

A Study of some key factors influencing micro enterprises' outcome: Evidences from Sonitpur District, Assam

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ABSTRACT

The Micro, Small and Medium Enterprise sector of India have been playing a crucial role in its economy by absorbing a huge portion of the labor force through generation of large employment opportunities along with the element of self-employment. Among its three division, the Micro Enterprise sector has been the major contributor towards the economy of the nation in terms of employment generation. Along with this, due to the lowest level of investment requirement, these micro enterprises have become the most reasonable choice of livelihood for new entrepreneurs, women and rural people of the country. While the MSME Sector has been getting widespread consideration worldwide for its reputation of being an effective strategy to counter the unemployment issue, its performance in Assam is not that satisfactory. The growth of industries particularly in the MSME sector has not taken place to the desired extent despite the availability of resources for industrial exploitation. According to the Commissionerate of Industries & Commerce, Government of Assam, among all the districts of the state, Kamrup district has the largest concentration of MSMEs units followed by Dibrugarh, Nagaon, Sibsagar districts respectively. The scenario of MSMEs in Sonitpur district is not up to the mark in comparison to the other high performing districts. Bearing in mind these facts a detailed study on the micro enterprises of the Sonitpur District is required to attain a deeper insight about the workings of these units. This study has given its efforts to investigate the influence of some key factors like Investment in fixed assets, total variable cost, age of the entrepreneurs, education level of the entrepreneurs and experience on the business outcome of these micro enterprises of the district.

1. Introduction

The entrepreneurs have the world wide recognition as one of the architects of a nation's economy, through their potentiality in generating the self-employment avenues and simultaneously engaging the others in their businesses. Within the sphere of an economy, by depending on the scale of operation, the entrepreneurs' business has categorized into Micro, Small and Medium Enterprises. Different economies have defined these Micro, Small and Medium Enterprises differently by depending on the characteristics of their own economy and regulatory structures. The micro enterprises of the United States had provided a significant contribution during the great recession to control the unemployment issue to a significant extent by generating employment avenues. In the India's scenario, after agriculture, it is the MSMEs sector which has provided the maximum opportunities for both self-employment and job creation. Besides the employment generation capabilities these enterprises have significant contribution towards the nation's GDP and foreign exchange earnings by creating export potentialities. The contribution of micro, small and medium-sized enterprises (MSMEs) to sustainable development is now widely acknowledged by both developed and developing nations of the world. In the context of a developed economy like the U.S, Micro enterprises have been performing a vital role; about 21 percent of the U.S. population has been employed by the micro enterprise sector, which is more than 32 million people. The Micro enterprise sector accounts for 25 percent of

the total employment in rural areas, and 20 percent in urban areas

The Indian Micro, Small and Medium Enterprises (MSME) sector has employed 59.7 million persons spread over 26.1 million enterprises. This sector accounts for around 45 per cent of the manufacturing output and around 40 per cent of total export of the country (4th census of MSME sector, Ministry of MSME, Government of India).

Though the Micro Enterprises sector has huge potentiality of generating employment, the growth rate of this sector is still very slow in the State of Assam. According to the Commissionerate of Industries & Commerce, Government of Assam, among all the districts of the state, Kamrup district has the largest concentration of MSMEs units followed by Dibrugarh, Nagaon, Sibsagar districts respectively. The scenario of MSMEs in Sonitpur district is not that satisfactory. Considering these facts a detailed study on the micro enterprises of the Sonitpur District would be useful to understand the various underlying factors which have an influence on the outcome of the operation, i.e. on the net income of the micro enterprises.

The enterprises are the physical setup which is created, run and organized by the entrepreneurs. The entrepreneurs, who by means of their human capital, through organizing and coordinating the factors of production, have able to exert such influence over the phenomenon of unemployment, GDP and

export throughout the economies. According to OECD, human capital is defined as: *'The knowledge, skills, competencies and other attributes embodied in individuals or groups of individuals acquired during their life and used to produced goods, services or ideas in market circumstances'*. It's the human capital which effect the productivity of the entrepreneurs. The human capital can be general human capital or specific human capital or both. Specific human capital can be used within the context of a specific job or a specific firm and general human capital can be used across jobs, firms and industries. General human capital is usually identified through education levels while specific human capital is usually measured through the tenure spent on learning by working on specific job. The various earlier research works on Entrepreneurs' personal factors have showed the dominance of the factors like age, experience, education on the outcome of the entrepreneurs' business. Some of these works had indicated the existence of a positive and strong relationship of these factors on the business outcome, while some other research works showed a complete opposite situation. Some researchers are of the view that higher the education level higher will be the probability to become an entrepreneur. On the other hand some others found that a more educated person, having higher degree in formal education process, is less likely to become an entrepreneur. Persons with specialized skill and training are keener to engage themselves in entrepreneurial activities than those without having such. Along with these various previous research works on various business factors had showed that there's no strong impact of investments made in fixed assets on the level of profit, while some other works depicted an opposite scenario. Studies regarding the influence of operating expenses had showed that operating expenses appeared to have positive relationship with profitability.

This study has given its efforts to investigate the influence of some key factors, enclosing the factors reflecting an entrepreneur's human capital along with two other necessary business factors i.e. investment made in fixed assets and total variable cost, on the business outcome of the micro units which is measured through the net income. Factors reflecting entrepreneurs' human capital for the purpose of this study are level of entrepreneurs' education and work experience of the entrepreneurs.

2. Review of literature

2.1 Personal Factors of the Entrepreneur and their influence on business outcome

Nafziger and Terrell (1996) through their study claimed that practical skills, obtained through experience, may be important in entrepreneurship. They find from a study of Indian entrepreneurs that age, experience, and background can compensate for lack of education in start-up rates and the success of the firm.

Kriechel (2005) through his work claimed that Specific human capital can be used within the context of a specific job or a specific firm and general human capital can be used across jobs, firms and industries. Learning on the job cannot be transferred across firms or industries. This part of learning by working on certain job is designated as the specific human capital. General human capital is usually identified through

education levels. Specific human capital is usually measured through the tenure spent on learning by working on specific job.

Cassar (2006) through his work revealed that the highly educated people may not choose to become entrepreneurs because entrepreneurship may very well lead to reduced Human Capital and Success income compared to other employment opportunities.

Sluis et al. (2006) claimed through their study that Entrepreneurs with higher levels of education are associated with better entrepreneurial outcomes.

Fairlie & Robb (2009) through their research work had found that the business outcomes are strongly and positively associated with the education level of the business owners. Working in the family member's business has a positive and statistically significant effect on all performance measures. The strong effect of previous work experience in a family member's business on small business outcomes suggests that family businesses provide an important opportunity for family members to acquire human capital related to operating a business. Management experience prior to starting or acquiring a business generally improves business outcomes.

Krasniqi (2009) had tried to explore personal, household and business environmental influences on entrepreneurship in Kosova. The findings of his study showed that males, those who live in urban areas, belonging to a larger family/household, have a higher likelihood of being involved in entrepreneurial activities, while a weak positive effect of age and no significant effect of marital status are found. Education received, household remittances and the presence of an additional wage earner in a household have negative impact on entrepreneurial activities.

Chakraborty (2014) through his work mentioned that factors like Education, Age and Family significantly influence the entrepreneurial ambition of the individuals.

2.2 Business Factors and their influence on Entrepreneurs' business outcome

Athanasoglou and Brissimis (2011) through their study on some selected Greek banks had found that Operating expenses appear to be an important determinant of profitability. However, their negative effect means that there is a lack of efficiency in expenses management since banks pass part of increased cost to customers and the remaining part to profits, possibly due to the fact that competition does not allow them to "overcharge". Clearly, efficient cost management is a prerequisite for improved profitability of Greek banks.

Uche (2012) conducted a study based on a sample four companies in the Nigerian brewery sector over an eleven year period from 1999 to 2009. The result of this study showed that the level of investment in fixed assets does not strongly and significantly impact on the level of reported profit of breweries in Nigeria.

Dong et al. (2012) tried to investigate whether fixed asset investments enhance (or damage) the performance of firms.

The data used in this study were collected from the China Stock Market and Accounting Research Database (CSMAR), which is based on annual reports and employed by several recent researchers. The study sample consists of companies listed on the Shanghai and Shenzhen stock exchanges throughout the years 2003 to 2007. The result showed that a higher proportion of fixed asset investments is associated with a lower level of Jensen's alpha, which suggests that CRE (Corporate Real Estate) and other types of FAH (Fixed assets/total assets) may not enhance firm performance in the stock market after adjusting for risk.

Okelue (2012) revealed that the focal variable Ratio of Selling and General Administrative Expenses designed to capture the effect of a company's operating expenses on profitability is statistically positive and impacts on profitability of the brewery firms in Nigeria. Cost of sale is the major variable that has significant positive relationship with the profitability of the brewery firms in Nigeria. Cost of sale is an important factor to be considered in enhancing or boosting the performance of Breweries in Nigeria.

Tajudeen (2014) had conducted the study on thirteen Commercial banks of Nigeria with the duration of 12 years (from the year 2000 to 2012) to examine the relationship between investment in fixed assets and banks' profitability. The result of this study had showed that investment in fixed assets has significant positive relationship to the performance of the sampled banks. The researchers had concluded that Investments in fixed assets have strong and statistical positive impact on the profitability of banking sector in Nigeria.

3. Analytical Framework

3.1 Objective of the study

The present study is driven by the following basic objective -

To investigate the impact of various factors like age, education, experience, investment made in fixed assets and total variable cost on the annual net income of the sample micro entrepreneurs of the study area.

3.2 Materials and methods:

3.2.1. Coverage:

The present study is strictly confined to the earlier undivided Sonitpur district of Assam. Since the micro enterprises has featured as one of the major and important source of livelihood for the ever increasing population of the nation in various plans and policies of the govt., the researcher here interested in getting a factual insight in relation to the operation of the micro enterprises of the concerned district.

3.2.2. Types and sources of data:

This paper is based on both primary and secondary data. The secondary data are gathered mainly from the various published sources of the Ministry of Micro, Small and Medium Enterprises (MSME) of the Government of India and other concerned Institutions. Besides this, books, articles, research articles, seminar papers related to the subject matter of this study, are taken as the secondary sources for the collection of

the required data. The primary data for the purpose of this study are intended to be collected through the sample survey method of the selected sample respondents by using a structured schedule.

3.2.3. Sampling technique and sample Size:

In relation to this specific study both the probability and non - probability sampling technique has followed.

Selection of the sample of registered micro enterprises of the concerned study area has made as per the probability sampling technique. For the purpose of drawing this required sample from the population, the list of registered micro enterprises from the year 2001 – 2016 prepared by the District Industry Center (Sonitpur), brought into consideration. For the purpose drawing the required sample, the concerned district has divided into 3 Sub divisions i.e Tezpur, Biswanath Chariali and Gohpur. For selecting the registered micro units from the sampling frame, systematic random sampling technique has applied.

Against the sample units of the registered sector, another same number of units have taken from the unregistered sector of Micro Enterprises of the district. For this purpose, "snowball sampling method" or Chain referral sampling method has applied, as there is no published set of data regarding the total population of the unregistered sector enterprises.

A total of 61 units from both registered and unregistered categories of micro enterprises have selected to form to ultimate sample for this study. 31 sample units had taken from the registered sector and 30 units from the unregistered sector.

3.2.4. Technique of analysis:

For fulfilling the objective of this study the researchers have used the multiple regression analysis technique. It's one of reliable statistical technique used to explore the relationship between a single dependent variable and several independent variables. Here efforts has given to develop a "multiple linear regression model" with the net annual income of the micro enterprises as dependent variable and age, education, experience, investment in fixed assets, and total variable cost as independent variables. The resulted coefficients of various explanatory i.e. the independent variables of the model are being used to explain the effect each of these variables on the net annual income of the sample micro enterprises.

Investment in Fixed assets has calculated by summing up the cost of purchasing plant and machinery in relation to manufacturing units and cost of tools and equipment in case of the service units. On the other hand Total Variable Cost is the aggregate of cost on input material, wages and salaries, electricity charges etc.

3.2.4.1. Designed model of the study:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + U_i, \quad i = 1, 2, 3 \dots n$$

Where

Dependent variable:

Y_i = Net annual income from the operation for the i th micro entrepreneur.

Independent variables:

- X_{1i} = Age of the i th micro entrepreneur in terms of years.
- X_{2i} = Education of the i th micro entrepreneur in terms of years of completed education.
- X_{3i} = Experience in business activity of the i th micro entrepreneur in terms of years.
- X_{4i} = Investment in Fixed assets made by the i th micro entrepreneur in terms of rupees.
- X_{5i} = Total Variable Cost incurred by the i th micro entrepreneur in terms of rupees.
- U_i = Error term, where $U_i \sim N(0, \sigma^2)$.

Co-efficient:

β_0 = Intercept or constant term.
 $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ and δ are the co-efficient of various independent variables through which the influence of these independent variables on the dependent variable can be studied.

4. Results and discussion:

4.1. Factors effecting the Net Annual Income of the Micro Enterprises:

Productivity of a firm or revenue earned by a firm is determined by different factors. In case of micro enterprises net annual income is influenced by various factors like age of the entrepreneurs, education of the entrepreneurs, experience of the entrepreneurs, Investment made in fixed assets and Total Variable Cost incurred by the entrepreneurs etc. The available earlier works has established this. In this section we will try to analyse the influence of these individual factors on annual net income earned by the micro enterprises.

4.2. Analysis of the Model:

During the analysis procedure the researcher have used software package XLSTAT to originate the model and to analyse the designed multiple regression model.

Table 1: Goodness of Fit Statistics

Observations	61.000
DF	55.000
R ²	0.661
Adjusted R ²	0.630

The above Table:1 has showed the value of R² = 0.630, and this indicates that 63.0% variability in the dependent variable i.e. Net Income is explained by the explanatory variables i.e. Age, Task specific experience, General education level, Fixed investment and Total Variable Cost (the regression model consisting of these independent variables).

Table: 2 Model parameters

Dependent variable: Net annual income			
Independent variables: Age, Experience, Education, Fixed Investment and Total Variable Cost			
Source	Coefficient Value	T Statistics	Pr > t
Intercept	-	-0.548	0.586
Age	14237.092	1.00	0.317
Task specific experience	10522.551	0.725	0.471
General education	21080.439	0.882	0.382
Fixed Investment	1.138	2.904	0.005
TVC	0.102	5.138	< 0.0001

The Table: 2 has showed the coefficients of the Independent variables along with their p values. Coefficients indicate the strength of the association between any two metric variables. The sign (+ or -) indicates the direction of relationship. Values more than + 1 indicating a perfect positive relationship, 0 indicating no relationship, and -1 indicating a perfect negative or reverse relationship. Here as per the calculated coefficients it can be mentioned when the 'Age' of the entrepreneur is increased by one unit 'Net income' will be increased by Rs 14237.092, when the entrepreneur's 'Task specific experience' is increased by one unit the 'Net income' will be increased by Rs 10522.55, when years of General education is increased by one unit the 'Net income' will be increased by Rs. 21080.439, when 'Fixed investment' is increased by one unit the 'Net income' will be increased by Rs. 1.138 and when 'Total variable cost' is increased by one unit the amount of 'Net income' will be increased by Re. 0.102.

In relation to the calculated p values of the independent variables, a low p value indicates that we can reject the null hypothesis i.e. the independent variables don't have any influences on the changes in the dependent variable. Here the corresponding p value of variables 'Total variable cost' and 'Fixed Investment' at 5% level of significance are 0.0001 and 0.005, so in relation to these two independent variables it can be concluded that these two independent variables have considerable influence on the dependent variable i.e. 'Net Income' and the null hypothesis can be rejected. And on other hand a large p value suggests that the changes in the dependent variable are not related with the changes in the independent variables. Here it can be seen that the p value of the independent variables i.e. 'Age', 'Task specific experience' and 'General Education' at 5% level of significance are 0.317, 0.471 and 0.382, so in relation to these variables it can be concluded that these three independent variables don't have considerable influence on the dependent variable i.e. 'Net income'.

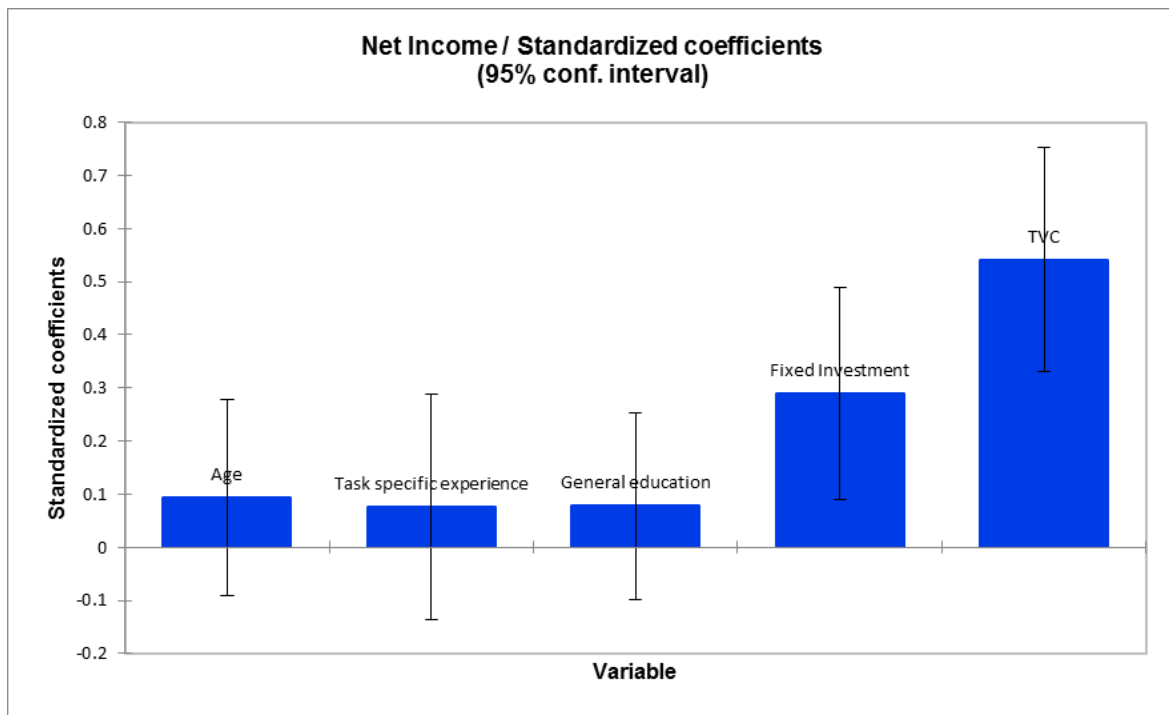
Though the available earlier research works in the related subject matter had given different views regarding the influence of factors like Education and Experience on the Entrepreneurs'

business outcomes. The findings of this present study have not established these facts that both education and experience have any strong influence over entrepreneurs' business outcome. The elements of Entrepreneurs' human capital have not indicated any influence on the entrepreneurial outcome in this present study. But factors like Investment made in Fixed Assets and Total Variable Cost incurred by the surveyed entrepreneurs have showed positive and significant influence on their businesses' outcome.

4.3. Assessed Equation of the model (Net Income):

$$\text{Annual Net Income} = -301189.695 + 14237.0915 * \text{Age} + 10522.551 * \text{Task specific experience} + 21080.439 * \text{General education} + 1.1376 * \text{Fixed investment} + 0.1017 * \text{TVC}$$

4.4. Graphical Representation:



5. Conclusion

Since both investment on fixed assets and total variable cost are the most influential factors effecting net annual income of the micro entrepreneurs, it is pertinent to provide ample investment scope to these entrepreneurs. It demands a consistent attention from the entrepreneurs as well as from the govt. Since most of the micro entrepreneurs cannot afford to bear all the financial need all the time, govt. can and should intervene to provide a smooth flow of capital to the other end stakeholder, through various financial institutions. Apart from this the govt. can introduce some sort of entrepreneurship courses within the periphery of institutional education system which will boost the perception of the students towards entrepreneurship. As the formal job market is sinking every day,

we are left with no option other than finding some alternative source of livelihood and micro entrepreneurship can produce that opportunity for long for a large numbers of job hungry youths.

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