

# Introduction

While education has its own intrinsic value, its benefits extend beyond individuals who receive schooling directly. Other members of the society also gain through externalities (Basu et al., 2000). This alone provides justification for governments' continued involvement in literacy for all and researchers attempts to understand what factors influence the demand and supply of education. Education is closely related to the quality of the human capital, which then translates into higher incomes for the people. Better income provides opportunities for achieving better health and education, thus feeding back into the cycle. In a globalized scenario, it is important that the poorest are nudged to be a part of this cycle, since their most important asset is labour. This alone can transform India by attracting better foreign direct investment and developing a pool of skilled workers with adequate technical knowledge. Primary education in India remains the domain of the state while higher education and technical education are increasingly being relegated to the market for efficient resource allocation and to reduce the demand-supply gap. However, the necessary conditions under which such initiatives of the government can succeed are often not met. That is the reason why despite many initiatives for universalisation of primary education in the past decades, India's efforts achieved limited success till the early 2000s with 28.5 percent of all children aged ten to 14 being out of school (Census 2001). About 30 percent of students dropped out of primary schools in 2010-11 (MHRD, GOI).

In my first chapter, I examine whether age of entry into school could influence students' educational performance and be correlated with school dropouts in a developing country setting. This question is important since unlike the developed countries, most students do

not enjoy access to high quality pre-school or conducive learning environment at home in less-developed countries. The debate there is still confined to participation in education, and schooling comes at an opportunity cost of labour force participation of the child. In such a context, it is important to study if the age at which individuals start school matters for their school performance. An early entry into school is desirable, since it leads to a longer working span, but may also breed disinterest and disengagement if the child is not able to follow the curriculum. Determining the correct age for school entry has been a controversial topic among policy makers, with existing studies providing mixed evidence. I use the Young Lives Project data from the undivided state of Andhra Pradesh in India collected over 12 years to show that school meal programs can have unintended consequences, resulting in economically disadvantaged students entering school at a younger age<sup>1</sup>. I find that an early entry increases the probability of dropping out of school, and negatively affects academic performance as measured by examination scores in standardized examinations for mathematics. Therefore, governments must ensure that admission into formal schools is age-appropriate and not rushed by providing for more robust and compulsory pre-school care.

A frequently cited explanation for lower human capital investment is household poverty. In my second chapter, I examine the relationship between increased consumption of addictive substances such as alcohol, tobacco, opium and cannabis on components of human development, particularly education and health expenditure. I use the National Sample Survey (NSS) data to study the adverse implications of such a trade-off, since studies have found that

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<sup>1</sup>The North-Western part of Andhra Pradesh was separated to form a new state of Telangana in June 2014 towards the end of Round 4 of this survey.

those with the lowest level of education are most likely to be heavy smokers, heavy drinkers and the most physically inactive, thus leading the household into a vicious cycle of even greater consumption of addictive substances with ever increasing medical costs (Schnohr et al., 2004). The paper finds that intoxicant expenditures are a significant component of total household expenditure and negatively correlated with investment in human capital, more so for the poorest households. This shows that individuals (and therefore households) tend to be myopic about consumption decisions. Blinder-Oaxaca decompositions performed for each of the rounds separately indicate that economically better off households tend to spend more on human capital attainment. Rural households are constrained by their endowments, and hence invest lesser in human capital. However, even if addictive users had the same endowments, they would still spend lesser on education than non-users. Thus I find that addiction is not only unhealthy, it can also be very expensive in the long run. This finding may be explained by the higher time preference of addictive substance consumers who are myopic and therefore place a lower value on the future benefits of spending on education or healthcare. Decreased spending on education leads to increased poverty, greater reliance on addictives, greater medical expenditure, thus leading the household in a vicious poverty trap.

For India's tertiary education sector, adopting Information and Communication Technology (ICT) has emerged as a potential solution to reach out to a greater number of students, especially those who could not access education previously. With the aim of providing students and teachers with interactive tools and latest educational content for skilling, teaching and learning, Massive Open Online Courses (MOOCs) have emerged as one of the most

widely adopted forms of ICT. However, with more universities opting to deliver courses online, there is a need to examine the impact of substitution of regular classroom programs by online courses on students' academic performance. This paper compares student academic performance for two successive batches in one of the top business schools in India - where one batch was offered a traditional classroom preparatory course and the other an online lecture format through MOOCs. My study design uses the Difference-in-Difference estimation to assess whether the change in lecture delivery and pedagogy has an impact on subsequent performance of the student in the subject. The paper finds that students perform worse in subsequent examinations when offered a preparatory course online for both Managerial Economics and Financial Accounting, as compared to performance in a traditional in-person class setting. Additionally, I find that student performance is more varied and the negative effects are stronger for students with lowest academic ability.