの政策実施者の異質な社会的選好が処置群内の政策の異質性を引き起こすことを実証した。

3つめの論文では、ケニア共和国において母親の教育年数が子どもの早期教育投資に与える影響をケニア共和国の家計データを用いて推計した。親子間での教育格差の連鎖についての実証研究は先進諸国のデータを中心に実証が行われているが、本論文は母親の教育年数が制度変更によって無作為に増えた影響が子どもの早期教育投資に与える影響を推計している点が特徴的である。分析の結果、母親の教育年数が大きいほど子どもの早期教育投資が大きく、また早期教育の開始時期が早まることが認められた。

〔審査結果の要旨〕

近年、マイクロ開発経済学の実証分析において、反実仮想モデル (Rubin, 1976) が定義する政策効果を推計する実証論文が多数あるが、それらの多くにおいて、政策効果を議論する際に処置群内では処置は一定で均質だと仮定されている。しかし、実際には処置群内に処置自体の異質性がある事例は多い。また、政策が必ずしも二値変数で捉えられないケースも多い。本博士論文では、これらの分析的課題に対し、処置効果の連続性や異質性、また異質性を生じさせる要因を明示的に考慮することにより、より精緻で信頼性の高い結果を得ることができている。また、これらの研究結果がより効果的な政策処方導き出し得る点から、本博士論文は博士 (応用経済学) として価値あるものと判断した。