

A Study on Effectiveness and Performance of SMEs in Indian Society

Deepali Rani Sahoo^a and Bhavana Sharma^b

¹Symbiosis Law School, NOIDA-Symbiosis International (Deemed University), Pune, India

²Birla School of Law, Birla Global University, Bhubaneswar, India

Keywords: Small and Medium-Sized Enterprises, Operational Management and Financial Aspects.

Abstract: In the upcoming ten years, the SME sector, one of the main drivers of the Indian economy, is anticipated to be crucial. Due to its capacity for financial inclusion and creation of significant employment prospects in both urban and rural areas, its expansion is seen as being vital. Due to their nature as small-scale investors, SMEs contribute to the protection of workers' rights and the social welfare of billions of people. Compared to main industries, the industry offers jobs with a significantly higher level of intensity. However, issues with finances, personnel availability and increased automation are jeopardizing the sector's productivity. Enhancing current technology and the support system requires evaluating the performance of SMEs. The lack of coordination between various performance measuring tools and bad management are two common problems in small and medium-sized enterprises. Due to quality concerns, the market is not yet ready to accept SMES in Delhi NCR's products, hence their output is mostly dependent on market availability. In this light, the researcher has made an effort to examine the impact of different factors of Operational, Management and Financial aspects of SMEs on its overall performance with the use of Factor Analysis and Structural Equation Modelling based on the views of 510 managers/owners of 384 SMEs spread over some places of Delhi NCR. The study identified significant impact of Operational, and Financial aspects on "overall performance of SMEs". In this work, both inferential and experimental quantitative research methods were employed. The fundamental objective of the inferential method is for the researcher to create a data base for the topic under inquiry. It includes selecting a sample in order to extract information about the characteristics of the population. This generally refers to survey research, which involves researching a sample of the population and analysing the data to derive conclusions about the population's characteristics. In the sampling procedure, the population and sample are described in detail.

1 INTRODUCTION

Due to their large range of products and connections to nearly all of the key industries, including as agriculture, plastics, food, fertilisers, paints, personal care items, and others, small and medium-sized companies (SMEs) serve as the foundation of the Indian economy. SMEs are typically seen as the main force behind economic growth (Khatri, 2019). It is the tool that encourages the growth of the country. This industry's capacity to create jobs has long been understood and appreciated (Harvie & Charoenrat, 2015). SMEs, which often have lower capital expenses than major businesses, promote significant job prospects (Sarma, 2016). Their support for the industrial development of rural and undeveloped

areas, which greatly lowers regional differences, also ensures a more equitable division of the nation's riches. This industry has already shown that it can generate a sizable number of job opportunities. Over the next ten years, it is expected to contribute 20% or more of the GDP, which would add a lot of value. In light of this, it has the potential to be successful in order to support the economy and fuel its growth engine. This industry has already demonstrated its capacity to create a significant amount of employment possibilities. According to Sivakami (2012), the sector is anticipated to contribute roughly 20% of the country's GDP, which is a considerable amount in terms of value adds. By introducing them to the idea of "self-sufficiency" through SMEs, the nation's greatest young population can be used to speed up economic growth and development.

^a <https://orcid.org/0000-0001-6949-7439>

^b <https://orcid.org/0000-0002-5287-3327>

Currently, the SME sector accounts for around 50% of all jobs in the nation, and it is projected to continue expanding across manufacturing, services, and contract farming. SME has the capacity to succeed against this backdrop in order to help the economy and power its growth engine. Accordingly, SMEs are the backbone of the Indian economy (Mageswari & Bhuvanewari, 2019). From the smallest industry to the proactive one that is rapidly improving and contributing to India's largest employer, this sector's progress may be seen. The low investment pattern of this sector has pushed many ordinary citizens of the country for the establishment of small and medium sized enterprises. But a barrier to the growth of this industry is the lack of a solid, developed work environment. In light of this situation, the researcher's goal in conducting the study was to evaluate how well SMEs were performing.

2 STATEMENT OF THE PROBLEM

SMEs are important to the country's economic and social development. Individual initiative and inventiveness are the driving forces behind this sector. It generates 40% of exports, 45% of the nation's manufacturing output, and 8% of the GDP. 26 million MSME scattered around India provide employment for about 60 million people nationwide. The lack of coordination between various performance measuring tools and bad management are two common problems in small and medium-sized enterprises. Due to quality concerns, the market is not yet ready to accept SMES in Delhi NCR's products, hence their output is mostly dependent on market availability. Additionally, due to a lack of sufficient funding and entrepreneurial vitality, these divisions inevitably fail even at the start up or maturity stage of a business. Despite having access to abundant natural resources, Delhi NCR is one of the most developed regions, so it is essential to carry out the study to evaluate the performance of SMEs. The study's findings can also be used to provide remedial actions for the SMEs' outstanding growth in Delhi NCR.

3 REVIEW OF LITERATURES

The Indian economy depends heavily on MSMEs. This demanding of labour sector of the economy contributes to the stability of the socioeconomic

system. By fostering economic stability, creating jobs, and assisting in the growth of society's wealth, they can lessen economic inequality at the local level. SMEs are clearly responsible for developing work possibilities for all socioeconomic groups. To the average Indian, it gives them a sense of financial independence. The only sector with a realistic chance of producing a lot of jobs in the near future is this one (Gade, 2018). The importance of SMEs to the Indian economy cannot be overstated. SMEs provide a significant contribution to the country's development, but they do not get the support they need from governmental agencies and financial institutions (Bagale et al. 2016). This labour-intensive industry supports the social equilibrium. It encourages financial independence, supports job creation, and contributes to society's sustainable development, all of which help to eradicate socioeconomic disparities at the local level. (Ahmed 2019; Islam & Gangly 2019; Singh et al. 2017).

A common man is typically encouraged to establish this industry because SMEs initially require little funding and a small staff. Even if this sector's performance isn't great, it's anticipated that it will be the only one to support job growth. The growth of rural and urban areas is now being driven by the SMEs sector. According to SIDBI (2001), Farooqi and Sibghatullah (2002), the main problems that have a significant impact on small businesses' performance at various stages of their operations include inadequate financing, bad infrastructure, machinery, management abilities, and unexpected shocks brought on by tax and economic developments. There are six main components: marketing, finance, technology, raw resources, labour, and management. Maheshkar & Soni highlighted as having an impact on the performance of MSMEs in 2022. These MSMEs' operational, managerial, and financial metrics are listed below (Gyampah & Boye, 2001). According to Adeola (2016), the technological, financial situation, political, legal, and sociocultural environments all significantly affect how well SMEs succeed. Variables like financial accessibility, instability, rising competitiveness, insufficient funding, a lack of leadership skills, cutting-edge technology, and insufficient marketing have a significant impact on the performance of SMEs (Grimsholm & Poblete, 2010; Gaziasayed, Najmussaharsayed, 2018). Inadequate funding, inadequate social infrastructures, lack of organisational skills, and unanticipated disruptions brought on by economic and tax reforms are the issues that have the largest impact on how

successfully small enterprises perform at different stages of their operations. The financial side needs to be encouraged because it is the main difficulty facing almost all of the industries that fall under SMEs (Turyahebwa, 2013). The social welfare of billions of people is influenced by SMEs. Therefore, it is clear that the business might generate employment prospects, especially for low and semi-skilled employees. The sector provides work that is substantially more intense. However, problems with funding, infrastructure, technology, the political & legal climate are reducing the sector's productivity. There are many studies that highlight the difficulties faced by SMEs, but few that examine the effects of various operational, management, and financial elements on SMEs' overall performance. Therefore, the researcher has made an effort to conduct the study to evaluate the performance of SMEs operating in Delhi-National Capital Region and to test the hypothesis that various performance measurement techniques' operational, management, and financial aspects have a significant impact on SMEs' performance.

4 METHODOLOGY

4.1 Population

There are over 160167 SMEs located throughout Delhi NCR. All SMEs cannot be used as a basis for the research. Therefore, a sufficient number of SMEs will be included in the study on the basis of annual turnover and the number of employees working in each SMEs

4.2 Sample Size

The adequacy of the sample size has been tested by the following mentioned formula.

$$n = \frac{z^2 p (1-p)}{1 + \frac{z^2 p (1-p)}{N e^2}} = 384 \text{ (Approx.)}$$

The number of small and medium sized industries of each type constitutes the sub-population size (N_i)

1.1.1.1 $N = \text{Population size (Total number of SMEs)} = 160167$

$P = \text{Proportion of SMEs} = 0.5$

$e = \text{Margin error} = 5\%$

$Z = \text{Critical value for large sample at 95\% confidence level} = 1.645$

The scope of study is limited to 384 small and medium sized enterprises, 510 owners/managers of

SMEs. Operational aspect of performance is associated with nature, type, number of years of operation of SMEs, gender, age and qualification of the entrepreneurs of SMEs. Management aspect of performance is associated with nature, type, number of years of operation of SMEs, gender, age and qualification of the entrepreneurs of SMEs

Limitation of the study -The study only examines the effects of three factors on the performance of SMEs: updated technology, capital structure, and infrastructural facilities.

4.3 Methods of Collecting Data

Data from both primary and secondary data sources were used in the study. Data about SMEs and entrepreneurship in Delhi NCR were compiled using secondary sources, such as government reports and websites. Sample data collected from secondary sources are mainly through journals, magazines, articles, books, published and unpublished documents and thesis on MSMEs. In most of the cases government publications, public websites, reports and articles on the role of MSME have been referred for the secondary data collection. Governmental documents, open-access websites, reports, and articles on small- and medium-sized businesses have typically been used as sources for secondary data collecting. 510 owners and managers of 384 SMEs provided the primary sources for the data.

A well-designed questionnaire with eight operational aspect questions, seventeen management aspect questions, and nine financial aspect questions about SMEs was utilised as a tool to gather data on a 5-point scale. Whereas a score of 5 indicates a strong disagreement with the item or statement in question and a score of 1 suggests a strong agreement. Following extensive literature investigation, the choices were made. The information was gathered over the course of four months in 2022. Using SPSS-23, the gathered data were examined.

4.4 Techniques of Data Analysis

When analysing the effects of various factors on the performance of SMEs, structural equation modelling and factor analysis are applied. The application of factor analysis enables the reduction of a "huge mass of data" to distinct "factors". The researcher conducted a multivariate statistical method using factor analysis to pinpoint the operational,

management, and financial aspects of SMEs. Regression modelling is used in structural equation modelling (SEM) to determine the influence of a collection of independent factors on a single dependent variable. It is conceptualized as a 'multivariate statistical' method that combines 'factor analysis' and 'multiple regression analysis'.

5 RESULTS AND DISCUSSION

To begin with, factor analysis is utilized to identify the key variables that can account for the "operational aspect," "management aspect," and "financial aspect" of SMEs' performance. SEM is used to further evaluate the effects of the elements that were retrieved from the first phase of the investigation. The impact of the factors extrapolated from the factor analysis on the general performance of SMEs is investigated in this case using SEM.

5.1 Operational Aspects of Measurement Techniques

Reliability of the Scale - Cronbach Alpha is a widely used as internal reliability measure.

Table 1: Reliability Statistics of Operational aspect

Alpha	N
0.856	9

Source: Computed from primary data

Alpha value of 0.856 is more than 0.70 and it implies a strong level of reliability for the scale used in the analysis.

Construct validity- It is demonstrated significantly with the help of alpha reliability value of 0.856 (More than 0.70) and KMO value of 0.714 (Hair et al., 1995).

Table 2: KMO and Bartlett's Test of Operational aspect.

Kaiser-Meyer-Olkin Measure		0.714
Bartlett's Test of Sphericity	Chi-Square	3.674E3
	df	36
	Sig.	0.000

Source: Computed from primary data

Table 2 shows 'KMO and Bartlett's test of the analysis and Bartlett's test of sphericity. Here, p-value of 0.000 (less than 0.05) is an indication to proceed with factor analysis.

Table 3: Rotated Component Matrix of Operational aspect

	1	2	3
O5 = There is always easy availability of raw materials	.953		
O6 = The industry provides good power facility	.933		
O7 = There is easy availability of infrastructural facilities	.914		
O1 = The industry gets financial assistance from bank.		.915	
O8 = The industry maintains the easy loan payment system		.818	
O3 = The procedures & formalities to avail loans suit the industry		.682	
O4 = There industry sticks to skilled and technology savvy work force			.945
O2 = The industry uses updated technology machines used is up to the mark			.936

Source: Computed from primary data

Convergent validity is explained with high factor loadings of ideally more than 0.60. (Table No-3)

Factor interpretation of Operational aspect- Factor analysis explores three important factors- ‘Infrastructural facilities’, ‘Bank assistance’ and ‘Updated technology’. The First factor has three loadings; second one is accounted for three factor loadings. The third factor is accounted for two factor loadings.

5.2 Management Aspects of Performance Measurement Techniques

Table 4: Reliability Statistics of Management aspect

Alpha	N
0.934	17

Source: Computed from primary data

It is clear that Alpha (0.934) is more than 0.70 and it implies a strong level of reliability for the scale used in the analysis.

Construct validity- Construct validity is demonstrated significantly with the help of alpha reliability value of 0.934 (More than 0.70) and KMO value of 0.896.

Table 5: KMO and Bartlett's Test of Management aspect

Kaiser-Meyer-Olkin Measure		0.896	
Bartlett's Test of Sphericity	Chi-Square	7.116E3	
	df	136	
	Sig.	0.000	

Source: Computed from primary data

KMO and Bartlett's Test measure of sampling Adequacy is 0.896 signifies the accuracy of factor analysis.

5.3 Financial Aspects of Performance Measurement Techniques

Table 6: Reliability Statistics of Financial aspect

Alpha	N
0.903	9

Source: Computed from primary data

It is clear that Alpha (0.903) is more than 0.70 and it implies a strong level of reliability for the scale used in the analysis.

Construct validity

Construct validity is demonstrated significantly with the help of alpha reliability value of 0.903 (More than 0.70) and KMO value of 0.800

Table 7: KMO and Bartlett's Test of Financial aspect

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.800
Bartlett's Test of Sphericity	Approx. Chi-Square	5233.931
	df	36
	Sig.	.000

Source: Computed from primary data

KMO and Bartlett's Test measure of sampling Adequacy is 0.800 signifies the accuracy of factor analysis.

Table 8: Matrix of Rotated Bits of Financial Aspect.

	1	2	3
F7= The industry is planning to avail more finance to increase the sales and the profit	.936		
F3= Payment to workers is satisfactory	.917		
F5= The industry is planning to reduce the cost of production	.911		
F8= Working capital structure of the industry is satisfactory	.556		
F1= There is proper diversion of working capital funds for acquisition of fixed assets		.942	
F9= The revenue has increased as compared to last three years		.921	
F4= The profitability position is good		.915	
F2 = Rate interest of loans is duly paid			.931
F6= There is proper planning to pay creditors			.925

Source: Computed from primary data

Convergent validity is explained with high factor loadings of ideally more than 0.60. (Table No-9)

Factor interpretation of financial aspect

Factor analysis explored three important factors- 'Capital structure', 'Profitability' and 'Financial Planning'. The First factor has four loadings; second one has three factor loadings and the third has three factor loadings.

5.4 Model Fit Summary of SEM

Chi-square value of 3504.503 with positive d.f of 55 indicates that the model is over identified. As chi-square value is sensitive to large sample size, the fitness of the model needs to be judged based on other indices. Other measures of goodness of fit are illustrated below.

Table 9: Model –I Fit Summary.

Variable	Value (Model I)	Suggested value
“CHI-SQUARE”	3504.503, d.f =55	
“CMIN/DF”	63.718	“less than 3 (Daire et al., 2008)”
“GFI”	.554	“More than 0.90 (Hair et al.,2006)”
“AGFI”	.367	“More than 0.90 (Daire et al., 2008)”
“CFI”	.012	“More than 0.90 (Hu and Bentler,1999)”
“RMR”	.261	“Less than 0.08 (Hair et al.,2006)”
“RMSEA”	.351	“Less than 0.08 (Hair et al.,2006)”
“P-CLOSE”	.000	“More than 0.05(Hu and Bentler,1999)”

Source: Computed from primary data

‘CMIN/DF’, ‘AGFI’, ‘P-CLOSE’ and ‘RMR’ do not lie within the suggestive range and an improvement in the model is tried out through modification of

indices. Model-II was developed to fit the indices to the suggested model.

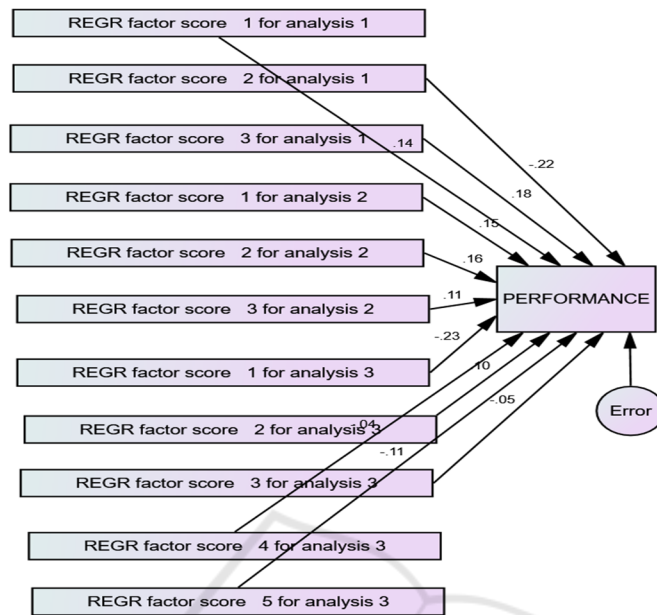


Figure 1: Path Diagram of Model.

Model-II is developed with the co-variance of factor scores having higher modification index as evident from path diagram of model-VII.

Table 10: Model -II Fit Summary.

Variable	Value(Model-VII)
“CHI-SQUARE”	88.271, d.f = 32
“CMIN/DF”	2.758
“GFI”	.973
“AGFI”	.934
“CFI”	.984
“RMR”	.056
“RMSEA”	.055
“P-CLOSE”	.151

Source: Computed from primary data

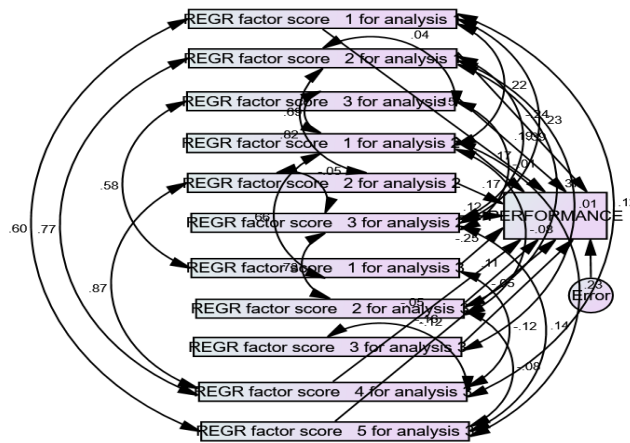


Figure 2: Path diagram of Model-II.

Table 11: Regression Weights.

Variable		Variable	Estimate	S.E.	C.R.	P
Performance	<---	FAC2_1- Bank assistance	-.340	.183	-1.852	.064
Performance	<---	FAC3_1- Updated technology	.278	.089	3.113	.002
Performance	<---	FAC1_2- Capital structure	.238	.102	2.322	.020
Performance	<---	FAC2_2- Profitability	.245	.187	1.310	.190
Performance	<---	FAC3_3- Employee Engagement	-.073	.065	-1.122	.262
Performance	<---	FAC1_1- Infrastructural facilities	.214	.084	2.550	.011
Performance	<---	FAC4_3- Good Incentives	-.064	.145	-.444	.657
Performance	<---	FAC2_3- Inter personal Relationship	.156	.094	1.656	.098
Performance	<---	FAC1_3- Performance Appraisal and Training	-.354	.090	-3.949	***
Performance	<---	FAC3_2- Financial planning	.172	.118	1.462	.144
Performance	<---	FAC5_3- Team work	-.167	.079	-2.102	.036

Source: Computed from primary data

Table No. 12 demonstrate the significance of the path with a 95% level of assurance. Similar to this, the P-value with (***) denotes the significance of the regression weights. A more positive impact on the variable is indicated by a higher regression weight value. Updated technology has a favourable and significant regression weight when compared to capital structure and infrastructure facilities for "overall performance of SMEs." Thus, it can be said that "updated technology" has a larger degree of good impact on "overall performance of SMEs" whereas "capital structure" and "infrastructure facilities" have

comparatively lesser degrees of positive impact. Similar to this, "Team work" has a lower degree of negative influence on "overall performance of SMEs" whereas "Performance Appraisal and Training" has a higher degree of negative impact. Thus, the variables "Updated technology" and "Infrastructure facilities" of the "Operational aspect" and the factor "Capital structure" of the "Financial aspect" are approved. As such, the effect of 'Updated technology' (supported by Tech Grimsholm & Poblete, 2010; Adeola, 2016) and Gaziasayed, Najmussaharsayed, 2018), 'Capital structure' (supported by SIDBI

(2001); Farooqi, Sibghatullah, 2002; Turyahebwa, 2013 and Maheshkar & Soni, 2022), 'Infrastructural facilities' (supported by SIDBI, 2001; Farooqi, Sibghatullah, 2002) are positive and significant on 'Overall performance of SMES'.

6 CONCLUSION

SMEs are the primary forces behind economic development in all countries on earth and have a big impact on India's GDP growth. In India, SMEs are the second-largest sector in terms of job generation and supporting equitable regional growth, after only agriculture. This sector accounts for more than 90% of all national industries, highlighting the significance of SMEs as the backbone of the Indian economy. These companies support big industries as auxiliary units and significantly contribute to inclusive growth in India. The social welfare of billions of people is influenced by SMEs. Therefore, it is clear that the business might generate employment prospects, especially for low and semi-skilled employees. The sector provides work that is substantially more intense. MSMEs provide a substantial contribution to the country's development, but neither governmental organisations nor financial institutions provide them with the necessary backing. However, problems with infrastructure, financing, and rising automation are reducing the sector's productivity.

REFERENCES

- Ahamed, I. S. B. (2019). An Empirical Research on the Problems and Prospects Perceived by the Small Scale Entrepreneurs in Salem District, *International Journal of Innovative Technology and Exploring Engineering*, 9(2),473-476
- Adeola A (2016) Impact of external business environment on organisational performance of small and medium scale enterprises in Osun State, Nigeria. *Scholedge, Int J Bus Policy Gov* 3(10):155. <https://doi.org/10.19085/journal.sijbpg031002>
- Bagale, G. S., Vandadi, V. R., Singh, D., Sharma, D. K., Garlapati, D. V. K., Bommiseti, R. K., Gupta, R. K., Setsiawan, R., Subramaniaswamy, V., & Sengan, S. (2021). <https://doi.org/10.1007/s10479-021-04235-5>
- Farooqi, S., (2002), *Small Scale Industries: Facing Acute Crisis*. *Kurukshetra*, 51(1), November, pp. 39-42
- Gade, S. (2018). MSMEs' Role in Economic Growth – a Study on India's Perspective, *International Journal of Pure and Applied Mathematics Volume*, 118(18), 1727-1741
- Gaziasayed, & Najmussaharsayed, (2018). Challenges Faced By Micro, Small and Medium Enterprises of Mumbai - An Empirical Study, *Journal of Business and Management*, 63-75
- Gyampah, K.A. and Boye S.S., (2001). Operations Strategy in an Emerging Economy: The Case of the Ghanaian Manufacturing Industry, *Journal of Operations Management*, Vol 19, 59-79.
- Grimsholm & Poblete, (2010). Internal and External factors hampering SME growth. Accessed 8 June 2013. <http://uu.diva-portal.org/smash/get/diva2:323837/FULLTEXT01.pdf>
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis*. 1998. Upper Saddle River.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Exploratory factor analysis*. *Multivariate data analysis*, 7th Pearson new international ed. Harlow: Pearson.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (ed.). (2010). *Multivariate data analysis - A global perspective (7thed.)*. New Jersey: Pearson Education, Inc.
- Harvie, C. and Charoenrat, T. (2015). SMEs and the Rise of Global Value Chains. In *Integrating SMEs into Global Value Chains: Challenges and Policy Actions in Asia*. 1–26. Manila and Tokyo: Asian Development Bank and Asian Development Bank Institute
- Islam, S., Ganguly, D. Mediating effect of utilisation in the relation between loans services from PSBs and capital formation of MSMEs: a study of Purba and Paschim Medinipur districts of West Bengal. *J Glob Entrepr Res* 9, 57 (2019). <https://doi.org/10.1186/s40497-019-0181-3>
- Khatri, P. (2019). A Study of the Challenges of the Indian MSME Sector, *IOSR Journal of Business and Management*, 21(2). 05-13
- Mageswari, U. T. & Bhuvanawari, G, (2019). A Research on the Opportunities Available for SMEs in Tamil Nadu in Procuring Funds for their Business Operations, *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, 9(1) ,3291-3294, DOI: 10.35940/ijitee.A4573.119119
- Maheshkar, C. & Soni, N. (2022), Problems Faced by Indian Micro, Small and Medium Enterprises (MSMEs), 48(2), <https://doi.org/10.1177/09708464211064498>
- Sarma, G. C. (2016). Performance of MSME's in India - problems & prospects, *International Journal of Social Science and Humanities Research* 4(3), (23-30)
- Sivakami, P. (2012). *Micro Small and Medium Enterprises - Problems and Prospects*, Salem: MSK Publication
- SIDBI (2001), *Report on Small Scale Industries Sector, Small Industries Development Bank of India, Government of India, New Delhi*
- Shaf M, Liu J, Ren W (2020) Impact of COVID-19 pandemic on micro, small, and medium-sized Enterprises operating in Pakistan. *Res Glob* 2:100018. <https://doi.org/10.1016/j.resglo.2020.100018>