

**ESSAYS ON FACETS OF THE EDUCATION SECTOR
IN DEVELOPING COUNTRIES**

Abstract of the Thesis

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Abstract

The thesis investigates three different facets of education sectors in developing countries. Since the role of education is intrinsic in shaping the overall well-being of individuals and facilitating the nation's progress, it becomes imperative to look into different educational outcomes. As advocated by the proponents of the human capital theory, education serves as a driver of the growth and development of a nation as it enhances the skills and economic capabilities of individuals. Thus, investments in education are crucial for fostering the demographic dividend, which contributes to growth if employed productively. Despite being well versed in the benefits associated with education, most developing countries are often found grappling with multifaceted issues such as school dropouts, overeducation, where individuals work in jobs with lower educational requirements, mushrooming of private tuitions stemming from poor school teaching etc. The thesis focuses on each of these issues separately. First, it studies the impact of a government reallocation of the education budget on school dropouts and overeducation; second, it explores the role of the cost of private tuition on school choice; third, it estimates overeducation among elementary occupations in India, where education requirements are minimal.

The second chapter of the thesis verifies the effectiveness of a government reallocation of education budget in favour of school education, on two distinct problems of education sectors in developing countries – school dropouts and overeducation. Accounting for path dependence in education investments, complementarities between household and government institutional investment and also between school and higher education quality, the theoretical model endogenously determines ability thresholds, based on which households decide on education choices for their child. We start with a benchmark equilibrium, where

every household sends their child for higher education after school completion, whereas, lower ability ones drop out of school to work as unskilled labour. However, all high-ability children do not secure a skilled job after higher education. Some are forced to work in the semi-skilled market as overeducated workers. The model shows that a shift in government spending towards school education leads to a new equilibrium, with lower dropout rates and lower enrolment in higher education, under certain conditions. The lower enrolment in higher education also translates into lower overeducation. Skewing government investment in favour of school education has a direct positive impact on school quality through better infrastructure. In the second round, better school quality improves higher education quality, which in turn poses a positive feedback effect on school quality. However, a shift in investment away from higher education leads to a deterioration of teaching quality. This has an indirect perverse impact on school quality. If the direct effect dominates the indirect effect, school quality improves and school dropout reduces. In other words, for the reallocation to be fruitful it must be the case that the school quality is more responsive to school infrastructural expenditure. The results also show that if the improved school quality sufficiently raises the semi-skilled wages, it draws in children on the margin who either dropped out of school or opted for higher education in the benchmark scenario. As a consequence, overeducation reduces too. The other observation that the chapter reveals is that school dropout is imminent and cannot be eradicated using a reallocation policy.

The third chapter explores the role of private tuition cost on the household choice between government and private schools at the secondary and higher secondary level. The chapter shows that private tuition cost, which is estimated by the household share of private tuition expenditure for a child in his monthly per-capita consumption expenditure has a negative significant effect on the probability of attending government schools, after controlling for individual and household level variables and the monthly average fee difference between

private and government schools. Thus, as the private tuition cost rises, it crowds in private schooling. Since school choice of households also relies on school specific factors, we next incorporate district level school specific factors which constitute the supply-side variables in education. The result remains unchanged even after the inclusion of these controls such as the proportion of government schools in a district, the difference between private and government schools in terms of proportion of professionally trained teachers and also in terms of proportion of availability of English as a medium of instruction in a district. However, since the empirical model does not shed light on the quality differences between private and government school teaching quality, we construct a theoretical model to corroborate the empirical results. The theoretical framework is set on the premise that household school choice depends not only on the teaching quality of schools but also on other factors such as school-specific attributes like discipline, medium of instruction, availability of special facilities and affordability. It shows that irrespective of the school-specific attributes, a rise in the cost of private tuition leads to a fall in government school enrolment when teacher quality is better in private schools. Thus, juxtaposing the empirical findings with the theory, we affirm the hard-to-find evidence that private school teaching is of superior quality compared to its government counterparts in the Indian context.

The fourth chapter uses the ‘returns to education’ approach to calculate overeducation within elementary occupations. Since the study is mainly concerned with the presence of tertiary graduate workers in elementary occupations, we conclude the presence of overeducation, if this category of workers fails to get positive significant returns in such occupations. The analysis starts from the broadest classification and then proceeds into different disaggregated categories and sub-categories within it. While considering elementary occupation as a whole, we find the ‘graduate and above’ category getting positive significant returns denoting the absence of any overeducation. However, owing to the large variability in

the nature of jobs within elementary occupations, we look into the next level of disaggregation. For both the sub-divisions under the umbrella of elementary occupations – ‘sales and service elementary occupations’ and ‘elementary workers in mining, construction, manufacturing and transport’, we find the absence of any overeducation, since those with higher education secure positive significant returns. Thereafter, we move to the final level of disaggregation on which information is available. In the occupation group ‘Domestic and related helpers, cleaners and launderers’, we find that workers with higher education do not get any positive significant returns. The result is robust to the inclusion of household-level controls and district-fixed effects. In another occupation, ‘Mining and construction’ workers with tertiary education gets positive significant returns. However, the significance is lost, once we incorporate the district-fixed effects. Thus, in these occupation groups, tertiary educated workers are overeducated. We also identify another occupation group, namely, ‘Messengers, Porters, Door Keepers and Related Workers’, where there exists no overeducation since higher-educated workers get positive significant returns. The chapter points out two reasons behind this unconventional finding. First, the official occupation requirements specified by the NCO 2004 occupation classification provide education requirements according to the average job description in the broad occupation divisions. It fails to capture the heterogeneity in the nature of work and differences in the demand and supply of labour. Second, even if the education requirements are applicable for all categories and subcategories within elementary occupations, higher education levels might signal higher productivity under some occupation groups, and provide a significant positive return. The chapter also calculates the overall extent of overeducation in these occupations, which includes any education level above the ‘illiterate’ category getting insignificant returns. For instance, among ‘Domestic and related helpers, cleaners and launderers’ and ‘Mining and construction’, there is no positive significant return for any education level over illiterates. Thus, any educated worker in this category is overeducated.

For 'Messengers, Porters, Door Keepers and Related Workers', all workers with education between 'below primary' and higher secondary are overeducated, since they do not get any significant positive returns over illiterates. However, as higher-educated workers get a positive significant return, they are excluded. Thus, the study shows that 56 per cent of 'Domestic and related helpers, cleaners and launderers', 74.09 per cent among 'Mining and construction' and 80.23 per cent of workers in 'Messengers, Porters, Door Keepers and Related Workers' in India, are overeducated. Compared with the modal method of overeducation, we find that the estimates match for 'Domestic and related helpers, cleaners and launderers. For the other two categories, there is an underestimation in the proportion of overeducation according to the modal method.