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Returns to Higher Education in India: A review

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Abstract
India in particular has a diverse differently developed categories of people of various socio-economic classes having different economic inequalities. Studies indicate rate of return to education can be different across socio-economic classes, gender, different quintiles and locational characteristics. There is need to examine the causes behind it as it may have important policy implications while mobility of labour has increased, dualism has not narrowed.

(***Keywords:*** *returns, differential, socio-economic classes, gender)*

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I. Introduction:

Education plays an important role in the modern labour market. In human capital theory education is an investment of current resources in exchange for future returns. A large amount of literature in many different countries and time periods have confirmed the relationship between education and earnings. Educational inequality can be posited as central to the inequalities in all other dimensions of human development. Education is the key to societal change and equitable economic development in any country.

The basis of a positive relation between education and earnings is based on a ' Mincerian earnings function'. The Mincer's earnings function is a single equation model that explains wage income as a function of schooling and experience. An important determinant of the demand for education is its expected benefits, which in turn depend upon the quantity of labour inputs, which themselves depend upon the human capital acquired during education. This is captured by the education-wage relationship, which can be used to measure the returns to education.

Education, Earnings and Inequalities:

If we look at India in particular, the current socio-economic situation is that of a nation of diverse differently developed categories of people having different economic inequalities studies have shown that people in upper/middle income classes belonging to forward castes have uneven access and control of economic resources.

They have wide exposure to information and superior technical capabilities. This is because they are able to access quality education and acquire expertise for higher remuneration jobs. The lower income groups run into debt traps by accessing expensive higher education due to a gradual withdrawal of state from this sector.

Keeping this in mind, it is important to estimate, rate of returns to education as they indicate the reward for education in the labour market. While there is volume of research evidence generated on estimates of rates of return to education in India, very few are capturing the inequalities in rates of return. There is much variation in the type of education available particularly at the tertiary level. Studies have indicated that rate of return can be different for different quintiles and locational characteristics, gender and socio-economic classes. Wages and earning differentials in the labour market can be linked in a multidimensional and interactional fashion rather than a linear way. There is a considerable segmentation and dualism in the Indian labour market in terms of sectors, caste religion and subject streams. While mobility of labour has increased, dualism has not narrowed.

A comparative analysis of rate of return to education can be done on the basis of :

i) Different Socio-economic classes.
ii) Across gender
iii) Across rural-urban sector
iv) Across Quintiles

This analysis will help to understand the disparities in rates of return to education in education as they reflect provision and participation of higher education with socio-cultural biases.

I.Differential Rate of Return across different Socio-economic classes

Inequalities in higher education are influenced by inequalities in the preceding levels of education. Evidence states where secondary education is universal, as is the case in most of the developed countries, equity in access to higher education may be more easily achieved. Studies in India, have given evidence on inter-generational mobility in their educational attainment and rate of return to education. If we look at the statistics in India, the so called backward castes accounted for a very small part of total enrolment in higher education, inspite of reservation policies. Keeping this background in mind we can look at differences in rate of return across socio-economic groups.

Education is an important factor which influences salaries and earnings. When educational opportunities and attainment are unequally distributed, they leadto unequal returns to education and became an important source of inequalities. Since rate of returns have an important bearing on income and wages, fostering equality in access to education is a powerful tool for aiming to reduce variations in rates of return to education and hence income inequality. A faster progress of under-represented groups is necessary to level of inequalities to higher education among social groups. In quantitative terms it can be through a faster growth in enrolment among the under-represented groups.

Historically the access policy in higher education was dominated by three principles, namely inherited merit equality of rights and equality of opportunity.

This approach needed to be replaced by notion of equality of opportunity that looks more closely into variations in the opportunity structure. This basically places a responsibility on higher education institutions to widen their approach to select talents from all social groups some form of affirmative positive approach is needed so that all social classes get represented. Equity is an inclusive notion, and inclusion implies provision of a basic minimum standard of education for all. Equal inputs need not always lead to equal outcomes in education. In fact, unequal inputs may be needed to achieve equity in outcomes ineducation. This may partly explain differences in returns to education. Students coming from different socio-economic backgrounds may vary in their ability to compete.

Caste is an important variable which also plays crucial role in determining earnings and occupation. The study uses IHDS 2005 dataset. The survey used has information on household characteristics, household characteristics, age,education and caste. He has fund that socio-economic variables are statistically significant at the 1% level of significance. Another dimension is that wage differential among the social group. The estimates yield that ST'S, OBC'S and SC'S are likely to earn less by 14, 13 and 7% compared to general category. This is true for both rural and urban sector. This wage differential may be because these groups are associated, mainly with these kinds occupation which are low paid or they are paid lower wages than others due to discrimination.

Another study by S.Singhari and S. Madheswaran also calculates changing rates of return to education in India, using NSS data. (rounds 38,50 and 68). According to this study, labour markets in India have historically been organized along caste lines. Discrimination against SC's/ST's is quite rampart in terms of their access to educational opportunities and employment in the labour market. Wages paid to them are considerably lower than their counterparts for higher education similarly for OBC, RORE is lower than that of forward castes except at middle education. The returns for ST's,SC's,OBC's and forward castes are 8.6%, 13.5%, 14.7% and 15.0% respectively for higher education.

Another study by P.Geeta Rani (NUEPA)has estimated rate of return to education using IHDS data (2005) using demographic characteristics. The study found that ability alone does not influence returns to education, but family endowments and connections influence returns to education. It was seen that individuals who acquire higher education generally belong to privileged backgrounds so that some part of their return to education arises from their back grounds. An important feature of these caste networks is that they are typically the most active among 'white callas' jobs, dominated by high casts. While reservation policies make special provisions for the promotions of educational, economic and social interests of these deprived castes. But inspite of all these policies they report low returns in higher education despite the rhetoric on empowerment of deprived groups, not much has been achievedin actual terms. There is not significant to these castes, partly because of the inability of the education to deliver superior jobs.

A study by A.Mitra (2019) using NSS data of 68th round (2011-2012) based on augmented ' Mincerian' equations has fond unfavourable rates of return in the case of reserved categories, reflecting underlying discrimination along caste lines influenced by biases and prejudices. The following table highlights this.

Social Class	Average log of hourly wages for graduate and above education
ST	3.96
SC	3.85
OBC'S	3.93
Unreserved	4.26

Therefore we can see the reserved classes lag behind.
Another recent study is by S.Sikdar (2019) based on NSS data using 'Mincerian' format in the probit model.
The study used the 'Heckman' model to take account of selectivity bias. It found that for unreserved classes there was an increase in average rate of return with better levelof education. For OBC's the relationships between education and earrings was negative or insignificant at levels of tertiary education but positive and significant at secondary education levels for SC's and ST's there is insignificant relation between education and earnings.

II. Rates of returns across Gender

Higher education is a pathway to employment, enabling the acquisition of specialised skills and knowledge, there has been an increasing participation of girls studies have shown that rates of return to higher education are higher. Women's Gross enrolment ratio in higher education stood at 21% in 2012-13.

According to a study by AnuneetaMitra (J.SocEco Dev, 2016)if we look at rate of returns for regular workers, mostly across all quintiles, female rates of return are higher than those of males. Literature suggests that women's wage work participation and level of education as well as returns experience a 'U'shaped relationship. The study used quintile regression and came to the conclusion that hourly wages for males were higher for regular workers but lower for casual workers. However with increase in quintile the positive impact on wages for being a male vis-à-vis decreases in case of regular workers.

The study by S.Singhhari and S.Madheswaran also fond significant inequality in rates of return to education between male and female workers. In the regular labour market, both the selectivity corrected and uncorrected rates of returns for female are higher than that of male irrespective of level of education, while in the casual labour market, the rate of returns for female are lower than that of male up to secondary education. The study also looked at rate of returns across quantiles of wage distribution by gender for higher education and came to the conclusion that rate of return is not an only higher at mean but also at different quantities of the wage distribution. The reasons suggested by the study were that the Mincerian earnings function does not incorporate cost of education that may differ by gender and also risk premia might differ by gender.

A recent study by S.Sikdar (2019) highlights gender disparities. It shows that average rates of return to education increase with education, for men at all levels of education but for women they increase only for secondary education and then decline.

Another recent study by A.Mitra has examined rates of return across gender. According to this study rates of return for females are higher than those for males at all levels, however the representation of females at various levels of education falls behind that of males, thus reflecting a negative relation between the two.

III. Rates of return across rural/urban sectors

Many studies have shown that private rates of return differ between the rural and urban sectors. According to the study by T. Aggarwal (2011), the returns for higher education were higher for graduates in rural areas. Wage dispersion was also higher in rural sector particularly for higher education levels, so higher education made substantial contribution to within group wage inequality. Also wage differentials between the rural and urban sectors are much larger at the top than bottom of wage distribution.

P.Geeta Rani (2014) also reported inter sectoral disparity at higher returns in urban India. These were due to both quantity and quality of higher education.

A study by A.Mitra (2016) also showed a disadvantage faced by rural sector regarding earnings.

Disparities in Rates of return and inequalities across Quintiles

Using quintile regression method, we can show that effect of education on earnings is not the same across the wage distribution. Many studies for India and abroad have shown it. T.Aggarwal (2012) estimated that positive impact of the education differed across the wage distribution. The different quintiles for which the study need was (Q=.1, .25, .5, .75 & .9). The effect is smaller at lower quantiles and larger at higher quintiles. The rates of return are low for lower levels of education and high for higher levels of education. The rates of return within educational levels differ across the wage distribution. For primary, middle, secondary and higher secondary levels, returns increase across the quintiles. For graduation, rates of return acrossquantilesc are of an invented 'U' shaped.

S.Singhari and S.Madheswaran (2016) have also estimated quantile regression at different quantiles of the wage distribution particularly at (Q=.1, .25, .5, .75 & .9) . They found that for regular workers, the value of primary, middle and secondary education coefficienentsis declining across the quantiles of the wage distribution while it follows an inverted 'u' shape pattern for higher secondary and graduation and above levels. Thus we can see that the rising Rates of return across the wage quantiles suggest that education is relatively more valued for highly paid jobs. This is result due to rapid industrialisation of the country which might have led to

increased demand for highly qualifiedand technical persons, which does not match with the supply. This suggests that education has a positive impact on wage inequality.

IV. Summary and Conclusions:

Thus there is a considerable differential in returns to education in the labour market which can be linked in a multi dimensional and interactional fashion rather than in a linear way. There is considerable need to study the reasons behind different rates of return to education in order to guide policy formulation. It is important to bring out reasons behind disparity in outcome across social groups, gender and locational characteristics. This would guide us in policy formulation as where private returns to education are high, there is room for government to shift some of for the costs of acquiring higher education.

Further political economy of targeting educational subsidies to specific groups would be in line with inclusive growth.

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