

# Sustainable IR Trends Fueling Growth of Manufacturing Industries: The Tamil Nadu Experience

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*In Tamil Nadu, the IR situation is relatively favorable compared to other states in India. Data was collected from authorized websites and the labor commissioner's office. Focus on skill development and technical education has enabled the state to generate a regular supply of workers for the manufacturing industries, and the employment generation and growth of the manufacturing sector surpass the national average. The number of strikes and lockout in Tamil Nadu resulted in 89658 man-days lost. It is evident from the findings that the state contributes a significant portion to the country's development and manufacturing. Providing an endless opportunity for education (Engineering, diploma, IIT) for setting up manufacturing and sustainable practices, with a favorable IR climate in the industry, works to the advantage of the state.*

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## Introduction

Tamil Nadu (India) plays a critical role in the nation's economic development as an industrial powerhouse. The organized manufacturing sector has the potential to become a global business center as a pillar of economic growth. The state contributes around 34% of GDP. Additionally, it attracts approximately \$ 4090.50 million in FDI equity investment toward industrial development (Ibef, 2021a). By 2025, it is expected to attract 20 lakh jobs are being created by investments costing Rs 10 lakh crore (US\$ 137.8 billion). With at least 37,378 factories, the southern state leads the list of states (Business Today, 2016). However, there were only 14,617 factories in 1990-91. Over 25 years, this number has risen more than 2.5 times.

Tamil Nadu has significantly contributed to India's development and has experienced decades of steady economic progress. It has become a major production center for textiles,

leather goods, light, and heavy engineering, pumps and motors, electronic hardware and software, and vehicles and auto components. The state continues to be a

national leader in the exports of readymade clothing, software, leather products, and autos and automotive components. (Ibef, 2021b).

**Table 1 Engineering Institutes Tamilnadu and India**

|                            | Tamilnadu          |          | All India                  |                    |          |
|----------------------------|--------------------|----------|----------------------------|--------------------|----------|
| Engineering and technology | Total institutions | 495      | Engineering and technology | Total institutions | 3010     |
|                            | Total intake       | 278428   |                            | Total intake       | 1389733  |
| Diploma                    | Total institutions | 486      | Diploma                    | Total institutions | 3994     |
|                            | Total intake       | 178498   |                            | Total intake       | 1012709  |
| ITI                        | Total institutions | 496      | ITI                        | Total institutions | 14779    |
|                            | Total intake       | 1,13,640 |                            | Total intake       | 19 lakhs |

Note: Intake in persons

Source: AICTE (2021), NCVT (2021), ITI Directory (2021)

Educational institutions play a crucial role in opening endless opportunities. Table 1 provides us with an overview of the number of colleges with students enrolled. The state has 495 engineering colleges with a total student intake of 278428 (Pon Vasant, 2021). GER (Gross enrolment ratio) in Tamil Nadu grew from 42% in 2012-13 to 51.4% in 2019-20, leading by a wide margin almost all other states in terms of enrolment in higher education. It is estimated that there are 486 diploma colleges in Tamil Nadu, with a student intake of 1.9 lakhs (approx). The courses help students match the industry's expectations by providing professional skills and reducing inequality. Students at the colleges are always prepared in such a way that they develop employability skills that result in their master's degrees. A study on technical and vocational education and its impact on employability found that technical graduates possessed proficient technical abilities.

#### Number of registered Factories in Tamilnadu

- 2017- 42,082
- 2018- 42987
- 2019- 44,129
- 2020- 45,477
- 2021- 46899

Source: Dish (2021)

“Tamil Nadu represented one-fourth of the factories registered in India overall.” This makes it easier to understand why the state is one of India's major industrial hubs. By 2017, there was 2.3 lakh (approx.) registered industries in India against 42,000(approx.) in Tamil Nadu. TN's strong performance in the manufacturing and service sectors has been fueled by the increased FDI and industry innovation, which has led to annual growth in the number of factories and, ultimately, a decrease in the unemployment rate in the nation. Hussein, (2019) explains that investing in manufacturing immediately creates more jobs. Employment in the manufacturing industry has

increased over the last ten years. Production decreased slightly during the epidemic, but industrial enterprises gradually resumed and added jobs.

**Skill Development & Workforce Demand-2019**

- Total Skilled Workforce Demand – 13,34,608
- Total Semi Skilled Workforce Demand- 10,14,298
- Total Skilled Workforce supply- 6,56,194
- Total Semi-Skilled Workforce supply- 9,31,733
- Estimated Skill Gap (Skilled)- 6,78,414
- Estimated Skill Gap (Semi Skilled) – 9,31733

Source: Tamilnadu Skill Development (2019)

Above source shows that there would be a skilled workforce demand of about 13,35,000 persons and skilled workforce supply of about 6,36,000 persons leading to an estimated skilled workforce shortfall of about 6, 78,000 persons in 2019. The predicted supply of semi-skilled workforce is about 10, 14,000 persons against the expected demand of 19,46,000 persons, with a skill gap of 9, 30,000 persons. According to Josh Foulger, Country Head and MD for Foxconn International Holding, Tamil Nadu is unique because it contributes one of the most significant percentages of manufacturing to India's GDP (21%). Additionally, the state has outstanding expertise in engineering and related fields (Divay, 2020).

The Tamil Nadu Skill Development Corporation (TNSDC), a central organization for setting up skill development programs in the state, was established by the Tamil Nadu Government. Up to 2019, 227,106 youngsters have received training under the program. Due to the global epidemic, fewer people would attend different skill programs in 2020. However, Tamil Nadu's Government has led several additional measures to upskill the workforce and satisfy the aspirations of the fast expanding local young. It has established a standard to be followed. The economy is projected to grow at a 12.73 percent annual rate at current prices, or Rs. 9.73 lakh crore, or US\$140 billion in 2020 (Skill India Report, 2021).

Santosh et al. (2013) states that manufacturing accounted for 14% of all jobs in India. "Digital Excellence" will replace current industry standards. The talent needs and supply in India can be used to extend existing skill sets through technology-driven education as a result of the advancement of technology. The Make in India program, which emphasizes skill development and India's world-class manufacturing infrastructure, were introduced by the Indian government to entice investment and create jobs.

MNC's in the state are promoting innovation in the industry. The government and labor unions work together to benefit the welfare of labor and the industry trends. The digital revolution in manufacturing enhances skills, knowledge, attitudes, and employee morale as manufacturing goes digital.

Tamil Nadu is the home of profitable opportunities and tends to invest considerably in multiple sectors to generate employment. With the help of a business-friendly environment and diverse workforce with the right expertise, the state has become a significant electronic

manufacturing hub in India. Thus, employment also includes migrant laborers; various changes and new initiatives are needed to ensure that migrants have access to their rights, most of which are not unique (Arjan, 2020).

**Table 2 Key Objective For Tamil Nadu Development -2022**

|                         | Export Zone                      |
|-------------------------|----------------------------------|
| Export %                | 9.25%                            |
| Export volume           | US \$ 30.5bn                     |
| Export basket           | 70%                              |
| Export value            | Rs 192 Lakh Cr                   |
| Major Ports             | 3 Major ports and 15 Minor Ports |
| Country exported        | 217                              |
| Commodities Nos         | 6226                             |
| Approved SEZs           | 57                               |
| Operational Sez         | 46                               |
| MEPz ( Functional Unit) | 117                              |
|                         | Sipcot                           |
| Implemented ( Year)     | 1971                             |
| Land Area ( Acres)      | 35,043                           |
| Industrial Park         | 24                               |
| SEZ                     | 6                                |

Source: Sipcot (2022); Ibef (2021)

### Tamil Nadu An Overview

Sipcot (State Industrial Promotion Corporation of Tamil Nadu) Provides infrastructure for setting up industries by providing comprehensive infrastructure in one place. Sipcot comprises a land value of 35,043 acres, implemented in 1971. Tamil Nadu has 24 industrial parks and 6 SEZs. Tamil Nadu has 57 approved SEZs of which 46 are operational. A country with higher export volume will grow faster, with increased productivity and national income. Tamil Nadu contributes 9.25% of export with a volume of USD 30.5 billion; Export is boosting productivity and employment generation and

maintaining the trade balance in the country.

The state held a second Global Investor Meeting (GIM) on January 23 and 24, 2019. A total of Rs. 3.4 lakh crore (US\$ 48.65 billion) was invested in 12 sectors, including automobiles, textiles, renewable energy, etc. It is expected that 10.5 lakh jobs will be created in the state due to 146 memorandums of understanding (MoUs).

### The Objectives of the Study

- To examine the significant contribution of Tamil Nadu towards the manufacturing sector

- To find out the manufacturing industry's contribution towards employment generation
  - To understand the impact of IR trends on industrial growth
- ment with the right policies, which are business-friendly. And the most critical factor for any enterprise of our size is the people who are very skilled and qualified.

### **Review of Past Studies**

Employee protection and skill development programs are necessary to build a sustainable environment in the manufacturing sector. Many small manufacturing industries rely on a migrant workforce, the ILO's principal objective today is to increase the chances for workers to find respectable, worthwhile jobs that respect their freedom, equity, security, and human dignity. The ILO Constitution from 1919, Preamble, in recital 2, states that workers employed in countries other than their own should have their interests protected. The ILO has developed specific international standards to manage labor migration and protect migrant workers (ILO, 2022).

As per Invest India, (2021) there are several major global manufacturers from various sectors in India, which continues to make a mark on the world map as a manufacturing destination. Tamil Nadu, a manufacturing hub, attracts investment and creates employment opportunities with skilled and qualified people. The manufacturing industry's advanced infrastructure and policy created a sustainable and smooth work environment. India is a regional hub for foreign direct investment in Asia and is a rich source repository and consumption base. It has the right mindset in the political environ-

The manufacturing industry, including vehicle assembly, has been reshaped by technological breakthroughs. Technology up-gradation has significantly contributed to the R & D rollout of passenger and commercial vehicles in Tamil Nadu (Krishnan & Poorani, 2022a). Manufacturing industries adopted smart manufacturing systems to maintain sustainable people practices and competitive advantage. These technologies transform the growth of the manufacturing industry and create employment opportunities. (Chris, 2021) states that the transformation has caused the industry to move from steam engines to mass production to the digital revolution. The change has increasingly become essential. Implementing automation and digitalization in the factory requires enormous capital investment; companies tend to retrench their employees to balance the amount spent. Deepti (2011) states that reduction is not due to the introduction of new machinery but primarily to capital invested, reducing the labor cost and cost of material production.

### **Industrial Relations Trends**

The infrastructure development in the state has given rise to growth to GDP; the diversified industrial base creates a strong investment climate and robust infrastructure development. Sustainable IR Trends promote value in the manufactur-

ing industries. Several trends are expected to affect employment, including investment, players in industrial relations, flexibility in labor law, workforce reduction, fixed-term employment, collective bargaining, changes in union roles, technology etc.

Existing approaches for measuring uncertainty networks were highly relevant to predicting business cycles (Haroon & Paul, 2004). Therefore, workers' participation in the management decision-making helps increase mutual understanding, efficiency at work, and production by reducing industrial disputes. Industrial disruption is present in every part of the organization; strikes and lockouts typically occur due to issues related to indiscipline and violence, wages and allowances, and personnel issues.

A key priority of the Ministry of Labor & Employment is maintaining cordial working relationships. As a result of constant efforts by both the Centre and states' industrial relations machineries, the general industrial relations climate has remained peaceful and amicable. Strikes primarily affect the leading company; consequently, companies that depend on raw materials from the striking establishment are also affected. The plants that relied on parts supplied by the strikers had to shut down (Karthik, 2000).

Additionally, it is noted that as the strike continues, the net benefits become smaller in terms of present value and that a breakeven point in strike days is reached when the net benefits are zero (Table 3). The number of strikes and lockouts gradually decreased, despite an initial high rate of industrial unrest.

T. K. Rangarajan v. Government of Tamil Nadu case number Appeal (civil) 5556 of 2003 helps us understand that strike is a legal right of the employees. According to Shah, (2003) the 'right to strike'

Table 3 Comparison of Industrial Climate in India & Tamil Nadu (Nos)

| Year     | INDIA  |          |       |                |        |                        | TAMILNADU |      |        |          |       |                |
|----------|--------|----------|-------|----------------|--------|------------------------|-----------|------|--------|----------|-------|----------------|
|          | Strike | Lockouts | Total | Man- Days Lost | Layoff | Retrenchment Headcount | Closure   | Year | Strike | Lockouts | Total | Man- Days Lost |
| 2017     | 87     | 25       | 112   | 52,33,467      | 40     | 4                      | 22        | 2015 | 22     | 6        | 29    | 113137         |
| 2018 (P) | 69     | 17       | 86    | 31,49,554      | 31     | 9                      | 12        | 2016 | 9      | 2        | 11    | 42653          |
| 2019 (P) | 95     | 10       | 105   | 27,82,546      | 43     | 2                      | 6         | 2017 | 25     | 1        | 26    | 607857         |
| 2020 (P) | 56     | 5        | 61    | 13,53,717      | 38     | 11                     | 15        | 2018 | 20     | 4        | 24    | 269670         |
| 2021 (P) | 15     | 2        | 17    | 5,50,994       | 5      | -                      | 2         | 2019 | 14     | 1        | 15    | 89658          |

Ministry of Labor and Employment (2021), Labor Department (2021)

is one such factor that lacks clarity; hence, most of the time, an intervention of the judiciary is needed. 'Right to Strike' is a double-edged sword; undoubtedly, it is a powerful tool, but on the other hand, if it is misguided, it can be dangerous. Too many strikes are an unhealthy trend that leads to big economic losses.

The increasing GDP contribution of Tamil Nadu is accompanied by specific troubling patterns, according to (Anish et al., 2022), who claims that the state of Tamil Nadu's deteriorating performance may be tied to issues with industrial unrest. Industrial conflicts impede industrial expansion and lessen employment opportunities. Additionally, this could result in fewer person-days of labor being put in by the employees. Of the 552 industrial dispute cases that were recorded in India in 2003, 81 instances were from Tamil Nadu. 12.71 lakh man-days and 5.79 lakh workers were involved in 102 industrial dispute cases that were registered in 2016 in Tamil Nadu. However, over time, the impact is lessened due to governmental action and union-led collective bargaining. Maintaining industrial peace requires industrial adjudication. The government can give or deny authorization or submit the situation to a tribunal for adjudication when employers and trade unions are unable to resolve the issue on their own. According to (Krishnan and Sumathi, 2021), the Industrial Disputes Act of 1947 creates a framework for conciliation-based conflict settlement and industrial adjudication. It describes how the government exerts control over the adjudication process. This law addresses the avoidance of unlawful strikes and lock-

outs, as well as concepts of retrenchment, industrial indiscipline, and unfair labor practices. This law ensures industrial democracy, worker engagement, and business and employment continuity (IANS, 2021). Retrenchment in the manufacturing sector is gradually reducing compared to previous years.

Table 3 depicts the layoff, retrenchment, and closure of the Indian manufacturing industry for the period 2017 to 2021. Data shows the highest number of retrenchments and an increase in closure and layoff in 2020, this may be owing to the pandemic. The manufacturing industry slowed down during the pandemic, and employees from a few industries were affected and were pushed to lifestyle changes—somehow industry balanced the situation and pushed itself to the profitable situation. The closure of the company creates a massive impact on employees' lifestyles. India had 22 companies closing in the year 2017; as per the statistics, it reduced gradually.

Permanent and contract workers of Hindustan Motors Ltd/Hindustan Motor Finance began demanding land or job through strike. Over 175 permanent workers and over 150 contract workers were retrenched. As per ILO's Termination of Employment Convention, 1982 (No. 158) the rule is that a worker's employment should not be terminated unless there is a good basis for doing so, such as a reason related to the worker's capacity or behavior or a reason based on the enterprise, establishment, or service's operational needs (ILO, 2021).

The convention also addresses issues pertaining to severance pay, notice requirements, dismissal appeal processes, unemployment insurance, and authorities' notification in the event of mass dismissals. stated,

“As a result of a lack of demand and sales, Ford India operations lost roughly two billion dollars. With unprecedented failures affecting employees' livelihoods, the pandemic has put the company on the back foot. Over 2,600 regular employees and around 1,000 contract workers will lose their jobs when the Indian wing of the company shuts down. The shutdown will also affect auxiliary companies that sell minor components and parts to Ford.” (Krishnan, Poorani, 2022 b).

As per Table 4 the pendency of disputes received during the year is reduced from 3306 to 778 over the ten years (2001 TO 2019). The total number of arguments received during 2001 was 9375; by 2019, it had declined to 2797. When the dispute arrives at conciliation, the Conciliation Officer will try to settle it, or they were sent to the appropriate government as per Sec12(4) of Industrial disputes Act, 1947. Table 4 shows the conflicts that did not come to the notice of conciliation and were sent to the relevant government

**Table 4 Industrial Disputes Trends**

| YEAR  | Pendency of Disputes Beginning of Year ( NOS) | No of Dispute Received | Total (NOS) | NO OF DISPUTES SETTLED IN TAMIL NADU FOR THE PERIOD OF 2001 TO 2019 |             |          | TOTAL NO OF DISPUTES SETTLED | NO OF DISPUTES PENDING AT THE END OF THE YEAR | AMICABLE SETTLEMENT (NOS) |
|-------|---|------------------------|-------------|---|-------------|----------|------------------------------|---|---------------------------|
|       |   |                        |             | Sec 12(3)*  | Sec 12(4) * | Other ** |                              |   |                           |
| 2015  | 1466  | 5412                   | 6878        | 893   | 2521        | 2398     | 5812                         | 1066  | 3291                      |
| 2016  | 1066  | 3327                   | 4393        | 668   | 1620        | 1031     | 3319                         | 1074  | 1699                      |
| 2017  | 1074  | 2809                   | 3883        | 692   | 1534        | 884      | 3110                         | 773   | 1576                      |
| 2018  | 773   | 2462                   | 3235        | 548   | 1264        | 645      | 2457                         | 778   | 1193                      |
| 2019  | 778   | 2797                   | 3575        | 1111  | 1191        | 484      | 2786                         | 789   | 1595                      |
| Total | 3306  | 105288                 | 108594      | 25068   | 49115       | 33622    | 107805                       | 789   | 58690                     |

Labor Department (2021)

\*Sec 12 (3) and Sec 12(4) ID Act 1947

\*\* Other Sections of ID Act 1947



Table 7 Sector-wise GDP Comparison

| Industry                                    | Segmentation                             | Indicators                | Employment                | Tamil Nadu<br>GDP/ Revenue | GDP/ India |
|---|--|---------------------------|---------------------------|----------------------------|------------|
| Agriculture<br>Fishery/ Forestry            | MNC Indian Companies                     | Strike Retrenchment       | Unskilled Semi            | 4.7 %                      | 20.19%     |
|   | SME's Sole proprietorship<br>Partnership | Closure Lockout<br>Layoff | skilled<br>Highly skilled |                            |            |
| Industry<br>Quarrying                       | MNC Indian Companies                     | Strike Retrenchment       | Skilled                   | 8.0                        | 1.63%      |
|   | SME's Sole proprietorship<br>Partnership | Closure Lockout Layoff    | Highly skilled            |                            |            |
| Manufacturing                               | MNC Indian Companies                     | Strike Retrenchment       | Skilled                   | 14.43%                     |            |
|   | SME's Sole proprietorship<br>Partnership | Closure Lockout Layoff    | Highly skilled            |                            |            |
| Electricity Gas<br>and Water                | MNC Indian Companies                     | Strike Retrenchment       | Skilled                   | 2.7%                       |            |
|   | SME's Sole proprietorship<br>Partnership | Closure Lockout Layoff    | Highly skilled            |                            |            |
| Construction                                | MNC Indian Companies                     | Strike Retrenchment       | Skilled                   | 7.16%                      |            |
|   | SME's Sole proprietorship<br>Partnership | Closure Lockout Layoff    | Highly skilled            |                            |            |
| Service<br>Public                           | MNC Indian Companies                     | Strike Retrenchment       | Skilled                   | 9.4                        | 15.42%     |
|   | SME's Sole proprietorship<br>Partnership | Closure Lockout Layoff    | Highly skilled            |                            |            |
| Administration /<br>Defence and Other       | MNC Indian Companies                     | Strike Retrenchment       | Skilled                   | 22.05%                     |            |
|   | SME's Sole proprietorship<br>Partnership | Closure Lockout Layoff    | Highly skilled            |                            |            |
| Financial and<br>Real estate                | MNC Indian Companies                     | Strike Retrenchment       | Skilled                   | 16.42%                     |            |
|   | SME's Sole proprietorship<br>Partnership | Closure Lockout Layoff    | Highly skilled            |                            |            |
| Trade,<br>Hotel transport,<br>Communication | MNC Indian Companies                     | Strike Retrenchment       | Skilled                   | 16.42%                     |            |
|   | SME's Sole Proprietorship<br>Partnership | Closure Lockout Layoff    | Highly skilled            |                            |            |

Source: Wikipedia (2022), Ministry of Statistics (2021)

wards countries development. Although Tamil Nadu's GDP contribution was lesser in the earlier stages, industrial development, by attracting investments, increased employment opportunities. The government, on the other hand, introduced major initiatives to promote investment. Start-up firms are growing these days, creating new markets and driving innovation. The government of India has taken necessary initiatives to strengthen and make the strongest in the world, which in turn helps to improve employability resulting in increased national income.

Compared with the other states, Tamil Nadu stands 2<sup>nd</sup> in terms of employment (Table 6). Increasing employment leads to elevated lifestyles and increased spending by employees. On the other hand, employment reduces inequality among people and contributes to GDP and per capita. It is imperative to understand a state's contribution to a nation's development based on its per capita income. Over the period of 2016-2021, various states' incomes were measured. Tamil Nadu's per capita contribution is Rs. 1, 24,000. Over time it is increasing but stands 7<sup>th</sup> compared to other states. By 2020-2021 Tamil Nadu's contribution increased to Rs. 1, 50,000 and stood 4<sup>th</sup>, showing the state's prosperity and development. And there is an increase in the annual income of the population. This increase is based on the rise in the number of enrolled for degrees followed by employment, Skill development, and FDI, ultimately resulting in sustainable industrial growth.

An average of 8% of Tamil Nadu's GDP is contributed to nation development by MNCs, SMEs, sole proprietorships, and partnerships (Table 7). Different sectors have different skill sets, such as highly skilled workers and unskilled workers. Employees were trained extensively to fill in the gaps. The Tamil Nadu government has launched various skill development programs to benefit its employees.

Indian manufacturing landscape in comparison to the leading industrial nations such as Germany, France, Japan and Great Britain clearly outlines the scope for improvement in infrastructure, skill and investment and regulatory climate. Germany's manufacturing of machinery and equipment is one of the world's leading industries, which is why investors prefer it as a place to invest. Joseph et al., (2015) states Germany's ability to infuse technology into its manufacturing sector to remain globally competitive is reflected in its strong labor market, growth, and trade outcomes. Improving mobility, innovation drives the country's future development. Japanese manufacturing industries are becoming more innovative and digitalized, which is contributing to the country's GDP growth. Japanese firms manage complexity very effectively in the automotive industry, where products integrate numerous components and systems with complex interfaces and dependencies (Shunet et al., 2020). The government brings various initiatives to the manufacturing sector, contributing to its development. According to Ratan, (2011), Maruti Suzuki India Ltd controls over half of the Indian automobile market.

Tata Motors makes a significant investment in the “Skill India Mission.” - Speaking at the event Asia Pacific Excellence Award 2016, Mr. Gajendra Chandel, CHRO of Tata Motors Ltd., stated, “Tata Motors is continually stepping up its efforts on skill development programs, for a flexible and future-ready workforce, in accordance with the government’s aggressive goals under the Skill India Mission” (Tata Motors- 2017).

The Chennai-based Ashok Leyland company is on a fast track to embrace new-age digital solutions, from real-time monitoring of more than 220,000 vehicles on the road to AI-based customer support. A new revenue stream is being carved out through data monetization (Shine, 2021). Over the past decade, India has also experienced sustained growth in GTF (Garment, Textiles and Footwear) value-added and exports, primarily driven by the wearing apparel and footwear sub-sectors (ILO, 2022). In accordance with chapter V section 16 to 21, of ID Act 1947, the government is committed to regulating all economic activities for managing health and safety risks at workplaces and to providing measures to ensure safe and healthy working conditions for all women in the industry. A safe and healthy workplace contributes to economic development and productivity (Ministry of Labour and employment, 2015).

Through collective bargaining, trade unions and employers can establish fair wages and working conditions. Moreover, it contributes to the development of sound labor relations. Typical issues on

the bargaining agenda include wages, working time, training, occupational health and safety, and equal treatment (ILO, 2022). Worker participation in management has helped to strengthen labor-management cooperation and maintain industrial peace and harmony. Workers’ participation in management paves the way for increased production and productivity through more effective and efficient management, alongside better industrial relations.

Maruthi Manesar strike and lockout and its consequence on management created a huge impact in the industry (Gopalakrishnan, 2015). Tamil Nadu seems to have developed a favorable industrial relations climate over the years. This might be the reason for the investors to prefer Tamil Nadu as a manufacturing hub.

As the manufacturing sector flourishes in other countries, Tamil Nadu follows its lead. Through education, the state promotes sustainable industrial growth and creates jobs and will raise the living standard of state employees in 2018, compared with in 2017. After Maharashtra and Gujarat, the state ranks third in manufacturing output but is home to the country’s most factories and workers in organized manufacturing. Tamil Nadu possesses a relatively high labor intensity in manufacturing and innovation-based economy with strong and improved education, which promotes a skilled workforce. Manufacturing in the State is dominated by textiles, garments, auto components, and leather goods. It is important to note that Tamil Nadu’s

manufacturing sector has a relatively better share of wages than other central manufacturing states (Vijayabasker, 2022).

### **Limitation of the study**

The study is limited to the State of Tamil Nadu, India and a macro level study of the manufacturing industry and does not cover a comparison of the various manufacturing segments. The study is limited to the districts of Tiruvallur, Sriperumbudur, Oragadam and greater Chennai.

### **Significance of the study**

The state over the years has established a very strong network of technical education institutes and skill development centers for creating a viable pipeline of talent catering to the manufacturing sector. Government's proactive approach is attracting foreign direct investment and creating a congenial ecosystem for manufacturing operations. The states outlook to wards increasing centers of manufacturing excellence in the form of Sipcot is a good case study. Lastly the workforce behavior and outlook has supported a favorable IR climate in the industry. This study has significantly highlighted the positive outcomes of a collaborated effort by the capitalist, labour, state government and NGOs in ensuring a winning combination.

### **Conclusion**

The study helps to identify the comparative analysis of the manufacturing

industry in India and Tamil Nadu. Several structural shifts have profoundly changed the world of work, including globalization, new ways of organizing the workforce, and advancements in automation and artificial intelligence (AI). In addition, workers will need to take advantage of lifelong learning, education, and training to stay employable. The analysis helps to identify the overall impact of industry trends toward employability. (Dilip et al., 2019), the large and organized industry has its own induction and training processes and programs in place to train human resources for their requirements. They also engage and support Vocational Training Institutes & ITIs for developing skilled labor pools in their respective sectors. Running high on this momentum, the government has initiated several policies such as 'Skill India' and 'Digital India' to complement 'Make in India'. Krishnan & Poorani, (2022) quotes a few officials from the Labor Department to suggest that the state government, in consultation with the Ministry of Labor and Industry, must invest in the up-skilling and unemployment compensation for the workers getting displaced to ensure that they find alternate employment in 6 months to avoid social unrest and mitigation of other risks in the society. From this study, it is clear that Tamil Nadu is an overall improved state with innovation and firm performance in manufacturing and services in India. Unrest in the industry is avoidable but needs to be managed pragmatically.

Emotions are contagious in the workplace and individual behaviors impact groups and organizations in totality. The

attitudes and behaviors of individuals shape group behavior. From the various perspectives and range of past studies, it is pertinent to note that discrimination, weak unions, and poor implementation of labor laws impact at multiple levels, i.e., individuals, groups, organizations, and society (Krishnan, 2020). Equipping employees to tackle the situation with the help of the union through collective bargaining is important. Attracting FDI to Tamil Nadu aids in creating employability resulting in sustainable growth in the manufacturing industry.

The state has been prosperous in its manufacturing endurance owing to proactive policy in infrastructural development, poly techniques, ITI's, and engineering colleges for a sturdy talent supply. The State ensures a level playing field for MNCs and international companies to set up manufacturing factories with proactive labor management. This has helped the manufacturing industry grow over the last 4 decades and is the preferred destination owing to skilled manpower supply and favorable IR Climate.

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