**A STUDY ON GREEN ENTREPRENEURIAL INITIATIVES OF SMALL AND MEDIUM ENTERPRISES IN JORHAT, ASSAM**

Barsha Borah

CKB Commerce College, Jorhat, India

Email: barshaborah511@gmail.com

*Received: 10th September 2022, Accepted: 3rd October 2022 and Published: 3rd October 2022*

**ABSTRACT**

**Aim:**The present study aims to determine the extent of green entrepreneurial initiatives by Small and Medium Enterprises (SMEs), in Jorhat, Assam.

**Results:**The research design of the study is descriptive. Sixty SMEs from Jorhat, Assam, India, are included in this study to determine green entrepreneurial initiatives.

**Conclusion:** It has been observed that SMEs within their spheres of operation limit green entrepreneurial initiatives, and such activities are nascent. The study emphasises green perspectives, which can often provide the foundation for creating and growing viable, commercially successful business ventures.

**Keywords**: Green Entrepreneurial Initiatives, Environmental, SMEs, Business Ventures

**HIGHLIGHTS:**

**1.**Small and Medium Enterprises (SMEs) in Jorhat, Assam, India, within their operation spheres, limit green entrepreneurial initiatives, and such activities are nascent.

**INTRODUCTION**

The paper aims to study the extent of green entrepreneurial initiatives by Small and Medium Enterprises (SMEs) in Jorhat, Assam. The following is the list of objectives of this current study.

1. To highlight the extent of Green Entrepreneurial Initiatives by SMEs in the Jorhat district of Assam, India.
2. To determine the factors influencing Green Entrepreneurial Initiatives by SMEs in Jorhat, Assam, India.
3. To identify the challenges in implementing green entrepreneurial initiatives.

To fulfil the requirement of the above objectives, both primary and secondary data have been collected from different sources while considering the following rationale. The area of the study is the SMEs of Jorhat District, Assam, India. The data from 100 SMEs is obtained from the District Industries Centre (DIC), Jorhat, Assam, India from April 2015-February 2020 (Table 1) [1]. The primary data on the parameter of interest from the selected sample has been collected with the help of a framed questionnaire keeping in view the study's objectives. The secondary information has been collected from the internet, DIC, Jorhat, Assam, India to supplement primary data. For the study, the sample size is determined as suggested by Yamane (1973) [2] and found to be 80 SMEs (Check supplementary data). A Simple Random Sampling (SRS) without replacement is applied, and the selection is made using a random number table.

Collected data were compiled and analysed through frequency and percentage. The descriptive statistics used in this study include mean and standard deviation. Principal Component Analysis (PCA) is applied to isolate the most prominent green entrepreneurial initiatives among small and medium enterprises in Jorhat, Assam, India. SPSS v17.0 (USA) is used for data analysis. Only 60 industries have responded to this questionnaire and agreed to participate in this study. The entire study is based on a thesis by Bakari Ali Mwakambirwa [3] at the University of Nairobi, Kenya.

**RESULTS**

*Profiles of Respondents' Firms:*

*Number of Employees*

All sixty SMEs had employees between 1 and 5, with about 72.1% employing less than five employees and 4% having a workforce of more than 11 employees. About 45.9% reported that their companies have been operating for five years, 13.1% between 3 to 4 years and 6.6% over 1 to 2 years.

*Value of Assets*

On the value of assets the business is worth, the respondents indicated that 52.5% of SMEs are worth less than Rs. 500,001.00 and 32.8% at between Rs. 500,001.00 and Rs. 1,000,000.00. Between Rs. 1000,001.00 to Rs. 5,000,000.00, there is 6.6% and above Rs. 5,000,001.00 with 6.6%. 85% of SMEs have an asset base of less than Rs. 1,000,000.00, which is small and medium.

*Annual Turnover*

6.6% of the respondents had an annual turnover above Rs. 5000,001. The businesses with a turnover less than Rs. 500,001 are more than Rs.500,001 to Rs. 1000,000.

*Ownership*

78.7% of the businesses are sole proprietorships, while 6.6% are partnerships. Only 13.1% of SMEs include viz; Joint Hindu Family (JHF) businesses, cooperatives, and limited liability companies. It concludes that most SMEs are singly owned and could be either side businesses or for people who are just starting a business.

*Type of Industry*

Regarding the type of industry respondents operate, food and beverage manufacturing and hotel/restaurant comprise 6.6%, respectively, followed by 13.1% for both paper and paper products and hardware manufacturers. Retail trade accounts for 19.7%, whereas 39.3% consist of other consists of Self-help group, tailoring, cane products, car care and other related small services.

*The extent of Green Entrepreneurial Initiatives among SMEs in Jorhat, Assam, India*

The principal component analysis is carried out on the elements to find the most effective green initiatives. Six components with Eigenvalues of 1 or more, accounting for about 87% of the total variance, are extracted (Table 2). The process of identifying the most significant indicators of SME's green entrepreneurial practices is determined based on values of the correlations between variables and their components in the component matrix summarised in Table 3. Table 3 contains the values of the correlations between variables and their components in the component matrix showing that the first five elements have correlation values greater than 0.7000 and thus constitute the list of extracted elements. Further scrutiny shows that five elements have correlation values less than 0.5000. Elements with correlation values of more than 0.5000, are retained (Only 8), while those with less than 0.5000 are excluded. Table 3 shows the support extended by SMEs towards green initiatives. It is found that SMEs' expenditure on green procurement is growing, and there are reliable consultancy firms for green business. Most SMEs acknowledging access to green technology are some of the principal indicators of the prevalence of green entrepreneurial practices in Jorhat, Assam, India. These predominant factors could be said to be related to green entrepreneurial production and marketing practices. The remaining elements, including an increasing number of employees, growing customers for green products, reduction in expenditure on non–green products procurement, and green activity, provide SMEs with a competitive edge as the most prominent seems to be related to marketing factors of products of green innovations.

*Factors Influencing Green Entrepreneurial Practices*

Various factors included in this study are entrepreneur skills, opportunities, capital, incentives and motivation for green entrepreneurship.

*Entrepreneurial Skills*

The analysis of the influence of the anticipated factors was initiated using a set of six statements to determine how entrepreneurial skill impacted SMEs' green practices. The research findings were as is summarised in Table 4. The influence of entrepreneurial skills received an average mean rating from the respondents (mean of 2.69). 26.7% of the respondents admitted having had training in green business activities, 13.3% of the respondents had skills in green management, and 26.6% indicated having skills in green team management. Further, 20% of the respondents acknowledged having adequate skills in green business planning, with 33.3% being equipped with skills in green marketing activities. However, 60% admitted that one could notice green business opportunities. The results imply that while there could be abundant opportunities for investment in green entrepreneurial practices by the SMEs in Assam, especially Jorhat, a majority of the SMEs lacked the requisite skills that could enable them to tap into the readily available potential.

*Opportunities*

Opportunity for green entrepreneurship was also assessed to determine its influence on the SMEs within their facilities (Table 5). The respondents indicated that opportunities for green entrepreneurship are relatively prominent, given its weighted mean of 3.32. 13.3% scored for the absence of entry barriers into the green entrepreneurial products market compared to those who felt there were barriers. The other elements drew relatively more positive ratings from the respondents. 33.3% of the respondents expressed a high demand for green products and services. 20% refuted such a suggestion, with the rest being not sure, 40% indicated that there are vast opportunities for green procurement, 33.4% said that the public supports green activities, and 40% acknowledged having access to information on green technology. It tends to corroborate the earlier assertion of the respondents about the existence of opportunities for investments in green practices by SMEs in Jorhat, Assam, India.

Green Incentives

Indicators of green incentives are probed to determine their presence and are listed in Table 6. Table 6 shows that the influence of elements of green incentives was found to be average, as manifested by its overall weighted mean of 3.21. Most of its elements were found to have either average or above-average mean ratings, showing their influence was a reality. The benefits of green business ventures (3.67), presence of environment-minded management and gain of expertise to improve green business shares the same mean (3.47) as benefits to diversify into a new market (3.33) and ease of product regulations in green business activity (3.27). Others include ease of modifying products for green-oriented markets (3.20), availability of profitable ways of doing green business (3.13) and also closeness to foreign markets needing green products (3.13). The taxation system favours green business activity (2.80), and the Government providing attractive incentives (2.67) had a slightly lesser mean rating indicating less influence.

*Availability of Capital*

An inquiry into the effects of the availability of capital for the coordination of its activities is made (Table 7). The results show that slightly above-average respondents indicated there being the capital for green entrepreneurship, giving the item an overall weighted mean of 3.00. It is due to the relatively low rating which all the elements of this factor received from the respondents. For instance, a minority of only 13.3% of the respondents were convinced that loans for green activities are available, and only 6.7% indicated the existence of a fund set for green entrepreneurship. The respondents are not aware of the steps taken by the Government included in Assam Industrial Policy 2008. It is not accessible for them, and only 26.7% of the respondents said there was reduced paperwork for access to green funding compared to those who contradicted the assertions or were unsure. Further, 20% said there are steps taken by governing authorities to encourage green entrepreneurship funding compared to 66.7% who are not sure, and 26.7% acknowledged the presence of subsidies given to green businesses. In comparison, only 13.4% said that there are low-interest loans available to green entrepreneurs, with a similar number indicating the existence of a wide variety of financing programmes for green entrepreneurs as compared to those who opposed such suggestions or those who were not sure. While most respondents acknowledged the influence of funds for green entrepreneurship, access to funds to run green entrepreneurial practices was a challenge.

*Challenges faced to implement green entrepreneurial practices:*

The industries' challenges to implementing green entrepreneurial practices are studied and listed in Table 8. The challenges faced in implementing green entrepreneurial practices indicate a weighted mean of 3.61, reflecting significant challenges. A majority of 73.3% responded that there had been a lack of green entrepreneurship policies framework, 53.3% indicated scarcity of natural resources, which is necessary for green technology, and 46.7% opined the absence of public financial support for green. 80% acknowledged that the lack of proper infrastructural networks to act as a catalyst, 46.7% affirmed that there had been a threat from large companies. 60% of respondents said there is huge research and development, production and commercialisation cost associated with green initiatives. 33.4% responded readily to pay high consumers for green products.

First and foremost, the study established that the SMEs had, within their spheres of operation, green entrepreneurial practices, as was indicated by the favourable weighted mean rating of the items used to assess the extent of the SMEs' green entrepreneurial practices. Each of the statements used to determine the prevalence of green entrepreneurial practices among the SMEs received average to above-average mean ratings from the respondents showing a pronounced prevalence of the practices among SMEs in Jorhat. The SMEs regard the green entrepreneurship as an emerging phenomenon.

The factors influencing the practices are listed in Table 9. The mean ranking of the various factors shows that entrepreneur motivation (4.03) had the most significant influence on SMEs' green entrepreneurial practices. It is followed by the challenges faced by them in implementing green entrepreneurial practices (3.61), opportunities for the green entrepreneur (3.32) then, green incentives (3.21) and availability of capital (3.00) and lastly, entrepreneurial skills (2.69).

**CONCLUSION:**

The findings showed that the adoption of green entrepreneurial practices by SMEs in Jorhat, Assam, India is still in a nascent stage. Following are the recommendations provided for its massive growth:

1. Therefore, relevant stakeholders should put in place measures to encourage its adoption and implementation. Such efforts could, for instance, create massive awareness on the relevance of green entrepreneurial practices through the sensitisation of all stakeholders. This act could open up opportunities to access green technology, internal and foreign markets and raw materials for green production in some cases.
2. The Government, through its relevant authorities, should enhance support for green product innovation. The support includes attractive incentives for a favourable taxation system for green business activity, creating a fund for green entrepreneurship, and negotiating with financial institutions to provide investors with low-interest loans. Also, implement provisions in the Industrial Policy of Assam (AIP 2008) [4] and financial benefits.
3. The investors in green entrepreneurship should form associations and forums to enable them to have a stronger negotiating ground with other stakeholders in the zonal, regional, national and international levels.
4. The local people should also help and encourage entrepreneurs and be ready to pay more for eco-friendly and high-quality products.

Relative to the influence of factors on the practices, various factors are found to manifest varying degrees of effect on the practices, according to a majority of the respondents. Specifically, the findings showed that entrepreneur motivation had the greatest influence on the SMEs' green entrepreneurial practices followed by opportunities for green entrepreneurs, green incentives followed by capital availability and entrepreneurial skills. From the above analysis, it can be concluded that green entrepreneurial practices as an emerging practice are progressively gaining popularity among SMEs in Jorhat, Assam, India. It is found to be practised by an appreciable number of SMEs directly or indirectly. The findings established were influenced by several factors: entrepreneurial motivation, opportunities for green entrepreneurs, green incentives, availability of capital and entrepreneurial skills, with entrepreneurial motivation manifesting the most significant degree of influence. SMEs also face many challenges while implementing them in practice. It is crucial to work on the recommendations to change the environment for the greater interest of society. Taking care of society is very important, and sustaining it for the future when resources are scarce.

**REFERENCES**

1. <https://industries.assam.gov.in/portlets/industrial-trade-infrastructure>

2. <https://www.google.co.in/books/edition/Statistics_an_Introductory_Analysis/dX-HBsrLHMIC?hl>

3. <http://erepository.uonbi.ac.ke/handle/11295/60388>

4. <http://www.aidcltd.com/pdf/assamindustrial_2008.pdf>

**TABLES:**

# Table 1: Small and Medium Enterprises in Jorhat district

|  |  |
| --- | --- |
| **Category** | **Number** |
| General Trade, Wholesale, Retail Stores | 10 |
| Transport, Storage and Communications | 04 |
| Agriculture, Forestry and natural Resources | 33 |
| Accommodation and Catering | 03 |
| Professional and technical Services | 20 |
| Education, Health and Entertainment | 04 |
| Industrial Plants, factories and Workshops | 26 |
| **TOTAL** | 100 |

**Source: District Industries Centre,** Jorhat, Assam, India (April 2015-February 2020)

# Table 2: Total Variance for Principle Component Analysis (PCA)

|  |  |
| --- | --- |
| **Component** | **Initial Eigenvalues** |
| **Total** | **Percentage of Variance** | **Cumulative Percentage** |
| 1 | 4.935 | 32.897 | 32.897 |
| 2 | 2.399 | 15.995 | 48.892 |
| 3 | 1.663 | 11.086 | 59.977 |
| 4 | 1.587 | 10.582 | 70.559 |
| 5 | 1.458 | 9.717 | 80.276 |
| 6 | 1.058 | 7.052 | 87.328 |
| 7 | .998 | 6.651 | 93.979 |
| 8 | .520 | 3.465 | 97.445 |
| 9 | .189 | 1.261 | 98.705 |
| 10 | .137 | .916 | 99.622 |
| 11 | .042 | .280 | 99.902 |
| 12 | .015 | .098 | 100.000 |
| 13 | 4.965E-16 | 3.310E-15 | 100.000 |
| 14 | -3.317E-16 | -2.211E-15 | 100.000 |
| 15 | -9.921E-16 | -6.614E-15 | 100.000 |

# Table 3: Component Matrix for Principal Component Analysis

|  |  |
| --- | --- |
|  | Component |
| 1 | 2 | 3 | 4 | 5 | 6 |
| Sales due to green activities have increased | 0.673 | -0.135 | -0.537 | -0.216 | 0.299 | 0.086 |
| Relatives production has reduced | 0.165 | 0.545 | 0.211 | -0.447 | 0.568 | 0.003 |
| Your business has increased pre-tax profit | 0.039 | 0.478 | -0.179 | 0.776 | 0.235 | -0.205 |
| Number of employees has increased | -0.354 | 0.274 | -0.219 | 0.148 | -0.094 | 0.818 |
| Your expenditure on green procurement is growing | 0.612 | -0.463 | 0.341 | 0.208 | -0.326 | 0.104 |
| Your customers needing green product is growing | 0.838 | 0.317 | 0.096 | 0.100 | 0.056 | -0.006 |
| Expenditure on non-green procurement is reducing | 0.713 | 0.456 | 0.248 | -0.295 | 0.063 | 0.075 |
| Your image as a green business is getting stronger | 0.821 | 0.258 | -0.436 | -0.126 | -0.010 | 0.038 |
| There has improved customerSatisfaction | 0.581 | -0.505 | 0.028 | 0.139 | 0.330 | -0.324 |
| Number of repeat buyers for green product is growing | 0.828 | -0.118 | -0.408 | -0.111 | -0.234 | 0.043 |
| I have an access to foreign markets | 0.311 | -0.447 | 0.353 | 0.229 | 0.230 | 0.149 |
| Green activity gives my business competitive advantage | 0.775 | -0.157 | 0.161 | -0.054 | -0.507 | 0.095 |
| I have access to green technology | 0.232 | -0.541 | -0.039 | 0.294 | 0.602 | 0.393 |
| There is support for green product innovation | 0.307 | 0.258 | 0.743 | -0.059 | 0.096 | 0.170 |
| There is reliable consultancy firms for green business | 0.445 | 0.582 | 0.035 | 0.619 | -0.150 | -0.033 |

# Table 4: Entrepreneurial Skill

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Statement** | **NE** | **LE** | **ME** | **GE** | **VGE** | **Total** | **Mean** | **S.D.** |
| **F** | **%** | **F** | **%** | **F** | **%** | **f** | **%** | **f** | **%** | **F** | **%** |
| I have the training in green business activities | 24 | 40 | 8 | 13.3 | 12 | 20 | 16 | 26.7 | 0 | 0 | 60 | 100 | 2.33 | 1.26 |
| You have skills in greenManagement | 8 | 13.3 | 16 | 26.7 | 24 | 40 | 12 | 20 | 0 | 0 | 60 | 100 | 2.67 | 0.95 |
| You have skills in greenteam management | 8 | 13.3 | 20 | 33.3 | 16 | 26.7 | 16 | 26.7 | 0 | 0 | 60 | 100 | 2.67 | 1.02 |
| You have skills in greenbusiness planning | 12 | 20 | 12 | 20 | 24 | 40 | 12 | 20 | 0 | 0 | 60 | 100 | 2.67 | 1.20 |
| You have skills in greenmarketing activities | 16 | 26.7 | 8 | 13.3 | 16 | 26.7 | 20 | 33.3 | 0 | 0 | 60 | 100 | 2.60 | 1.03 |
| You can easily notice aGreen business | 12 | 20 | 4 | 6.7 | 8 | 13.3 | 32 | 53.3 | 4 | 6.7 | 60 | 100 | 3.20 | 1.29 |
| **Grand Mean** |  | 2.69 | 1.12 |

# Table 5: Opportunities for Green Entrepreneurship

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Statement** | **SD** | **D** | **NS** | **A** | **SA** | **Total** | **Mean** | **STD** |
| **F** | **%** | **F** | **%** | **F** | **%** | **F** | **%** | **f** | **%** | **f** | **%** |
| There are no entry barriers into market I serve | 16 | 26.7 | 0 | 0 | 24 | 40 | 12 | 20 | 8 | 13.3 | 60 | 100 | 3.20 | 1.23 |
| There is a high demand for a green productionand services | 8 | 13.3 | 4 | 6.7 | 28 | 46.7 | 8 | 13.3 | 12 | 20 | 60 | 100 | 2.93 | 1.35 |
| There are wide opportunities for green procurement | 0 | 0 | 0 | 0 | 36 | 60 | 16 | 26.7 | 8 | 13.3 | 60 | 100 | 3.53 | 0.72 |
| The public has support for green activities | 8 | 13.3 | 0 | 0 | 32 | 53.3 | 4 | 6.7 | 16 | 26.7 | 60 | 100 | 3.33 | 1.26 |
| You have access to information on green technology | 0 | 0 | 0 | 0 | 36 | 60 | 12 | 20 | 12 | 20 | 60 | 100 | 3.60 | 0.81 |
| **Grand Mean** |  | 3.32 | 1.07 |

# Table 6: Green Incentives

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Statement** | **NE** | **LE** | **ME** | **GE** | **VGE** | **Total** | **Mean** | **STD** |
| **F** | **%** | **F** | **%** | **f** | **%** | **f** | **%** | **f** | **%** | **f** | **%** |
| The taxation systemfavors green business activity | 4 | 6.7 | 16 | 26.7 | 32 | 53.3 | 4 | 6.7 | 4 | 6.7 | 60 | 100 | 2.80 | 0.92 |
| Attractive incentives provide by the  | 4 | 6.7 | 20 | 33.3 | 32 | 53.3 | 0 | 0 | 4 | 6.7 | 60 | 100 | 2.67 | 0.88 |
| Presence of environment minded | 0 | 0 | 0 | 0 | 32 | 53.3 | 28 | 46.7 | 0 | 0 | 60 | 100 | 3.47 | 0.50 |
| Expectation of benefits of green business | 0 | 0 | 0 | 0 | 32 | 53.3 | 16 | 26.7 | 12 | 20 | 60 | 100 | 3.67 | 0.80 |
| Benefits from diversifyinto new market | 0 | 0 | 0 | 0 | 48 | 80 | 4 | 6.7 | 8 | 13.3 | 60 | 100 | 3.33 | 0.71 |
| Gain of expertise to improve green | 0 | 0 | 0 | 0 | 40 | 66.7 | 12 | 20 | 8 | 13.3 | 60 | 100 | 3.47 | 0.72 |
| Availability of profitable ways of doing green | 4 | 6.7 | 0 | 0 | 44 | 73.3 | 8 | 13.3 | 4 | 6.7 | 60 | 100 | 3.13 | 0.81 |
| Easy product regulations in green business | 0 | 0 | 0 | 0 | 48 | 80 | 8 | 13.3 | 4 | 6.7 | 60 | 100 | 3.27 | 0.58 |
| Easily to modify products for green-oriented | 0 | 0 | 0 | 0 | 52 | 86.7 | 4 | 6.7 | 4 | 6.7 | 60 | 100 | 3.20 | 0.55 |
| Closeness to foreign markets needing green products | 0 | 0 | 8 | 13.3 | 40 | 66.7 | 8 | 13.3 | 4 | 6.7 | 60 | 100 | 3.13 | 0.72 |
| **Grand Mean** |  | 3.21 | 0.72 |

# Table 7: Availability of Capital

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Statement** | **SD** | **D** | **N S** | **A** | **S A** | **Total** | **Mean** | **S.D** |
| **F** | **%** | **F** | **%** | **f** | **%** | **f** | **%** | **f** | **%** | **f** | **%** |
| Loans for green activities are available | 8 | 13.3 | 8 | 13.3 | 36 | 60 | 4 | 6.7 | 4 | 6.7 | 60 | 100 | 2.80 | 0.99 |
| There is a fund set for Green entrepreneurship | 8 | 13.3 | 12 | 20 | 36 | 60 | 0 | 0 | 4 | 6.7 | 60 | 100 | 2.67 | 0.95 |
| Reduced paper work for access to green funding | 0 | 0 | 8 | 13.3 | 36 | 60 | 4 | 6.7 | 12 | 20 | 60 | 100 | 3.33 | 0.95 |
| There are delicate steps taken to governing authority to encourage green entrepreneurship funding | 0 | 0 | 8 | 13.3 | 40 | 66.7 | 0 | 0 | 12 | 20 | 60 | 100 | 3.27 | 0.94 |
| There are subsidies given to green business | 0 | 0 | 8 | 13.3 | 36 | 60 | 12 | 20 | 4 | 6.7 | 60 | 100 | 3.20 | 0.75 |
| There are low interest loans available to green entrepreneurs | 8 | 13.3 | 8 | 13.3 | 36 | 60 | 4 | 6.7 | 4 | 6.7 | 60 | 100 | 2.80 | 0.99 |
| There are wide variety offinancing programmes | 4 | 6.7 | 8 | 13.3 | 40 | 66.7 | 4 | 6.7 | 4 | 6.7 | 60 | 100 | 2.93 | 0.86 |
| **Grand Mean** |  | 3.00 | 0.92 |

# Table 8: Challenges faced to implement green entrepreneurial practices

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Statement** | **S** | **D** | **N** | **A** | **S** | **Total** | **Mean** | **S.D** |
| **F** | **%** | **F** | **%** | **f** | **%** | **f** | **%** | **f** | **%** | **f** | **%** |  |  |
| Lack of green entrepreneurship policies framework | 8 | 13.3 | 0 | 0 | 8 | 13.3 | 20 | 33.3 | 24 | 40 | 60 | 100 | 3.87 | 1.32 |
| Scarcity of natural resources which is necessary for green technology | 8 | 13.3 | 0 | 0 | 20 | 33.3 | 12 | 20 | 20 | 33.3 | 60 | 100 | 3.60 | 1.32 |
| Absence of financial public support to green entrepreneurship | 0 | 0 | 4 | 6.7 | 28 | 46.7 | 16 | 26.7 | 12 | 20 | 60 | 100 | 3.60 | 0.89 |
| Lack of proper infrastructural networks | 8 | 13.3 | 0 | 0 | 4 | 6.7 | 24 | 40 | 24 | 40 | 60 | 100 | 3.93 | 1.30 |
| Threat from large companies | 12 | 20 | 4 | 6.7 | 16 | 26.7 | 4 | 6.7 | 24 | 40 | 60 | 100 | 3.40 | 1.55 |
| Huge research and development, production and commercialization cost | 0 | 0 | 0 | 0 | 24 | 40 | 24 | 40 | 12 | 20 | 60 | 100 | 3.80 | 0.75 |
| Ready to pay high consumers for green products. | 0 | 0 | 20 | 33.3 | 20 | 33.3 | 16 | 26.7 | 4 | 6.7 | 60 | 100 | 3.07 | 0.94 |
| **Grand Mean** |  | 3.61 | 1.15 |

# Table 9: Mean ranking of factor influencing SMEs Green Entrepreneur (N=60)

|  |  |  |
| --- | --- | --- |
| **Factor** | **Mean Ranking** | **Standard Deviation** |
| Entrepreneurial skills | 2.69 | 1.12 |
| Opportunities for green entrepreneur | 3.32 | 1.07 |
| Entrepreneur motivation | 4.03 | 0.93 |
| Green incentives | 3.21 | 0.72 |
| Availability of capital | 3.00 | 0.92 |
| Challenges | 3.61 | 1.15 |

**SUPPLEMENTARY DATA**

**Sample Size Calculations (Yamane 1973):**

****

Where n is the sample size, N is the population size and e is the level of precision.

Calculation of sample size: In this study Population size (N) = 100 and taking the level of precision e=0.05 (i.e. 95% confidence), the required sample size is calculated as below.



Therefore, the sample size is 80 SMEs.