



## FACTORS CONTRIBUTING TO THE PROGRESS OF MSMEs IN UTTARAKHAND STATE, INDIA: A PRINCIPAL COMPONENT ANALYSIS

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### Abstract

The present paper is an attempt in understanding the factors contributing to the progress of MSMEs in Uttarakhand state, India. The instrument has been tested using and is valid reliable using cronbach alpha coefficient greater than 0.7. The respondents were surveyed using questionnaire. The data has been collected from 500 respondents of kumaon and Garhwal regions of Uttarakhand, India from owners or working people in MSMEs. The data has been collected by visiting the MSMEs site or through internet. Participants were mainly male (n=433, 86.6%) while the rest being female (n=67, 13.4%). The sample was taken using convenience sampling. The data analysis technique used is principle component analysis through SPSS 21 as statistical tool. Results show that economic factors, Institutional factors and Technological factors were the principle factors contributing to the progress of MSMEs in Uttarakhand, India.

**Keywords:** Progress, MSMEs, Economic factors, Institutional factors, Technology factors

### Introduction

MSMEs stands for Micro, Small, and Medium Enterprises. These are businesses that fall under a certain threshold of size in terms of investment, turnover, or employment. The exact definitions of MSMEs can vary from country to country, but generally, they are characterized by:

1. Micro Enterprises: These are the smallest entities, often run by individuals or families, with minimal investment in plant and machinery or equipment. Micro-enterprises usually have fewer than 10 employees.

2. Small Enterprises: Small enterprises are larger than micro-enterprises but still relatively small in scale. They typically have more employees (up to 50) and higher investment in plant and machinery.

3. Medium Enterprises: These are larger than small enterprises but still smaller than big corporations. Medium enterprises can have significantly more employees and higher investment thresholds compared to micro and small enterprises.

MSMEs play a crucial role in economic development, particularly in emerging economies, as they contribute significantly to employment generation, income generation, and overall economic growth. MSMEs have played a very significant factor in the development of Indian economy. The sector has created huge amount of jobs for the people compared to other industries, thus diminishing the regional imbalance in the nation (*Surendre Gade 2018*). The Indian economy is

growing and making progress in various sectors of economy. Thus, the MSMEs are faced by both opportunities and challenges (*Atul Saikia 2018*). MSMEs have always encouraged domestic production, low investment employment generation, contribution to foreign earnings and low import operations (*Gilda Farajollahzadeh et al 2016*). They are often considered the backbone of many economies due to their agility, innovation, and ability to adapt quickly to changing market conditions. MSMEs have been the most significant factor in economic growth. The number of people employed in terms of intensity is much higher compared to large industries. Thus, generating high amount of employment as well as production and exports. MSMEs have shown a great deal of innovativeness and adaptability in recent times for survival (*Subina Syal 2015*). The role of MSMEs have been realized specially in crisis times as they have become the significant part of economy in these times. The local government play an important role in the development of MSMEs be it in production, procurement, marketing or innovation (*Rosyid Arifin et al 2021*). The MSMEs sector is important for economic growth of the nation. The MSMEs provide goods and services to the people at a very reasonable price. The government have also realized the importance of MSMEs and have taken various initiatives in promoting MSMEs (*Priyadarshani Zanjurne 2018*). Governments and policymakers often provide special incentives and support to MSMEs to foster their growth and sustainability. The developed as well as developing economies have understood the significance of MSMEs. They play important role in finished good generation, exports and entrepreneurship (*Sanjeeb Kumar Dey 2014*).

Several factors contribute to the progress and growth of Micro, Small, and Medium Enterprises (MSMEs). These factors can vary depending on the specific industry, location, and economic conditions. Adequate access to finance is crucial for MSMEs to invest in their operations, purchase equipment, expand their businesses, and manage cash flow. MSMEs experience constraints which effect their ability and take benefit of the opportunity mainly financial. MSMEs should not depend on debt and remain self-sufficient. Moreover, they should efficiently employ their resources and must manage themselves more efficiently (*John Guay Pagaddut 2021*). 60% of MSMEs fail within the first 5 years (*Fatoki 2012*) Mainly because of poor financial management as there is lack of financial literacy in MSMEs (*Hamdino Hamdan et al 2021*). Financial institutions and government-backed schemes that provide affordable credit and financing options tailored to the needs of MSMEs can significantly contribute to their progress. Supportive government policies, such as tax incentives, subsidies, simplified regulations, and access to markets, can create a conducive environment for MSME growth. Additionally, dedicated government agencies that provide technical assistance, training, and capacity-building programs can help MSMEs overcome challenges and seize opportunities. Access to reliable infrastructure, including transportation networks, communication systems, energy supply, and digital connectivity, is essential for MSMEs to operate efficiently and reach markets. Most of the MSMEs use their own capital. They face huge competition from large industries in quality, infrastructure, anti-dumping policy etc. The government have made definitive measures in protecting the MSMEs (*Golakh Kumar Behera et al 2018*). Investments in infrastructure development can lower production costs, improve logistics,

and enhance market access for MSMEs. Embracing technology and innovation can improve productivity, quality, and competitiveness for MSMEs. Technology have influenced the economy and the businesses al around the world. Modern businesses cannot operate without the help of the technology. Thus it is important for MSMEs to upgrade themselves and make use of modern technology in their businesses (*Puneet Singh et al 2014*). Access to affordable technology solutions, digital tools, and training programs can empower MSMEs to streamline processes, develop new products/services, and access global markets. Access to domestic and international markets is critical for MSMEs to expand their customer base and increase sales. Trade facilitation measures, market linkages, participation in trade fairs, and e-commerce platforms can help MSMEs reach new customers and diversify revenue streams. A skilled and trained workforce is essential for MSMEs to innovate, adopt new technologies, and improve productivity. Investments in education, vocational training, and skill development programs can enhance the employability and productivity of workers in MSMEs. Building networks, partnerships, and collaborations with other businesses, industry associations, research institutions, and government agencies can provide MSMEs with valuable resources, knowledge, and opportunities for growth and innovation. Effective risk management practices, including financial planning, diversification of products/markets, insurance coverage, and contingency planning, can help MSMEs mitigate risks and navigate economic uncertainties. A supportive entrepreneurial ecosystem, including access to mentors, incubators, accelerators, and peer networks, can provide MSMEs with guidance, resources, and inspiration to overcome challenges and succeed in their ventures. Despite government initiative the MSMEs sector faces various challenges as difficulty in acquiring timely funds for working capital, problems in documentation, consultancy, lack of technology skills, quality of product, infrastructure, complicated laws etc (*Commodore Sushil Kumar Patel et al 2022*). By addressing these factors and creating an enabling environment for MSME development, policymakers, stakeholders, and support organizations can foster the progress and sustainability of MSMEs, thereby contributing to economic growth, job creation, and poverty reduction.

Uttarakhand, a state in northern India, presents a unique set of factors contributing to the progress of MSMEs.

The state has two states namely Kumaon and Garhwal which in total have 13 districts. The capital for winter is Dehradun while the summer capital is Gairsain (*Singh et al 2020*). Uttarakhand's strategic location in the foothills of the Himalayas makes it naturally endowed with scenic beauty and biodiversity, attracting tourists and providing opportunities for eco-tourism, adventure tourism, and related MSMEs in hospitality, travel, and recreation sectors. Uttarakhand economically is one of the fastest growing states of India (*Anil Sasi 2014*). The state is rich in natural resources such as water, forests, and minerals, which can be harnessed for various industries including agriculturally based industries, herbal and medicinal plants processing, hydropower generation, and mineral based industries, all of which can support MSME growth. The government of Uttarakhand has implemented several policies and initiatives to promote MSME growth, including financial assistance, subsidies, incentives, and easy access to credit and

land for setting up MSME units. Special schemes like the MSME Development Policy, Start-up Policy, and Industrial Policy provide a conducive environment for MSME development. Infrastructure development, including road networks, industrial estates, technology parks, and power supply, is crucial for MSME growth. Uttarakhand has been investing in improving infrastructure to facilitate business operations and attract investment in MSMEs. Uttarakhand has a pool of skilled and semi-skilled manpower, particularly in sectors like tourism, agriculture, and handicrafts. Government initiatives for skill development and vocational training further enhance the availability of skilled labor, which is essential for the growth of MSMEs. Uttarakhand is famous for its pilgrimage sites, hill stations, and adventure tourism spots. The tourism sector provides ample opportunities for MSMEs in hospitality, travel agencies, adventure sports, handicrafts, and local cuisine, contributing significantly to the state's economy. Uttarakhand's commitment to sustainable development aligns well with the ethos of many MSMEs. Initiatives promoting organic farming, eco-friendly practices, and renewable energy create opportunities for environmentally conscious MSMEs to thrive. Improvements in digital infrastructure and connectivity enable MSMEs in Uttarakhand to access markets beyond geographical boundaries. E-commerce platforms, digital marketing, and online payment systems open up new avenues for MSMEs to reach customers globally. By leveraging these factors and addressing challenges such as infrastructure gaps, access to finance, and regulatory hurdles, Uttarakhand can foster the growth and competitiveness of its MSME sector, driving overall economic development and job creation in the state.

Hence, the present paper tries to understand the factors contributing to the progress of MSMEs in Uttarakhand state, India. The findings may be helpful in addressing the factors contributing to the progress of MSMEs.

### **Research method**

The research is descriptive in nature done by using correlation research. Exploratory factor analysis technique is used to carry out the analysis. The questionnaire has been tested for validity with less than 0.05 and reliability with Cronbach alpha of 0.875. The sample was taken using convenience sampling.

A preliminary survey was conducted to observe the factors contributing to the progress of MSMEs in Uttarakhand, India also a literature review was done understand the different factors contributing to the progress of MSMEs so that the research instrument and data collection technique can be formulated. Factor analysis as the data analysis technique was used.

### **Participants**

The respondents were the owners and working people of different MSMEs in the state of Uttarakhand, India. The primary data was gathered through questionnaire send by internet or by visiting the MSMEs site. A total sample of 500 was collected. Participants were mainly male (n=433, 86.6%) while the rest being female (n=67, 13.4%). Demographic data is presented in table 1.

AGE	Frequency	Percent	Valid Percent	Cumulative Percent
under 18	107	21.4	21.4	21.4
18-24	68	13.6	13.6	35.0
24-34	31	6.2	6.2	41.2
35-44	83	16.6	16.6	57.8
45-54	87	17.4	17.4	75.2
55-64	26	5.2	5.2	80.4
above 64	98	19.6	19.6	100.0
Gender				
Male	433	86.6	86.6	86.6
Female	67	13.4	13.4	100.0
Total	500	100.0	100.0	

Table 1: Demographic data 2024

### Factor Analysis

Factor analysis was used on 16 variables, so that it can be analysed which factors are key for the progress of MSMEs in Uttarakhand, India. The factor analysis consists of KMO and Bartlett's test and extraction.

### Kaiser-Meyer-Olkin (KMO), Anti Image Matrices, and Bartlett's Test of Sphericity.

The KMO is 0.814 which is above 0.7 so is acceptable while the significance level is found to be .000 which is less than 0.05 (Hair et al., 2010).

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.814
Approx. Chi-Square		3993.234
Bartlett's Test of Sphericity	df	120
	Sig.	.000

Table 2: Processed Data 2024

In the Anti-image Matrices, each variable is found to be greater than 0.5 (Hair et al., 2010) in measure of sampling adequacy so there is no need to remove any variables as all variables are feasible to analyse. communality values exceeded .50 (Hair et al., 2010) ranging from .522 to .797 (Table 3).

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.821	36.380	36.380	5.821	36.380	36.380
2	2.185	13.655	50.036	2.185	13.655	50.036
3	1.524	9.527	59.563	1.524	9.527	59.563
4	1.124	7.023	66.586	1.124	7.023	66.586
5	.910	5.686	72.272			
6	.736	4.601	76.873			
7	.639	3.993	80.866			
8	.606	3.785	84.651			
9	.478	2.985	87.636			
10	.430	2.687	90.323			
11	.323	2.021	92.344			
12	.300	1.877	94.221			
13	.271	1.696	95.918			
14	.245	1.534	97.452			
15	.238	1.490	98.941			
16	.169	1.059	100.000			

Extraction Method: Principal Component Analysis.

Table 3: Processed Data 2024

The total variance explained by the variables having Eigen values greater than 1 is 66.58% (*Hair et al., 2010*). The rotated factor matrix on table 4 shows all factor loadings are significant, greater than 0.50.

**Component Matrix**

	Component		
	1	2	3
The economic viability of MSMEs is closely related to their investment decisions.	.750		
Access to financing and credit opportunities	.603		
Market demand for MSME products/services	.524		
Cost of doing business (e.g., taxes, utilities)	.616		
Competitive pricing strategies	.644		
Ease of obtaining necessary permits and licenses	.696		
Access to business development services	.652		
Intellectual property protection			.719
Adoption of modern technologies and digital tools			.655

Innovation in products or services	.600		
Digital marketing and online presence		.704	
Data analytics and automation		.771	
Availability of skilled labor	.665		
Collaboration with larger enterprises	.581		
Local infrastructure (e.g., transportation, utilities)	.728		
Sustainability and environmental practices	.723		

Extraction Method: Principal Component Analysis.

a. components extracted.

Table 4: Processed Data 2024

The factor analysed by principle component analysis were best fit in 3 factors namely economic factors, institutional factors and technological factors. Hence, it can be concluded that these factors are valid and best for further models.

### CONCLUSION

This paper explores factors contributing to the progress of MSMEs in Uttarakhand, India. The instrument and the data collected is reliable and valid. Exploratory factor analysis using principle component analysis (PCA) with varimax rotation was used showing 3 factors namely economic factors, institutional factors and technological factors were distinct and valid of 16 variables with KMO above 0.70 and communalities above 0.50 and significant. Hence, all factors are valid contributing to the progress of MSMEs.

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