

論文の内容の要旨

論文題目 Economic Analyses of the “Reversed Gender Disparity”
in Education and Development in the Philippines
(フィリピンにおける教育開発分野の「逆向きジェンダー
格差」に関する経済分析)

氏 名 岡部 正義

This doctoral dissertation is a compilation of the empirical studies exploring the issue of “boys’ underperformance” in education that seems to be emerging in developing countries. This phenomenon is seen not only in regard to access to education but also in the internal efficiency of education and educational achievement. The Philippines is chosen because it presents typicality with regard to the magnitude of the issue. The dissertation comprises 10 chapters, of which eight are in three parts and two are in Appendices.

PART I: INTRODUCTION

Part I comprises two chapters. Chapter 1 provides introductory discussions, which begin by setting out the problems and the issues in the research and by providing an overview of trends in the Philippines and internationally. It also reviews and reconfirms the general, mainstream trends in international educational development and cooperation, which focus on supporting girls’ education. Chapter 1 presents the issue of boys’ educational underperformance as another emerging problem in developing countries. By comparing international statistics about gender parity in basic education, Chapter 1 finds that gender disparity against male students exists in selected regions, such as Latin America and the East Asia and Pacific region. Country reports note that the same issue exists even in some countries in Sub-Saharan Africa. Chapter 1 also finds that the seemingly reversed gender disparity is greater in secondary schools than in elementary schools, an effect that is particularly noticeable in the Philippines. This disparity also is more pronounced in poorer, rural areas than in wealthier, urban ones. These patterns in the Philippines are considered puzzling, especially when compared to other countries. By reviewing the literature’s

theoretical and empirical discussions, and to clarify the problems and issues, Chapter 1 also defines the dissertation's research approaches and structure, as well as its data sources.

Chapter 2, which also contains introductory information, explains the current educational system in the Philippines as a premise for subsequent chapters. This Chapter, in particular, focuses on the country's recent overhaul of the basic educational system, called the "K-12 Program." Under this program, the Philippine secondary level of education is undergoing a drastic institutional change. Prior to the program, the length of secondary education was only four years, but the program added two more years. Secondary education now comprises four years of junior high school and two years of senior high school. In addition, preschool (kindergarten) became compulsory. Chapter 2 also provides an overview of languages as mediums of education, while also explaining curricula and other aspects of education. Chapter 2 then further explains and combines demand- and supply-side circumstances regarding the location of children and their households.

PART II: DEMAND CONTINUITY FOR EDUCATION, INTERGENERATIONAL RELATIONS, AND GENDER HETEROGENEITY

Subsequent chapters provide empirical analyses of observational data that were collected in a survey conducted in rural areas of the Philippines. Part II comprises two chapters that discuss the gender bias and the demand continuity for education, specifically using data collected in Bukidnon Province in Northern Mindanao Region by third-party research institutes: the International Food Policy Research Institute in the United States and Xavier University's Research Institute of Mindanao Culture in the Philippines. Chapter 3 shows that delays in years of education are considered to cause internal inefficiency in education and that delays are greater among boys. It is also remarkable that delays happen even in elementary education. Econometric analyses show that an educational father-son preferential nexus has a positive connotation under the circumstances, implying that improvement of boys' education for the current generation, the generation to which the students who are the focus of the present study belong, will, if it lasts, mitigate the immediately preceding generation's underperformance. On the other hand, the analysis did not detect a cross-gender intergenerational nexus between fathers and daughters, that is, fathers' education levels statistically associate with those of their sons but not those of their daughters. Furthermore, possible supply-side interventions, such as a policy of school-entrance-age change, are expected to mitigate the size of delays in education.

Chapter 4 expands the framework of demands to higher educational levels compared to Chapter 3. Chapter 4 notes that educational demands begin with elementary school and last until a student either reaches a certain level of education and then stops attending school or progresses to the next level. By employing a sequential logit model analysis, the present study in Chapter 4 seeks to empirically identify factors that determine the cessation or continuing of demand for education. The results indicate that, like the father-son nexus discussed in Chapter 3, even the mother-daughter nexus positively influences the education level attained by a child. Chapter 4, which focuses on the mother-daughter nexus, shows that it is stronger than the father-son nexus. In addition, the results also exhibited that the magnitudes of the specified factors are not homogeneous across the educational stages, implying that income factors, for instance, shall be rather crucial in proceeding to the next level than they would in completing the said, immediately preceding level of education after being enrolled.

PART III: FURTHER GENDERED HETEROGENEITY AND BIAS IN INPUT ACTIVITIES FOR AND OUTPUTS OF EDUCATION

Part III aims to offer further studies by relying on primary data collected by the author himself in Marinduque Province in 2017–2018. The original research began with directly surveying the children’s time-allocation patterns with some supplementary qualitative interviews, not only asking parents about their socioeconomic characteristics. It then proceeded to combine children’s school-performance information with administrative data that the government confidentially provided. Specifically, the author took a cue from local anecdotal representations that boys’ sloth caused their underperformance in hypothesis formations. Part III presents some quantitative evidence on them.

Chapter 5 started with illustrating descriptive information about the time-allocation survey for the sampled children and specified the motivations for analyzing time-allocation patterns by reviewing the related literature. It noted the scarcity of time-allocation studies about developing countries and affirmed the need to analyze the “trinity” of pro-educational, labor, and leisurely activities of children and youth altogether, the last of which is a particular sphere that was not well known or examined thus far. Chapter 5 continued with descriptive analyses and revealed that gender differences were also found not only in children’s educational attainments but also in their allocations of time. Boys were found to be more likely to do more labor and enjoy more leisure activities, and to study shorter than their girl counterparts. In addition, multiple regression analyses showed that the amount of time that children allocated to studying at home, working with fathers, and playing outside were directly associated with their school performance.

Chapter 6 further quantified children’s time-allocation patterns as noted above in Chapter 5, using econometric analyses. As the independent variables, of particular interest was the amount of time allocated to studying at home, working with fathers, and playing outside. A child’s gender and the mothers’ labor-force participation (MLFP) were given special attention. Endogeneity-conscious analyses primarily found the pattern: Sons are both more playful and less studious than daughters if their mothers are working. These analyses also confirmed that the MLFPs were triggered considerably by the low level of their livelihoods, as represented by fathers’ insufficient earnings or unemployment. At the same time, the MLFP is likely characterized by the mothers who are more highly educated than their non-working counterparts. Their daughters’ reverse behavioral patterns, that is, more pro-educational patterns compared to their sons, may be motivated by the role model of a working mother. In other words, if the mothers are working, their sons are more likely to become playful while their daughters become less playful (more diligent), when compared with their non-working mother counterparts. The literature notes that boys’ development may require more maternal involvement than is needed by girls. Maternal involvement, particularly for sons, largely cannot be taken on by other family members, even in the extended family setting that is found widely in rural areas of the Philippines. Through time-allocation analyses, these findings confirmed an “unintended” effect of MLFP on sons’ time allocation. The discussion reconfirms the need to situate the results regarding sons and their mothers in a broader context of family dynamics.

Heretofore, the dissertation, as well as a considerable part of the literature, has approached gender bias in education mainly from a socioeconomic (demand-side) standpoint. Chapter 7, while still considering students’ socioeconomic circumstances, combines the author’s primary data with confidential, raw, and student-level administrative data about

Philippines' national achievement tests (NATs). This combination intentionally provides a supply-side focus. Specifically, Chapter 7 explores gendered stereotypes perceived by teachers as score markers against students. As in the literature, by applying a natural experimental identification strategy, the empirical analyses compare sources of the persistence of a negative male effect on test scores. We avail of the variations of blindness in rating systems between the NAT and teacher-rating report cards (RC). Results of sensitivity analyses in regressions support the hypothesis that male students are systematically more likely to receive lower scores when they are evaluated in a non-blind rating system in which teachers know who the examinees are.

Chapter 7 thus presents an insightful perspective about a channel in which Filipino schoolboys' underperformance is further *augmented* through gender stereotypes perceived by the evaluators, in this case, the teachers. The present study in Chapter 7, however, does not intend to point out that teachers are at fault, because the study did not prove that they intentionally or consciously exercised said stereotypes. Nevertheless, the findings are noteworthy. The previous discussions in the literature provide us with empirically sound perspectives about demand-side circumstances that drive boys to perform poorly or to opt out of their own education. Chapter 7 now suggests other channels, supply-side interventions, e.g., related to the teacher-side backgrounds, and causes such as the high proportion of female teachers in the Philippines, in conjunction with demand-side interventions such as employment and stipend programs. Moreover, importantly, Chapter 7 also found that the augmentation is ascribable to *pure* stereotyping, based 'unconditionally' on male students' gender rather than the extent in which male students are tidy enough to achieve in the scores on RC. In a related move, because the directions of gendered stereotypes have been erratic in the literature, importantly it is notable that stereotyping can be exercised not in an essentialistic, deterministic manner but purely socially in a local context.

CONCLUDING CHAPTER

After all the above discussions, Chapter 8, the final chapter, sums up the dissertation's significant topics, contributions, and future issues. It also revisits a critical inquiry into the semblance of the reversed gender disparity in the Philippines, specifically referring to boys' underperformance noted in previous chapters.

APPENDICES

In addition to the main body of the dissertation, two Appendix Chapters are attached at the end of the dissertation. Appendix Chapter A provides supplementary information about survey design, sampling processes, and the basic livelihoods of the households in Marinduque Province. In particular, the profiles of children not enrolled in schools are descriptively spelled out to assess why they opted out of the educational system.

Being different from other chapters, Appendix Chapter B focuses on learning qualitative aspects of children in school. Looking at role models as a catalyst, this Appendix Chapter explores how they perceive education. It makes indirect inferences to children's ability to link with people surrounding them and on the nexus between self-formation and education. Thus, it describes how children find a role model and what they find they need to do to emulate this person. As supplementary information, this Appendix Chapter explores how children weight learning as they are becoming adults. Largely this form of inquiry was not covered in the econometric analyses presented in the main body of this dissertation.