

Factors influencing the performance of MSMEs in the state of Odisha

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Abstract: Internationally, Micro, small and medium enterprises (MSMEs) played an important role in the economic development in a country. MSMEs sector is one of the biggest contributors to GDP, employment generation and supply chain of large business. The purpose of this paper is to find out the dependent and independent variables which are influencing the performance of Micro, Small and Medium Enterprises (MSMEs) in the state Odisha. The data has been collected from secondary source Govt. of Odisha, Ministry of Micro, Small and Medium Enterprises (MSMEs). The study is based on quantitative method. In this paper multiple regression analysis has been used as the major Statistical tools to compare the performance of MSMEs sector during study period. Therefore, analysis was conducted to identify the factors constraining the growth and survival of MSMEs in the state Odisha. The dependent variable is MSMEs units and independent variables are capital investment and no. of employees. The result shows that capital investment is more influencing to MSMEs units than number of employee. This research is original and highly value to a wide range of readers. Individuals, community, organization and society are interested to understand the status of MSME in the state Odisha.

Keywords: Performance of MSME, influencing factors of MSMEs, Multiple Regression, state Odisha, SPSS.

Introduction

Micro, small and medium enterprises (MSMEs) facilitates development of global economy. The sector is an important contributor in the transition to a market economy, process of creativity, fostering technological advancement, organization innovation and changes, employment creation, income generation, competitiveness of the economy and other aspects of social development (Ahmad et al., 2010). MSMEs in the manufacturing sector of Odisha are mainly in various types of industries such as textiles, power, Non-conventional energy, traditional energy/fire wood. The manufacturing sector of Odisha mainly provides its output to the global market. The manufacturing sector has been one of the major contributions to GDP, economic growth, innovation, competition and poverty reduction. Financing the MSMEs is one of the major problem faced by owner/managers of MSMEs in manufacturing sector. Particularly, numbers of owner/managers use their own capital to set up MSMEs sectors.

Objective of the study

The present study takes a step to find out the most influencing factors which are really affecting the growth of MSMEs and critically analyzing the factors encountered by the MSME business entrepreneur not only survival but also in development.

1. To identify the factors affecting for business survival and development.
2. To identify factors contributing to influence of economic performance on the MSMEs sector using Multiple Regression.
3. To study the problem related to the performance of MSMEs sector.

Review of literature

Kaur, S. (2014), the paper light on through up the criteria used by the financial institutions in Punjab to evaluate the loan applications of MSMEs and into the criteria and the internal evaluation methods used by the MSMEs for their self assessment of loan application. They also compare the results obtained from the financial institutions and the MSMEs. The study based on primary survey. The data was collected from 10 financial institutions providing finance to MSMEs in Punjab used to interview method and 50 MSMEs in Punjab which were granted loan by these financial institutions. The study analyzes that the criteria of banks use to evaluating the loan applications are the investment in fixes assets, value of collateral, financial ratio, and other important from the

banks point of view include profitability, financial ratio and growth aspects. They finally observed that there was statically significant difference between financial institution and the MSMEs

Lahiri, R. (2012), Studied the performance of MSMEs during the period from 1973-74 to 1989-90 is considered pre-globalization period and from 1990-90 to 2009-10 post-globalization. The current paper is an attempt to critically analyze the difference between pre-globalization and post-globalization period. The paper explore that the annual average growth rate (AAGR) has been used as the major statistical tool to compare the performance of MSMEs during pre and post liberalization period with the help of four factors like, no. of units, production, employment and export. The study result shows that during the period of liberalization the growth rate in employment generation were increases better than the growth rate of other parameters. Therefore, the other parameters are not really encouraging to MSMEs sectors during the period of liberalization. The study results revealed that the AAGR in the period of post-globalization is more than pre-globalization. Hence, the period of study confirms that the govt. has taken several policy and schemes to ensure proper co-ordination and implementation.

Zamberi Ahmad, S. (2012), the purpose of this paper is to find out the main problems and constraints faced by micro, small and medium sized enterprises (MSMEs) in the kingdom of Saudi Arabia. Based on the results this study, several factors were identified to small business growth and survival in Saudi Arabia. Survey methods were used to gather data from 177 MSMEs located in selected cities in Saudi Arabia and in addition, 15 of these entrepreneurs were purposefully selected and interpreted. The result show that the difficulties in obtaining financial support, bureaucracy, lack of credit options and constraints faced by MSMEs. He also stated that the other problems included inadequate govt. supported, unpredictable policy changes and lack of training.

Research Hypothesis

According to this study, there are number of independent and dependent factors affecting the performance of MSMEs units. For this study, a model has been developed that aims to describe factors influencing MSMEs and challenges that they are facing while conducting their business. Therefore, formulate two research hypotheses which are explained in the following sections.

Capital investment and MSMEs units

Financing is the act of providing funds for business activities, making purchase or investment. The difficulties in obtaining financial support are the main problem and constraints faced by MSMEs sector. There are various factors affecting the performance of entrepreneurship over a period of time. The government changes its policy to give a boost to entrepreneurship in the country for the growth of the MSMEs units to invest their capital.

H₁: The influence of capital investment will be positively association with MSMEs units.

MSMEs unit and Employment Generation

These industries facilitated the growth of local entrepreneurs and self-employed professionals in small towns and villages. They help to remove regional disparities by industrialization in rural and backward areas. MSMEs also helps in improving the standard of living in sub-urban and rural areas sector is being emphasized not only because of its potential for generation of employment opportunities, but also for its contribution to industrial output in the state.

H₂: The influence of MSMEs units will be positively association with employment generation.

Research Methodology

Data base: The data has been collected from secondary sources. The secondary information's were collected from the various publications of government and non-government organization, MSME annual reports of Odisha, Economic Survey annual report of Odisha, and the hand book of RBI reports are used, wherever required. This paper examined the importance, contribution and development potential of micro, small and medium enterprises in the state of Odisha.

Period of the study: Study covers a period of fifteen years from 2000-01 to 2014-15.

Tools of analysis: for the purpose of analysis data has been collected from secondary sources. It is Quantitative analyses using the statistical package – SPSS has been used to analyses the data. In particular, the analysis involves undertaking multiple regression procedures.

Analysis and Interpretation

Method

In the section of the paper we use as explanatory multivariate method multiple regression analysis to analyze correlations between variables and establishing the validity of the multiple regression model.

In this regard, we consider the data derived from the organization studied during years 2000-2015: MSME units, capital investment, and number of employees as described table 1.0.

Table 1.0 Details of MSMEs units, capital investment and No. of Employee

| Year | No. of SSI/MSMEs | Capital Investment (Rs. In Lakh) | No. of Employee |
|---------|------------------|----------------------------------|-----------------|
| 2000-01 | 3676 | 15318 | 18115 |
| 2001-02 | 3919 | 16523 | 16582 |
| 2002-03 | 4008 | 15514 | 16320 |
| 2003-04 | 4431 | 17013 | 20547 |
| 2004-05 | 4511 | 24558 | 21898 |
| 2005-06 | 4786 | 27044 | 25142 |
| 2006-07 | 4476 | 12967 | 18760 |
| 2007-08 | 4710 | 29551 | 23301 |
| 2008-09 | 4806 | 22792 | 20996 |
| 2009-10 | 4907 | 29234 | 23195 |
| 2010-11 | 5016 | 38502 | 24451 |
| 2011-12 | 5505 | 5073 | 30387 |
| 2012-13 | 5931 | 43290 | 27104 |
| 2013-14 | 7009 | 66941 | 32136 |

Source: Annual report 2006-07 to 2014-15 Govt. of Odisha, Ministry of Micro, Small and Medium Enterprises

Note: Data up to 2005-06 is only for SSI sector, subsequent to 2005-06, Data related to MSME sector is being complied.

Thus, we choose capital investment and number of Employee as two independent variables and MSMEs unit as one dependent variable. The general purpose of regression is to learn more about the relationship between one dependent and more than one independent factor. To explain the variation of the dependent variable MSMEs unit by its covariance with independent variables capital investment, and number of employee, we use a multiple regression statistical model defined by:

$$Y = b_0 + b_1x_1 + b_2x_2 + \dots + b_nx_n + \epsilon,$$

Where:

Y= the explained variable;

x_1 = the explanatory variable 1;

x_2 = the explanatory variable 2;

n= number of observation

b_0, b_1, \dots, b_n = Model parameters.

ϵ = specification error, unknown (the difference between the true and the specified model);

The Multiple Regression to check the variables must be linear and normally distribution, before carrying out analysis should check the assumption. It is very important that check the assumption before deciding which statistics test is appropriate. Throughout in this study we will become aware of our obsession with assumption and checking them. Many researcher find checking assumption a pretty tedious affairs and often get confused about how to tell whether or not an assumption has been met. To check the normality of data we have use **One-Sample Kolmogorov-Smirnov Test**. We found that the variables which have been taken are normal. The MSMEs unit Significance value is greater than .05 (p -value = .598) and other two factors capital investment and number of employee Significance value also greater than the level of .05 (see table 1.1). In SPSS output above the significance values are greater than 0.05 (the typical alpha level), so we accept these data are normal distribution.

Table 1.1 One-Sample Kolmogorov-Smirnov Test

| | | No. of SSI | Investment made | No. Employment |
|----------------------------------|----------------|------------|-----------------|----------------|
| N | | 14 | 14 | 14 |
| Normal Parameters ^{a,b} | Mean | 4840.79 | 29205.14 | 22928.21 |
| | Std. Deviation | 861.324 | 14800.882 | 4702.388 |
| Most Extreme Differences | Absolute | .205 | .276 | .111 |
| | Positive | .205 | .276 | .111 |
| | Negative | -.104 | -.174 | -.092 |
| Kolmogorov-Smirnov Z | | .767 | 1.034 | .416 |
| Asymp. Sig. (2-tailed) | | .598 | .235 | .995 |

Source: SPSS output

After that again we have checked the linearity of the variables, one of the most important assumptions of regression model is linearity. In the regression model it is necessary that there should be a linear relationship between the dependent and independent variables. This study has verified linearity assumption for all possible sets. To check linearity we use Durbin-Watson. Table 1.2 displays linearity between motives and impact of mergers, in which the former is independent variable while the latter acts as dependent variable. The test signifies that the value of tolerance is less than .2 and the value of VIF is greater than 5. It means, the factors are linear (table 1.2).

Table 1.2 Coefficients

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|-------|-----------------------------|------------|---------------------------|------|-------|-------------------------|------|
| | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 2389.916 | 653.781 | | 3.656 | .004 | |
| | Investment made | .038 | .014 | .649 | 2.700 | .021 | .142 |
| | No. Employee | .059 | .044 | .321 | 1.336 | .208 | .142 |

a. Dependent Variable: No. of MSMEs

Source: SPSS output

Results and Analysis

This section presents and discusses study findings including testing of hypothesis and mediating effects.

Hypotheses Testing

To examine the relationship among variables, a multiple regression analysis was used. In most situations, statistical analysis consisted of an investigation of the behavior of known variables and development of an equation or model to explain the relationship between the variables. Moreover the statistical significance of the proposed relationship has to be evaluating which is known as the level of confidence that the correct relationship is roughly the estimated relationship.

Based on regression test, MSMEs units and capital investment were supported as they have p -values (p -value = .004 and .021) less than .05. The β values are respective (β value = .645) which shows positive relationship between MSMEs with capital investment shown in table (Table 1.5). On the other hand, other factor is number of employee were not supported at 5 percent as they have p -values (p -value = .208) greater than .05. Therefore, the hypothesis is rejected. The summary of research hypothesis is shown in table 1.5.

The below table 1.3 provided by SPSS is a summary of the model. This summary table provides the value of R and R² for the model that has been derived for the data, R has a value of .954 is only one predictor, this value represents the correlation between dependent and independent variables. The value of R² is .910 which tells us that independent variable in account of 91.5 % of the variation in dependent variable. There must be many factors that can explain this variation, but our model, which includes only independent variable, can explain approximately 91.5 % of it. This means that 8.5 % of the variation in dependent variable cannot be explained by independent variable alone. Therefore, there must be other factors that an influence also.

Table 1.3 Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .954 ^a | .910 | .893 | 281.641 |

a. Predictors: (Constant), No. Employment, Investment made

Source: SPSS output

ANOVA table 1.4 shows that, the average sum of square (mean square) can be calculated by dividing the sum of squares by the associated degree of freedom. The most important part of the table is the f-ratio, which is calculated $f = MS_m/MS_R$, and the associated significance value of that f-ratio. For the data the significant value is less than .05 (p-value = .000). The result tells us that there is less than 5 % chance that on f-ratio this large would happen if the null hypothesis true. ANOVA table shows that the significant value is less than 0.05. It means dependent variable is significantly predicted by independent variables namely capital investment and number of employee.

Table 1.4 ANOVA

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|--------|-------------------|
| 1 | Regression | 8771888.030 | 2 | 4385944.015 | 55.293 | .000 ^b |
| | Residual | 872538.327 | 11 | 79321.666 | | |
| | Total | 9644426.357 | 13 | | | |

a. Dependent Variable: No. of SSI

b. Predictors: (Constant), No. Employment, Investment made

Source: SPSS output

Table 1.5 Coefficients

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|-----------------|-----------------------------|------------|---------------------------|-------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 2389.916 | 653.781 | | 3.656 | .004 |
| | Investment made | .038 | .014 | .649 | 2.700 | .021 |
| | No. Employment | .059 | .044 | .321 | 1.336 | .208 |

a. Dependent Variable: No. of MSMEs

Source: SPSS output

The above co-efficient SPSS output table 1.5 provided details of the parameters (the β value) and the significance of these values. So, from the table we can say that b_0 is 2389.916, and this can be interpreted, the model predicts that 238992 units will be set up (our unit of measurement was numbers). We can also read off the value of b_1 from the table and this value represents the gradient of regression line it is .038 and b_2 is .059. Although this value is the slope of the regression line, it is more useful to think of this value representing the change in the associated with a unit change in the predictor. If our independent variables are increase by one unit, then our model predicts that .038 extra MSME units will be growth. We can say that for an increase in investment of Rs 1lkh the model predicts 38 extra units growth.

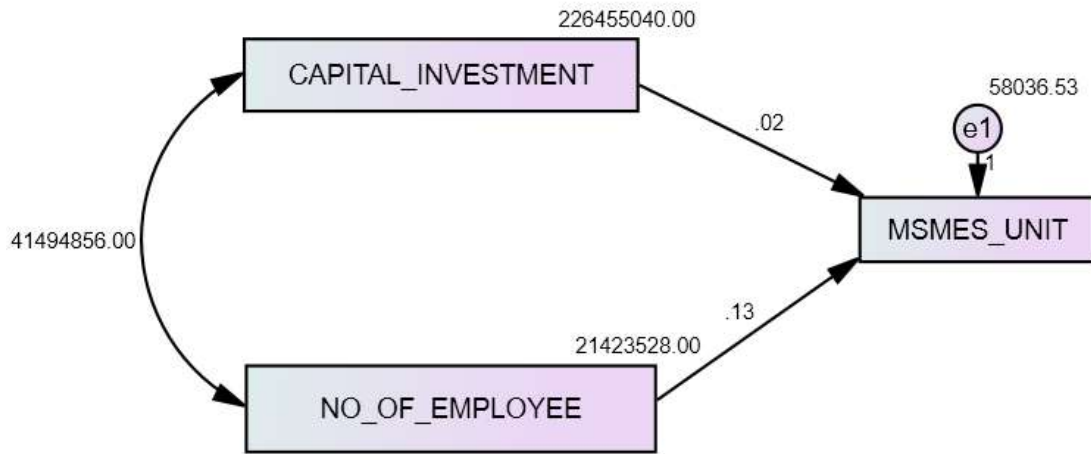
If this observed significance is less than .05, then scientists agree that the results reflect a genuine effect. For these two values, the significance is .004 and .021 which are less than .05. Therefore, the β values are different from 0 and we can conclude that the independent variable (capital investment) makes significant contribute ($p < .05$) to predict dependent variable (MSME units).

Most influential factor on performance of MSMEs

Two factors are found to have significance relationship with performance of MSMEs, there are MSMEs units and capital investment with p -values less than .05. Thus, MSMEs have to focus on these factors in order to enhance their performance.

| Research hypothesis | Decision | Reason for accepting or rejecting |
|---|----------|---|
| The influence of capital investment will be Positively association with MSMEs units. Capital investment and employment generation | Accepted | Supported at 5% significance level (p-value= .004 and .021) |
| The influence of MSME units will be Positively association with employment generation. | Rejected | Not supported at 5% significance level (p-value = .208) |

Figure 1.0



Influential factor on performance of MSMEs

Discussion and Implication

The results indicate that capital investment is more influence to MSMEs than number of employee. The result is also confirmed with many studies that approve the relationship between entrepreneurial goals and motivation with MSMEs sector. Motivation is required to translate recognize opportunity into actions (Carsrud and Brannback, 2011). Furthermore, studying the relationship between capital investment and employment generation and MSMEs units’ business performance reveals that the capital investment is more influence than employment generation.

As a result in our study, MSMEs has an opportunity to identify the strength and weakness of entrepreneurship along with existing opportunities and threats. MSMEs are time poor and as a result focus mostly on operational activities (Garengo et al, 2005) because they are more concerned about survival rather than growth (Gray, 2002). Hence, those searching for growth opportunity are acting entrepreneurially (Ardichivili et al., 2003). The main difference between MSMEs and entrepreneurs is the degree to which they engage in the search for growth opportunities. There had been lots of research examine the benefits of networking for entrepreneurs seeking business opportunities (Hillet al., 1997; Singh et al., 1999; Hill and Brennan, 2000).

Conclusion

MSMEs form an integral part of the Indian economy. The major sources of finance used by the MSMEs, and we find that most of the MSMEs use their own capital. The MSMEs face a situation due to extreme competition from large industries due to withdrawal of subsidy, lack of infrastructure, anti dumping policy, challenges on product standardization, total quality management etc. There has been a definite change in attitude of the govt. from protection to promotion of MSMEs.

The objective of this study was to determine the factors influencing of MSMEs in Odisha. Result from table 1.4 shows that the significant value is less than 0.05. It means dependent variable MSMEs unit is significantly predicted by independent variables namely capital investment and number of employee. Then, the co-efficient table shows that capital investment is more influencing than number of employee in the MSMEs sector. This research was carried out to study the critical considered the MSMEs sector generate more employment with the help of capital investments. Therefore, entrepreneurs have to focus these factors to enhance their performance. There are number of factors impact on MSMEs performance has made significant contribution to set up MSMEs sector and also develop rural industrialization is ideally suited to build on the strength of our traditional skills and knowledge by the use of technology. It is very good and healthy sign towards progress and prosperity of Odisha.

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Conflict of interest

We declare that we have no conflict of interest.

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