A study on Performance of MSMEs in Odisha

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Abstract- **The SME sector which is one of the biggest contributors to Indian economy is expected to play a vital role in the coming decade. Its development is perceived to be crucial owing to the financial inclusion capabilities and generation of substantial employment opportunities across rural and urban areas. Further it has the scope of supporting new generation enterprises that can flourish both the domestic as well as foreign entrepreneurs. SMEs help in providing the security to workers' rights and social protection to livelihood of billions of population through their nature of small amount of investment. Therefore, there is no doubt that the sector has the potential to generate employment opportunities especially in unskilled and semi skilled category. The industry provides employment opportunities with a substantially higher level of intensity as compared to major sectors. Yet, problems including finance, availability of skilled labours and rising automation are endangering the sector's productivity. Evaluating the performance of SMEs is essential for enhancing current technologies and the support system. 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 Modeling based on the views of 510 managers/owners of 384 SMEs spread over 30 districts of Odisha. The study identified significant impact of Operational, and Financial aspects on "overall performance of SMEs".**

Key Words: Small and medium-sized enterprises, Operational, Management and Financial aspects

1 Introduction

Small and medium-sized enterprises (SMEs) form the basis of the Indian economy due to their wide range of products and ties to almost all of the major sectors, including agriculture, plastics, food, fertilizers, paints, personal care products, and others. SMEs are usually regarded as the key driver of economic expansion (Khatri, 2019). It is the instrument that promotes the development of the nation. It has long been recognized and acknowledged that this sector has the ability to provide employment (Harvie, & Charoenrat, 2015). Significant job opportunities are fostered by SMEs, which generally have lower capital expenses than large industries (Sarma, 2016). A more equitable distribution of the nation's wealth is also ensured by their support for the industrial development of rural and underdeveloped areas, which significantly reduces regional disparities. This industry has already demonstrated its capacity to create a significant amount of employment possibilities. It is anticipated to contribute 20% or more of the GDP over the next ten years, which is a large amount in terms of value additions. It has the capacity to succeed against this backdrop in order to help the economy and power its growth engine. This sector has already proved its potentiality in generating a huge opportunities for being employed. The sector is expected to achieve a share of around 20% of Gross Domestic Product which is significant one in terms of value additions (Sivakami, 2012). The country's largest young population can be utilized to further expedite the economic growth and development by exploring them to the concept of "self sufficiency" through SMEs.

Currently SME sector employs around 50% of total employment in the country which is expected to grow further across manufacturing, services and contract farming. In this backdrop SME has the potential to emerge as a winner to support the economy and drive its growth engine. Thus, SMEs constitute the strength of Indian economy (Mageswari, & Bhuvaneswari, 2019). The growth of this sector can be observed from the smallest sector to the fast improving proactive sector contributing to the largest employment generating sector in India. 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, the absence of good and developed work environment is a hurdle in the development of this sector. With this scenario, the researcher has conducted the study with an intention to appraise the performance of SMEs in Odisha.

2 Statement of the problem

SMEs play significant role in the economic and social growth of the nation. This industry is propelled by the initiative and creativity of the individual. It produces 8% of the GDP, 40% of the exports, and 45% of the nation's manufacturing output. Around 60 million people of the nation are employed through 26 million of MSME spread over India. Small and medium-sized businesses generally suffer from poor management and a lack of coordination between different performance measurements techniques. SMES in Odisha operate with a very low capacity and their output depends on the availability of market as the market is not ready to accept their products due to quality issues. Further with lack of adequate capital, and lack of dynamism in entrepreneurship, these units ultimately die very early even at the introduction or maturity stage of business. Odisha, being one of the backward states in spite of having access to abundant natural resources, it is imperative to undertake the study to appraise the performance of SMEs. The results of the study can further be used to suggest the corrective measures for the remarkable growth of SMEs in Odisha.

3. Review of Literatures

MSMEs are especially important for the Indian economy. This labor-intensive industry contributes to preserving the socioeconomic balance. By creating jobs, encouraging economic stability, and assisting in the society's wealth creation, they can

help to minimize economic inequalities at the regional level. SMEs are apparent in creating the job opportunities for all class of people. It creates the sense of financially independent status to an average Indian. This sector is the only hope for employment creation at a large scale in near future (Gade, 2018)). SMEs are of particular significance to the Indian economy. SMEs provide substantial contribution to the development of the nation, but they do not receive the essential assistance from governmental organizations and financial institutions (**Bagale, et al. 2016**). The socioeconomic balance is supported by this labor-intensive industry. It promotes financial independence, creates jobs, and aids in the society's sustainable growth, which eliminates socioeconomic inequities at the regional level (Singh et. al. 2017; **Islam & Gangly 2019; Ahamed 2019**). The use of low fund and the minimum number of employees for initial setup of SMEs usually encourages a common man to go for the establishment of this sector. Though the performance of this sector is not so good but it is expected that this sector would be the only sector to stand with the creation of job. The SMEs sector has turned into a driving force for the development of rural as well as urban area**.** Inadequate financing, poor infrastructure, machinery tools, managerial skills, and sudden shocks caused by economic and tax reforms are the issues that majorly affect the performance of small enterprises at different levels of their operations (**SIDBI (2001), Farooqi, Sibghatullah, 2002**). **Maheshkar & Soni, (2022)** identified six different factors—namely marketing, finance, technology, raw material, labour, and management which affect the performance of MSMEs. These are the indicators of operational, management and financial aspects of MSMEs (**Gyampah & Boye, 2001**). **Adeola (2016)** argued that the technology, financial condition, political, legal & socio-cultural environment, have a notable impact on the SMEs' performance. The performance of SMEs is substantially impacted by variables like financial accessibility, instability, increasing competition, inadequate funding, lack of leadership ability, advanced technology and inadequate marketing (**Grimsholm & Poblete, 2010; Gaziasayed, Najmussaharsayed, 2018**). The problems that have the biggest impact on how well small businesses function at various stages of their operations include insufficient funding, poor social infrastructures, organizational skills, and unanticipated disruptions brought on by economic and tax reforms. The biggest challenge before all most all the industries under SMEs is finance and so the financial aspect need to be supported (**Turyahebwa, 2013).**

SMEs contribute to the social welfare of billions of people. Hence, there is no question that the industry has the ability to create job opportunities, particularly in the category of unskilled and semi-skilled workers. The industry offers jobs with a significantly higher level of intensity. However the issues with financing, infrastructural facilities, technology, political & legal environment are putting the sector's productivity in problem. There are many studies reflecting the the challenges faced by SMES but a few are found on the impact of different factors of Operational, Management and Financial aspects of SMEs on its overall performance. And so the researcher has attempted to conduct the study to appraise the performance of SMEs operating in Odisha and to test the hypothesis that different aspects of performance measurement techniques (operational aspect, management aspect and financial aspect) significantly influence the performance of SMEs

4. Methodology

4.1 Population-There are 160167 SMEs spread over 30 districts of Odisha. It is not possible to conduct the research based on all SMEs. And so the study will be conducted with the inclusion of suitable number of SMEs of Odisha.

4.2 Sample Size -The adequacy of the sample size has been tested by the following mentioned formula.

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

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

N = Population size (Total number of SMEs) = 160167

P = Proportion of SMEs = 0.5

e = Margin error = 5%

Z = 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.

4.3 Methods of Collecting Data

The study has made use of the data from both primary and secondary data sources. Secondary sources including government reports and websites were used to compile data on SMEs and entrepreneurial activities from 30 districts of Odisha. Primary data were gathered from 510 owners/managers of 384 SMEs of Odisha. A well designed questionnaire consisting of eight items on Operational aspect, 17 items on Management aspect and 9 items on Financial aspects of SMEs have been used as an instrument tool to collect the data from on 5-point scale. Where, 5–indicates strongly disagree and 1-indicates strongly agree attitude to that particular item/statement. The items were decided after researching a lot of literature. The data were collected over a period of four months in 2022. The collected data were analyzed by using SPSS-23.

4.4 Techniques of Data Analysis

Factor analysis and Structural equation modeling are used to examine the impact of different factors on performance of SMEs. A "huge mass of data" can be reduced to distinct "factors" with the use of factor analysis. The investigator used factor analysis to conduct a multivariate statistical method to identify the factors of Operational aspect, Management aspect and Financial Aspect of SMEs. SEM (structural equation modeling) uses the regression model to identify the weight of a group of independent variables on a single dependent variable. It is conceptualized as the combination of 'factor analysis' and 'multiple regression analysis' of 'multivariate statistical' technique.

5. Results and Discussion

At first Factor analysis is used to trace out the important factors that can explain "operational aspect", "management aspect" and "financial aspect" of performance of SMEs. The impact of the factors extracted from first phase of analysis is further tested by

using SEM. Here, SEM is used to find out the impact of the factors extracted from factor analysis on overall performance of SMEs of Odisha.

5.1 Operational aspects of measurement techniques

Reliability of the Scale

Cronbach Alpha is a widely used as internal reliability measure.

Table No-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 No-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 No-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 No-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 No-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.

Table No: 6- Rotated Component Matrix of Management aspect

	1	2	3	4	5
M11= The supervisor possesses adequate knowledge and training to evaluate the performance	.840				
M5= There is Performance-based pay in the industry for motivating employees to improve performance	.836				
M16= There are policies covering health and safety at work	.827				
M8 = Industry provides formal training to promote skills	.798				
M13= Employees normally go through various training programs every year	.775				
M2= There is clear and unbiased appraisal performance appraisal process in the industry	.770				
M15= The industry believes in strong interpersonal relationship		.883			
M10 = There is good agreement within the management		.858			
M4= The industry adheres to good relations with the employees		.842			
M3= The industry encourages the employees in their carrier development			.843		
M9 = Employee participation is an important aspect of growth of any organization.			.842		
M14= The industry believes that good work environment encourages the employees to perform better			.809		
M1= There is a fair incentive practice in industry				.831	
M12= The organization believes in rewarding the loyal employees				.821	
M7= Industry uses good practices of rewarding the people who contribute the most to organization				.813	
M6= The industry always seeks the opinion of the team ideas before making any decision					.898
M17= The industry believes in team work					.883

Source: Computed from primary data

Convergent validity is explained with high factor loadings of ideally more than 0.60. (Table No-6)

Factor interpretation of Management aspect

Factor analysis explored five important factors- 'Performance Appraisal and Training', 'Inter personal Relationship', Employee Engagement' 'Good Incentives' and 'Team work'.

5.3 Financial aspects of performance measurement techniques

Table No-7: 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 No: 8- 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 No: 9- Rotated Component Matrix 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.
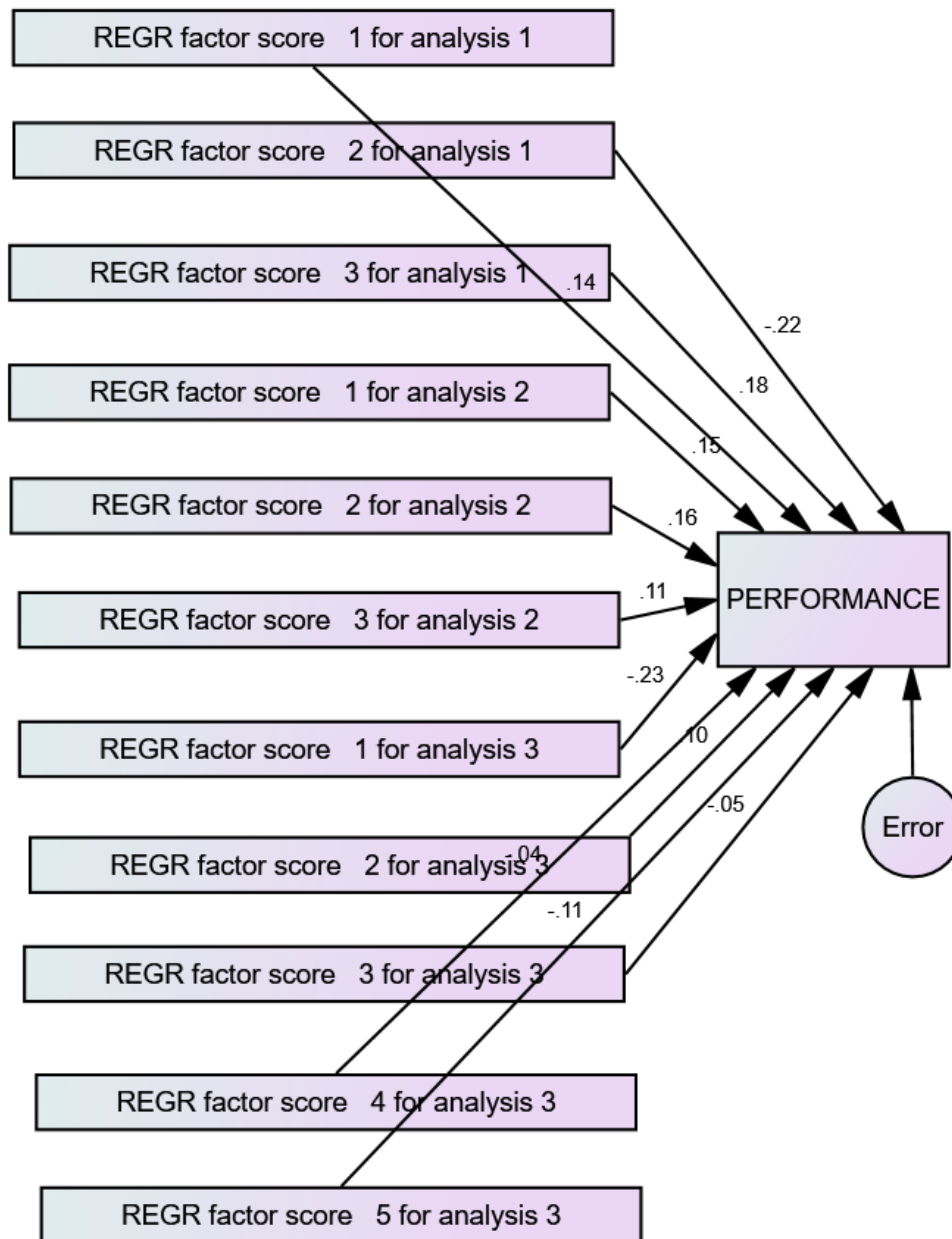
Table No: 10- Model –I Fit Summary

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.

Fig-1 : Path diagram of Model-I

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

Table No: 11- 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

Fig-2: Path diagram of Model-I
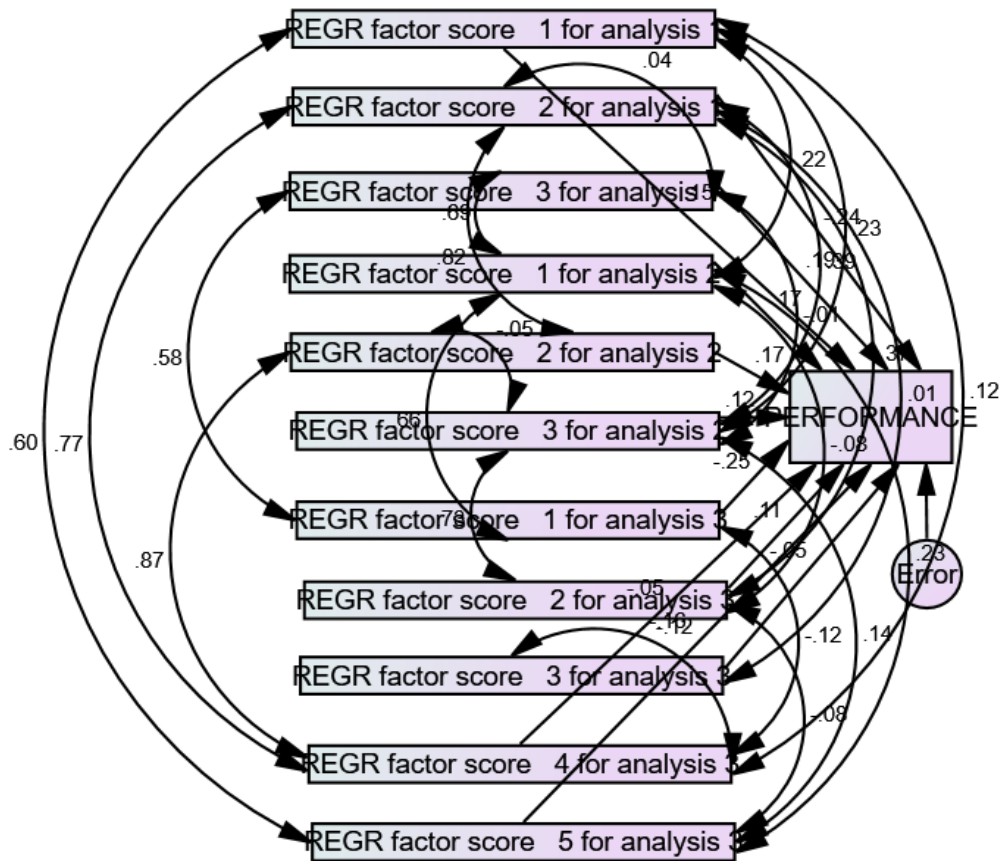
Table No: 12- Regression Weights

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

In table no-12 the value of critical ratios (C.R) that is more than 1.96 indicates that the significance of the path with 95% confidence level. Similarly the P-value with (***) indicates that the regression weights are significant. The higher value of regression weight indicates a higher degree of positive impact on the variable. The regression weight of the factor 'Updated technology' on "overall performance of SMEs" is positive and high as compared to 'Capital structure', 'Infrastructural facilities'. And so it is concluded that 'Updated technology' has higher degree of positive impact and 'Capital structure', & 'Infrastructural facilities' have comparatively lower degree of positive impact on "overall performance of SMEs". In the similar vein, 'Performance Appraisal and Training' has higher degree of negative impact and 'Team work' has lower degree of negative impact on "overall performance of SMEs". Thus the hypothesis is accepted for the factors 'Updated technology' and 'Infrastructural facilities' 'of 'Operational aspect' and the factor 'Capital structure' of 'Financial aspect'.

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 main drivers of economic development in all nations on earth and make significant contribution to the expansion of the Indian economy. SMEs are the second-largest industry after agriculture in terms of employment creation and fostering equitable regional growth in India. This industry makes up more than 90% of all industries in the nation, demonstrating the importance of SMEs as the foundation of the Indian economy. These businesses serve as auxiliary units to major industries and have a significant positive impact on India's inclusive growth. SMEs contribute to the social welfare of billions of people. Hence, there is no question that the industry has the ability to create job opportunities, particularly in the category of unskilled and semi-skilled workers. The industry offers jobs with a significantly higher level of intensity. MSMEs provide a substantial contribution to the development of the country, but they do not receive the essential assistance from governmental organisations and financial institutions. However the issues with financing, infrastructures and growing automation are putting the sector's productivity in problem.

REFERENCES:

1. 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
2. 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
3. Bagale, G. S., Vandadi, V. R., Singh, D., Sharma, D. K., Garlapati, D. V. K., Bommisetti, R. K., Gupta, R. K., Setsiawan, R., Subramaniyaswamy, V., & Sengan, S. (2021). Small and medium-sized enterprises' contribution in digital technology. Annals of operations research, 1–24. Advance online publication. https://doi.org/10.1007/s10479-021-04235-5
4. Farooqi, S., (2002), Small Scale Industries: Facing Acute Crisis. Kurukshetra, 51(1), November, pp. 39-42
5. 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
6. Gaziasayed, & Najmussaharsayed, (2018). Challenges Faced By Micro, Small and Medium Enterprises of Mumbai - An Empirical Study, Journal of Business and Management, 63-75
7. Gyampah, K.A. and Boye S.S., (2001). Operations Strategy in an Emerging Economy:
8. The Case of the Ghanaian Manufacturing Industry, Journal of Operations Management, Vol 19, 59-79.
9. 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.

10. Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). Multivariate data analysis. 1998. Upper Saddle River.
11. 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.
12. 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.
13. 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
14. 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
15. Khatri, P. (2019). A Study of the Challenges of the Indian MSME Sector, IOSR Journal of Business and Management, 21(2). 05-13
16. Mageswari, U. T. & Bhuvaneswari, 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
17. Maheshkar, C. & Soni, N. (2022), Problems Faced by Indian Micro, Small and Medium Enterprises (MSMEs), 48(2), https://doi.org/10.1177/09708464211064498
18. Sarma, G. C. (2016). Performance of MSME's in India - problems & prospects, International Journal of Social Science and Humanities Research 4(3), (23-30)
19. Sivakami, P. (2012). Micro Small and Medium Enterprises - Problems and Prospects, Salem: MSK Publication
20. SIDBI (2001), Report on Small Scale Industries Sector, Small Industries Development
21. Bank of India, Government of India, New Delhi
22. 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
23. Turyahebwa, A. (2013). Financial management practices and business performance of small and medium enterprises in western Uganda. African Journal of Business Management, 7(38), 3875-388