



**International Journal of Process Management and Benchmarking**

ISSN online: 1741-816X - ISSN print: 1460-6739

<https://www.inderscience.com/ijpmb>

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**Managerial and environmental factors affecting small and medium enterprises: an empirical study in India**

Sachin A. Meshram, A.M. Rawani, Atul Kumar Sahu, Ajit Kumar Singh

**DOI:** [10.1504/IJPMB.2023.10061250](https://doi.org/10.1504/IJPMB.2023.10061250)

**Article History:**

Received:	23 May 2023
Last revised:	25 May 2023
Accepted:	12 June 2023
Published online:	02 January 2025

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## **Managerial and environmental factors affecting small and medium enterprises: an empirical study in India**

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**Sachin A. Meshram\***

Department of Mechanical Engineering,  
G H Rasoni University,  
Amravati, Maharashtra 444701, India  
Email: sachin\_meshram27@yahoo.com  
\*Corresponding author

**A.M. Rawani**

National Institute of Technology Raipur,  
Chhattisgarh-492010, India  
Email: amrawani@gmail.com

**Atul Kumar Sahu**

School of Studies in Engineering and Technology,  
Guru Ghasidas Vishwavidyalaya (A Central University), India  
Email: atulkumar.sahu@ggu.ac.in

**Ajit Kumar Singh**

Jaipuria Institute of Management Jaipur,  
Rajasthan – 302033, India  
Email: ajitkumar2101@yahoo.com

**Abstract:** Small and medium enterprises (SMEs) are considered to be the most important driver to achieve significant progress and economic development. The contribution of the SME sector to the country's economy has attracted the attention of academics and policy makers in both developed and transition economies. Today, it is well-established fact that, SMEs are the engine of economic growth through employment generation, contribution to GDP, technological innovations, and other aspects of economic development. The aim of this study is to identify the managerial and environmental factors affecting success of SMEs in Chhattisgarh, India. A questionnaire was developed using 23 items identified from literature. Using a convenience sampling technique, data were collected through a questionnaire survey method. By conducting exploratory factors analysis, this study identified five managerial and environmental factors, namely: managerial competency, business environment, market support, socio-culture and institutional support. Cronbach's alpha coefficients were used to measure the reliability of the all identified five factors.

**Keywords:** managerial and environmental factors; small and medium enterprises; SMEs; factor analysis.

**Reference** to this paper should be made as follows: Meshram, S.A., Rawani, A.M., Sahu, A.K. and Singh, A.K. (2025) 'Managerial and environmental factors affecting small and medium enterprises: an empirical study in India', *Int. J. Process Management and Benchmarking*, Vol. 19, No. 1, pp.77–88.

**Biographical notes:** Sachin A. Meshram is a faculty in Mechanical Engineering Department at G H Rasoni University Amravati, Maharashtra (India). He has received his Master Degree in Industrial Engineering and Management from National Institute of Technology Calicut and PhD from National Institute of Technology Raipur. He has more than ten years teaching experience, three years of research and one-year industrial experience. He has published more than ten research papers in international journals and national/international conference papers. His area of research interest is industrial engineering, entrepreneurial ecosystem, supply chain management, manufacturing management, entrepreneurship, and small and medium enterprises (SMEs).

A.M. Rawani worked as a Professor in Mechanical Engineering, the Dean (Academic) and former Director of National Institute of Technology Raipur, India. He has received his MTech in Industrial Engineering and Management from IIT Kharagpur and PhD in Strategic Management from I.I.T. Delhi. He has more than 35 years of teaching/research and administrative experience of educational institutes. He has published more than 100 research papers in international/national journals. He has visited many countries like the USA, Switzerland, Singapore, China, Mauritius, Dubai, and Hong Kong, Thailand either to deliver keynote speech or to chair the academic conferences. His areas of interest are strategic management, flexible systems management and quality management.

Atul Kumar Sahu is working as faculty in the Department of Industrial and Production Engineering, Guru Ghasidas Vishwavidyalaya (Central University), Bilaspur, India. He obtained his Master's in Production Engineering from NIT, Rourkela and PhD from National Institute of Technology Raipur. He has published more than 20 research papers in international/national journals. His areas of research interest are industrial engineering, soft computing, optimisation, supply chain management, manufacturing management, decision-making, and agile management.

Ajit Kumar Singh is working as an Assistant Professor at the Jaipuria Institute of Management Jaipur, Rajsthan, India. He holds a Master's in Industrial Engineering and Management and PhD from National Institute of Technology Raipur. He has established himself as a prominent researcher in his field, with numerous publications in esteemed journals and has made a significant contribution to the academic literature through his authorship and editorial work.

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## 1 Introduction

The importance of small and medium enterprises (SME) is well acknowledged in the literature (Aris, n.d.). Many authors agree that SMEs are integral to economic and social development and regeneration. SMEs promote economic growth and increase a country's competitiveness and wealth (Alim et al. 2022; Anwar and Ali Shah, 2020). They are integral part of the Indian industrial sector (Nair and Das, 2019). The distinctive feature of SMEs are less capital investment and high labour absorption which has created

unprecedented importance to this sector. As per the Development Commissioner of Micro, Small and Medium Enterprises, the sector has the credit of being the second highest in employment, which stands next to agricultural sector (Kumar and Sardar, 2011). SME triggers private ownership, boosts entrepreneurial skills and their flexibility in responding quickly to changing market demand and supply conditions are noteworthy. In India, SMEs contribute about 45% of the gross turnover in the manufacturing sector and 40% of total exports (Kumar and Gugloth, 2012). SMEs in India are a very heterogeneous group. They include a wide variety of firms like village handicraft makers, small machine shops, component manufacturers, restaurants, computer software firms, etc. that possess a wide range of sophistication and skills. Ownership patterns range from proprietorship and partnership to companies and cooperatives. Due to their contribution to the national economy, the importance and emphasis on SMEs has been accentuated in the minds of policy makers, planners and the industry in the recent past.

An attempt is made in this study to identify the managerial and environmental factors affecting success to SMEs in India. Data for the study are collected from central part of India i.e. Chhattisgarh state. Chhattisgarh is among the richest States in India in terms of mineral and forest resources, with large untapped potential for industrialisation. Due to easy availability of these resources, it has immense potential for industrial development. Similar to other developing regions, SMEs play a vital role in the Chhattisgarh economy. The identified factors will help strategy makers and entrepreneurs to design strategies that give confidence and promote entrepreneurship in India.

## **2 SMEs: an outline**

A large number of key characteristics may be differentiated SMEs from larger enterprises as suggested by past literature (Aris, n.d.; Meshram and Rawani, 2022). Followings are some essential key characteristics are outlined as follows:

- a limited financial capacity
- b limited resource in terms of manpower, finance, marketing, R&D, technical support, etc.
- c dynamic and informal strategies
- d flexible structures
- e high innovatory potentials
- f small number of customers
- g operating in limited markets
- h role of manager, with little devolution of authority.

SMEs cover a wide variety of enterprises and assume an important role in both developed and developing economies. As they represent the major source of employment and generate significant revenue and export earnings. India is no omission and SMEs posses a prominent position in the planned development of the Indian economy. Indian SMEs contribute 7% to gross domestic product (GDP), make up 34 % of national export. India SMEs accounts for 40% of the industrial production, 35% of the total export and provides

about 80% of employment in the industrial sector (Ghose, 2001). Over the years, SMEs have shown a constant growth rate, both during a secured and an open economy.

According to the provision of Micro, Small & Medium Enterprises Development Act, 2006, the SMEs are classified as given in Table 1 (MSMED 2006).

**Table 1** Classifications of SMEs

<i>Classification</i>	<i>Investment ceiling (excluding land and building)</i>	
	<i>Manufacturing (in Rs.)</i>	<i>Service (in Rs.)</i>
Small	Between 25 Lakhs to 5 Crores	Between 10 Lakhs to 2 Crores
Medium	Between 5 crores to 10 Crores	Between 2 Crores to 5 Crores

### 3 Literature review

#### 3.1 *Small and medium enterprises*

SMEs cover a wide variety of enterprises and assume an important role in both developed and developing economies. India is no omission and SMEs possess a prominent position in the planned development of the Indian economy. Indian SMEs contribute 7% to gross domestic product (GDP), make up 34 % of national export. India SMEs accounts for 40% of the industrial production, 35% of the total export and provides about 80% of employment in the industrial sector (Effiom and Edet, 2018; Centobelli et al., 2019). Over the years, SMEs have shown a constant growth rate, both during a secured and an open economy. SMEs are defined in different ways by different countries. Most of the countries have adopted the benchmarks of employment. Some define them in terms of assets, a few in terms of sales and yet others, in terms of shareholders fund. In few countries, a hybrid definition is used such as employment as well as assets. According to the provision of Micro, Small & Medium Enterprises Development Act, 2006, the SMEs in India are classified as given in Table 1 (Nair and Das, 2019).

#### 3.2 *Factors affecting success of SMEs*

Numerous empirical studies on factors affecting success of SMEs can generally be conducted from two approaches; either by focusing on a quite limited set of variables at firm level or by incorporating a broader framework that covers the external environment (Kemayel, 2015). Researchers have argued that the success of enterprises is a function of both external and internal factors. Furthermore, literature argued that for new SMEs to grow, it is important to strengthen not only the internal business environment but also the external environment. Literature on the success of SMEs usually identifies several factors with regard to the internal and external environment of the firm. Mehralizadeh and Sajady, worked on small business firms to identify the determinants of their success and failure (Handoyo et al., 2021). They found number of issues and believed to have contribution on the performance of entrepreneurs in business which are suitable managing technical skills, selecting appropriate personnel with relevant skills, education and paying more attention to personnel training, application of management conceptual skills, financial issues, better human relation, recognise the economic situation, planning and organising of their business and informal issues. Bose and Uddin (2013) investigated

the relationships of factor affecting SMEs success. By mean analysis, they found religious duty/honesty factor is the most significant factor contributes the success of SMEs. They also confirmed that information access, leadership styles, and support from others are also significant for SMEs success. AlBar and Hoque, suggested reputation for honesty, good customer service, hard work, and friendliness and charisma are important for successful SMEs (AlBar and Hoque. 2019). Handoyo et al. (2021) identified the main factors that mostly used to reflect the success of Jordanian small and Medium-sized enterprises. The analysis is based on the results of the questionnaire survey that was distributed to the sample firms. The descriptive statistical technique of factor analysis has been used for analysing data. The results of this study identified five principle factors those are major contributors to the success of the small and medium-sized enterprises in Jordan. The identified factors are: technical procedures and technology, structure of the firm, financial structure, marketing and productivity and human resources structure. These factors are mainly reflecting the main characteristics of the SMEs. Chittithaworn et al. (2011) identified factors those are affecting business success of SMEs in Thailand. Asma Benzazoua Bouazza, analysed the key factors affecting the growth of SMEs and the external and internal factors affecting the growth of SMEs in Algeria (Matinaro et al., 2019). An extensive review method used to present a conceptual framework on factors affecting the growth of SMEs in Algeria. The research finding reveals that the growth of SMEs in Algeria is hampered by several interrelated factors, which include business environmental factors that are beyond the SMEs' control and internal factors of the SMEs. The external factors include the legal and regulatory framework, access to external, financing, and human resources capacities. The internal factors comprise entrepreneurial characteristics, management capacities, marketing skills, and technological capacities.

### *3.3 Managerial factors*

A key role played by entrepreneurs is the decision-making role in any business. Most entrepreneurs in SMEs are proprietor/administrators, who ordinarily have no support from a particular unit or office to enable them to perform administrative assignments. Subsequently, such undertakings become the singular errand of the business visionary. According to O. Fatoki, managerial capabilities are sets of knowledge, skills, behaviours and attitudes that contribute to personal success (Anwar and Ali Shah, 2020). Matic, described managerial competences as the skills needed to organise the work on a day-today basis (Matić, 2022).

Several literatures have considered management skills as a factor for the success of SMEs; this finding is steady with the universally accepted fact that efficient management is crucial for the success of any type of organisation (Tuan and Rajagopal, 2018). Moreover, whilst a considerable number of studies have identified poor management as being a major cause of business failure (Ali et al., 2019; Ropega, 2011). However many have found that efficient management is the key to business success (Lateef and Keikhosrokiani, 2022). Siu et al. (2004) studied success factors of SMEs in Taiwan, concludes that the management skills and management concepts of business founders are considered to be substantially more significant than their technical skills where long-term success is concerned. Ultimately, the managerial functions of the owners/managers of SMEs play a critical role in determining the success. Moreover, effective management has been found to be an important success factor for an SME (Tuan and Rajagopal, 2018;

Torugsa et al., 2019). A study conducted by Chowdhury et al. (2013), in Bangladesh, in which data were collected from 74 SMEs by means of a survey pursued by interviews, reported that the entrepreneurial behaviour factor was perceived as a key factor to success followed by the concept of managerial skills of owner-managers. Steady with this, numerous studies found that greater part of the business failure were because of the absence of the management skills or competencies. Tehseen and Ramayah (2015) examined the impacts of entrepreneurial competencies on success of businesses in the context of Malaysian SMEs and presumed that there were three major reasons for the failure: financial difficulties, product/market problems and managerial problems. Hence, entrepreneurs who have the necessary competencies especially in the area of finance, operations, human resources, marketing and management skills required for the business are more are bound to be successful (Bala and Feng, 2019).

### *3.4 Environmental factors*

A number of literatures have perceived the impact of environmental factors on the growth of SMEs (Bala and Feng, 2019). However, impact is not viewed as significant contrasted with different other factors. Alim et al., listed environmental factors to include markets (local, emerging and established markets), socio-demographics, economic, cultural, political, institutional, productive, legal, infrastructure technological, and other physical factors of that particular environment (Alim et al. 2022; Effiom and Edet, 2018). Several researchers contended that that the general state of an economy, in which a firm competes, persuades the performance of a business (Lateef and Keikhosrokiani, 2022; Anwar and Ali Shah, 2020).

The preceding argument reveals that the managerial and environmental factors influenced by success of SMEs. Furthermore, a study on success of SMEs is very rare in India and the existing studies also have not directly searched the managerial and environmental factors. The aim is to identify managerial and environmental factors affecting success of SMEs in India.

## **4 Methodology**

### *4.1 Sample, data sources and instrument development*

A self-designed questionnaire was used to gather the research data through a self-monitored online and personal questionnaire survey. A questionnaire was developed using 23 items identified from the previous research. This study adopted a convenience sampling method in collecting data for this study. Entrepreneurs (owners/managers) of SMEs in Chhattisgarh were requested to rate the importance of motivational variables. A total of 400 questionnaires were distributed in person and by e-mail. Follow-up for response is done by e-mail, phone and personal visit. The survey was build based on prior research consisted with two sections. The first section was designed to gather general information about the entrepreneurs and their enterprises. Managerial and environmental items are set at the second section to screen out factors of SMEs using 5-point Likert scale anchored by strongly disagree to strongly agree. Total 253 responses are found with a response rate of 63.25%. The obtained responses are scanned for missing data. For this study purpose, a total six responses obtained by e-mails are excluded after the scanning

for missing data. Finally, 247 valid responses are used for data analysis. Similar method was used to collect data for a similar study on Tangier SMEs (Sefiani, 2013).

## 4.2 Data analysis

Exploratory factor analysis was used to identify whether managerial and environmental items group together on significant factors. Keiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of Sphericity were used to establish the justification of implementation of factor analysis for test purpose (Kaiser, 1974; Taherdoost et al., 2022). Principal component analysis and component matrix were used to establish factors loading. An item factor loading of at least 0.50 was required for an item to be included on a factor. Then, a principal component analysis extraction method with a varimax with 'Kaiser normalisation' rotation method was used to determine the factor loading and communalities. Similar method was used to analyse data for a similar study on Sri Lankan entrepreneurs (Nishantha and Pathirana, 2014). Statistical package SPSS 21.0 was used for data analysis.

## 5 Results

### 5.1 Factor analysis of managerial and environmental factors

The factor analysis for 23 dimensions of managerial and environmental items weighed down on five factors. Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is 0.872 which is adequate and close to praiseworthy (Mostafa and El-Masry, 2008). This indicates that factor analysis was appropriate. Bartlett's test of sphericity with significance (.000) means the relationship among the items was strong. The "best fit" factor analysis represents 82.92% of the variance and was obtained by using principal component factor analysis with varimax rotation as shown in Table 2. As suggested by Hair et al. (2006), all factor loadings are greater than 0.40, and all communalities exceed 0.50. These factors can be interpreted as managerial competency, business environment, market support, socio-culture and institutional support.

The identified factors are interpreted in light of SMEs success literature. The first factor consists of five items. Factor loading of items ranges from 0.651 to 0.913 and a Cronbach's alpha value is 0.897. First item represents the customer service provided by owner/manager that leads towards customer attraction and satisfaction. Second item shows the ability to manage personnel. The third item shows the general management skills that can manage the routine activities of enterprise. Previous business experience of similar enterprise is the fourth item loaded in this factor. Fifth item focused on product quality at competitive price. Accordingly, the first factor is referred as managerial competency. This factor represents 50.071% of total cumulative variance. The second factor consists of five items. Factor loading of items ranges from 0.576 to 0.794 and a Cronbach's alpha value is 0.933. First item identifies the availability of infrastructure for the enterprise. Second item elaborates about access to suppliers. Third item shows the extent to which the availability of advanced technology for the new innovative things to start in enterprise. Good at maintaining of accurate records is the fourth item loaded in this factor. Fifth item focused on Access to network of similar enterprises in the region. Therefore, business environment is the second factor considered in this study. This factor



represents 62.842% of total cumulative variance. The third factor covers market related total five items. Factor loading of items ranges from 0.521 to 0.823 and a Cronbach's alpha value is 0.832. First item shows about marketing capabilities of SMEs owner/manager, more marketing results good sales of the product and services. Second item shows the marketing/sales promotion. Third item focused on market size that explores the opportunity for product and services. Fourth item elaborate the availability of human resources. The fifth and last item symbolise about the easy access to capital. Accordingly, the third factor is termed as market support. This factor represents 72.809% of total cumulative variance. The fourth factor includes four items. Factor loading of items ranges from 0.647 to 0.807 and a Cronbach's alpha value is 0.864. The first item focused on friendliness behaviour towards customers and other stakeholders of enterprise. Second item represents the reputation of honesty in business community. Third item focused on social skills of owner/manager. The fourth and last item emphasise on position in society. Factor 4 can be labelled as socio-culture factor. This factor represents 78.598% of total cumulative variance. Fifth factor consists of four items. Factor loading of items ranges from 0.589 to 0.762 and a Cronbach's alpha value is 0.961. First item focused on support from government institutions. Second item loaded in this factor is the product quality. Third item again focused on supportive laws and regulations for the smooth working of enterprise. The fourth and last item discussed about the access to information and communication for further expansion of enterprise. Therefore, the fifth factor is referred as institutional support. This factor accounts for 82.924% of total cumulative variance.

**Table 2** Rotated component matrix for identified factors

<i>Items</i>	<i>Factors</i>					<i>Communalities</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	
Good general management skills	.819					.872
Ability to manage personnel	.764					.826
Previous business experience	.913					.761
Good customer service	.697					.758
Good at maintaining of accurate records	.651					.749
Availability of infrastructure		.794				.845
Easy available human resources		.726				.831
Access to supplier		.701				.823
Available technology		.668				.757
Access to network		.576				.602
Market size			.823			.854
Marketing capabilities			.737			.829
Customer satisfaction			.678			.783
Good product at competitive price			.652			.747
Product quality			.521			.685
Reputation of honesty				.807		.786

Notes: Extraction method: principal component analysis.

Rotation method: Varimax with Kaiser normalisation.

a – Rotation converged in nine iterations.

**Table 2** Rotated component matrix for identified factors (continued)

<i>Items</i>	<i>Factors</i>					<i>Communalities</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	
Friendliness skills				.763		.759
Position in society				.683		.672
Social skills				.647		.637
Supportive laws and regulations					.762	.772
Easily access to finance and capital					.677	.662
Legal and regulatory issues					.623	.620
Support from government institutions					.589	.570
Percentage of variance explained	20.4	19.9	18.5	14.0	10.0	
Eigen value	13.0	3.32	2.59	1.50	1.12	

Notes: Extraction method: principal component analysis.

Rotation method: Varimax with Kaiser normalisation.

a – Rotation converged in nine iterations.

## 5.2 Reliability analysis

The internal consistency of the items within each factor is also evaluated based on Cronbach's Alpha. Table 3. shows that the value of Cronbach's alpha for all the extracted factors are found to be larger than 0.6, indicating acceptable internal consistency (Hair, n.d.). Cronbach's alpha coefficients were used to measure the reliability of the items. The reliability was tested for all identified five factors of managerial and environmental as shown in Table 3. An alpha value close to 1.0 indicates high internal consistency reliability, an alpha value less than 0.6 is considered to be poor, values of 0.7 are considered acceptable and values above 0.8 are deemed to be good (Grossman et al., 1991).

**Table 3** Reliability statistics of identified factors

<i>Factors</i>	<i>No of items</i>	<i>Cronbach's alpha</i>
F1	5	0.897
F2	5	0.933
F3	5	0.832
F4	4	0.864
F5	4	0.961

## 6 Conclusions

This study has identified managerial and environmental factors affecting success of SMEs in India. Identified factors are: managerial competency, business environment, market support, socio-culture and institutional support. Out of five factors identified, three factors are similar to those obtained in previous studies in different regions (Alam and Alam 2019; Ghosh et al. 2001). The identified factors will help strategy makers and entrepreneurs to design strategies that give confidence and promote entrepreneurship in

India. This cannot be said that factors related with success of SMEs will emerge similar universally. These distinctions reveal because of regional, political systems and the economic policies. This study was conducted based on the opinions of SME owners/managers operating business in Chhattisgarh, India (Meshram and Rawani, 2022). The results may not be over simplified indication of all SMEs. It would be very fascinating to acquire results of similar investigations on a larger sample, which would create considerably more important outcomes with greater probabilities to be generalised on the population of SMEs in Chhattisgarh.

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