

---

## UNIT 8 MANUFACTURING INDUSTRY

---

### Structure

- 8.0 Introduction
- 8.1 Learning Outcomes
- 8.2 Manufacturing Sector
- 8.3 Women Participation in Manufacturing Sector
- 8.4 Leading Women Entrepreneurs in the Manufacturing Sector in India
- 8.5 Let Us Sum Up
- 8.6 Unit End Questions
- 8.7 References
- 8.8 Suggested Reading

---

### 8.0 INTRODUCTION

---

Manufacturing sector in India is considered as one of the high growth sectors in India and importance of Manufacturing sector can be understood from the fact that one of the objectives of the 'Make in India' program is to place India on the world map as a manufacturing hub and give global recognition to the Indian economy. Government aims to create 100 million new jobs in this sector by 2022. India has become one of the most attractive destinations for investment in the manufacturing sector. The Government has taken many initiatives to promote a healthy environment for the growth of manufacturing sector in the country and some of the notable initiatives are: skill training of 3 lakh migrant workers; Production Incentive Scheme (PLI) for Large-scale Electronics Manufacturing; increased FDI in Defence manufacturing under the automatic route from 49% to 74%; financial assistance to the Modified Electronics Manufacturing Clusters; 73 lakh people were trained during 2016-20 under *Pradhan Mantri Kaushal Kendras*; permitting 100% FDI in contract manufacturing through the automatic route; and the Government aims to increase the share of the manufacturing sector to country's GDP to 25% by 2025. The manufacturing sector is skilled manpower intensive sector and women play a major role through their contribution. This is evident from the fact that percentage distribution of women workers is 24.5 in 2018-19 in the urban area and 12.8 in rural+urban area (Source: <https://www.ibef.org/industry/manufacturing-sector-india.aspx>).

---

### 8.1 LEARNING OUTCOMES

---

After reading this Unit, you would be able to:

- Explain Manufacturing sector and its contribution to Indian Economy;
- Examine reasons of low participation of women workers in the Manufacturing Sector; and
- Discuss the contribution of successful women leaders in the manufacturing sector.

## 8.2 MANUFACTURING SECTOR

Let us read what does manufacturing sector mean? The KLEMS database 2019, which measures productivity at the industry level, has provided industrial classification and according to this classification, there are 27 industries under the six broad categories. These six categories are:

- Agricultural, Hunting, Forestry and Fishing;
- Mining and Quarrying;
- Manufacturing;
- Electricity, Gas and Water supply;
- Construction; and
- Services

Under manufacturing sector, 13 industries have been classified and these are summarized in the Table 1 below:

**Table 1 Industrial Classification of Manufacturing Sector**

Sl. No.	Description of Industry
1	Food Products, Beverages and Tobacco
2	Textiles, Textile Products, Leather and Footwear
3	Wood and Products of Wood
4	Pulp, Paper, Paper Products, Printing and Publishing
5	Coke, Refined Petroleum Products and Nuclear Fuel
6	Chemicals and Chemical Products
7	Rubber and Plastic Products
8	Other Non-Metallic Mineral Products
9	Basic Metals and Fabricated Metal Products
10	Machinery
11	Electrical and Optical Equipment
12	Transport Equipment
13	Manufacturing, recycling
Source: KLEMS database, 2019	

Source:

<https://m.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=1158#CP1>

The August **2020 IBEF Report** on Manufacturing Sector has classified 24 different activities under manufacturing sector in India and these activities are summarised in Table 2 below.

**Table 2: Activities under Manufacturing Sector**

Food products	Paper and paper products	Fabricated metal products, except machinery and equipment
Beverages	Printing and reproduction of recorded media	Computer, electronic and optical products
Tobacco products	Coke and refined petroleum products	Electrical equipment
Textiles	Chemicals and chemical products	Machinery and equipment n.e.c.
Wearing apparel	Pharmaceuticals, medicinal chemical and botanical products	Motor vehicles, trailers and semitrailers
Leather and related products	Rubber and plastics products	Other transport equipment
Wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	Other non-metallic mineral products	Repair and Installation of machinery and equipment
Furniture	Basic metals	Other manufacturing which includes jewellery, bijouterie and related articles, musical instruments, sports goods, games and toys, medical and dental instruments and supplies

*Source: udyogaadhaar.gov.in*

The manufacturing sector in India has three basic advantages in terms of economic growth, global hub for manufacturing, and competitiveness. In terms of economic growth, the manufacturing sector has three basic advantages. These are:

- a. Organized manufacturing is the biggest private sector employer in India. Overall, more than 30 million people are employed in the sector (organized and unorganized) and it has become the engine of growth as it tries to incorporate the huge available workforce in India, most of whom are semi-skilled;

- b. The manufacturing sector will push growth in the rural areas where more than 5 million manufacturing establishments are running already. This will be an alternative available to the new generation of farmers; and
- c. Government aims to achieve 25 per cent GDP share and 100 million new jobs in the sector by 2022.

The manufacturing sector has all the potential to become a global hub due to following characteristics:

- a. India’s manufacturing industry is already moving in the direction of industry 4.0 where everything will be connected, and every data point will be analyzed. Indian companies are at the forefront of Research & Development (R&D) and have already become global leaders in areas such as pharmaceuticals and textiles. Areas such as automation and robotics are also receiving the required attention from the industry; and
- b. Large international industrial producers such as Cummins and Abbott already have manufacturing bases in the country.

Also, the manufacturing sector in India promotes competitiveness due to the following reasons:

- a. India has all the necessary ingredients for its major industrial push – a huge semi-skilled labour force, multiple Government initiatives like Make in India, high investments and a big domestic market;
- b. Necessary support infrastructure is being developed with areas such as power being the prime focus; and
- c. Government incentives like free land to set up base and 24\*7 power supply is making India competitive on a global scale.

Source: *Central Statistics Office, FICCI, PwC, Economic Survey of India and IBEF August 2020*

Before going ahead, attempt the following check you progress exercise.

**Check Your Progress Exercise I**

Note: I. Use this space given below to answer the question.

II. Compare your answer with the course material of this Unit.

- 1. What are the broad industrial classifications of Manufacturing Sector?

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

- .....
2. Identify the reasons for promoting competitiveness in manufacturing sector in India.
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....

---

### 8.3 WOMEN PARTICIPATION IN MANUFACTURING SECTOR

---

Let us now read about women’s participation in manufacturing sector of India. In this section, we will discuss about four factors to enhance our understanding about women’s participation in the manufacturing sector. These are:

- Worker population ratio for females;
- Worker population ratio on educational level for females;
- Percentage distribution of females in manufacturing sector; and
- Percentage distribution of working females in employment for manufacturing sector

Before going into details of above four factors, let us first understand about worker population ratio (WPR).

#### *Worker population ratio for females*

The **worker population ratio (WPR)** is defined as the percentage of employed persons in the population. **The Principal activity status (ps)** is known as the activity status on which a person spent relatively long time (major time criterion) during 365 days preceding the date of survey, was considered the usual principal activity status of the person. **The Subsidiary economic activity status (ss)** is known as the activity status in which a person in addition to his/ her usual principal status, performs some economic activity for 30 days or more for the reference period of 365 days preceding the date of survey, was considered the subsidiary economic status of the person.

The worker population ratio of females for the years 2017-18 and 2018-19 is summarized in the Table 3. As evident from the table, WPR in usual status (ps+ss) for females at All India level in rural area has increased to 19.0 in 2018-19 from 17.5 in 2017-18.

**Table 3: Worker Population Ratio in usual for Females**

Worker Population Ratio	Rural (%)		Urban (%)		Rural + Urban (%)	
	2017 - 18	2018 - 19	2017 - 18	2018 - 19	2017 - 18	2018 - 19
WPR during PLFS in usual status (ps + ss)	17.5	19.0	14.2	14.5	16.5	17.6
WPR during PLFS in CWS	14.8	15.5	13.3	13.7	14.4	15.0

Source: [http://mospi.nic.in/sites/default/files/publication\\_reports/Annual\\_Report\\_PLFS\\_2018\\_19\\_HL.pdf](http://mospi.nic.in/sites/default/files/publication_reports/Annual_Report_PLFS_2018_19_HL.pdf), page no. 49

Marginal increase in WPR in usual status (ps+ss) for females in urban sector has been observed and it has increased to 14.5 in 2018-19 from 14.2 in 2017-18. Similarly, the WPR in current weekly status (cws) in rural area has increased from 14.8 to 15.5 in 2018-19. In the urban area, the increase in WPR in CWS has been observed from 13.3 in 2017-18 to 13.7 in 2018-19.

***Worker population ratio on educational level for females***

The percentage of workers in usual status (ps+ss) having particular levels of education among persons with that level of education is defined as the education level specific WPR. The highest level of education successfully completed by the person has been considered as the education level of the person.

**Table 4: Worker Population Ratio in Different Levels of Education among Females**

Highest level of education successfully completed	Rural (%)	Urban (%)	Rural + Urban (%)
Not literate	30.7	21.9	29.1
Literate & upto primary	29.8	20.6	27.3
Middle	21	15.9	19.3
Secondary	17.2	9.9	14.5
Higher Secondary	13.8	9.5	12
Diploma/Certificate Course	34.3	34	34.1
Graduate	18.4	23.1	21.3
Post Graduate & Above	31.5	36.8	35.5
Secondary & Above	17.1	17.3	17.2
All	25.5	18.4	23.3

The Table 4 suggests that WPR in usual status (ps + ss) in different levels of education among Females in rural area is quite significant at the education levels of post graduate and diploma level followed by not literate and primary level. Similar trend is observed in urban areas also.

***Percentage distribution of females in manufacturing sector***

The third factor about understanding of female participation in manufacturing sector is Percentage distribution of females in manufacturing sector. Based on data as summarized in the Table 5 below, percentage distribution of females in usual status (ps+ss) in Manufacturing Sector is quite high in urban areas as compared to rural areas. This may be because of urban centric location of manufacturing units.

**Table 5: Percentage distribution of females in usual status (ps+ss) in Manufacturing Sector during PLFS 2017 - 18 and PLFS 2018-19**

Year	Rural	Urban	Rural + Urban
PLFS 2017 - 18	8.1	25.2	12.5
PLFS 2018 - 19	9.0	24.5	12.8

Source: [http://mospi.nic.in/sites/default/files/publication\\_reports/Annual\\_Report\\_PLFS\\_2018\\_19\\_HL.pdf](http://mospi.nic.in/sites/default/files/publication_reports/Annual_Report_PLFS_2018_19_HL.pdf), page no. 55.

However, Percentage distribution of females has decreased slight from 25.2 in 2017-18 to 24.5 in 2018-19 in the urban area.

***Percentage distribution of working females in employment for manufacturing sector***

The fourth factor to understand about female participation in manufacturing sector is distribution of working females in employment for manufacturing sector. The Percentage distribution of usually working females in Usual Status (ps+ss) by broad status in employment for manufacturing sector (2018 - 19) at All India Level is summarized in Table 6 for the year 2018-19. There are three broad categories of employment and these are self employment, regular wage / salaried and casual labour.

**Table 6: Percentage distribution of usually working females in employment for manufacturing sector (2018 - 19) at All India Level**

Status in Employment		Rural	Urban	Rural +Urban
Self-employed	own account worker, employer	65.8	51.3	58.9
	Helper in household enterprise	11.2	11.9	11.5
	All self-employed	77.0	63.2	70.5
Regular wage/salaried		13.6	27.1	20.0
Casual labour		9.4	9.7	9.5

From the data summarized in the Table 6 about broad status in employment in manufacturing, it appears that the percentage share of self-employed is higher both in urban and rural areas followed by regular wage/ salaried employees.

After having studied all the four relevant factors, which can help in determining the participation of females in the manufacturing sector, let us now look into some case studies of leading and successful women entrepreneurs in manufacturing sector in the country. Before reading ahead, take the flowing check your progress exercises.

### Check Your Progress Exercise II

Note: I. Use this space given below to answer the question.

II. Compare your answer with the course material of this Unit.

1. What is the meaning of worker population ratio by female?

.....  
.....  
.....  
.....

2. What is the distribution of working female in employment for manufacturing sector?

.....  
.....  
.....  
.....  
.....

---

## 8.4 LEADING WOMEN ENTREPRENEURS IN THE MANUFACTURING SECTOR IN INDIA

---

According to Fortune India, the annual ranking of the most powerful women in business of India, who are making significant impact by their business acumen and socio-cultural influence specially in the manufacturing sector include: Kiran Mazumdar-Shaw (Biocon), Mallika Srinivasan (Machinery), Nisaba Godrej (Consumer Products), Soma Mondal (SAIL), Schuna & Nadia Chauhan (Parle Agro), Priya Nair (HUL), Devita Saraf (Vu Televisions), Harshbeena Zaveri (NRB Bearings), Natasha Poonawalla (Serum Institute of India). In the subsequent section of this unit, we will go through the case studies of some of the successful women entrepreneurs in the manufacturing sector of the country. The case studies will highlight their success stories,



hard work, perseverance and leadership quotient in their respective organisations.

## 8.4.1 Case Studies of Woman Entrepreneurs in Manufacturing Sector In India

### 1. KIRAN MAZUMDAR-SHAW (PHARMA)

Kiran Mazumdar- Shaw is Chairperson of the Board of Directors of Biocon, which she founded in 1978. She has over 4 decades of experience in biotechnology and considered in India as a first-generation entrepreneur and global business leader in the area of pharmaceutical. Kiran Mazumdar- Shaw is also regarded as an unconventional thinker and under her corporate leadership, Biocon has delivered on making medicines accessible and affordable to millions of patients worldwide.

Having obtained bachelor's degree in zoology in 1973 from Bangalore University, on the advice of her father, who was the head brewmaster at United Breweries, she studied fermentation science, and trained to be a brewmaster, which is considered as a very non-traditional field for women. Kiran Mazumdar went to Ballarat College, Melbourne University in Australia to study malting and brewing and earned the degree as master brewer in 1975.

After her studies and training in fermentation science, she started her career as trainee brewer in Carlton and United Breweries, Melbourne and as a trainee maltster at Barrett Brothers and Burston, Australia. However, she could not be hired as a master brewer in India because "**it's a man's work**" and began to look abroad for opportunities and was offered a position in Scotland.

She started Biocon India in 1978 at Bengaluru with a seed capital of Rs. Ten Thousand,(10000) as a joint venture company. 70% of the company belongs to her, because of prevalent Indian laws during that period, and foreign ownership restricted to only 30% of particular company. In the initial years of Biocon, she had many technological challenges such as poor infrastructure, interrupted power supply, lack of good quality water, lack of sterile labs, and imported research equipments. Over a period of time with her technical and business acumen, she transformed Biocon from an industrial enzymes manufacturing company to a fully integrated bio-pharmaceutical company with remarkable product portfolio. Her company focuses research focus on diabetes, oncology and auto-immune diseases.

She took first major expansion in 1987, through venture capital funds, She Facilitated Biocon to expand its Research and Development efforts. The company built a new plant, featuring proprietary solid substrate fermentation technology based on a semi-automated tray culture process, and in 1989, Biocon became the first Indian biotech company to receive U.S. funding for proprietary technologies. In 1990, Kiran Mazumdar came up with Biocon Biopharmaceuticals Private Limited (BBLP) to manufacture and market a select range of biotherapeutics in a joint

venture with the Cuban Center of Molecular Immunology.

Cancer, diabetes, and other auto-immune diseases such as rheumatoid arthritis and psoriasis are now major areas of research of Biocon. It is due to the fact that the high percentage of people in India who chew betel or tobacco, and India accounts for eighty-six per cent of oral cancer in the world. Diabetes is prevalent, and people who do not wear shoes are at risk to have a minor scrape or injury develop into gangrene, or "diabetes foot". Biocon is also working on drugs to treat psoriasis, a skin pigment disease.

Kiran Mazumdar-Shaw is also the recipient of many awards and some of them includes Padma Shri (1989), Padma Bhushan (2005), ICMR's Lifetime Achievement Award for Outstanding Achievement in Healthcare (2019), EY World Entrepreneur of the Year (2020) and EY Entrepreneur of the Year India Award (2019) and Order of Australia (2020). <https://www.biocon.com/about-us/board-of-directors-biocon/kiran-mazumdar-shaw-biocon>

## 2. MALLIKA SRINIVASAN (MACHINERY)

Mallika Srinivasan is currently the Chairman and Managing Director of Tractors and Farm Equipment Limited (TAFE). The TAFE is a 93 billion tractor major company which was incorporated in 1960 at Chennai, India. It is also the third largest tractor manufacturer in the world and the second largest in India by volumes, with an annual sale of about 150,000 tractors and presence in over 100 countries, including developed countries in Europe and the Americas.

In her leadership career of 25 years, Mallika has established TAFE as a quality mass manufacturer of tractors, and with her special emphasis on product and process development, she has ensured significant expansion of TAFE's product range. She has contributed immensely towards engineering strengths at TAFE to design, develop and manufacture a range of products for international markets and worked for TAFE's partnership with AGCO for mutual growth, in both, the components and complete tractors businesses.

Mallika Srinivasan is recognized for entrepreneurship, commitment to excellence and contribution to Indian agriculture machinery business and academia and is recipient of Padma Shri Award for Trade and Industry in 2014. On her education front, she was a university gold-medallist in Econometrics from the University of Madras, she graduated as a member of the Dean's Honor List, and the Alpha Beta Gamma Society, from the Wharton School of Business, University of Pennsylvania, United States, and was ranked as one of its top 125 most successful alumni.

She is on the Boards of leading conglomerates including AGCO Corporation - USA and TATA Steel Limited. She is also on the Global Board of U.S.-India Business Council (USIBC), a core member of the

Source: [https://en.wikipedia.org/wiki/Mallika\\_Srinivasan](https://en.wikipedia.org/wiki/Mallika_Srinivasan)

### 3. NISABA GODREJ, (CONSUMER PRODUCTS)

Nisaba Adi "Nisa" Godrej, is the chairperson of Godrej Consumer Products Limited and also the youngest daughter of Adi Godrej and Parneshwar Godrej. Besides, she also oversees the corporate strategy and human capital functions for Godrej Industries and its associated companies. Another significant contribution of Nisa Godrej is towards the company's CSR initiatives. She acts as the driving force behind the Godrej Group's CSR initiatives and is the point person for the operations of the Godrej Family Council. She is currently on the boards of GCPL, Godrej Agrovet and Teach for India.

Nisa Godrej was announced as executive chairperson of Godrej Consumer Products Limited (GCPL) on May 10, 2017 and she became the youngest chairperson of a company whose consolidated revenue was approximately Rs. 9,600 crore. She has also played a crucial role in GCPL's strategy and transformation. Previously, within the Godrej Group she was involved in the turn around of Godrej Agrovet and has overseen various projects including innovation, strategy and HR for Godrej Industries and its associated companies. She was appointed to the board of Godrej Agrovet in the year 2008. She is being credited for paving the way to hiring foreign nationals for leadership positions at Godrej by appointing Mark Kahn, as the Executive Vice President at Godrej Agrovet. She made Godrej Agrovet, a profitable entity as compared to its past performance through strategic organisational changes and over the years, she has transformed in her leadership style to being inclusive and engaging with the employees in her firm.

Nisa completed her Bachelor of Science (BSc) from The Wharton School, University of Pennsylvania and Master of Business Administration (MBA) from Harvard Business School. (Source: <https://forbes.com/profile/nisaba-godrej/?sh=276605d87e0b>)

### 4. SOMA MONDAL (SAIL)

Soma Mondal has assumed the position of Chairperson, Steel Authority of India Limited (SAIL) from 1<sup>st</sup> January, 2021. Soma Mondal has the distinction of not only being the first woman Functional Director of SAIL, but she is also the first woman Chairperson of the Company.

She earned her graduation in Electrical Engineering from National Institute of Technology, Rourkela, in 1984 and has over 35 years of experience in the metal industry. She commenced her career as a Graduate Engineer Trainee at NALCO and rose through the ranks to take over the mantle of Director (Commercial) at NALCO in the year 2014.

She joined SAIL in March, 2017 as Director (Commercial). At SAIL, she spearheaded the implementation of the marketing strategies emerging from the Comprehensive Turnaround Roadmap for the

Company since 2017, which witnessed SAIL increasing its sales and expanding the market reach progressively year on year. SAIL achieved best ever sales volume consecutively for the three Financial Years from 2017-18 to 2019-20, and the momentum is still continuing in the current financial year of 2020-21, despite the challenges posed by COVID-19. Promoting the branding efforts of the various products of the Company, she was instrumental in the launch of new brands viz. “NEX” and “SAIL SeQR” to promote PF Structural Sections and TMT Bars respectively.

Sensing the need for improving sales through the retail channels, she has made relentless effort to set up two-tier distribution network. To educate and tap the vast potential of rural India, the “Gaon Ki Ore” workshops were organised in almost all the States and Union Territories across the Country.

For meeting the evolving expectations of the challenging domestic market, Soma Mondal has introduced timely reforms in the Marketing Organisation Structure of SAIL. For better management and marketing of the enhanced volumes after the modernization & expansion of SAIL, she created three verticals viz. Sales, Marketing and Services. This was envisaged to bring in focus and effective micro management in the marketing operations.

She is a member of the CII-National Committee on Steel and Chairperson of the CII sub-committee on ‘Safeguard for Tariff and Non-Tariff Barrier’.

Source: <https://sail.co.in/en/ms-soma-mondal-profile>

#### 5. **PRIYA NAIR (Hindustan Unilever)**

Priya Nair is the present Executive Director -Beauty and Personal Care for Hindustan Unilever Limited (HUL). She is also the Vice President – BPC, Unilever, South Asia, responsible for Beauty and Personal Care business spanning India, Pakistan, Bangladesh, Sri Lanka and Nepal. Her key responsibilities include business delivery on top line and bottom line by creating and delivering a strategic plan for the business.

Another significant aspect of leadership role of Priya Nair is that she has led the sustainability initiatives for HUL with a focus on the WASH (Water, Sanitation, hygiene) programme for the company, reaching over 140 million people with a sanitation and hygiene intervention under the ‘*Swachh Aadat Swachh Bharat*’ initiative, educating consumers to adopt three clean habits of washing hands with soap, drinking clean purified water and using a clean toilet.

Besides, she is also a director of Village Social Transformation Mission which is a Maharashtra Government’s public-private initiative to create 1,000 model villages in Maharashtra.

She has led many award-winning campaigns in HUL which includes Surf Excel’s ‘*Daag Acche Hai*’ and mobile marketing initiatives like

‘*Kan Khajura Tesan*’ a mobile radio service that reaches out to 40 million consumers in media dark villages that has won multiple awards. Priya has been recognised as one of the most influential women marketers in India and amongst the most powerful women in Indian business by Business Today, Fortune India and Impact Magazine.

Source: <https://www.hul.co.in/about/who-we-are/our-leadership/ms-priya-nair.html>

[https://rocketreach.co/priya-nair-email\\_2474684](https://rocketreach.co/priya-nair-email_2474684)

<https://www.businessstoday.in/magazine/special/most-powerful-businesswomen-in-india-priya-nair/story/198082.html>

## 6. NATASHA POONAWALLA (Serum Institute of India)

Natasha Poonawala is the Chairperson of Viloo Poonawalla foundation and Executive Director of Serum Institute of India, the world's largest vaccine manufacturer by number of doses produced and sold globally (more than 1.5 billion doses) which includes Polio vaccine as well as Diphtheria, Tetanus, Pertussis, Hib, BCG, r-Hepatitis B, Measles, Mumps and Rubella vaccines. She is also the Director of the Poonawalla Science Park, Netherlands, and Director of the Viloo Poonawalla Racing and Breeding Pvt. Ltd.

She is equally passionate about the business strategy of the group, with a focus on relationship management for the Cyrus Poonawalla group of companies.

She, through her family foundation supports schools, a hospital and a large sanitation program for the underprivileged and the economically backward sections of the society. She believes that Philanthropy and the power to influence, is the ultimate luxury.

Natasha Poonawalla has obtained a MSc. Degree from the London School of Economics in Organizational Behavior.

Source: <https://www.vpcf.org/natasha-poonawalla.html>

---

## 8.5 LET US SUM UP

---

In the recent times, India has transformed into an attractive hub for foreign investments in the manufacturing sector. Several mobile phone, luxury automobile brands, among others, have set up or are looking to establish their manufacturing bases in the country. The manufacturing sector of India has the potential to reach US\$ 1 trillion by 2025. The prediction of Indian Cellular and Electronics Association (ICEA) is that India has the potential to scale up its cumulative laptop and tablet manufacturing capacity to US\$ 100 billion by 2025 through policy interventions. However, sincere efforts in policy development and its implementation is required for integrating, monitoring and developing a conducive environment for the industrial development that could promote advance practices in manufacturing. This will require skill development and competency enhancement of workers in the manufacturing sector. With the increased percentage of women

participation in the manufacturing sector, together with their skill development and continuous training, productivity can be enhanced and quality output of manufacturing produces can be ensured.

---

## 8.6 UNIT END QUESTIONS

---

1. Explain salient features of manufacturing sector in India?
2. What are the different factors which can determine women participation in the manufacturing sector?
3. List out different activities under manufacturing sector in India?
4. Write a case study of women entrepreneur who led to the growth of manufacturing sector in India.

---

## 8.7 REFERENCES

---

Periodic Labour Force Survey PLFS (July 2018-June 2019), MOSPI ([http://mospi.nic.in/sites/default/files/publication\\_reports/Annual\\_Report\\_PLFS\\_2018\\_19\\_HL.pdf](http://mospi.nic.in/sites/default/files/publication_reports/Annual_Report_PLFS_2018_19_HL.pdf))

<https://www.ibef.org/industry/manufacturing-sector-india.aspx>

<https://yourstory.com/herstory/2019/08/stovekraft-factory-bengaluru-80pc-women-inclusive>

<https://yourstory.com/herstory/2019/09/women-entrepreneurs-manufacturing-workforce>

<https://economictimes.indiatimes.com/magazines/panache/et-womens-forum-power-women-who-are-in-the-driving-seat-in-the-manufacturing-industry/articleshow/63121240.cms?from=mdr>

<https://www.womenentrepreneursindia.com/success-stories-2.php>

<https://www.fortuneindia.com/mpw?year=2018>

<https://www.ibef.org/research/news-trends>

[http://mospi.nic.in/sites/default/files/reports\\_and\\_publication/statistical\\_publication/social\\_statistics/WM17Chapter4.pdf](http://mospi.nic.in/sites/default/files/reports_and_publication/statistical_publication/social_statistics/WM17Chapter4.pdf)

[http://archive.indianstatistics.org/misc/women\\_work.pdf](http://archive.indianstatistics.org/misc/women_work.pdf) (NSS)

<http://www.businessworld.in/article/A-Tight-Grip-On-The-Market-/06-03-2017-113907/>

<https://www.anandgroupindia.com/wp-content/uploads/2017/11/AnjaliSingh-1.pdf>

<https://www.vpcf.org/natasha-poonawalla.html>

<https://www.motorindiaonline.in/women-of-mettle/women-of-mettle-harshbeena-zaveri/>

<https://www.fortuneindia.com/mpw/harshbeena-zaveri?year=2019>

<https://www.wellesley.edu/albright/about/faculty/harshbeena-zaveri>

<https://www.devitasaraf.com/>

<https://www.hul.co.in/about/who-we-are/our-leadership/ms-priya-nair.html>

[https://rocketreach.co/priya-nair-email\\_2474684](https://rocketreach.co/priya-nair-email_2474684)

<https://www.businesstoday.in/magazine/special/most-powerful-businesswomen-in-india-priya-nair/story/198082.html>

[https://everipedia.org/wiki/lang\\_en/schauna-chauhan](https://everipedia.org/wiki/lang_en/schauna-chauhan)

<https://sail.co.in/en/ms-soma-mondal-profile>

<https://forbes.com/profile/nisaba-godrej/?sh=276605d87e0b>

<https://www.biocon.com/about-us/board-of-directors-biocon/kiran-mazumdar-shaw-biocon/>

---

## **8.8 SUGGESTED READING**

---

(<http://yearsstory.com/story/2019/09/women-entrepreneurs-Manufacturing-workforce>)

