



Employment growth and out-of-school children in Cambodia and Laos: An empirical study on decision making of households, secondary education students, and teachers.

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学位請求論文審査結果報告要旨

博士学位論文

論文内容の要旨および審査結果の要旨

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論文内容の要旨

Education is a vital determinant for economic development, especially in developing countries. It improves labor productivity and increases economic growth. Therefore, governments and development organizations have focused on educational development that in results high school enrollment worldwide. However, the number of out-of-school children remains high. Dropping out of school before the end of compulsory education or leaving school early can become a major problem. School dropout can be the strongest factor impacting on future social and economic status of children. Dropout from school limits choice and opportunity for employment. Students who do not graduate have a higher likelihood of being unemployed and earn less when they are employed. Furthermore, dropped out students are also likely to have difficulty receiving public assistance, in health problems, and may lead to criminal behavior and incarceration. In developing countries, if children from poor socio-economic backgrounds are out of school, they have difficulty improving their living standard and continue to live in poverty. Thus, it exacerbates cycle of the poverty when the poor lose an opportunity to be educated.

Several studies have found factors that influence school dropout and non-enrollment. One important factor that directly and indirectly increases the number of out-of-school children is growth in employment demand. Generally, growth improves wage levels and expands employment opportunities which help households to increase educational resources. However, there is a contrasting effect that increases the number of out-of-school children. When there are more jobs and higher wage levels in

the labor market, the attitude of the main educational agents, specifically households, students, and teachers, is effected.

When there are higher paid jobs and more jobs available, the opportunity cost for not working becomes higher and children may drop out from school to take the available jobs as additional source of income. Moreover, some children might need to work in the household to substitute for adults who take the available jobs. Regardless of whether this is household or child decision, it increases number of out-of-school children.

The growth of employment attracts potential teachers to take non-teaching jobs. The teaching profession in developing countries suffers from low salaries compared to average non-teaching salaries in the labor market. Therefore, when there are many jobs available with higher pay compared to teaching, potential teachers may decide not to join the teaching profession particularly where they need to teach in schools with difficult working environments such as rural locations. Where there are insufficient qualified teachers in a school, there is a probability that pupils would have no education service and would need to be out of school.

Cambodia and Laos have high economic growth; however, both countries have a high number of out-of-school children and school dropouts compared to East Asia and Pacific countries. In 2011/12, the dropout rates for primary, lower secondary, and upper secondary were 3.7, 20.0, and 10.1 in Cambodia and 7.1, 10.4, and 7.2, in Laos, respectively.

The main objective of this study is to estimate the potential impact of the growth of employment on the out-of-school problem. The specific objectives are: (1) to estimate the impact of employment growth on out-of-school children, (2) to analyze

secondary students' preference on jobs' characteristics, (3) to examine the possibility of potential teachers not joining the teaching profession. Many previous studies focused on the impact of employment growth on child labor. The significance of this study is that it investigates the impact of the growth on out-of-school children in developing countries like Cambodia and Laos. Also this study distinguishes the effect of growth on different genders and ethnicities. Moreover, many studies estimate the effect of the characteristics of jobs on students who have already dropped out from school. This kind of data hinders an analysis of the characteristics of jobs on every student; because some students may have access to different information about the jobs available. This study applies choice experiment to measure value characteristics of those jobs preferred by secondary students. In valuing the incentives for recruiting potential teachers, this research is a pioneer in applying the choice experiment analysis to measure the characteristics of difficulties facing the teaching profession, the possibility of moving to non-teaching jobs, and non-direct monetary incentives.

The main findings of this study shows that, firstly, the effect of the growth of un-skilled labor demand on out-of-school suggest that the expansion of agricultural and service sectors increase number of out-of-school children. The effect of the sectors between male and female children is similar, while the effect between major ethnicity and non-major ethnicity children is different in each country. Secondly, the results from the experiment of secondary school students show that an increasing wage increases the possibility of the students to drop out and take the offered jobs. The students are less likely to take the jobs if the location is farther. Also, the students who have a higher probability to take the jobs are non-Lao ethnicity students, come from poor household, have friends working outside of the residential district, and have a difficulty travel to

school. Thirdly, the potential teachers are less likely to take the teaching profession if they are assigned to teach in school that locates in rural village without several support infrastructures and has poor condition of classroom. The potential teachers prefer the teaching profession over the non-teaching jobs such as the government staff, state-enterprise employee, and private company employee. However, the preference of the non-teaching jobs easily exceeds the preference of the teaching job if the potential teachers need to teach in difficult situation.

This research provides policy implications for educational development. Firstly, children have a possibility to be out of school for working; thus, the government should be considered strengthen the regulations to prevent the use of child labor that causes them to be out of school, particularly compulsory education. Secondary, households should be educated about the important of the basic education and the risk to be out of school because of working. Thirdly, the particular programs to motivate school enrollment as well as keeping students in school should be considered where there is a high risk for children to be out of school. Also, different characteristics of students influence the decision of dropping out. The programs should be targeted to the particular problem for an effective policy. Fourthly, the difficulty in teaching profession such as the rural location of school and the condition of classroom lowers the preference of potential teachers to join teaching profession; therefore, teachers in the particular location should be provided incentive programs. A particular difficulty in teaching profession should be addressed by a particular and appropriate incentive value. Finally, the government should be concerned using the indirect monetary incentives.

審査結果の要旨

ラオスとカンボジアは近年、著しい経済成長を経験し、それに伴い教育の面で就学率の改善がみられる。しかし、学校の中退率はまだ高く、地域的に見ても非常に高い地域が存在する。経済成長は家計の所得を上昇させて学校からの中退や不就学を減らす働きをすると考えられる。しかしその一方で、経済成長は雇用機会を増加させて、仕事に就くために中退や不就学を増加させてしまう働きをする場合もある。この論文では、家計調査の個票と選択実験 (Choice Experiment) を使用して経済成長の中退や不就学に与える要因と中退のための代価を分析している。また、教育への急速な需要の高まりとともに、多くの教師が必要となってくる。教員になるための教育を受けた人が、地方勤務において生活および教育をする条件が悪いことをきらって教員の職に就かないことは社会にとって大きな損失となる。生活や教育の場が悪条件であることは、教員職につくためにどのくらいの代価が必要であるかに関して選択実験を使用して分析している。この論文は、ラオスやカンボジアの教育や労働市場に関して選択実験という方法を使用して分析した意欲的でオリジナリティの高い研究となっていると評価できる。この論文の貢献は次のような点に認められる。

1. ラオスとカンボジアの家計調査の個票を用いて、家計の所得の上昇や雇用機会の増加が学校の中退や不就学にどのような影響を与えているかを実証的に分析している。従来、児童労働を説明するために使用されていた推定式を中退や不就学の説明に応用し、サービス業の発展など新たな変数を導入してラオスとカンボジアを比較している。推定の結果、家計の所得や世帯主の教育が高いほど中退や不就学が少なくなるのに対し、農業やサービス業の発展が中退や不就学を増やす効果があることを確認している。
2. 中等学校学生に対して、中退して仕事につくかどうかに関して選択実験を行っている。これまで仕事に関する情報を与えずに学生が中退するかどうかに関する選択実験はあったが、この分析では直接仕事に関する情報を与えて選択実験を行っている点に独創性がある。選択実験の結果、友人が村の外に働きに行っている場合仕事に就くための代価が低くなる、タイでの仕事の場合仕事に就く代価が高くなるといった興味深い結果が出ている。
3. これまで医療関係者の職業選択の選択実験はいくつかあったが、この方法を教員養成学校の学生の職業選択について適用するという非常にオリジナリティの高い選択実験を行って分析をしている。学校の所在地の条件、教室の条件、教員以外の仕事、間接的なインセンティブなどについて条件を示してラオスとカンボジアで実験を行った。その結果、学校の所在地では両国ともに病院がないことに対して最も大きな代価が必要であり、教員以外の仕事ではラオスでは公務員、カンボジアでは国有企業の仕事をもっとも代価が少なく済む、インセンティブでは両国ともに継続して教育を受けることができることの代価が最も少なく済むというような結果が出されている。

このように選択実験を使用した意欲的な価値の高い研究ではあるが、次のような問題点も残っている。

1. 仕事選択に関する実験において、中等学校生を対象に行っているが、義務教育に当たる前期中等学校生と後期中等学校生を混在してサンプルにしている点はやや問題があるだろう。
2. 職業選択の分析において、ランダムなパラメタの分布を正規分布としているが、他の分布を考えることもできるであろう。
3. 教員採用制度に関して問題点があることが予想されるので、採用制度に関する分析が望まれる。

今後改善すべき課題はあるものの、家計調査個票による分析だけでなく選択実験を使用してデータを作成して教育や労働市場の分析を行った研究は貴重なものである。また、実験のために作成したデザインおよび分析方法は非常に適切であり、博士論文として高い水準の論文となっている。論文は独立した研究者としての能力を十分備えていることを示しており、審査員一同は一致して博士(経済学)に値すると判断した。

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