RETURNS TO EDUCATION IN ODISHA: A COMPARATIVE STUDY BETWEEN AGRICULTURAL AND INDUSTRIAL WORKERS

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ABSTRACT

This paper examines returns to education in agriculture and industry sectors of Odisha using the primary survey data collected during 2017. While agricultural data were collected from five blocks of Odisha namely Bargarh Sadar, Baripada Sadar, Bhawanipatna, Balasore, and Ghatgaon; industrial data were collected from large scale, medium scale, and small scale industries, micro enterprises and start ups. Fitting a Mincerian type of returns to education model, the study finds that there is a positive and linear relationship between income and education and a negative or negligible relationship between income and experience in both the sectors. The findings of the study point to the fact that agriculture and industrial sectors in Odisha require more attention from the government in education and skill development in order to maximise the returns to education.

Key words: Returns to Education, Agriculture, industry, Odisha

I. Introduction

Agriculture and allied sector plays a critical role in economic development of Odisha. Being an agrarian economy, declining share of agriculture sector to state's gross domestic product (GSDP) since early 1990s and more so in the 2000s is a matter of concern as around 62 per cent of the workers of the state still continue to depend on the sector for their

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livelihood. Growth of this sector is important not only for ensuring food security and reduction of poverty in rural areas, but also in sustaining the growth of rest of the economy. Agriculture sector's share was 64.65 per cent during 1950-51 which declined significantly to 34.5 per cent during 1990-91. Despite such a large decline, the agriculture sector's share was still higher than other sectors till 1990-91. Since then, barring a couple of years, the share of agriculture sector has been falling continuously and has fallen far below the share of other sectors. The reasons for decline in agricultural output growth could be due to various factors like lack of irrigation facilities (two-thirds of the net sown area is un-irrigated), frequent natural calamities, traditional method of cultivation, lack of knowledge in using the modern technology and high yield variety seeds in farming, lack of market and storage facilities for agricultural commodities and low returns on agricultural output.

Not only the growth of agriculture sector is critical to the development of other sectors, it also plays an important role in generating a major chunk of employment in the state. The NSSO data show that agriculture and allied sector with 56 per cent share of the total employment in 2011-12 continues to be the main source of employment. But the sector is facing a major crisis of low productivity, probably due to the presence of large percentage of unskilled workforce. More than 66 per cent of the workers in the sector are either illiterate or having education up to primary level. More than 99 per cent of them do not have any formal technical training and qualification. Therefore, shifting the agricultural labourers to other high value added sectors like manufacturing and services is a herculean task. It is also found that there is a strong positive lagged impact from agriculture sector's growth to industry's growth in the state.

Odisha is endowed with natural resources in terms of mining and other ores. The state has about 28 per cent of India's iron ore, 24 per cent of coal, 59 per cent of bauxite and 98 per cent of chromite. The state ranks first in the country in terms of both production capacity and actual output of aluminium. The state attracted surprising investments of Rs.14 lakh crore (Rs.14 trillion/$226 billion) next only to Gujarat during 2014. Of the total investments since 1991, the bulk of it being in metals and mining, Rs. 8 lakh crore has come during 2000-2014. "Data for the last five years (2012-13 to 2016-17) showed that 62 per cent of the projects were predominantly taken up in the states of Gujarat, Odisha, Maharashtra, Andhra Pradesh, Chhattisgarh, Madhya Pradesh and Karnataka" (RBI Bulletin September 2017). Keeping this in mind, the paper selected two firms under large scale industries, NALCO (National Aluminium Company Limited) and RSP (Rourkela Steel Plant), for the purpose of

data collection. Odisha is amongst the top ten states accounting for the highest number of Micro, Small and Medium enterprises (MSMEs). The entrepreneurs from Iran, Bangladesh, South Korea and Germany who came to participate in the Odisha International MSME Fair in March 2018 expressed their interest in marine fishery, poultry, handloom, food processing etc., while enhancing trade relations with Odisha at a G2B meeting at the state secretariat. Women empowerment has reached grassroots level as around 6 lakh women SHGs have been formed till 2017. So, three SHGs are included in the study and out of these three, two are all-women SHGs. May it be agriculture or industries, human capital theorists believed that education has the ability to increase GSDP (gross state domestic product) through individual income (Becker, 1962; Curle, 1964; Mincer, 1974; Anosike, 1977; Pissarides, 1997).

Comptroller and Auditor General (CAG, 2016) of India stated that "Status of elementary education continues to be poor despite the fact that Rs.23,194 crore was spent in Odisha in just five years' period from 2009 to 2014, because of oversight by the School and Mass Education department, deficient planning and weak implementation of the provisions of the Right of Children to Free and Compulsory Education (RTE) Act, 2009. According to the report 1,226 eligible habitations did not have any primary school within one kilometer while 201 habitations do not have any upper primary school (UPS) within three kilometers". "The enrolment at elementary stage decreased from 66.21 lakh in 2009-10 to 63.88 lakh in 2013-14, indicating the failure of government and aided schools to attract students despite interventions like Mid Day Meal, free uniform and text books," it says. The report pointed out that 3,440 (5.50 per cent) to 8,739 (14 per cent) schools with 1.79 lakh to 3.88 lakh students were functioning in the state with single teachers. Given the state of technical and vocational education in Odisha in general, the government's over-emphasis on improving the individual income in the state raised a pertinent question – is there any direct linkage between education and experience with income of the people engaged in agriculture and allied sectors and industries of Odisha?. In this context, the present study makes an attempt to empirically examine the relationship between the years of schooling and experience with the level of income of the people engaged in agriculture and industrial sector.

The paper is organised as follows. In section II, the paper discusses relevant studies on the issue of returns to education both in the context of India and other countries. Methodology and data sources are discussed in section III, followed by analysis of the results in section IV and conclusion in section V.

II. Literature Review

The long term goals of education are securing economic equality (Sianesi & Reenen, 2003) and social justice. Earnings typically increase with age (Eckaus, 1963) at a decreasing rate. Level of skill has positive relation with both the rate of increase and the rate of retardation. In the early phase of work, people are more enthusiastic for job change and in-service training as compared to later part. Professional and skilled workers and able persons have positively skewed earning distribution (Becker, 1962; Schultz, 1988; Harmon, 1995; Schultz et al., 1997; Schultz et al., 1998; Ashenfelter et al., 1999). Gundlach in 1994 pointed out that "international difference in the stock of human capital is positively related to the observed income differentials between the industrialized and the developing countries". Mincer (1974) said that "over half of the inequality in earnings can be explained in terms of the inequality in educational attainments of workers" (including on-the-job training and experience as well as schooling). The economic returns to individuals from schooling increases with years (Hansen, 1963; Dougherty et al., 1991; Bourdon et al., 2010). The effect of inequality in schooling on income inequality is very low in the economic sense in OECD (Organisation for Economic Co-operation and Development) nations. Even though a more equal distribution of education may not lead to higher income per capita (Földvári & Leeuwen, 2011) but that does not mean that education should not be given importance.

India no longer has to face the serious backlog in employment. Rather, the new word buzzing the corridors of academicians and researchers is 'unemployability'. The cause being that the education imparted to the youth in schools and colleges do not help them much to earn a better living or receive a higher pay scale. There are many research works available in the database to substantiate the issue. While most of the works have focused on urban population (Blaug, Layard and Woodhall, 1969; Psacharopoulos and Hinchliffe, 1973; Psacharopoulos, 1994), very few have ventured into rural areas (Malathy 1983; Tilak, 1987; Divakaran, 1996; Duraisamy and Duraisamy, 1995, 1997). Returns on education determine the investment to be made on education. Difference in returns may it be gender-wise, level-wise, or region-wise will have its impact on investment decisions. In India returns to education is researched based on secondary data. The present paper uses primary data to evaluate returns on education from various districts of Odisha. Accordingly, the broad objective of the paper is to study the relationship between years of schooling and years of experience with the level of income of the workers and to suggest some measures to

improve the relationship between variables. The specific objectives of the paper are outlined below.

- To study the nature and distribution of agricultural and industrial workers
- To study the linear relationship between education, experience and individual income
- To study the non-linear relationship (Mincerian Model) between variables

III. Methodology and Data Source

The variables used in the study are years of schooling (for education), years of experience (for experience) and average monthly income. Income is the independent variable, and schooling and experience are dependent variables.

Data Collection: Primary data from Odisha is used to substantiate the objectives. Multi-stage random sampling method is used to draw samples. The data were collected through a structured questionnaire and schedule method. The major problem that arose was of collecting information from illiterate agricultural farmers and a few SHG members. Illiterate farmers gave their answers in their own local language which was then and there written down. The next problem was lack of time for collecting data from local make-shift vegetable vendors, who were quick to leave the market place as soon as their work was done. Collection of data from them was hectic. Not many issues were faced while collecting data from industrial workers.

Time Period: The questionnaire was initially distributed among 50+50 potential sample units as a pilot survey; based on the feedback, a few changes were made in the questionnaire. Some of the prominent changes were: replacing monthly income by average monthly income received in the last six months; translating the questionnaire into Odia language by the enumerators. Then the final questionnaire was developed. The data collection process started during the summer month, from 1st June, 2017 and ended in 31st June, 2017.

Sample frame: The following sampling procedure was followed to select 150 individuals from agriculture sector. Out of the 30 districts of Odisha, ten districts were selected on the basis of highest paddy production (District at a Glance, 2016). One block from each of the ten districts was chosen at random. Out of the ten blocks thus chosen, five were selected based on suitability of data collection. Thus, finally the five blocks that were covered under the study are: Bargarh Sadar, Baripada Sadar, Bhawanipatna, Balasore, and Ghatgaon.

The industrial sector of Odisha is divided into four categories, i.e., large, medium, small and micro industries as per Micro, Small and Medium Enterprises Development (MSMED) Act, 2006. The total 150 industrial samples were distributed as: Large Scale (Sample Size: 35); Medium Scale (Sample Size: 40); Small Scale (Sample Size: 40), and Micro Scale and Start-ups (Sample Size: 35).

Sample unit: The sample unit used here is individuals engaged in work and receiving income. Under agriculture, farmers directly involved in cultivation, vendors selling vegetables in local weekly markets, vendors selling items like meat and eggs on regular or make-shift shops, fish monger, butcher, and wholesalers, are covered. The data were collected from both genders. Under industrial sector, employees from various grades were covered to get a more representative sample.

Sample Size: A total of 150+150 samples was used from agriculture and industrial sector for the study. The investigators' presence during the entire filling up process reduced the wastage in questionnaire, but at the same time, it increased the time line of data collection.

Statistical Tools: The study used simple graphic method, measures of central tendency, dispersion, Correlation, t test for correlation, Regression and significance test for regression values.

Terminology: In the paper Individual earnings refers to the average earnings received by the individuals over the last one year. The data on earnings were collected in monetary terms. No considerations were made for any financial adjustment like returning of loans or clearing of debts. The net income in the case of business is taken into consideration. In order to calculate the total number of years of schooling, the last qualified or passed level of schooling is considered. Drop-out year or grade is not accounted for. Illiterate are those people who never went for any formal education. Years of experience includes years spent in the current job along with earlier jobs in the case of job change But it does not include the years overlapping with years of schooling. The samples with job change are few in number and concentrates in the services sector.

IV. Results Analysis

In this section, we discuss the findings of the study from the quantitative analysis using simple statistical tools and econometric technique.

(a) Descriptive Analysis

(i) Agricultural Sector

Under agriculture sector, the stakeholders involved directly and indirectly

in trading agro products are farmers, vegetable vendors, wholesalers, fish and meat mongers etc. The blocks that are covered under the primary survey for agriculture sector are: Bargarh Sadar, Baripada Sadar, Bhawanipatna, Balasore, and Ghatgaon. Data were collected based on multi-stage sampling techniques. The total sample size of workers in agriculture sector is 150. Agricultural workforce mainly consists of paddy cultivators and vendors dealing with agricultural products. The distribution of workers by education and gender is given in Table 1 below.

Table 1: Sample Size of Agricultural Workers by Education

Agriculture Sector	Level of Schooling	Sample Size	Average Income per month (Rs.)	Years of Experience
Male	Illiterate	2	5,000	38
	Below Matriculation	39	15,893	24
	Matriculation	27	22,552	24
	I2th Class	7	38,833	14
	Graduate	0	00	00
	Post Graduate	0	00	00
Total Male		75	19,804	24
		St.Dev.	21,356	11
Female	Illiterate	10	6,100	22
	Below Matriculation	35	15,343	15
	Matriculation	24	24,280	35
	I2th Class	6	15,083	11
	Graduate	0	00	00
	Post Graduate	0	00	00
Total Female		75	14,025	15
		St.Dev	14,979	9
Grand Total (Male + Female)		150	16,914	20
		St.Dev	21,458	11

Source: Primary Servey, 2017

The sample consists of 12 illiterates (10 Females + 2 Males), 74 below matriculation (39 Males + 35 Females), 51 completed their 10th board or matriculation (27 Females + 24 Males), and 13 completed their 12th class exam (6 Females + 7 Males). The average income of 150 individuals is

Rs. 16,914 per month. The standard deviation is Rs. 21,458 per month. Average earnings of females (Rs. 14,025) are lower than that of males (Rs. 19,804) by Rs 5,779. Average years of experience for females (15 years) are less than that of males (24 years) by 9 years.

Years of experience plays a prominent role in earnings. If the earnings are associated with productivity, and productivity be a function of efficiency, a positive relation is expected between them. This is based on the assumption that the age cohort of the samples is same and overlapping of both activities is not taken into consideration, that is, if an individual was working and studying as well for a specific time period, then the years of experience during that time period is not counted. But the problem is that the time spent in gaining efficiency through work may have a role in reducing the time spent in schooling. A similar trend is seen in Table 1 among male agricultural workers. The more the years of experience the less the years of schooling. Women engaged in agriculture too show the same pattern except for the women who stopped studying at matriculation. The reason for this is few females from Kendujhar district were above 60 years of age group. This peculiarity was observed and noted during data collection process. Since the purpose of Mincer Model (and of this study) is to analyse the contribution of education to earnings, the samples were collected keeping in mind the academic qualification of the workers, and not their age group.

In order to understand the relationship between income earned by workers with their years of schooling and years of experience, as a first step, the study conducts a correlation matrix between the variables, both in the case of male and female workers. The correlation matrix for the female and male workers is illustrated below.

For Female workers:

X= Years of experience, Y= Average income Rs./m
r= - 0.3641 r2 = 0.0412 t-Calculated = -3.340 df=73

X= Years of schooling , Y= Average income Rs./m

r = 0.2029 r2 = 0.1326 t-Calculated = 1.770 df=73

For Male workers

X= Years of experience, Y= Average income Rs./m
r= - 0.2413 r2 = 0.0582 t-Calculated = - 2.1244 df=73

X= Years of schooling, Y= Average income Rs./m
r = 0.3504 r2 = 0.1228 t-Calculated = 3.1964 df=73

Although technically a negative correlation is seen between years of experience and average income per month among females working in the agriculture sector, but the relationship between variables is weak and not significant. This means that though women engaged in agriculture sector "bear a disproportionately high share of the burden of poverty" (Agarwal, 2008), yet the years of experience should not be held responsible for it solely. Technically a positive correlation exists among years of schooling and average income; even though the relationship between variables is weak but is significant.

For the males engaged in agriculture sector, a negative and weak correlation is seen between years of experience and average income per month. There exists a weak, positive correlation between years of schooling and average income among males working in the agriculture sector. Both relations are not significant. This means that earnings received by men in agriculture are not (linearly) related to their years of experience or schooling.

So far, the simple correlation coefficients indicated the existence of linear relationship between the variables (taking two variables at a time). The major objective of the model is to help in forecasting and prediction for which regression is used. Simple regression analysis helps in detecting the impact of one independent variable (either years of experience or schooling) on the average monthly income. The significance test of the regression values show whether the result derived can be safely generalized for a larger population prediction or not.

Linear regression equation of female samples from agriculture sector:

X= Years of schooling, Y= Average income Rs./m
Y = 828.4*X + 7885, P Value = 0.0711, F= 3.349
Not Significant Deviation from Horizontal

X= Years of experience, Y= Average income Rs./m
Y = - 618.3*X + 23215, P Value = 0.0009, F = 11.92
Significant Deviation from Horizontal

The linear regression between years of schooling and average monthly income is not significant but years of experience and average monthly income is significant. This means experience of females in agriculture sector has impact on income rather than schooling. But years of experience has a negative impact on female income. Thus, it may be inferred that earnings of these workers are affected by other variables like monsoon and/or other forms of market imperfections.

Linear regression equation of male samples from agriculture sector:

X= Years of schooling, Y= Average income Rs./m
Y = 2844*X – 4854, P Value = 0.0042, F= 8.719
Significant Deviation from Horizontal

X= Years of experience, Y= Average income Rs./m
Y = -537.9*X + 32584, P Value = 0.0100, F= 6.981
Significant Deviation from Horizontal

In the case of male samples from agriculture sector the linear regression between years of schooling and experience with average monthly income is significant. This means experience and schooling of males in agriculture sector has impact on income. Years of schooling has positive relation with average income whereas experience has negative impact on income.

The result is fascinating because the education provided by the institutions is generally gender neutral, yet the gender difference in sign (±) for contribution of education to earning is visible. Male workers are able to cash in each additional years of education, whereas females fail to benefit out of it. The finding is thought provoking in the sense that this might reduce the importance of education for women in rural and agricultural belts of Odisha.

(ii) Industrial Sector

Industrial sector samples were collected from large scale, medium scale, small scale industries, micro enterprises and start-ups. Organisations selected for the purpose were (NALCO) National Aluminium Company Limited, (RSP) Rourkela Steel Plant, OMFED (Orissa State Cooperative Milk Producers Federation), Milk Mantra Private Limited, Smaak Agro

Table 2: Sample Size of Industrial Workers by Education

Industry Workers	Level of Schooling	Sample Size	Average Income per month (Rs.)	Average Years of Experience
Male	Illiterate	0	00	00
	Below Matriculation	9	20033	17
	Matriculation	4	16900	9
	I2th Class	12	24708	10
	Graduate	24	37470	12
	Post Graduate	26	49289	12
Total Male		75	36703	12

(contd.)

		St.Dev.	26205	9
Female	Illiterate	0	00	00
	Below Matriculation	7	8287	6
	Matriculation	10	16887	10
	I2th Class	8	27100	15
	Graduate	31	38037	8
	Post Graduate	19	47065	15
Total Female		75	32872	11
		St.Dev.	28249	8
Grand Total		St.Dev.	61968	20
		Average	34675	11

Private Limited (Start-up). Samples were also picked from three SHGs namely The Maa Kalijai, Ananya, Anukulachandra.

Out of 150 industrial employees, 9 males and 7 females were below matriculation, 4 males and 10 females had completed matriculation, 12 males and 8 females had plus two certificates, 24 males and 31 females were graduates and 26 males and 19 females were post graduates. The average income of males (Rs. 36,703) was slightly more than that of females (Rs. 32,872). The average years of experience for both males and females were almost same (Table 2).

The Correlation coefficients of the study are illustrated below:

X= Years of experience, Y= Average income Rs./m
r = 0.4707 r2 = 0.2216, t-Calculated = 4.5581 df=73

X= Years of schooling, Y= Average income Rs./m
r = 0.4648 r2 = 0.216, t-Calculated = 4.4851 df=73

The correlation coefficient of years of experience and years of schooling with average income among female samples working in industrial sector is weakly positive But in both cases the correlation coefficient turned out to be not significant. Positive correlation means both variables move in same direction. In other words, with increase in experience and education, income also increases and vice versa. The movement is not significant suggesting that even though they have direct relation for the samples but the relationship may not sustain or hold true for the entire population.

The Correlation coefficients of the study are illustrated below:

X= Years of experience, Y= Average income Rs./m
r = 0.4793 r2 = 0.2297 t-Calculated = 4.6660 df=73

X= Years of schooling, Y= Average income Rs./m
r = 0.3225 r2 = 0.104 t-Calculated = 2.9109 df=73

Similar linear relationship is seen among male samples like their female counterparts. Average income does not have a statistically significant correlation either with years of experience or years of schooling. Thus, the results of sample correlation of one-is-to-one variable cannot be used for the population.

The correlation coefficient showed that the results are not significant but that does not mean that regression results also shall be not significant, because the correlation is independent of sample size, whereas the p value is affected by sample size. Therefore, irrespective of a not significant r value, regression can be run.

Linear regression equation of female samples from industrial sector:

X= Years of schooling, Y= Average income Rs./m
Y = 4469*X – 28399, P Value = < 0.0001, F= 24.26
Significant Deviation from Horizontal

X= Years of experience, Y= Average income Rs./m
Y = 1698*X + 14631, P Value = < 0.0001, F= 25.04

Linear regression equation of industrial females shows significant relationship between schooling and experience with income. Both schooling and experience positively affect income of females working in industrial sector.

Linear regression equation of male samples from industrial sector:

X= Years of schooling, Y= Average income Rs./m
Y = 3019*X – 4393, P Value = 0.0035, F= 9.052
Significant Deviation from Horizontal

X= Years of experience, Y= Average income Rs./m
Y = 1388*X + 20112, P Value = < 0.0001 , F= 23.2
Significant Deviation from Horizontal

Linear regression equation of industrial males too shows significant positive relationship between schooling and experience with income. In the industrial sector schooling and experience have an impact upon individual income irrespective of gender difference. Schooling has stronger impact as compared to experience – almost thrice.

As expected, the regression values turned out to be significant even though the correlation is not significant. The change in result is because of highly scattered variables. The simple regression shows that industrial workers have higher income with higher experience and education. This is a better outcome as compared to agriculture.

(b) Econometric Estimation and Analysis

After analyzing the relationship of income with years of experience and schooling by using descriptive statistics, the study estimates the following Mincean type of returns to education equations by using econometric tools. The estimated equations for the overall workers in agriculture and industry sector are illustrated below.

$\ln Y_t = a + bS_t + cEX_t + dEX_t^2$

Here

Y is the monthly average income.

S is the years of schooling.

EX is years of experience.

b, c, and d are regression coefficients.

The coefficient on years of schooling (b) is the average rate of return (or the percentage change in wages) to an additional year of schooling.

The experience variable is used in the equation since higher experience is likely to earn more as with years of experience in a particular activity the worker increases her efficiency and productivity. To estimate the non-linear relationship between earnings and experience it has been squared.

The income is taken in log (ln) because Mincer believed that "education should have a multiplicative effect on earnings". Mincerian regression analysis is also used to understand which among the independent variables (years of schooling or years of experience) are related to the dependent variable (average income per month), and to explore the forms of these relationships.

Agriculture Sector:

$\ln Y_t = 3.829 + 0.0472S_t - 0.0056EX_t + 0.000EX_t^2$--------(Agriculture Sector)

The equations show that there is higher positive (0.0472) impact of schooling on earnings. This is in favour of education. It means that if agricultural workers are encouraged to go for higher education then their earnings might go up as well. On the other hand, experience (linearly) has negative impact and its square (non-linearly) has almost zero impact. This may be because income in agriculture is more influenced by other factors (monsoon) than education and experience. Another reason may be market imperfections, that is, demand and supply mismatch of the agricultural goods.

Industrial Sector:

$\ln Y_t = 3.349 + 0.06S_t + 0.0212EX_t - 0.0001EX_t^2$--------- (Industrial Sector)

The regression equation based on industrial samples shows a similar result as that of agriculture. In absolute term, education has low impact on income, but when compared to experience, the years of schooling tend to have a higher impact on income. The low contribution of education among industrial workers is because, the salary of workers in large scale firms is determined based on either government pay commissions or on negotiation (bargaining ability of the employee) for medium scales. The firms which received profits (small scale, micro enterprises) were mostly consisting of high school dropouts. Nevertheless, education should have had more contribution to earnings.

Gender perspective:

Education irrespective of gender should have equivalent impact on individual income. The earnings of a registered firm are governed by Directive Principles of State Policy which propagates 'Equal Pay for Equal Work' for both men and women. And if education imparted at various institutions is same for all gender, then logically education should have similar impact on income irrespective of gender. But in reality the data gave a different picture.

Agriculture Sector:

$\ln Y_t = 3.7565 + 0.0646S_t - 0.0035EX_t - 0.0001EX_t^2$-------- (Males - Agriculture Sector)

$\ln Y_t = 4.030 + 0.025S_t - 0.013EX_t + 0.000EX_t^2$ ---------- (Females - Agriculture Sector)

In agriculture sector males (0.064) with higher education are earning six times more than their female (0.025) counterparts. Females engaged in agriculture work, may it be farming, cultivating, selling or harvesting, is considered as the secondary earning source of the family. The male members of their families are the main bread earners. Due to this, they are placed in a secondary position. Besides this, there is another reason, as pointed out by the women, that the number of days they work is usually lower than men, since they have the additional burden of looking after the family. It becomes impossible for them to visit 'haat' (local open-air market) regularly because of ailing in-laws, kids and other domestic issues.

From experience point of view, females' income (0.013) seems to dominate males' income (0.003). Women have a better insight into the ongoing market situation. Their years of experience helped them in developing their bargaining skill. Their experience is enriched by sharing of information among themselves. During and after the sale the women were mostly seen chatting among themselves about their day's business, the market condition of neighbouring haats, and the pros and cons (cost benefit analysis) of shifting their business to a more profitable haat. What appears to be a pastime gossip among the females turns out to be a kind of non-formal business discussion and that too on a daily basis.

Industrial Sector:

In industrial sector the impact of education and experience on income is more prominently visible. The workers in this sector mostly get their payment through pay roll and in a proper systematic manner. In industries the role of the variables is expected to be more.

$\ln Y_t = 3.391 + 0.0607 S_t + 0.0153 EX_t + 0.0002 EX_t^2$ ---------- (Males - Industrial Sector)

$\ln Y_t = 3.2353 + 0.064 S_t + 0.0302 EX_t - 0.0004 EX_t^2$ ------- (Females - Industrial Sector)

Among industrial workers, education has almost equal impact on income for both genders i.e. contribution of education towards individual income is gender equivalent in industries. This is because all the large, medium and small firms selected for data collection are registered under government. So, they have uniform grade pay structure for similar qualified employees or workers. While recruiting or hiring, they advertise the minimum and essential educational criteria (graduate or post graduate and so on) for a post and their relevant pay scale. Thus, the difference in earnings is calculated based on the desirable qualifications of each employee. The slight amount of gender difference in earnings that is observed is because of the unregistered SHGs which are free from minimum wage rule, thus both matriculates and school dropouts receive same pay. The results also show that years of experience has a differential impact on individual earnings for both men and women. Women with higher experience in industry earn more than men. But the values in absolute and relative terms are too small.

Gender perspective (Intersectoral):

When the samples are compared from dual angle simultaneously, that is, from gender and sector perspective, it adds new findings to the result.

$\ln Y_t = 4.030 + 0.025S_t - 0.013EX_t + 0.000EX_t^2$ ---------(Females - Agriculture Sector)

$\ln Y_t = 3.2353 + 0.064S_t + 0.0302EX_t - 0.0004EX_t^2$ -------- (Females - Industrial Sector)

Education level plays a prominent role in women's income. Women with higher education working in industries usually receive higher wage income than those in agriculture sector. The reason could be due to the existence of a regularized systematic pay band in the former sector than the latter one. The results also show that experience of female workers does not impact their income level in agriculture sector and has a very low impact in industry sector. Overall, it is found that the returns to education for female workers are low both in agriculture and industry sectors as compared to that for male workers. Hence, parents of girl students in the selected blocks under this study expressed their unwillingness to send their girls to school after tenth board.

$\ln Y_t = 3.7565 + 0.0646S_t - 0.0035EX_t - 0.0001EX_t^2$ ------(Males – Agriculture Sector)

$\ln Y_t = 3.391 + 0.0607S_t + 0.0153EX_t + 0.0002EX_t^2$ --------(Males - Industrial Sector)

Education has slightly more impact on the income of agricultural male workers (0.064) as compared to that of industrial male workers (0.060). Experience has negative impact on the income of agricultural male workers but has negligible and positive impact in industrial sector.

V. Conclusion

Education is considered as a public goods because the benefit out of it positively affects the society in the form of human capital as well as knowledge. This benefit of education has encouraged the policy makers and practitioners to consider financing it. Very often researchers have pointed out that India spends extremely low percentage of its GDP on education as compared to other developing nations. The reason is the low contribution of education towards economic growth. The present study too showed that education has low impact on earnings, that too mostly in the industrial regions. GSDP depicts a state's financial position, it is a SWOT analysis of the entire economy. If education fails to contribute at a higher rate to the primary and secondary sector's individual income then it is going to be only knowledge without output. Outcome based education system with negligible output is the worst form of schooling. If a comparison is made between syllabi of Indian universities and foreign

universities then surprisingly very less percentage of difference can be observed. So, where lays the difference? Why in spite of having similar content material, India is simply a 'Knowledge Economy' lacking in skill? The paper pointed out that the fall in years of schooling (education level) was affecting the earnings of the individuals. The possible solution is incorporating skills in schools. Along with knowledge, education system should impart different vocational courses and skill based courses. These certificate courses should be regional based. Practical implementation of theories should be given priorities. Certificates on successful completion of a degree course should be backed by certificates on successful field work. This will help youths to gain both skills and knowledge. Finally, the 'knowledge economy' presently lacks skill which is the connecting bridge between education and earnings.

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