Himalayan J. Soc. Sci. & Humanities ISSN: 0975-9891 https://doi.org/10.51220/hjssh.v20i1.14
Vol. 20, (2025) 108-115

A Comparative Analysis of Hill and Plain Region MSMEs and Their Contribution to Uttarakhand's Economic Development

Divyanshu Panwar[1*]; M. C. Sati[2]

[1]*Department of Business Management, HNB Garhwal University, Srinagar (Garhwal)-246174, India*
[2]*Department of Economics, HNB Garhwal University, Srinagar (Garhwal) -246174, India*

[*]Corresponding Author's email Id: divyanshupanwar24@gmail.com

Received: 12.10.2025; Revised: 26.12.2025; Accepted: 30.12.2025
©Society for Himalayan Action Research and Development

Abstract: Micro, small, and medium enterprises (MSMEs) play a crucial role in generating employment, attracting investment, and establishing business units in the state of Uttarakhand. The importance of MSMEs has been increasingly recognized in India, with major emphasis placed on their development at the national level. However, several challenges persist, including policy gaps, inadequate infrastructure, limited training, insufficient credit facilities, and the prevalence of sick units. The present paper aims to compare the hill and plain regions of Uttarakhand. The study focuses on three key variables: employment, number of units, and investment. Analytical tools such as paired sample t-tests, percentage change, and compound annual growth rate (CAGR) were employed, and SPSS 21 software was used for data analysis. The study draws on data collected from 2015 to 2024. The findings suggest that, Dehradun experienced relatively smaller declines in number of units and employment, whereas Pauri Garhwal performed better in terms of investment.

Keywords: MSMEs; Hill; Plain; Uttarakhand; Development.

Introduction

MSMEs stands for Micro, Small, and Medium Enterprises. These are businesses classified based on their size—usually determined by investment, turnover, or number of employees. MSMEs play a crucial role in economic development, especially in countries like India, by fostering entrepreneurship, generating employment, and contributing to GDP and exports. The current definition of MSMEs is as follows.

Table 1. Classification of MSMEs as per the amendment notified on 1 June 2020

Enterprise Type	Investment in Plant & Machinery/Equipment	Annual Turnover
Micro	Up to ₹1 crore	Up to ₹5 crore
Small	Up to ₹10 crore	Up to ₹50 crore
Medium	Up to ₹50 crore	Up to ₹250 crore

Source: https://www.msme.gov.in.

MSMEs worldwide make up about 90% of all businesses and provide 60–70% of employment globally. MSMEs create employment opportunities *(Simmanjeet Kaur et al., 2019).* MSMEs has been accepted as engines of economic growth *(Subina Syal, 2015).* Organizations like the World Bank and UNIDO support MSME development through funding, training, and policy assistance. MSMEs are backbone of Indian economy *(Surendar Gade, 2018).* They play a key role in driving industrial growth, creating jobs, and promoting balanced regional development. MSMEs play a crucial role in industrial development of the country *(Sanjeeb Kumar Dey, 2014).* MSMEs significantly contributes

in manufacturing and exports *(Priyadarshani Zanjurne, 2018).* Often called the "engine of growth", these enterprises operate across sectors—from manufacturing and handicrafts to IT and services. Entrepreneurship is the catalyst of economic growth *(Ebitu et al., 2016).* There is increase in income level of entrepreneurs of MSMEs *(Shweta Thakur et al., 2019).* MSMEs are not just small businesses—they are strategic drivers of India's economic growth. MSMEs have shown toughness in crisis *(Titien Agustinal et al., 2017).* With the right support in finance, digitalization, and global market access, MSMEs can help India reach its $5 trillion economy goal while ensuring inclusive development.

The state of Uttarakhand**,** known for its natural beauty and strategic location, has been steadily developing its MSME sector since its formation in 2000. MSMEs form the core of Uttarakhand's industrial ecosystem, driving employment, entrepreneurship, and balanced regional development — especially in the hill districts. MSMEs develops backward rural areas *(Dipak Kumar Das, 2021).* MSMEs in Uttarakhand are growing rapidly, transforming the state into a hub for green industry, agro-processing, and sustainable tourism**.** While challenges like finance and infrastructure remain, targeted policies and digital support platforms are helping bridge the gap especially in the hilly regions**.** MSMEs are helpful in poverty reduction *(Divyanshu Panwar et al., 2024).* With continued support, MSMEs will remain the engine of inclusive growth in Uttarakhand's journey toward industrial and economic self-reliance.

Objective of the study

The objective of the study is to compare the economic development of the state of Uttarakhand compared with hilly and plain regions of the state. The specific objective is to analyse the growth and trends of MSMEs sector in Uttarakhand in terms of number of units, employment generated and investment during the time frame of the study.

Hypothesis of the study

H0-The contribution of MSMEs to the number of units in Uttarakhand was similar in hill and plain region.

H0-The contribution of MSMEs to the employment in Uttarakhand was similar in hill and plain region.

H0-The contribution of MSMEs to the investment in Uttarakhand was similar in hill and plain region.

Research methodology

The present study is on secondary sources obtained from variety of sources, including the economic survey of India, the Economic Survey of Uttarakhand, the MSME Annual Reports, the All-India Census Report, Journals, newspapers, etc. The data has three variables namely employment, number of units, investment and is collected over a period of 2015-2023 The study employed Compound Average Growth Rate (CAGR) and paired sample T-test as the statistical tool. SPSS 21 was used to analyse data.

MSMEs in hill and plain regions of Uttarakhand

1. Pauri district (Hill region)

Pauri Garhwal is a located in the state of Uttarakhand**,** India. It's one of the most scenic and culturally rich regions in the Garhwal division of the state. The district lies on the southern slopes of the Himalayan range**,** offering panoramic views of the snow-clad peaks (like Chaukhamba and Kedarnath). Major rivers include the Alaknanda and its tributaries. The climate varies — cool and temperate in higher altitudes, warm and subtropical in lower areas. Pauri Garhwal has registered 4,406 enterprises. This indicates that the overwhelming majority are micro-units; very few medium-scale enterprises.

Fig 1. Total Registered MSME Units, Employment and Investment (lakh) in Pauri Garhwal, During the Time Frame of the Study (Source: https://doiuk.org.)

Figure 1 presents data on the number of MSME (Micro, Small, and Medium Enterprises) units, employment, and investment in Pauri district from 2015 to 2023. The data is secondary in nature and has been sourced from the Directorate of Industries, Uttarakhand. During this period, a total of 2,005 MSME units were established, generating employment for 9,886 individuals and attracting investments amounting to ₹37,877.41 lakhs.

2. Dehradun district (Plain region)

Dehradun is the capital city of Uttarakhand, a northern state in India. It's located in the Doon Valley**,** nestled between the Ganges and Yamuna rivers at the foothills of the Himalayas**.** Has an altitude around 450–700 meters (1,500–2,300 ft) above sea level. Generally pleasant and temperate year-round, though summers can be warm and monsoons bring heavy rain. Dehradun has had 2321 units registered before the state's formation.

Figure 2 presents data on the number of MSME (Micro, Small, and Medium Enterprises) units, employment, and investment in Dehradun district from 2015 to 2023. The data is secondary in nature and has been sourced from the Directorate of Industries, Uttarakhand. During this period, a total of

3,889 MSME units were established, generating employment for 36,873 individuals and attracting investments amounting to ₹69,079.62 lakhs.

Fig 2. Total Registered MSME Units, Employment and Investment (lakh) in Dehradun, During the Time Frame of the Study (Source: https://doiuk.org.)

Results and discussion

Table 2: A Comparison of the Pauri Garhwal and Dehradun district for the Contribution of MSMEs to the number of units.

Year	Pauri district		Dehradun district	
	Number of Units	Growth rate %	Number of Units	Growth rate %
2015-2016	147	--------	227	---------
2016-2017	285	93.88%	467	105.73%
2017-2018	294	3.16%	763	63.38%
2018-2019	60	-79.59%	468	-38.66%
2019-2020	411	585.00%	442	-5.56%
2020-2021	391	-4.87%	576	30.32%
2021-2022	404	3.32%	918	59.38%
2022-2023	13	-96.78%	28	-96.95
CAGR		-26.15%	CAGR	-23.02%

Source: https://doiuk.org/.

The data for this study has been acquired from secondary sources, specifically the Directorate of Industries, Government of Uttarakhand. Table 2 presents a comparison of the contributions of MSMEs to number of units for hill region (Pauri Garhwal) and plain region (Dehradun). In Pauri Garhwal region, the growth rate of number of units reached its peak in 2019–20 at 585.00%, while the lowest growth rate occurred in 2022–23 at -96.78%. In Dehradun region, number of units growth was at its lowest in 2022–23 at -96.95%, and it peaked in 2016–17 at 105.73%. The study indicates that number of units in MSMEs has increased over the years; however, there have been notable fluctuations in the annual percentage changes. Comparing the contributions of MSMEs of Pauri

Garhwal and Dehradun using the Compound Annual Growth Rate (CAGR), it is evident that the Dehradun experienced a slightly faster rate of growth than Pauri Garhwal.

Table 3: A comparison of Pauri Garhwal and Dehradun regions for the contribution to investment (in lakhs).

Year	Pauri district		Dehradun district	
	Investments	Growth rate %	Investments	Growth rate %
2015-2016	436.75	--------	5260.94	---------
2016-2017	5400.33	1136.48%	9524.05	81.03%
2017-2018	5119.29	-5.20%	9090	-4.56%
2018-2019	1381	-73.02%	11225	23.49%
2019-2020	7157.3	418.27%	11759.48	4.76%
2020-2021	5723.74	-20.03%	12558.29	6.79%
2021-2022	12585	119.87%	9420	-24.99%
2022-2023	74	-99.41%	241.86	-97.43%
CAGR		-19.90%	CAGR	-31.95%

Source: https://doiuk.org/.

The data for this study was obtained from secondary sources, specifically the Government of Uttarakhand's Directorate of Industries. Table 3 presents a comparison of the contributions of MSMEs to investment of Pauri Garhwal and Dehradun regions. In Pauri Garhwal region, the growth rate of investment reached its peak in 2016–17 at 1136.48%, while it fell to its lowest point in 2022–23 at -99.41%. In contrast, Dehradun region, the investment growth rate was lowest in 2022–23 at -97.43%, and it peaked in 2016–17 at 81.03%. Overall, the study indicates that while investment by MSMEs has grown over the years, there have been considerable fluctuations in the percentage change. A comparison based on the Compound Annual Growth Rate (CAGR) shows that the Pauri Garhwal experienced slightly faster rate of growth compared to the Dehradun.

Table 4: A comparison of Pauri Garhwal and Dehradun regions for the contribution to employment.

Year	Pauri district		Dehradun district	
	Employment	Growth rate %	Employment	Growth rate %
2015-2016	361	--------	1125	---------
2016-2017	1509	318.01%	3273	190.93%
2017-2018	2556	69.38%	3841	17.35%
2018-2019	472	-81.53%	3480	-9.40%
2019-2020	1547	227.75%	3922	12.70%
2020-2021	1713	10.73%	10759	174.32%
2021-2022	1682	-1.81%	10325	-4.03%
2022-2023	46	-97.27%	148	-98.57%
CAGR		-22.70%	CAGR	-22.40%

Source: https://doiuk.org/.

The data for this study was obtained from secondary sources, specifically the Government of Uttarakhand's Directorate of Industries. Table 4 compares the contributions of MSMEs to employment of Pauri Garhwal and Dehradun regions. In Pauri Garhwal, the growth rate of employment peaked in

2016–17 at 318.01.10%, while it reached its lowest point in 2022–23 at -97.27%. In Dehradun, employment growth was lowest in 2022–23 at -98.57%, and it peaked in 2016–17 at 190.93%. Overall, the study indicates that employment generated by MSMEs has increased over the years, although there have been significant fluctuations in the growth rates. Based on the Compound Annual Growth Rate (CAGR), the Dehradun region experienced a faster rate of growth in employment compared to Pauri Garhwal.

H0-The contribution of MSMEs to the number of units in Uttarakhand was similar in hill and plain region.

Table 5: Paired Samples t-Test for the Contribution of MSMEs in the number of units of Pauri Garhwal and Dehradun.

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pauri - Dehradun	-235.5	200.66	70.94691	-403.26	-67.7	-3.319	7	.013

Source: Processed data 2025

Table 5 shows the paired sample t-test results indicate a mean difference in the number of units between Pauri Garhwal and Dehradun regions. The p-value of 0.013 is less than the 0.05 significance level, leading to the rejection of the null hypothesis. This result demonstrates that there is a statistically significant difference in the contribution of MSMEs to the number of units.

H0-The contribution of MSMEs to the employment in Uttarakhand was similar in hill and plain region.

Table 6: Paired Samples t-Test for the Contribution of MSMEs in employment of Pauri Garhwal and Dehradun.

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 2	Pauri - Dehradun	-3373.3	3495.7	1235.9	-6295.8	-450.8	-2.729	7	.029

Source: Processed data 2025

Table 6 shows the paired sample t-test indicates a mean difference in employment between Pauri Garhwal and Dehradun regions. The p-value of 0.029 is less than the 0.05 significance level, leading to the rejection of the null hypothesis. This result confirms that there is a statistically significant difference in the contribution of MSMEs to employment between Pauri Garhwal and Dehradun regions.

H0-The contribution of MSMEs to the investment in Uttarakhand was similar in hill and plain region. Table 7 shows the paired sample t-test indicates a mean difference in investment between Pauri Garhwal and Dehradun regions The p-value of 0.027 is less than the 0.05 significance level, leading to the rejection of the null hypothesis. This result confirms that there is a statistically significant difference in the contribution of MSMEs to investment between Pauri Garhwal and Dehradun regions.

Table 7: Paired Samples t-Test for the Contribution of MSMEs in investments of Pauri Garhwal and Dehradun.

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 3	Pauri - Dehradun	-3900.2	3949.4	1396.3	-7202.1	-598.4	-2.7	7	.027

Source: Processed data 2025

Conclusion

According to the study, the contribution of MSMEs in number of units, employment, and investment has been continuously increasing since the study period. The compound annual growth rate (CAGR) for number of units was -26.15% in Pauri Garhwal and -23.02% in Dehradun, indicating a sharper decline in Pauri Garhwal. Employment declined at a CAGR of -22.70% in Pauri Garhwal and -22.40% in Dehradun, while investment decreased at a CAGR of -19.90% in Pauri Garhwal compared to -31.95% in Dehradun. These figures suggest that Dehradun experienced relatively smaller declines in number of units and employment, whereas Pauri Garhwal performed better in terms of investment. The paired sample t-test indicates that, despite the declines, the contribution of MSMEs across the variables shows statistically significant differences between the two districts, highlighting areas where each district has relative strengths.

Limitations of study

The present study is based entirely on secondary data sources, which may not always perfectly align with the research objectives. To analyze the trends of MSMEs in the hill and plain regions of Uttarakhand, only three variables were considered, as data for other potentially relevant variables were unavailable. Furthermore, the study focuses on just two districts—one from the hill region and one from the plain region—resulting in a relatively small sample size, which may limit the generalizability of the findings.

References

Agustina T, Candrarin G & Manan A (2017). MSMEs Challenges in Phenomena of Disruption Era. *Journal of Economics and Sustainable Development* 8(21), 116-121.

Das D K (2021). Role of micro, small, and medium enterprises (MSMEs) in economic development of India. *International Journal of Multidisciplinary Research and Explorer* (IJMRE), 1(1), 1-7.

Dey S K (2014). MSMEs in India: it's growth and prospects. Abhinav national Monthly refereed *Journal of research in Commerce & Management* 3(8), 26-33.

Ebitu E T, Glory B & Alfred U J (2016). An appraisal of Nigeria's micro, small and medium enterprises (MSMEs): Growth, challenges and prospects. *British Journal of Marketing Studies*, 4(5), 21-36.

Gade S (2018). MSMEs' role in economic growth–a study on India's perspective. International *Journal of Pure and Applied Mathematics* 118(18), 1727-1741.

Panwar D, Mamgain P & Sati M C (2024). Role of Micro, Small and Medium Enterprises in Promoting Employment and Livelihood Opportunities: A Study of Uttarakhand, India. *Journal of Mountain Research* 19(1), 21-27.

Syal S (2015). Role of MSMEs in the growth of Indian economy. *Global Journal of Commerce and Management Perspective* 4(5), 40-43.

Thakur S & Vashisth K K (2019). Business Performance of MSME since Last 5 Years in Solan and Shimla Districts of Himachal Pradesh. *International Journal for Research in Applied Science & Engineering Technology* (IJRASET)**,**7(12), 580-584.

Virk S K & Negi P (2019). An overview of MSME sector in India with special reference to the state of Uttarakhand. *International Journal of Trend in Scientific Research and Development* 3(2), 891-896.

Zanjurne P (2018). Growth and future prospects of MSME in India. *International Journal of Advanced Engineering, Management and Science* (IJAEMS), 4(8), 608-614.