Investment and Employment Generation in Micro-enterprises of North Karnataka: An Analysis in Registered Manufacturing and Service Micro-enterprises

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Abstract: The micro-enterprise sector is an economic engine that creates employment opportunities in developed, developing, and underdeveloped countries. It has a different range of manufacturing products and services and lower capital than large industries. In India, MSMED Act, 2006, reveals the investment level is higher in the micro manufacturing sector than in the microservice sector. According to the ministry of MSME, the micro-enterprise industry accounts for 97 per cent of the total employment in the Micro, Small, and Medium Enterprise sectors. In the case of the employment level of micro-enterprises, which sector creates more work, whether the manufacturing or service sectors? The present study attempted to compare the investment and employment generation level between registered micro manufacturing and service enterprises and examine association between investment and employment level in registered micro manufacturing and service enterprise sector in North Karnataka. The researcher collected secondary data from the District Industries Centres (DIC) in five districts of North Karnataka. 385 samples out of 10,270 micro enterprises listed given by DICs selected by Slovin's formula have been categorised using the stratified random sampling method. The researcher used a non-parametric Mann-Whitney U-test and Spearman's rank correlation to analyse the data. The researcher found that there is a significant difference in investment as well as employment generation level between manufacturing and service micro-enterprises. There is a positive and significant association between investment and employment level in the micro manufacturing enterprise sector but a negative and not significant association between investment as well as employment level in the microservice enterprise sector.

Keywords: Micro enterprises, Manufacturing, Service sector, Employment, Investment, Karnataka.

INTRODUCTION

Entrepreneurship is a powerful weapon to fight against poverty and unemployment. It creates rural development, industrialisation, technological development, and exports of the country (Bhushan, 2019). Almost all countries, such as Egypt, Israel, Turkey, Germany, Sweden, Norway, Denmark, Korea, Sudan, Taiwan, etc., define the Micro, Small, and Medium Enterprise (MSME) sector based on employment factors and investment. This sector employs 60 million people through 26 million enterprises in India (Rajhans, 2018). The MSME sector provides 21 per cent employment to India's workforce and 80 million jobs (Shah & Sultania, 2022). The micro-enterprise industry is crucial in creating employment opportunities; it has a different range of manufacturing products and services and lower capital than large industries (Ministry of MSME, 2022). In India, micro-enterprises are engaged in manufacturing, processing, or preserving goods where investment is less than 25 lakh rupees in plant and machinery. Similarly, micro-enterprises provide services where investment is less than 10 lakh rupees in equipment (MSMED Act, 2006). This definition reveals that the investment level is higher in the manufacturing sector than in the service sector. According to the ministry of MSME, the micro-enterprise sector accounts for more than 99 per cent of the total number and 97 per cent of the full employment in the MSMEs. In the case of the employment level of micro-enterprises, which sector creates more work, whether the manufacturing or service sectors? The present study compares the investment and employment generation level between registered micro manufacturing and service enterprises in North Karnataka. The researcher reviewed the existing studies. In Karnataka, the number of SSI (Small Scale Industries) units registered by march 1984 was 40,751 with an investment of Rs. 40,559,39 lakhs which employed 4,26,594 persons. But by March 1989, the size of SSI units rose to 95,867 with an investment of Rs. 85,777,22 lakhs, providing work to 7,03,073 persons (Hanumanthraya, 1994). The micro-enterprises are a part of SMEs (small and medium enterprises). The small-scale industries have contributed 40 per cent to industrial production and 35 percent to national exports. Fixed investment in this sector was Rs. 84,329 crores in India (Chester, 2007). There was a radical change in the employment growth rate of small-scale industries in India in the pre and post-liberalisation period. In the 1980s employment growth rate was close to 6-7 per cent, but in the 1990s, the employment growth rate diminished by nearly 4 per cent. They found that the government policy of formalising the employment sector, failed (Majumdar & Sengupta, 2010). The micro-enterprise industry provides huge employment. In case of middle-income countries, we can observe in Ethiopia, its manufacturing micro-enterprises

account is 97 per cent (Li & Rama, 2015). The MSMEs employed eight crore people and four crore enterprises. They have 45 per cent of manufactured output and 40 per cent of exports from India. Manufacturing enterprises account for 31.8 per cent, and service enterprises represent 68.2 per cent. 55.3 per cent of these enterprises are in the rural area (Syal, 2015; Azteagu and Paramashivan, 2016; Mayilsamy, 2018). The MSME sector is predominantly the backbone of the Indian economy. It comprises around three crore units and generates seven crore employment opportunities (Ningappa, 2017). The micro-enterprise sector is labour intensive and has a smaller capital investment than the larger enterprises. The share of micro-enterprises is 95.05 per cent in total MSMEs and 94.16 per cent in manufacturing, and 96.85 per cent in service units (Khanka, 2020). According to Karnataka Economic Survey 2021- 22, as of November 30, 2021, under the Udyam registration portal, there are 3.32 lakh MSME units registered in the state with an investment of about Rs. 0.60 lakh crores and employed 36.31 lakh persons. After a review of these studies, the researcher has to clearly understand which sector is significant in promoting investment and employment generation- whether the micro-manufacturing sector or the service sector? The main intention of the present research is to compare investment and employment generation levels between registered micro manufacturing and service enterprises and examine the association between investment and employment level in registered micro manufacturing and service enterprise sectors in North Karnataka.

RESEARCH GAP

The researcher has reviewed a lot of existing studies. Studies indicate the overall MSME sector's performance in case investment, employment, production, and export level in the country but not particularly in the individual sector, i.e., what is investment and employment level in the micro manufacturing sector and what is the investment and employment level in the microservice sector? The present study has tried to compare investment and employment levels in the micro manufacturing and service sector.

REGISTRATION PROCESS OF ENTERPRISES UNDER DICS (DISTRICT INDUSTRIES CENTRES) IN INDIA

The District Industries Centre (DICs) policy was started in India on May 8, 1978, to provide an integrated administrative framework at the district level for promoting small-scale industries in rural areas (Khanka, 2020). DICs are established under the department of the Directorate of Industries and Commerce of each state. Every district has one agency to deal with all requirements of micro, small and medium industries under one roof. The

needs of MSMEs are provided for and supported by DICs. The primary function of DIC is to act as the chief coordinator of multifunctional agencies in respect of various government departments and other agencies. The prospective small entrepreneur will obtain assistance from this organisation for setting up and running the industry in rural areas (Murthy, 2017). The concept of DIC has been introduced to assist MSMEs with raw materials, machinery, business ideas, and credit facility (Rajhans, 2018). There was a registration process of small scale industries in the District Industries Centre before MSMED Act 2006. This act defined MSMEs, and these enterprises started registering under EM (Entrepreneurs Memorandum) part I and II in DICs. In 2015, the government initiated Udyog Aadhaar to simplify the registration process and to support ease of doing business. It is an electronic platform; even a registration certificate is given electronically (Reserve Bank of India, 2019). Under http://udyogaadhaar.gov.in portal, DIC gave UAN (Udyog Aadhaar Number) to enterprises (National Institute of Labour Economics Research and Development [NILER], 2016). On July 1, 2020, the Ministry of MSME began a Udyam Registration Portal (http://udyamregistration.gov.in) where the entrepreneur can register their enterprises free of cost, and Aadhaar or PAN card is the only essential document required while registering (Ministry of MSME, 2020).

OBJECTIVES OF THE STUDY

1. To compare investment and employment generation levels between registered micro manufacturing and service enterprises.

2. To examine association between investment and employment levels in registered micro manufacturing enterprise sector.

3. To examine association between investment and employment levels in registered micro service enterprise sector.

4. To examine association between investment and employment levels in overall registered micro enterprise sector.

HYPOTHESES OF THE STUDY

• H_0: There is no significant difference in investment and employment generation levels between registered micro manufacturing and service enterprises.

• H_0: There is no significant association between investment and employment levels in registered micro manufacturing enterprise sector.

• H_0: There is no significant association between investment and employment levels in registered micro service enterprise sector.

- H$_0$: There is no significant association between investment and employment levels in overall registered micro enterprise sector.

METHODOLOGY AND DATA COLLECTION

The researcher has collected secondary data from the District Industries Centres of five districts of North Karnataka. The entire micro enterprises' size is 10,270, representing micro enterprises registered in District Industries Centre in five districts: Belagavi, Bagalkote, Gadag, Haveri, and Koppal. Based on this size of enterprise, the researcher has chosen 385 samples based on the Slovin formula, which helps determine the sample size. In 385 samples, the researcher selected 220 from Belagavi, 66 from Bagalkote, 39 from Haveri, 28 from Gadag, and 32 from Koppal districts using a stratified random sampling method. The samples of micro-enterprises have included the manufacture of food products, textiles, leather products, electrical equipment, plastic paper and cups, bricks, agarbatti and among the services, computer centers, xerox centers, mobile repair and service shops, auto and travel service, photo studio, and grocery shops.

$$\text{Slovin's formula} \quad n = \frac{N}{(1 + Ne^2)}$$

$$n = \text{sample size}$$
$$N = \text{population size}$$
$$e = \text{margin of error}$$

The non-parametric Mann-Whitney U- test and Spearman's rank correlation has been used to analyse the data, using the SPSS program.

Variables: The researcher has used three variables one is an independent variable that is the type of micro-enterprises, and two are dependent variables that are investment level and employment generation level (number of workers in the enterprises).

Test the normality: the researcher tested normality whether data are normally distributed or not by the Kolmogorov-Smirnov test, Shapiro-Wilk test, Skewness, and Kurtosis z-values. In our data, the Kolmogorov-Smirnov and Shapiro-Wilk test p-value (0.00) is less than the significance level (0.05) for manufacturing and service micro-enterprises' employment level. In the investment level, the p-value (0.00) is also less than the level of significance (0.05) for manufacturing and service enterprises. It shows that our data are not normally distributed.

The skewness z value for manufacturing enterprises' employment level is 10.10, and for service enterprises' it is 12.28. However, a kurtosis z value for the employment level of manufacturing enterprises is 9.31, and for

service, it is 17.74. Similarly, the skewness z value for manufacturing enterprises' investment level is 11.31, and for service enterprises', it is 13.85. However, the kurtosis z value for the investment level of manufacturing enterprises is 10.93, and for service, enterprises it is 20.59. These values are neither above -1.96 nor below +1.96. Regarding the skewness and kurtosis z values, we can assume that our data are not normally distributed. Therefore, a non-parametric Mann-Whitney U-test has been used for data analysis.

TESTING THE HYPOTHESES

- **H_0: There is no significant difference in investment and employment generation levels between registered micro manufacturing and service enterprises.**

The researcher has used Mann-Whitney U test which is a non parametric tool for testing first hypothesis of the study.

Table 1: Mann-Whitney U test comparing the investment level for micro manufacturing and service enterprises

Ranks

	Types of enterprises	*N*	*Mean Rank*	*Sum of Ranks*
Investment.level (Binned)	Manufacturing	192	209.60	40244.00
	Service	193	176.48	34061.00
	Total	385		

Test Statistics[a]

	Investment.level (Binned)
Mann-Whitney U	15340.000
Wilcoxon W	34061.000
Z	-5.150
Asymp. Sig. (2-tailed)	.000*
a. Grouping Variable: 2	

* significant level is at p<0.05

Table 1 implies the Mann-Whitney U-Test results for comparing the investment level for micro manufacturing and service enterprises. It reveals a significant difference between the mean rank values of manufacturing and service at the investment level. The mean rank value of the manufacturing enterprises is 209.60, higher than service enterprises, which is 176.48. The Mann-Whitney U value is 15340.00, Z = 5.150, p = 0.00. Therefore, the null hypothesis that there is no significant difference in investment level between micro manufacturing and service enterprises is not accepted.

Table 2: Mann-Whitney U test comparing the employment level for micro manufacturing and service enterprises

Ranks

	Types of enterprises	*N*	*Mean Rank*	*Sum of Ranks*
Employment.level (Binned)	Manufacturing	192	208.09	39952.50
	Service	193	177.99	34352.50
	Total	385		

Test Statistics[a]

	Employment.level (Binned)
Mann-Whitney U	15631.500
Wilcoxon W	34352.500
Z	-5.261
Asymp. Sig. (2-tailed)	.000*
a. Grouping Variable: 2	

*significant level is at p<0.05

Table 2 depicts the Mann-Whitney U- Test results for comparing the employment level for micro manufacturing and service enterprises. It reveals a significant difference between the mean rank values of manufacturing and service at the employment level. The mean rank value of the manufacturing enterprises is 208.09, higher than service enterprises, 177.99, Mann-Whitney U value is 15631.50, Z = 5.261, p = 0.00. Therefore, the null hypothesis that there is no significant difference in employment level between micro manufacturing and service enterprises is not accepted.

Table 3: Spearman's rank correlation between investment and employment level in Micro manufacturing sector

Correlations

			Investment.level (Binned)	*Employment.level (Binned)*
Spearman's rho	Investment.level (Binned)	Correlation Coefficient	1.000	.480**
		Sig. (2-tailed)	.	.000
		N	192	192
	Employment.level (Binned)	Correlation Coefficient	.480**	1.000
		Sig. (2-tailed)	.000	
		N	192	192

**. Correlation is significant at the 0.01 level (2-tailed).

- **H_0: There is no significant relation between investment and employment levels in registered micro manufacturing enterprise sector.**

The researcher tested the second hypothesis using the non-parametric Spearman's rank correlation tool, which measures the relationship between two ordinal variables. The two variables, which are investment and employment level, are converted into categorical nature, i.e., "Low," "Moderate," and "High."

Table 3 indicates Spearman's rank correlation between investment and employment level in the micro manufacturing sector. There has been positive and significant correlation between investment and employment level in the micro manufacturing enterprise sector, r_s = .480, n = 192, p < 0.01. Therefore, the null hypothesis, which is there is no significant relationship between investment and employment levels in the registered micro manufacturing enterprise sector, has been rejected.

- **H_0: There is no significant relation between investment and employment levels in registered micro service enterprise sector.**

The researcher tested the third hypothesis using the non-parametric Spearman's rank correlation tool, which measures the relationship between two ordinal variables. The two variables, which are investment and employment level, are converted into categorical nature, i.e., "Low," "Moderate," and "High."

Table 4: Spearman's rank correlation between investment and employment level in Micro service sector

Correlations

			Investment.level (Binned)	Employment.level (Binned)
Spearman's rho	Investment.level (Binned)	Correlation Coefficient	1.000	-.024
		Sig. (2-tailed)	.	.736
		N	193	193
	Employment.level (Binned)	Correlation Coefficient	-.024	1.000
		Sig. (2-tailed)	.736	.
		N	193	193

Table 4: indicates Spearman's rank correlation between investment and employment level in the micro service sector. There has been negative and not significant correlations between investment and employment level in the micro service enterprise sector, r_s = -.024, n = 193, p > 0.01, which .736.

Therefore, the null hypothesis, that there is no significant relationship between investment and employment levels in the registered micro service enterprise sector, has not been rejected.

- **H$_0$: There is no significant relation between investment and employment levels in overall registered micro enterprise sector.**

The researcher tested the fourth hypothesis using the non-parametric Spearman's rank correlation tool, which measures the relationship between two ordinal variables.

Table 5: Spearman's rank correlation between investment and employment level in Micro enterprise sector

Correlations

			Investment.level (Binned)	*Employment.level (Binned)*
Spearman's rho	Investment.level (Binned)	Correlation Coefficient	1.000	.453**
		Sig. (2-tailed)	.	.000
		N	385	385
	Employment.level (Binned)	Correlation Coefficient	.453**	1.000
		Sig. (2-tailed)	.000	.
		N	385	385

**. Correlation is significant at the 0.01 level (2-tailed).

Table 5 indicates Spearman's rank correlation between investment and employment level in the overall micro-enterprise sector, which included manufacturing and service enterprises. There have been positive and significant correlations between investment and employment levels in the general micro-enterprise sector, $rs = .453$, $n = 385$, $p < 0.01$. Therefore, the null hypothesis, that there is no significant relationship between investment and employment levels in the overall registered micro-enterprise sector, has been rejected.

RESULTS AND DISCUSSION

According to Keynesian theory, an increase in investment is a common cause of an increase in employment, and the change in employment depends on investment (Jhingan, 2017). We selected 385 samples of registered micro enterprises registered under the Udoyga Aadara portal in District Industries Centres in five districts of North Karnataka to compare investment and employment generation levels between micro manufacturing and service enterprises and examine the association

between investment and employment levels in registered micro manufacturing as well as service enterprises. As per the results of the Mann-Whitney U test which is an alternative statistical test of independent t-test, there is a significant difference in investment as well as employment generation level between registered micro manufacturing and service enterprises. It indicates that in both groups, the mean rank of manufacturing enterprises is higher than service enterprises. It reveals that more capital is needed to invest in manufacturing than service activities. Our samples included manufacturing activities such as textiles, food processing units, plastic paper cups and plates, wood products, bricks, fabricated metal products, footwear, and service activities such as taxi operation, photo studios, small hotels, xerox centres, online computer centres, food and beverage services, grocery shops, fruit shops, hair salons, and electrical repair shops. At the employment generation level, we observe a significant difference between registered micro manufacturing and service enterprises. It shows that the manufacturing sector creates more employment opportunities than the service sector. As per the non-parametric Spearman's rank correlation, which is an alternative statistical test of the Karl Pearson correlation test, results show that there is a positive and significant association between investment and employment level in the micro manufacturing enterprise sector but a negative and not significant association between investment as well as employment level in the microservice enterprise sector. Generally, we observe the overall micro-enterprise sector's investment and employment level, which is a positive and significant association.

CONCLUSION

The micro-enterprise sector plays a very crucial role in every economy. As per the above result, we can observe that the manufacturing industry is more significant than the service sector. The researcher considered some mixed manufacturing enterprises such as textiles, food processing units, plastic paper cups & plates, wood products, bricks, fabricated metal products, and footwear and in the case of service enterprises, taxi operations, photo studios, small hotels, xerox centres, online computer centres, food and beverage services, grocery shops, fruit shops, hair salons, and electrical repair shops. But the researcher should focus on individuals in manufacturing and service enterprises further.

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