

# “SKILLED LABOUR SHORTAGE : AN ANALYSIS IN MICRO INDUSTRIES WITH REFERENCE TO COIMBATORE DISTRICT, TAMILNADU, INDIA”

**C.Anbalagan**

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*PhD Scholar,*

*Department of Management,*

*Karpagam Academy of Higher Education,*

*Coimbatore*

Under the Guidance of

**Dr A. Martin Jayaraj,**

*Associate Professor,*

*Department of Management*

***Karpagam Academy of Higher Education,***

*Coimbatore*

## **ABSTRACT**

*Skilled labour is an important Asset in any Manufacturing company, and it is more relevant to MSME's. The micro units mostly dependent on the Labour's and their skills to run the day-to-day business. They can not afford to have too many people for the same skill as standby considering their nature of business. Businesses suffer greatly when there is a lack of trained personnel owing to a lack of people entering niche occupations or people lacking in required skills. The study's goal is to explain why and how the micro industry is experiencing a scarcity of trained workers. The information of 115 registered micro industries in Coimbatore District was collected via a survey research technique and analysed. The research's major data collection instrument was a questionnaire designed with the specific aims of the study in mind. In-depth analysis of the causes of the skilled labour shortage uncovered a number of factors, including but not limited to: socioeconomics, external influences, work attractiveness, job attributes, job satisfaction, industry constraints, and individual preferences. This directly affects the productivity of workman and industry. Companies can invest in training to increase their workforce, and employees can be incentivized to upgrade their trade skills and outlook on the workplace.*

**Keywords:** Skilled labour shortage, Micro Industry, Performance. Coimbatore district, MSME

## INTRODUCTION

Skilled workers are those who have the education, training, and experience necessary to do tasks that are more difficult cognitively or physically than those performed by unskilled workers. Skilled work is typically connected with greater pay because of the higher or specialised education required, as well as the higher levels of competence attained via training and experience. The term "unskilled labour" is used to describe workers who have a limited skill set. Skilled labour is important for the success of any business, and it continues to rise its importance with the emergence of complexity and technology in micro industry delivery. In India alone, the MSME sector is expected to have 6.3 crore units, employing approximately 11.10 crore people. The industry accounts for 27% of GDP and is critical to the economy's functioning, particularly in terms of job creation, exports, and lending possibilities. According to certain figures on small and medium-sized enterprises (MSME, 2017), there are 32 million SMEs in India, and these SMEs provide jobs for an estimated 60 million individuals. India's micro, small, and medium-sized enterprises (MSME) are responsible for 65% of the country's manufacturing output and 45% of its entire export sector. The growth rate of the nation's micro, small, and medium-sized enterprises (MSME) has been 10.8 percent. MSME's contribute 30 percent to the GDP. There are an estimated 32 million micro, small, and medium-sized businesses worldwide, but only 1.5 million of them are formally registered. The states of Uttar Pradesh, Maharashtra, Tamil Nadu, West Bengal, Andhra Pradesh, and Karnataka account for 55% of these MSMEs. Over 6,000 of the country's manufactured goods are made by micro, little, and medium-sized enterprises (MSME). Coimbatore is the highly populated micro industries and are facing huge problems due to shortage of Skilled Labors, and is losing the business over the last few years.

## REVIEW OF LITERATURE

Gudien et al. (2013) note that highly trained workers are a crucial component of every successful manufacturing operation. It is also pointed out that the lack of skill or shortage of labour will have direct impact on the business especially in the industries which relies more on the labours. Workplace activities are heavily reliant on trained labour (Mackenzie et. al 2000), any shortage has a detrimental impact on the micro sector, as many of the micro units are not automated and depend on the day-to-day operations using the skilled workforce. Carliner (1998) said that HRM has problems in obtaining suitable workers for its many initiatives because of the rising demand for educated labour. The HRM activities are to be focussed towards the retention aspect of the workforce by meeting their basic conditions and requirements. Many of the available skilled professionals also lack the necessary expertise in their respective fields (Erkelens & van Egmond, 2007). Although the severity of the shortage varies by industry, it is having an impact on the ability of countries to get their projects completed. The delivery failure would lead to failure in delivery across the complete the supply chain as one industry has connection to the next level and so on till it reaches the end customer. R. Vettriselvan et. al. 2014 reported that Indian laborers do not stay in the same job for a long

time. There is high labor turnover, absenteeism, indiscipline, etc. This may be because workers were originally comparatively independent from rural areas, or it may be because of their lack of education and love of leisure. The goal of the study is to identify trade areas where personnel is in short supply and to come up with a list of required criteria for competent labours in the region.

The micro industry is regarded as one of the world's most important industries (Untari, D., & Satria, B. 2021). As important as it is to a country's GDP, well-trained workers are essential to its success (Subramanian et.al. 2021). The lack of qualified workers and the inability to find enough of them remain significant problems. According to Healy et. al. (2011), a lack of skilled labour is a multifaceted issue that hinders the performance of productive tasks. Windapo (2016) claims that insufficiently skilled workers are the primary cause for project failure. It is not always a lack of resources, she said; sometimes it's a lack of access to personnel with cutting-edge expertise. Multiple authors (Tarnoki, 2002; SLIM Report, 2002; Lill, 2004; Dainty et. al. 2004; Olsen et. al. 2012; Oseghale et. al. 2015) have pointed the factors and causes such as an ageing workforce a growth in the number of activities, a bad public attitude, and a lack of consistent training and training policies. However, Bennett and McGuinness (2009) suggested that the industry's negative reputation is to blame for the shortage of skilled workers. It's widely recognised as one of the riskiest and accident-plagued fields of work possible. Alternatively, Rasool and Botha (2011) argued that a combination of factors is to blame.

## **NEED FOR THE STUDY**

Today especially in post pandemic situation, the biggest problem to sustain the business is managing the shortage of skilled employees in micro industries due to the lack of job opportunities, mismatch of employee's skills to demand and availability and migration of people. The need of the research study is to know the various reasons of skilled employee shortage in micro industry. This study is to help the micro firms to retain the employees and reduce the skilled employee shortage.

## **OBJECTIVES OF THE STUDY**

- To study the present condition of the skilled labours in micro industries in Coimbatore District.
- To analyse the causes for the shortage of skill labours in micro industries.
- To evaluate the effects of the shortage of skill labour and suggest measures to retain the skilled labours in micro industries.

## **RESEARCH METHODOLOGY**

Descriptive Research design has been deployed with the Simple random sampling technique to select labours of micro industries. The study covers the period from 2021–2022 and is concentrated from one region in Tamil Nadu i.e., Coimbatore District. The present study is based on both primary and secondary data. Primary sources include a questionnaire and in-depth interviews with managers and owners of micro-enterprises. The primary data are taken from a random selection of 115 micro-industries in a Coimbatore neighborhood with 400 total. Secondary sources such as annual reports and national/international journals are mined for information about micro, small, and medium-sized enterprises.

The collected data were analysed using the Statistics Package for Social Sciences (SPSS). The Kaiser-Meyer-Olkin (KMO) p-value was determined to assess the factor model's suitability. Tools like Factor analysis and ranking method tools are used appropriately to rank the causes and effects of shortage of employees.

## **LIMITATIONS OF THE STUDY**

- The Study is limited to only micro industry, so the study is not applicable to small, medium and large enterprises.
- This study has been carried out only in micro industries in Coimbatore, and hence may not be applicable for other geographical locations
- Sample size is limited to 115 micro industries only in Podanur area of Coimbatore
- The respondents are the Industry owners / supervisors. The opinion of employees have not been recorded and this opinion may differ from current study.

## **ANALYSIS AND INTERPRETATION**

There are various skills required for different industries and will vary from industry to industry in the micro industry. The most commonly shortage of skills are considered as in the below table.

**Table 1: Shortage of Skilled Labour**

<b>Skilled Labour</b>	<b>Average Index</b>	<b>Rank</b>
Welders	1.73	1
CNC operators	1.69	2
Electricians	1.69	2
Fitter	1.68	3
Installer technician	1.64	4
Plumbers	1.64	4
Safety technician	1.60	5
Fuel technician	1.58	6
Law enforcement officers	1.54	7
Maintenance technician	1.54	7
Machine operator	1.39	8
Sales representative	1.35	9

(Source: Primary data)

Table 1 reveals that the professions of welder (1.73), CNC operator (1.69), electricians (1.69), and fitter (1.68) were in short supply in the micro industry in Coimbatore City, and were ranked first, second, and third. Machine operator and sales representative, which are categorised as easily obtained skilled labour, were ranked 8th and 9th, respectively, with average indices of 1.39 and 1.35. Rene Van Berkel (2018) and Ashu Katyal (2015) agree with the study's findings, stating that trained personnel such as welders and CNC operators are scarce. Because of its unique character, the micro sector needs a high degree of professional ability to meet the needs of clients (Enshassi et. al. 2009).

## **CHARACTERISTICS OF SKILLED LABOUR**

There are numerous characteristics applicable to the skilled employees of the micro industries. The key characteristics as determined based on this study is listed in the below table.

**Table 2: Characteristics of Skilled Labour**

<b>Characteristics</b>	<b>AVERAGE INDEX</b>	<b>RANK</b>
Persistence and determination	1.80	1
Coordination	1.72	2
Adaptability	1.66	3
Faithfulness	1.66	3
Expertness	1.65	4
Loyalty	1.64	5
Ability to communicate	1.62	6
Ambitious	1.58	7
Reading	1.58	7
Good coordination of the hands, eyes, and body	1.57	8
a strong work ethic	1.55	9
analytical abilities	1.47	10
Comprehensive	1.35	11

(Source: Primary data)

In Table 2, the most significant attributes required by any skilled labour were determined to be determination and perseverance. Coordination was ranked second with an average score of 1.72. On the other hand, having extensive knowledge of how to utilise tools and equipment was considered as one of the lowest levels of skilled labour.

### CAUSES OF SKILLED LABOUR SHORTAGE

Causes identified on this study in micro industries has been tested using the KMO test and the outcome of the test is given below

**Table 3: KMO and Bartlett's Test of Sphericity**

Kaiser–Meyer–Olkin Measure of Sampling Adequacy		0.516
	Approx. Chi–Square	622.369
Bartlett's Test of Sphericity	Df	209
	Sig.	0.000

(Source: Primary data)

Using Table 3, It can be seen that the KMO = 0.516 has a p-value higher than the 0.05 significance level to indicate that the factor model is adequate for gauging sampling sufficiency. Bartlett's sphericity test will fail at a 0.05 significance level. There is a significant deviation from an identity matrix in the correlation matrix (p 0.05).

**Table 4: Total Variance Explained**

Factor	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %
1	3.234	14.874	14.874	3.234	14.874	14.874
2	2.768	12.258	28.456	2.768	12.258	28.456
3	2.753	9.852	38.591	2.753	9.852	38.591
4	1.789	8.486	47.246	1.789	8.486	47.246
5	1.987	7.369	54.579	1.987	7.369	54.579
6	1.312	6.741	61.654	1.312	6.741	61.654
7	1.426	5.375	66.458	1.426	5.375	66.458
8	1.486	5.786	72.233	1.486	5.786	72.233

(Source: Primary data)

Skilled labour is in limited supply due to the eight (8) causes and contributing variables shown in Table 4 in the micro sector with eigenvalues greater than one that identifies the major drivers of skilled labour shortages.

The first factor/component accounts for 14.874 percent of the variation in skilled labour shortage causes. The second factor/component accounts for 12.258 percent of the variation not explained by the first. Together, the eight factors/components account, the factors contributing to the scarcity of competent workers account for a staggering 72.23 percent of the total variance.

**Table 5: Rotated Component Matrix**

Causes	Components							
	1	2	3	4	5	6	7	8
Lack of interest by the youth	0.060	-0.020	0.960	0.001	-0.080	-0.044	-0.021	0.014
Lack of job security	0.691	-0.071	0.182	0.065	-0.219	-0.256	0.074	-0.069
Changes in skill requirements	-0.267	-0.003	-0.149	0.779	-0.195	0.030	0.017	0.000
Irregular and low remuneration	-0.089	-0.019	0.141	-0.092	0.059	0.759	0.049	0.094
Economic change	0.434	0.269	-0.004	0.170	0.280	-0.260	-0.129	-0.188

Low motivation	0.417	-0.132	-0.123	-0.170	0.103	0.606	0.088	-0.139
Not meeting employer expectation	0.015	0.113	0.030	-0.023	0.889	0.136	-0.060	0.025
High education level	0.759	0.059	-0.041	-0.250	0.244	0.195	0.023	0.070
Ageing workforce	-0.009	-0.120	0.002	0.814	0.170	-0.223	-0.085	0.139
Geographical allocation	-0.048	0.610	-0.032	-0.015	-0.060	0.289	-0.389	-0.100
Dissatisfaction with the organisation	-0.205	0.529	-0.153	0.470	-0.302	0.249	-0.164	-0.125
New technology	0.116	0.685	-0.032	0.133	-0.321	0.026	0.040	0.096
High mobility	0.057	0.062	0.041	-0.035	-0.049	-0.005	0.234	0.862
Small number of new entrants	-0.044	0.240	-0.198	-0.359	0.329	-0.310	-0.589	-0.005
Poor education	0.074	0.074	-0.235	-0.060	0.634	0.122	0.517	-0.226
Organisation unacceptable behaviour	-0.019	-0.380	-0.040	0.202	-0.014	0.132	-0.086	0.745
Poor training	0.039	0.785	-0.150	0.053	-0.040	0.150	-0.215	0.029
Personal reasons	0.079	0.197	-0.104	-0.160	0.067	-0.004	0.054	0.791

Extraction method: Principal Component Analysis.

Rotation method: Vari-max with Kaiser Normalization.

Table 5 displays the factor loadings for each variable, and it is clear that economic change, high levels of education, and a lack of employment stability have a significant weight on factor 1. These characteristics are referred to as socioeconomic conditions collectively. Factor 2 is heavily loaded with variables such as dissatisfaction with the organization, geographic location, poor training and new technology. As a result, these variables are grouped together as external forces. Furthermore, factor 3 is heavily influenced by the youth's lack of interest. As a result, factor 3 is labelled as job attractiveness. As a result, factor 4 is heavily weighted due to the aging workforce and changes in skill requirements. As a result, these factors are grouped together as job characteristics. Because the variables do not fulfil the given requirements, factor/component 5 is discarded. Low motivation is associated with a high level of factor 6 and is classified as job satisfaction. Factor 7 is heavily laden due to lack of newcomers and a shaky educational foundation, which are grouped as industrial limits. Finally, component 8 is heavily



weighted with personal characteristics, such as high mobility, Organisation unacceptable behaviour, and Personal reasons.

An important micro industry deficiency is due to economic crisis or bad seasons in manufacturing, as stated by Willow (1998). Low salary and motivation for skilled workers, according to OffeiNyako et al. (2014), are to blame for the shortage of skilled labour. Young people in Coimbatore are less interested in vocational training as a result of this tendency (OffeiNyako et al., 2014). Sovereign Insurance reports that a lack of qualified workers is diminishing output quality and generating endless delays across the board for microprojects.

## THE EFFECTS OF SKILLED LABOUR SHORTAGE

Various effects applicable and identified through this study has been given below in the table

**Table 6:** Impact of an Insufficiency of Qualified Workers

<b>EFFECTS</b>	<b>AVERAGE INDEX</b>	<b>RANK</b>
Work of poor quality	1.77	1
Concerns about safety	1.69	2
Wastage of materials	1.65	3
Method of manufacturing is incorrect.	1.63	4
Errors in the process add to the overall cost of the product.	1.60	5
Production is taking longer than expected, causing a delay in the completion of the task.	1.59	6
Inability to deal with unanticipated site issues	1.56	7
Inability to comprehend process	1.55	8
Inability to grasp drawings	1.52	9
Low labour productivity	1.44	10

(Source: Primary data)

The average evaluation for the impact of the skilled labour shortage on job quality was 1.77, as shown in Table 6. Safety concerns came in second, with an average value of 1.69, The ninth and tenth places, respectively, were taken by inability to grasp drawings and low labour productivity.

## FINDINGS

It has been identified as Welder and CNC Operators have been ranked as 1 and 2, and is the major shortage of skills are per the study, and the Sales representatives has been rated as low according to the Table 1. The Persistence and Determination & Ability to collaborate with others have been ranked in the higher order of the Skilled labour characteristics and the Table 2 shows that the lowest-ranked skill is in-depth familiarity with using various types of tools and equipment. There are eight factors viz. socioeconomic conditions, job characteristics, external forces, work attractiveness, lack of skill, industry limits, job satisfaction, and personal factors have strong relationship with the causes like Irregular and low remuneration, Economic

change and other causes as tabulated in the Table 6 with the relationship values. On further analysis, it has been found that the work of poor quality, and concerns of safety are the two major reasons with high-ranking contribution for the shortage. The Labour productivity with the ranking 10 is the effects of skilled labour shortage.

## **SUGGESTIONS**

The micro industry owners can formulate an effective need-based strategies for retention of labour. The employee's attitudes may change over a period of time. The Human resource aspect is to periodically make efforts to study the attitudes of the employees and the factors influencing them. This research concluded that existing retention strategies needed to be refocused on the issues that make worker stay and it holds good for any company by way of giving better training on the job/off the job to improve the quality of the work done by the worker. The strategies for better and safe work environment can be maintained to improve the safety of environment and health care of the employees. Also, better and efficient manufacturing methods to be imparted to the employees from time to time to minimize the wastages of materials for getting in to the right manufacturing methods. Suitable methods can be taught to the employees for eliminating the errors in the process, and reduction in overall cost of the processes. The workers can be imparted with the knowledge on handling the contingency situations in unexpected issues. A specific challenge in Coimbatore that is exacerbating the situation for most micro businesses is the enterprises' failure to train their staff by the owners. The training programs can be organised on their own if they are capable, or can be organised by grouping the neighbour industries and sharing the training cost.

## **CONCLUSION**

The need for Skilled Labours is increasing in Coimbatore. Welders, CNC operators, and electricians were among the skilled workers in limited supply in Coimbatore's micro industry. The scarcity was caused by a number of factors, including economic and social climate, external influences, the attractiveness of available jobs, the quality of available jobs, work satisfaction, the capacity of the industry, and individual differences. As a result of the skilled labour scarcity, poor quality deliveries and safety hazards have been documented. In turn, the most crucial features of the skilled labour force needed were highlighted as follows: unwavering determination, coordination, flexibility, faithfulness, communication skills, expertness and a desire and ability to learn and acquire new information and expertise. Employees may contribute for easing the skilled labour shortage by being encouraged and counselled to cultivate the appropriate frame of mind and skill set for their respective occupations. Further, microbusinesses can increase their worker size by investing in employee training.

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