

The image features a large, light gray watermark of the UJiGNOU logo on the left side. The logo consists of a stylized 'U' and 'G' intertwined. To the right of the logo, the text 'UJiGNOU' is written in a large, light gray font. Below this, the text 'THE PEOPLE'S UNIVERSITY' is written in a smaller, light gray font. A vertical line separates the logo area from the text area.

**BLOCK 3**

**WOMEN IN INDUSTRIAL SECTORS**

UJiGNOU  
THE PEOPLE'S  
UNIVERSITY



**ignou**  
THE PEOPLE'S  
UNIVERSITY

---

## UNIT 7 SMALL-SCALE PRODUCTION

---

### Structure

- 7.0 Introduction
- 7.1 Learning Outcomes
- 7.2 Who Is An Entrepreneur?
- 7.3 Nature and Definition of Small-Scale Industries
- 7.4 Journey of Women Entrepreneurs
  - 7.4.1 Case Study 1-Social Skills and Entrepreneurship
  - 7.4.2 Case Study 2—Social Entrepreneurship and Retail Business
  - 7.4.3 Case Study 3—An Entrepreneur by Accident
  - 7.4.4 Case Study 4- Weaving Success
- 7.5 Barriers to Women Entrepreneurship at Small Scale Industries
- 7.6 Let Us Sum Up
- 7.7 Unit End Questions
- 7.8 References
- 7.9 Suggested Reading

---

### 7.0 INTRODUCTION

---

Indian Economy has witnessed drastic changes since 1989 after the opening up of the Economy through the implementation of neoliberal economic policies. The entrepreneurial activities at various levels took momentum during that period. The mobilization of women for economic empowerment through various government sponsored programmes like DWCRA, SGSY, Self Help Group movement and National livelihood mission provided opportunities for women to mobilize themselves to take up entrepreneurial activities. This Unit will introduce you to the concepts like who is an entrepreneur, types of women entrepreneurs and what is meant by small-scale production. Further, the learners will learn about the factors influencing women's entrepreneurship and the problems women entrepreneurs face in small-scale production with the help of case studies. These cases are drawn from different parts of the country. Let us now read about what will be your learning from this unit.

---

### 7.1 LEARNING OUTCOMES

---

After studying this, you shall be able to:

- Define small scale production;
- Explain concepts of entrepreneurship and entrepreneur; and
- Examine the factors contributing to becoming a successful entrepreneur in small-scale production areas.

---

## 7.2 WHO IS AN ENTREPRENEUR?

---

The word 'entrepreneur' derives from the French word "Entreprendre" (to undertake). In the early 16th Century, it was applied to persons engaged in military expeditions and extended to cover construction and civil engineering activities in the 17th Century. However, during the 18th Century, the word 'entrepreneur' was referred to economic activities. Many authors have defined 'entrepreneur' differently. Generally, an entrepreneur is an adult individual who combines capital and labour for production. According to **Cantillon**, "entrepreneur is the agent who buys means of production at certain prices, to sell at prices that are certain at the moment at which she/he commits themselves to his cost". According to P.F Drucker, "person one who always (1) searches for change (2) responds to it (3) exploits it as an opportunity.

### 7.2.1 Categories of Women Entrepreneurs

Participation of women in various economic activities is measured through the female work participation rate. As per the Government of India, the Periodic Labour survey (PLS) in July 2020- June 2021, the female work participation rate is 25.1 per cent. As you are aware, the Economy in India, as well as throughout the world, is divided into formal (organized as called in India) and informal (unorganized sector as called in India) sectors. Women predominantly work in the unorganized sector due to patriarchy and other gender-related issues like low skill and low education.

Women constitute 50 % of the population. If government or any other agencies formulate policies to improve economic development of the country without the active involvement of women and other genders, the policy will be failed and it is doesn't improve overall development of the country. Therefore, government formulates gender sensitive policies in order to enable women in economic activities. The existing patriarchy tries to make entrepreneurial spirit male space. But that is not true. Women entrepreneurship has gained momentum in the last three decades with the increase in the number of women enterprises and their substantive contribution to economic growth due to change in the gender relations. Government initiatives and feminist interventions have made financial institutions responsive to support women entrepreneurship. Since the Tenth Five Year Plan, encouraging entrepreneurship for women has been a key area of intervention for poverty alleviation in rural areas. In the time of feminisation of agriculture, expansion of farm and other non-farm enterprises which involves large number of women can be a significant factor for reducing poverty in rural areas. Development of entrepreneurship based on science and technology (S&T) interventions has become crucial for attaining livelihood security for women in which small-scale industries play a key role (A Road map for Women in Science and Technology, Vision document). Government of India has major schemes like: **Scheme for Fund for Regeneration of Traditional Industries (SFURTI)** and **Prime Minister Employment Generation Programme (PMEGP)** and **Pradhan Mantri Mudra Yojana (PMMY)** in the MSME sector to encourage entrepreneurship among women and other marginalised groups.

The Women's Biotech Park was set up by the Department of Biotechnology in Chennai in the year 2000. The aim was to provide opportunities for professionally qualified women to take a career of self-employment by setting up environment friendly biotechnological enterprises. The goal was to make the project commercially viable based on the bio sources available within the state. They have classified technologies into four broad segments: Agriculture, Food, Medical and Environmental biotechnology. A good number of women entrepreneurs have been supported through this project. Special drive for **entrepreneurship based on S&T** is critical for employment generation and livelihood security of women. Small scale industries particularly should be encouraged to organise such programs with the help of S&T institutions (Source: A Road Map for Women in Science and Technology, Vision Document, unpublished draft).

There are the following categories of women entrepreneurs.

- Women entrepreneurs in organized & unorganized sectors
- Women entrepreneurs in traditional & modern industries
- Women entrepreneurs in urban & rural areas
- Women entrepreneurs in large-scale and small-scale industries
- Single women entrepreneurs and joint venture entrepreneurs

Since this Unit discusses women in small-scale industries (S.S.I.) through case studies, we will read about case studies of women entrepreneurs in the following sections after learning more about small-scale industries.

---

### **7.3 NATURE AND DEFINITION OF SMALL-SCALE INDUSTRIES**

---

The definition of small-scale industries varies from country to country. It is based upon factors like the number of persons employed, investment, production/turnover, location, technology, etc. Most countries have taken the number of persons employed and the amount of investment as the essential criteria for defining the concept of a small-scale industry.

Most small-scale industrial units are small in size regarding the number of people engaged in production, volume of production, and monthly or years of profits. The Small -scale Units also have limited financial resources. In these kinds of Units, the entrepreneur herself/ himself will be the owner and performs most of the production and all managerial functions. Sometimes, She/ he may make his close acquaintance or friend join the Unit as a business partner. The partner may contribute part of the capital, or she /he may involve in production-related activities, and she/he may assist her/him in managerial activities. The small-scale production may locate in the dwelling place itself. Some may rent a space in the city's periphery or small town to run the unit. The small-scale units may or may not register as production Units. The Self-Help Groups (SHGs) movement from the 1990s onward in India has provided

opportunities for women to join a group consisting of 10 to 15 members from the same socioeconomic background, and they get trained by various agencies (both government and Non-Governmental Organizations) to start a small-scale production unit. A very negligible percentage of small-scale production units follow proper organizational structure. The owner of small-scale production may have a formal school education, but they may not have technical or managerial education. In the process of their production, they might learn all production and entrepreneurial-related knowledge through informal learning. Also, they have minimal financial sources. The government of India programme facilitates SHGs to have access to banks and financial institutions to start production units. All these units are labour intensive, and women may work for more than 12 hours to sustain themselves in the production and market-related activities. SHGs and other small-scale production units have been mostly located in rural and semi-urban areas.

Let us read about a few case studies of women entrepreneurs.

---

## 7.4 JOURNEY OF WOMEN ENTREPRENEURS

---

### 7.4.1 Case Study 1-Social Skills and Entrepreneurship

Mrs. K.K.K. hails from an impoverished family background, has no formal education, and is currently about 80 years of age. She has been a very industrious person since her childhood. She likes to go to weekly markets (*Haat*) in different villages, which sometimes are as far as 20-30kms, to trade various products, including rice, different varieties of fruits and soaps. During these visits, she learned how to communicate with people and started building good relationships with regular customers and suppliers. Gradually, she met many other business women and men and made friends with them.

When she got married, she became involved in agriculture and produced many vegetables. She got land and could supply to various markets in plenty. She could also generate employment for people from nearby villages. After ten years of her work in agriculture, she shifted her business to some construction and transport works and invested in her first automobile, an old truck which in those days they used to call '**Dok Truck**'. It helped her in various ways, especially in carrying agricultural produce to the market.

Later she bought a Jeep. This helped her go from one village to the other. Due to her industriousness, she once again proved herself by making the transport business successful and bought a mini bus and an Ambassador car. This experience made her realize that business was profitable, and she bought more vehicles, including buses and ambassador cars which were in better condition than the earlier ones. Lack of competitors in those days brought her large profits. Mrs K.K.K. never took a loan or any financial support from anyone or the bank since she believed that it was only hard work and that living a simple and economical lifestyle is adequate to sustain oneself financially. Although her transport business went down after the Supreme Court order to ban deforestation, she was not discouraged by that. She availed many other new opportunities; now, her businesses include a general store and real estate business.

She mentioned some inevitable constraints; finance, ill health and pregnancies. Other constraints she mentioned were employees not being loyal towards work, high transportation costs, high competition, inflation, difficulties marketing the products and in getting customers, maintenance of business, and retaining employees. Being illiterate, she has to depend on somebody to translate whatever is written on paper. However, she overcame these problems with her experience, hard work, patience and family support.

(Source: This Case Study is drawn from Sairabell Kurbah, Role of Women Entrepreneurs in the Economic Development of Meghalaya: A North Eastern State, India)

#### 7.4.2 Case Study 2-Social Entrepreneurship and Retail Business

A big group from a Kolkata-based enterprising woman - Aparna Banerjee retails her goods under the name 'Project *Sukanya*'.

Interestingly, the goods are not sold from huge showrooms but from 54 roadside mobile kiosks managed by 141 women who work in shifts. Another 3,500 women directly benefit from this project by making products such as handicraft items, edibles like 'papad' (wafer made with potato/rice paste), pickles and jams. Packaged spices and ready-to-eat lunches are also sold. She plans to launch another 500 'bou carts' (women carts) that would be deployed across 18 districts, again managed by women.

"When I got the idea for these mobile kiosks, my first step was to finalize the design and patent it under the Intellectual Property Rights Act. Thus, the Project *Sukanya* retail chain is also patented," says Banerjee. The project resulted from extensive research based on material gathered from 62 villages across India during her studies in Anthropology at Calcutta University.

"I did my M.B.A. in Logistics and Supply Chain Management from XLRI and realized during that time that I wanted to become a social entrepreneur. I then did a course in Anthropology to get a grip on human rights. I realized that women need financial independence to get freedom from restrictions, abuse and social taboos," says Banerjee, who struggled to complete her studies under severe financial constraints.

Banerjee realized that marketing was the bottleneck of all small-scale enterprises, and blocking cash within a supply chain was not advisable. "I found that retail was the only option. However, setting up a huge retail space was beyond my capabilities. I hit upon the mobile kiosk idea and worked on it for two years, getting all required permissions and licenses to place them on the roads. No loophole was left open. The carts are manufactured at our unit," she adds.

The attractively designed sleek kiosks, which are placed at most major crossings in the city, quickly catch the eye. The apron-clad women operating them are polite and knowledgeable about the products. Kakoli Das, 24, is one of the smiling faces at the Rashbehari kiosk. "We do not have any problems with the police regarding parking our kiosk. Our paperwork is watertight. The customers, too, are friendly. We get repeat clients regularly now."

Project *Sukanya* has a 20,000 sq. ft. common facility centre at Topsia. The rural women who supply the products come here with their samples. The products are graded into three categories. Under the A category, the product is immediately bought with a 10 per cent advance. *Sukanya* gives support for better packaging for the B category products and is bought. Falling under the C category are products that have market saturation. *Sukanya* trains these women to shift focus to products that would have more market demand. The edible products are tested and certified by the central government's National Test House.

The venture's success is evident from the fact that several big retail chains have started offering to buy out Project *Sukanya* and the patent for the mobile kiosks. "But I am committed towards my social responsibility. Rather than entrepreneurship, it is the emancipation of women that is my primary concern. My venture helps several needy women take home a well-earned salary," says Banerjee.

As Banerjee puts it, all women within the project are "those in need of a livelihood". Jayanti Chatterjee, 49, from Baharu village in South 24 Parganas district, responded to one of the first advertisements by *Sukanya* in a newspaper and approached Banerjee for a job. A school dropout, Jayanti had done menial jobs for over three decades and yet had managed to send her six siblings to school. However, they all went their ways once they were well settled, leaving her to cope with an ailing mother. Jayanti, who is in charge of the *Sukanya* Tollygunge kiosk, today earns a regular income of Rs 3,000 per month.

Swapna Dutta, 50, an urban poor, was dumped by her husband during the initial years of their marriage. She managed to educate her son up to higher secondary by doing odd jobs. However, when he secured admission to an engineering college, Dutta found herself helpless. The *Sukanya* project came to her rescue and she pays the tuition fee from the regular monthly salary of Rs 2,800.

On the anvil for Banerjee is a rural initiative. Project *Sukanya* is set to adopt a village, offering alternative livelihood options. "Many villages have poor irrigation or flooding problems that restrict agriculture activity. I have approached the government for adopting one such village to set up the *Sukanya* Village Common Facility Centre," says Banerjee.

*Sukanya* has also spread its wings beyond West Bengal with 30 new outlets. Groups of needy women have already been identified in states such as Kashmir, where consignments of saffron and apples have already arrived to be sold from the mobile kiosks. Here too, women are at the back and front ends of operations.

(source: <http://smeworld.org/story/focus/msme-ministry-government-schemes-women-entrepreneurs-india.php>)



### 7.4.3 Case Study 3 -An Entrepreneur by Accident

The story of Patricia Narayan, winner of this year's 'FICCI Woman Entrepreneur of the Year award, is amazing. She started her career 30 years ago as an entrepreneur, selling eateries from a mobile cart on the Marina beach in Chennai amidst all odds -- battling a failed marriage, coping with her husband, multiple addicts, and taking care of two kids.

Today, she has overcome the hurdles and owns a chain of restaurants. "I was always interested in cooking and passionate about trying out new dishes. However, the thought of becoming a businesswoman never came to my mind as I do not come from a business family. Both my parents were government servants".

However, her marriage changed everything. Both the families opposed the marriage vehemently as her husband belonged to the Brahmin community; unfortunately, her marriage did not work out as her husband was addicted to alcohol, drugs, etc. She could not bring him out of the addiction. As a young woman, she did not know how to cope with this, and she was also getting beaten up every day.

Though her father, a very conservative Christian, never forgave her, he gave her refuge when she had nowhere to go. She was thrown out with two tiny children. It was a question of survival for her. She knew she should either succumb to the burden or fight. She decided to fight her lonely battle.

She did not want to be a burden to her parents. She started making pickles, squashes and jams at home. She just took a couple of hundred rupees from her mother. She sold everything she made in one day, and that gave her confidence.

(Source <http://business.rediff.com/slide-show/2010/jun/08/slide-show-1-from-50-paise-to-Rs2-lakh-a-day-success-story.htm>)

### 7.4.4 Case Study 4 - Weaving Success

Shrimati R.K. Ongbi Purnima Devi from Imphal West, Manipur, is a Proprietors of M/S. S.P.Embroidery Centre .

Her father, a carpenter and a part-time manager (who manages local religious and customary ceremonial functions), died when she was very young, leaving behind her mother, two elder sisters, one elder brother. Her mother, who is the 2nd among the three wives of her father, was much neglected by her father. Her mother's difficulties in raising her children inspired her to start her enterprise. "During the rainy season, when no jobs were available, we were to starve, and our father did not look after us. That ignited a challenge that women should be educationally and economically strong."

She further tells that "luckily my husband also supported me and helped me in every field. As soon as I finished my graduation in 1984, and due to my training from District Industries Centre (D.I.C.) in Embroidery. I availed a good chance of being a beneficiary of a government scheme – Prime Minister Rojgar Yojna 1995, and training in Entrepreneurship Development

Programme (EDP) under the auspices of North Eastern Industrial Consultant Ltd. (NECON)”.

People became attracted to the firm's finished products, specially designed for marriage and decorative purposes. A workforce of three artisans found it hard to supply the demand of the customers and in such a crucial moment, NECON sponsored training for twenty trainees, and I was given a free hand to select the trainees. Whenever I was occupied with family responsibilities, my family and workers looked after the enterprise in my absence. In this way, I ran my enterprise without much difficulty. There were only three leading competitors in my enterprise. I tried to be at the top by grooming my workers and building a good work infrastructure.

I started running a hostel on the first floor of my house where about twenty of my trainees and workers from far places are kept free of cost. My husband and I concentrate on our venture and tried to generate more employment through our firm. We aimed to generate more entrepreneurs in our field. Today one can easily see signboards of embroidery shops in the nook and corner of the state.

Currently, I am a member of the Jury in the State Level Yuva Kriti/Exhibition organized by Nehru Yuva Kendra Sangathan (NYKS), Imphal. I was also selected as a trade expert for Embroidery by the Board of Examiners for conducting the All India Trade Test of Craftsmen (final) by the Labour Department, Govt. of Manipur. The Unit received the prestigious “National Award 2009 “from Her Excellency, the President of India, Smt. Pratibha Devisingh Patil for Outstanding Entrepreneurship in MSME sector.

I feel loans can be given without any collateral to the women entrepreneurs. Due to much paperwork and delay in loan sanctioning, entrepreneurs usually become nervous and cannot concentrate on their work and plan. Banks and financial institutions seldom understand that without loans, entrepreneurs cannot grow. Working capital should be provided at the minimum interest to women entrepreneurs.

Handloom and Handicrafts enterprise is the most suited in the case of Manipur. The food and Fruit Industry has a promising future for women entrepreneurs. I would be happy if I could be an " **Inspire** "to my all-women friends.

(Source: Hina Shah, 2013).

### 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. Who is an entrepreneur?

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

2. Write a note on small scale industry.

.....

.....

.....

.....

.....

---

## 7.5 BARRIERS TO WOMEN ENTREPRENEURSHIP AT SMALL SCALE INDUSTRIES

---

Let us now read about some of the barriers that women entrepreneurs face while setting up enterprises. **Chaudhary & Sharma** (2017) discusses the following challenges faced by women entrepreneurs:

1. **Shortage of Finance:** Women and small entrepreneurs always suffer from inadequate financial resources and working capital. They lack access to external funds due to the absence of tangible security and credit in the market. Since women do not generally have a property in their names, they lack the security to avail of loans. Also, the complicated procedure of bank loans, the inordinate delay in obtaining the loans and the running about along with the transaction cost involved therein work as deterrents against many women who aspire to be entrepreneurs.
2. **Inefficient arrangements for Marketing and Sales:** For marketing their products, women entrepreneurs are often at the mercy of the intermediaries who pocket a chunk of profit. Further, women entrepreneurs find it challenging to capture the market and make their products popular. This problem is all the more severe in the case of food production and processing ventures.
3. **Stiff Competition:** Many women enterprises have imperfect organizational setups. They have to face severe competition from organized industries and male entrepreneurs. For example, women cooperatives engaged in hand-pounding rice in Kerala confronted heavy competition from mechanized rice mills, resulting in the liquidation of many units in the traditional sector.
4. **Lack of Education:** In India, lack of education, illiteracy and low skill among will affect entrepreneurship. Due to this, considerable percentage of women struggling to understand technological developments, financial services and banking. Lack of information and experience creates further problems in the setting up and running business enterprises.
5. **Low Ability to Bear Risk:** The existing socialisation process assumes that it is difficult for women to bear economic and other risks. Thus, they are not allowed to involve even small-scale production and they forced to follow protected life with patriarchal notions. Society dictates them to

live certain way of life and society feels the reproductive activities are suitable for the women. Lack of gender sensitivity at every level made women to choose certain type of entrepreneurial activities which are extension of their household activities. Sometimes, they face discrimination in the selection for entrepreneurial development training. Some of them lack entrepreneurial initiative or specialized training. Unregulated market, unplanned growth, lack of infrastructure, are some of the problems women face

6. **Social Attitude:** The biggest problem of a woman entrepreneur is the social attitude and the constraints in which she has to live and work. Despite constitutional provisions, there is discrimination against women. Women do not get proactive support from every social structure. Their hopes and aspirations are never cared for in the name of reproductive activities. Marriage, preference for boys and discrimination against girls are well-known practices amongst most Indian families.
7. **Low Mobility:** One of the most significant handicaps for women entrepreneurs is restricting their mobility. Even if women ready to travel to improve their production, the existing infrastructural facilities restrict their mobility. Lack of safe and secure transportation, lack of hygienic resting space, increased gender-based violence, lack of availability of public toilets, lack of low clean accommodation space in every town are biggest impediments.
8. **Family Responsibilities:** The society expects and imposes women to look after the children and other family members. Society expects women to fulfil the needs of all family members. Sharing of household responsibilities are uncommon in Indian family setup. This needs to be changes. Government must include gender -sensitisation programme to all to change the existing gender relations and treat every individual in the society equal.

**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. Identify the societal barriers faced by women entrepreneurs.

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

2. Write a brief case study of a woman entrepreneur in your neighbourhood.

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

---

## 7.6 LET US SUM UP

---

In this Unit, we have read about case studies of women entrepreneurs drawn from different geographical locations. Case 1 talked about the 80-year-old woman and how she became successful. Even though she does not have formal education, she could reach became a successful entrepreneur and tried different fields like selling vegetables to running a transport business. One can learn the qualities required to become an entrepreneur from her story. Like her story, there are cases of a social entrepreneur giving livelihood to many women as well as the story of an accidental entrepreneur. We have also discussed the problems faced by women entrepreneurs in the last section. Factors such as: gender inclusive infrastructure, entrepreneurial skill development, safe working environment, flexible working hours and access to small credit can create an enabling entrepreneurship ecosystem for women.

---

## 7.7 UNIT END QUESTIONS

---

1. Discuss cases of two successful women entrepreneurs and examine how their life narratives will have an impact on aspiring women entrepreneurs in small-scale industries.
2. Identify and describe the challenges faced by women entrepreneurs while setting up the business enterprise.
3. How does gender perspective help in building entrepreneurship among women? Discuss with the help of appropriate examples.

---

## 7.8 REFERENCES

---

Chaudhary, Mamta and Susma Sharma. (2017). Women Entrepreneurship and Small Scale Sector in India., *International Journal of Innovative Social Science & Humanities Research* ISSN: 2349-1876 (Print) | ISSN : 2454-1826

Indira Gandhi National Open University (IGNOU) School of Management Studies (2017), MCO Business Environment, Block 4 Economic Environment Unit 16 Small Scale Industries, New Delhi: IGNOU

Sairabell Kurbah, Role of Women Entrepreneurs in the Economic Development of Meghalaya: A North Eastern State, India, *International Journal of Engineering, Business and Enterprise Applications (IJEBA)*, IJEBA 13-156; © 2013, IJEBA 2013 [www.iasir.net](http://www.iasir.net) )

<http://smeworld.org/story/focus/msme-ministry-government-schemes-women-entrepreneurs-india.php>.

<http://business.rediff.com/slide-show/2010/jun/08/slide-show-1-from-50-paise-to-rs-2-lakh-a-day-success-story.htm>.

Hina Shah, Creating Enabling Environment for Women's Entrepreneurship in India, Economic and Social Commission for Asia and the Pacific (ESCAP), South and South-West Office, *Development Papers 1304*, May 2013.

---

## 7.9 SUGGESTED READING

---

Chaudhary, Mamta and Susma Sharma. (2017). Women Entrepreneurship and Small Scale Sector in India., *International Journal of Innovative Social Science & Humanities Research* ISSN: 2349-1876 (Print) | ISSN : 2454-1826 (Online).



ignou  
THE PEOPLE'S  
UNIVERSITY

---

## 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 following 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>)



ignou  
THE PEOPLE'S  
UNIVERSITY

---

## UNIT 9 HEALTH INDUSTRIES

---

### Structure

- 9.0 Introduction
- 9.1 Learning Outcomes
- 9.2 Industries within the Health Care Sectors
- 9.3 Scope of Health Industries
- 9.4 Regulations through Food and Drug Administration (FDA)
- 9.5 Health Tourism
- 9.6 Vaccines
- 9.7 Wellness Industries
- 9.8 Health Insurance in India: A case study
- 9.9 The Commercialization of Surrogacy
- 9.10 Let Us Sum Up
- 9.11 Unit End questions
- 9.12 References
- 9.13 Suggested Reading

---

### 9.0 INTRODUCTION

---

Indian healthcare industry is a thriving business which caters to activities ranging from manufacturing drugs, vaccines, surgical equipments to latest research and advancement in health care and lifestyle modification. There are best hospitals in India mostly situated in the capital cities of different states which are not only multi-specialists, but equips with luxury facilities like air ambulance, tele- medicine conferencing with global renowned surgeons, usage of robotics and artificial intelligence for promoting holistic health.

India is also becoming the hub of beauty and aesthetics industry with surgical options to make the best of bodily features at affordable prices compared to other countries in the world. Hence it is no less to say that India has become a renowned medical tourist destination promoting medical tourism. Within this backdrop, this Unit will focus on various exiting industries in the health sector. The Unit will discuss wellness, nutrition, vaccines, drugs and surrogacy as booking industries within health care sector. Let us now read about the learning outcomes of this Unit.

---

### 9.1 LEARNING OUTCOMES

---

After studying this Unit, you would be able to:

- Explain various concepts related to health industries;
- Discuss the demand on the rise of health industries in India; and
- Engage in potential of health care industries from a gender perspective.

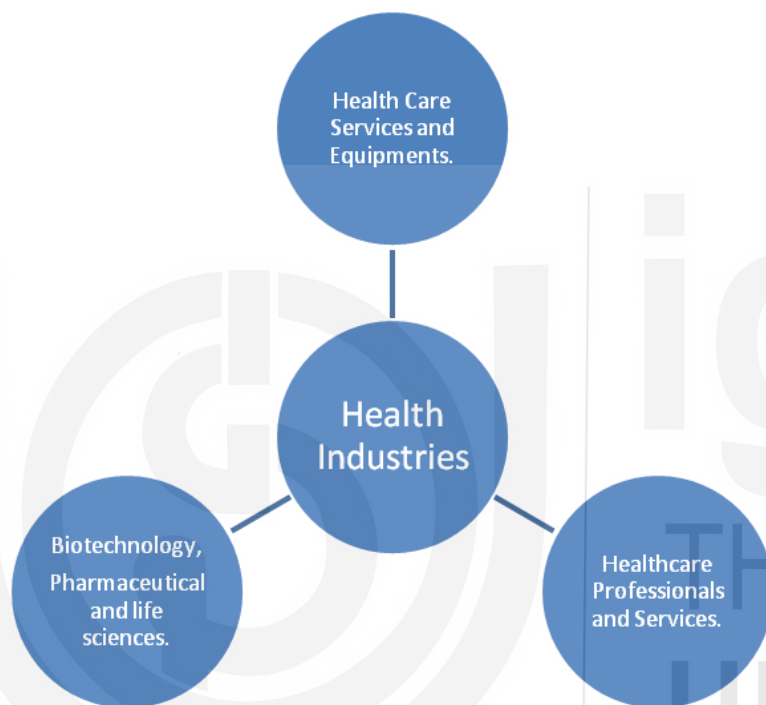
---

## 9.2 INDUSTRIES WITHIN THE HEALTH CARE SECTORS

---

Health Care Sector is a booming industry with the market share rise in manufacturing of drugs, medical equipments, health insurance and other medical facilities. It is estimated in 2022, health care market in India will be \$373 billion. The issue of lifestyle disease and health insurance will grow (IBEF, October 21 2020, Healthcare Industries in India). This draws a major source of investments from pharmaceutical companies, research industries and patent technology.

**Figure 9.1: Types of Health Industries**



Source: Techno Func, 2020

### **Health Care Services and Equipment**

It comprises of various medical supplies relating to equipments such as MRI machines, surgical robots, medicines and health care services for diagnosing, monitoring and treatment of various diseases. There are laboratories and complete health packages for various diseases and its monitoring. A new technology known as **Defibrillation** provides electric current to the heart in the case of abnormal heartbeats which is majorly outsourced.

### **Pharmaceutical, biotechnology and life sciences**

These industries are evolving on day-to-day basis with latest products, composition and combination of medicines, preparation and sales, nutritional supplements made from semi-synthesis of biological sources and other sources. Sale of antioxidant and collagen-based products to keep a youthful appeal among masses is on high demand through health supplements and anti-ageing creams.

## Healthcare Providers and Professionals

A health care provider is an institution (such as a hospital or clinic) or person (such as a physician, nurse, allied health professional, or community health worker) that provides preventive, curative, promotional, rehabilitative, or palliative care services in a systematic way to individuals, families or communities. Every multispeciality hospital has their range of professional team which is possible due to demand for specialists by patients and their family members.

---

### 9.3 SCOPE OF HEALTH INDUSTRIES

---

The United Nations International Standard Industrial Classification of All Economic Activities (ISIC) categorizes the health care industry as generally consisting of

- Hospital Activities
- Medical and Dental Practice Activities
- Other human health activities

The first two categories are traditionally found, yet in the 21<sup>st</sup> century, the third category of professionals range from physiotherapist, midwives, pathology and imaging, diagnostic clinics and other allied health professionals such as speech therapist, chiropractor, music therapist, occupational therapist, optometry, hydrotherapy, acupuncture and so on.

With rise of infrastructure and communication bridging rural areas; emergence of blood banks, sperm banks, organ donation and transplantation banks, air ambulance are major facilities under the common roof of health industries. Another set of scope is seen through hospice, palliative care, nursing care facilities, home for elderly, convalescent homes for the critically ill and elderly population.

In the metropolitan cities of India, elderly packages for holistic health at a reasonable cost per month based on their needed suitable plans are catching up. Elderly population is taken care with access to certified nurses, attendants, 24 hours emergency services and helpdesks, support for rehabilitation in post-stroke, cancer and dementia. Regular reminder for medicines and care calls are also initiated.

---

### 9.4 REGULATION THROUGH FOOD AND DRUGS ADMINISTRATION (FDA)

---

The Food and Drug Administration (FDA) , India Office was established in 2008 as a measure to ensure safety, quality and effectiveness of food and medical products to be exported to the United States of America. There is a regularity of commodity specific inspections to meet the legislative mandates of FDA specification, building a quality data to inform regulatory decisions and actions of FDA. This would be enhancing the oversight capacity, safety and quality to FDA's knowledge of India's legal requirement and jurisdiction with strong partnership with authorities, industries, academia, and non-



## 9.5 HEALTH TOURISM

Tourism refers to traveling mainly for leisure or business; however the definition is redefined recently through the coinage of 'health or medical tourism'. India ranks 6 out of 46 in Medical Tourism Index (2020-21). It is mainly growing so that tourists may enjoy the best facilities and medical practitioners at a lesser cost with world class facilities. It is mostly inward towards Asian countries. Services mainly range from complicated transplants, replacement, cosmetic surgeries, psychiatry, alternative treatments and even burial services. It is still not a formalized practice for readdressal or quality control as individuals chooses hospitals from tourism packages or internet facilities.

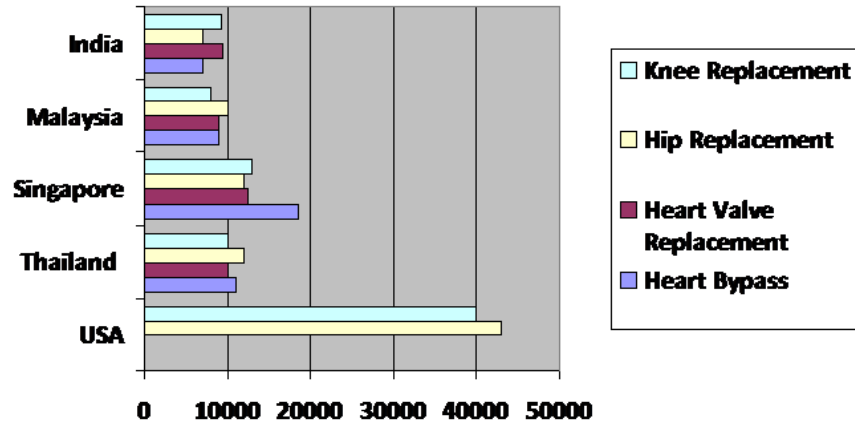
According to Chavda (2019), there is lot of medical companies in India. Vaidam is the only Medical Tourism Company which is ISO registered and **National Accreditation Board for Hospitals and Health Providers (NABH)** accredited with 70 MOUs in more than twenty countries that shows transparency in cost in every medical procedure and costs in their website. Other companies like MediConnectIndia (awarded National Tourism Award) provide services to medical tourists. **Tour2India4Health** is also India's first government recognized Medical Value Provider. These medical tourism companies provide facilities from initial checkups to post treatment consultations.

**Table 9.1: Cost of Treatment Worldwide**

Procedure Cost in USD (\$)	USA	Thailand	Singapore	Malaysia	India
Heart Bypass	1,30,000	11,000	18,500	9,000	7,000
Heart Valve Replacement	1,60,000	10,000	12,500	9,000	9,500
Hip Replacement	43,000	12,000	12,000	10,000	7,020
Knee Replacement	40,000	10,000	13,000	8,000	9,200

Source: <https://www.shalby.org/international-patients/compare-rates/>

Figure 9.2: Data on Medical Tourism



According to the graph, India has the cheapest rate for medical tourism which makes it a haven for these five kinds of treatment facility centres. Asian countries have much lesser rate of cost compared to United States of America. Hence it makes a viable option for medical tourism in South Asia.

**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. Define medical tourism.

.....

.....

.....

.....

.....

2. Name the industries falling with medical healthcare.

.....

.....

.....

.....

.....

---

**9.5 VACCINES**

---

You will read about vaccines in Unit 5 of BGS 004. In this section, we will briefly discuss about vaccines in the context of Covid-19. According to Watson et.al. (2022), the first COVID-19 vaccines outside a clinical trial was administered on December 8, 2020 to ensure vaccines to reach globally. Vaccines were the only way to save more than ten million lives from the virus. It was set by WHO and Covid-19 Vaccines Global Access (COVAX). However, there were shortfalls and challenges due to short supply as some

countries got a greater proportion, pharmaceuticals could not meet the contractual obligations to COVAX, they had short expiry period and supply was less in number. As a result, a lot of low-income group countries suffered. There are companies in the race of vaccine trails and monopoly namely Moderna, CanSino Biological, Novavax, SinoVac, BioNTech, Chinese Academy of Medical Sciences, Inovio to name a few (intellizence, 2021).

---

## 9.6 WELLNESS INDUSTRIES

---

The Wellness Industry in India marks a rise of a health-conscious class of population who not only defies the agents and factors of ageing but showcases the young and energetic sections through advertisement. India is a young country due to its demographic dividend hence the Ministry of AYUSH, Government of India also promote wellness as a part of country's development. Under Ayushman Bharat (2019-2024) campaign, Health and Wellness Centres are promoted for States and Union Territories under the National AYUSH Mission (NAM). It is envisioned to reduce burden of disease and expenditure by promoting holistic wellness. Therefore, reputed Trusts and NGO's and AYUSH educational institutes are utilized for awareness and capacity building. The basic aim is to promote healthy lifestyle, food, knowledge on medicinal plants, management of common disease, oral health, elderly and palliative care, pregnancy, neo-natal, reproductive health, outpatient care and screening and monitoring of all non-communicable disease. Wellness Packages are also provided by private agencies and hotels in Karnataka, Uttarakhand, and Kerala to name a few states to improve various diseases and manage stress related diseases.

---

## 9.7 HEALTH INSURANCE IN INDIA: A CASE STUDY

---

Health insurance in India works under the principle of 'utmost good faith' for both the insurer and insured with no fraud occurrence. It is estimated that around 130 million people in India may suffer according to the Associated Chambers of Commerce and Industry of India (ASSOCHAM) and Pricewaterhouse Coopers (PwC) study (PTI, 2013). Hence a stable health industry is mandatory for a growing developing economy such as India to curb the vicious cycle of poverty both at the state and the national level. Health insurance such as *Rashtriya Swasthya Bima Yojana* was initiated in 2008 under Ministry of Labour and Employment, Government of India. The aim was to help the Below Poverty Line (BPL) section of unorganized workers with five members was a prime example of social security. However, the coverage could not be on an extensive scale especially in rural areas as awareness and reach to remote location is less. Total sum insurance was Rs 30000 covering pre-existing diseases and transportation cost within the limit of Rs 1000. Rs 30 were the annual registration fee. The data on March 25, 2013; the scheme had 34,285,737 smart cards and 5097128 cases of hospitalization (National portal of India, 2016).

Another massive scheme for health insurance is the *Ayushman Bharat (Pradhan Mantri Jan Arogya Yojana)*. It covers a wide range of poor

including over 10 crore poor and 50 crore beneficiaries. It is under National Health Protection Mission providing coverage upto 5 lakhs per family cashless in both government and private empanelled hospitals. NITI Aayog, State Health Agency and Union Health and Family Welfare Ministry shall simultaneously look into its provisions. It has covered nearly 40 % of the population and mainly under the SECC census data.

There are new health insurance players' everyday covering both terminal ill and critical ill patients with pre-existing, existing, out-patient department (OPD) and pregnancy as well. During emergency, most of the hospitals offer cashless treatment with empanelled hospitals covering 30 to 60 days pre and post hospitalization. There are other benefits such as Critical Illness cover, Air Ambulances, tele conferencing, international consultation, Personal Accident covers for disability. The limitation of health insurance with more premium amounts has lesser waiting period time. Health insurance has wider plans for senior citizens too. There are also tax benefits while buying a health insurance under Section 80D of Income Tax Act, 1961 where the tax exemption ranges from Rupees 25000 to 75000.

With the recent pandemic, almost all health insurance plans cover corona virus (COVID-19) treatment. As per the Insurance Regulatory and Development Authority of India (IRDAI) guidelines, insurers have also launched COVID-19 specific best health insurance namely *Corona Rakshak Policy* and *Corona Kavach* that pays for health cover as well as PPE kits, masks, gloves and 100 percent no claim bonus. It has the age group of 18-65 as entry limit. The minimum insurance is 50,000 Rupees and maximum cap range to 5 Lakh with both policy term and home-based treatment that can range from three and half months to nine and half months covering hospitalization cost of entire family.

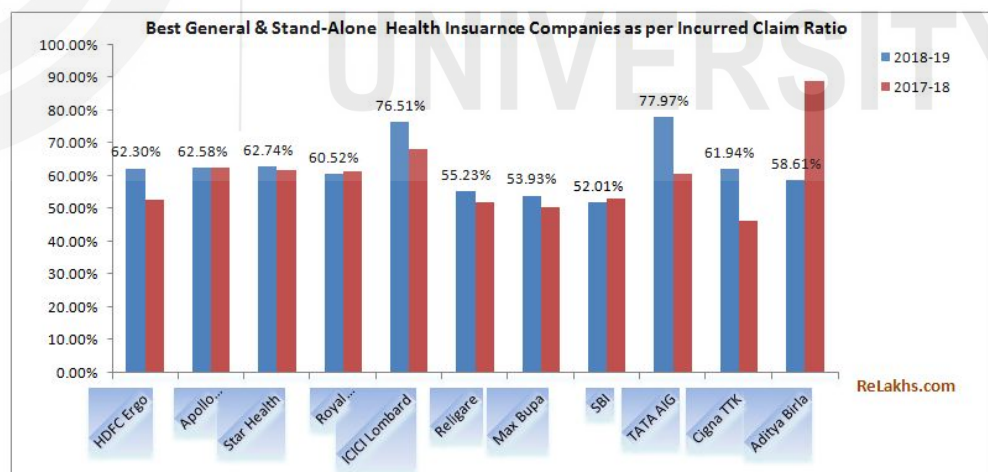


Figure 9.3: Health Insurance Companies and Incurred Claim Ratio

Source: <https://www.relakhs.com/health-insurance-incurred-claims-ratio-2018-19-irda-data/>

According to the Fig.1.3, Aditya Birla Health Insurance was the highest Incurred Claim Ratio in 2017 and the second was ICICI Lombard. While in 2018, TATA AIG was the highest claim settler. The second position for settling claims in 2018 was ICICI Lombard followed by Apollo Munich. India has a large array of health insurers depending on the income and need

of the population.

Let us now contextualize health industries in relation to gender and reproduction in the next section.

---

## 9.8 THE COMMERCIALIZATION OF SURROGACY

---

The following section has been adapted from Unit 4: Surrogacy of the course MWG 004.

Let us now look at surrogacy as a form of health services provided by various health industries. In India, particularly commercial surrogacy is located and operationalised in relation to market.

### Box 9.4: India's Dominance as a 'Surrogacy Hub/Capital'

- Lower costs (1/4th of the costs in the West)
- Large top-notch private healthcare providers
- English-speaking providers
- A socio-political climate that encourages the outsourcing of Indian labour
- World-famous tourist destinations
- Presence of a large number of women willing to be surrogates
- The absence of government regulation

Over the years infertility 'treatment' in India, including surrogacy, has achieved the proportions of an industry. Though projected as pro-women and couched in the language of choice, rights and altruism, this market seeks women as clients and their reproductive body parts as commodities. In the case of surrogacy, poorer women have emerged as 'rentable wombs'; the suppliers of cheap reproductive labour. Surrogacy has now become a major component of the larger fertility industry, which also includes technologies for assisted conception. This reveals significantly that economic globalisation today is no longer restricted to goods but includes services as well. Medical services, and now fertility services, are becoming increasingly commercialised, and this has resulted in a phenomenal growth in people travelling across the globe to access these services. India is the newly emerging destination for this medical, and now reproductive, tourism.

India's health care sector has emerged as the largest in the service sector in the country, contributing 6.2 per cent to the country's GDP; by 2012, this figure is expected to rise to 8 per cent, thus employing a staggering 9 million people.

([http://shodhganga.inflibnet.ac.in/bitstream/10603/2590/9/09\\_chapter%201.pdf](http://shodhganga.inflibnet.ac.in/bitstream/10603/2590/9/09_chapter%201.pdf))

It is estimated that the size of the medical tourism market in the country will be Rs.1, 95,000 crores in 2012. An integral part of the growing medical tourism industry, the fertility industry, is slated to bring additional revenue of \$1-2 billion by 2012 (Sarojini et.al, 2011). In fact, India is already regarded as the surrogacy outsourcing capital of the world, and is often termed the “mother destination”. According to one estimate, India’s rapidly growing commercial surrogacy industry is worth U.S. \$445 million per year (Economic Times, 2008). There are no reliable statistics available for how many surrogacies are arranged in India for foreigners, but there is a lot of anecdotal evidence of a sharp rise in the instances of commercial surrogacy. This is also corroborated by various media reports, which range from being laudatory to critical of the surrogacy industry. In 2008, Rudy Rupak, co-founder and president of Planet M Hospital, California, a medical tourism agency, pointed out the growth trends in surrogacy, and mentioned that he expected to send at least 100 couples to India for surrogacy, up from 25 in 2007, the first year that he began offering the service (<http://www.planethospital.com>).

While friends or relatives can act as surrogates in altruistic surrogacy arrangement, in instances of commercial surrogacy, the surrogates are generally recruited through:

- fertility clinics, which have surrogacy programmes
- surrogacy agents, and websites or online recruitment links
- advertisements in the classified section of magazines (both English and Hindi)
- voluntary advertising by individuals looking to act as surrogates.

Apart from ART clinics that offer surrogacy as one in a range of services, other organisations have also sprung up to provide diverse kinds of support services to further the growth of the surrogacy industry. These include private healthcare consultants, travel agencies, the hospitality industry, government tourism departments, surrogacy agents, hostels for surrogates and surrogacy law firms. ART clinics in India have tied up with foreign hospitals and companies to solicit ‘clients’ globally in a bid to expand their clientele. As is evident in the example of Planet M Hospital above, some of these companies are headquartered in the United States or in other countries, from where the ‘clients’ are sourced. Often these companies also employ on-the-ground support staff in India, where the surrogates reside. They act as ‘full-service’ brokers between commissioning couples/individuals and the clinics, providing all ‘services’ in surrogacy. Typically, surrogacy is just one of the many medical tourism services these companies offer, but its exponential growth in recent years has resulted in it becoming a critical service component on offer. Commercial egg donation is emerging as another commercial venture where reverse tourism is seen to occur, with companies bringing in women from first world countries to donate their eggs as well as travel in India.

Clinics and other actors offering/ promoting surrogacy services claim that by providing surrogacy as an option, they are simply responding to the existing

market demand of desperate women to become mothers. In interviews conducted by **Sama**, a resource group for women and health, as part of a research project on the growing commercialization of ARTs, providers communicated their discomfort with “emotional” surrogacy. They see commercial surrogacy as a win-win situation that gives the commissioning parents the child they want, and the surrogate mother the money she needs. They insist that surrogacy is opening up new avenues for women to earn money and “better their lot”. It is argued that Indian women have high fertility as it is, and often give birth to four or five children. As such, one surrogate pregnancy that will help them improve their living conditions, or pay for a child’s operation, cannot be a ‘bad thing’. From the surrogate’s perspective, financial benefit is cited as the main reason why women are ready to act as surrogates. The money earned from surrogacy can be used to provide the surrogate’s own children with a good education, to buy a house, to overcome a financial crisis, or to generally improve the living standard of the family. Surrogacy is thus projected as a better option than, and even a way out of, the sex trade. While the comparison between surrogacy and sex work is not a simple one, it does provide an additional dimension to examine and understand commercial surrogacy. The comparison between the two in the public imaginary as stigmatised work, also results in constant negotiation by the surrogates both at an ideological and practical level.

**Anand** [a town in the western state of Gujarat] has become the epicentre of the commercial surrogacy industry in India. In surrogacy hostels here, surrogate mothers are carefully chosen and cared for with rich nutritional support, and medical supervision that is comparable to international standards. However, this is ironic given that most of these mothers were probably deprived of basic nutritional support and medical facilities when they gave birth to their own children, as they often belong to the lowest socio-economic rung of the population.

Further, surrogacy arrangements where both sperm and eggs are required from donors create three mothers for the child; the gestational mother (surrogate), the genetic mother (donor) and the intended mother (commissioning parent/s). This raises a whole range of ethical dilemmas.

### **Box 9.5: Advertisements for Fertility Services**

**The website of a fertility services provider Institute of Reproductive Medicine and Women’s Health (IRMWH) has the heading 'A woman's best friend', under which the caption reads 'They say women make the world go round. How true! It is because they are mothers: The creators and sustainers of every generation.' Their work is described as 'revolving around women' and is a 'harbinger of hope for childless couples' (<http://www.madrasmedicalmission.org/irm.html>).**

Agencies make large profits by recruiting commercial surrogates, whose services are aggressively advertised by the agencies. The ‘selling point’ becomes the ‘quality’ of the surrogate, which is determined by her social background, looks and, preferably, by proven fertility. The advertisements for surrogates highlight this, and typically read, “Good looking, fair, 27-year-lady from respected family available for surrogate mother. Only rich and genuine people contact” (Sama, 2009, p.14). As a whole, ART services are advertised on websites, in fancy brochures, on walls and hoardings on streets, near adoption agencies and on local cable channels and bus stops. The images, language and slogans used serve to reinforce the tragedy of childlessness and the sentimentality of childbearing, particularly motherhood. At the same time, concerns and complications that come with medical intervention (like side effects, costs, efficacy, and so on) are pushed into the background. Within the larger discourse of the medicalisation of childlessness, surrogacy is projected as the altruistic and noble ‘gift’ of motherhood, from one woman to another. Surrogacy is most often associated with the values of benevolence and altruism. ‘Giving the gift of life’, ‘helping someone build a family’ and other such phrases are often used to emphasize the ‘good deed’ of renting one’s womb. This is deployed equally in commercial surrogacy, wherein the economic aspect is disguised as well as justified in altruistic terms. The ever expanding access to ARTs and the option of surrogacy also means that alternative forms of parenthood or voluntary childlessness are not even considered and more or less excluded as choices.

It is therefore not surprising to find that today, commercial surrogacy has been routinised and normalised to a large extent, with ‘stories’ of surrogacy slowly finding their way into popular imagination, as well as local moral worlds and discourses.

**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. “India as a surrogacy hub”. Do you agree or disagree with this statement? Justify your answer with recent data.

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

2. Describe the ways through which surrogates are recruited in the surrogacy industries.

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



---

## 9.9 LET US SUM UP

---

With the rise of environmental degradation, overpopulation, adulterated food and polluted water; there is an increase level of health complication and morbidity factors in recent years. This trend will continue until a breakthrough pledge is made by nations of the world where people are losing on hygienic food, quality water, mental rest and connecting to Mother Nature through physical activities. There is tremendous rise of health industries which will continue to boom to reduce the mortality and morbidity factor in modern times. This unit has highlighted the concepts, demands and engagement of health industries in recent times looking into the curative, preventive and rehabilitative measures that has made the industry successful in India and it will further generate more income in all future possibilities.

---

## 9.10 UNIT END QUESTIONS

---

1. Write an essay on health industries in India.
2. Define surrogacy and discuss the aspect of commercialization of surrogacy in India.

---

## 9.11 REFERENCES

---

Ayushman Bharat ( National Health Protection Mission) Retrieved from <https://www.india.gov.in/spotlight/ayushman-bharat-national-health-protection-mission>

Chavda, K. (2019). List of Top Medical Tourism Companies in India. Retrieved from <https://www.frankit.in/blog/list-top-medical-tourism-companies-india>

Das, S ( May 12, 2015) . Amway making false, misleading health claims for Nutrilite Daily: UP court. Retrieved from <https://economictimes.indiatimes.com/industry/cons-products/fmcg/amway-making-false-misleading-health-claims-for-nutrilite-daily-up-court/articleshow/47240783.cms?from=mdr>

Food & Drugs .Chapter 13.

Retrieved from <https://main.mohfw.gov.in/sites/default/files/13%20ChapterAN2018-19.pdf>

Food & Drugs Administration. (March 8.2020). India Office. Retrieved from <https://www.fda.gov/about-fda/office-global-operations/india-office>

Healthcare Insurance Evolution in India: An Opportunity to Expand Access (cognizant.com)

Home Elder Care | Senior Citizens Care Delhi | Emoha India. Retrieved from <https://emoha.com/>

TRUiC (2022). How to start an LLC <https://howtostartanllc.com/business-ideas/supplement>

India Brand Equity Foundation (IBEF) (October 21, 2020) Healthcare Industry in India <https://www.ibef.org/industry/healthcare-india.aspx>

- Intelligence (September 1, 2021). <https://intelligence.com/insights/top-10-companies-leading-the-race-of-covid-19-vaccine/>
- Investopedia Healthcare Sector (March 23, 2020)  
Retrieved from [https://www.investopedia.com/terms/h/health\\_care\\_sector.asp](https://www.investopedia.com/terms/h/health_care_sector.asp)
- Lifestyle disease may cost India \$160 bn. PTI.  
Retrieved from <http://business.rediff.com/report/2009/oct/07/lifestyle-diseases-may-cost-india-dollar-160-bn.htm>
- Medical tourism destination: <http://www.medicaltourism.com/destinations/india>
- Ministry of AYUSH. National AYUSH Mission.  
<https://namayush.gov.in/content/about-hwc#v-pills-messages>
- Rashtriya Swasthya Bima Yojana Retrieved from  
<https://www.india.gov.in/spotlight/rashtriya-swasthya-bima-yojana>
- Reddy, S (July 11, 2020). Latest Health Insurance Incurred Claims Ratio 2018-19 Data | Top Health Insurance Companies List. Retrieved from  
<https://www.relakhs.com/health-insurance-incurred-claims-ratio-2018-19-irda-data/>
- Shetty, G. (2014). *Cognizant*. Health Insurance Evolution in India: An Opportunity to Expand Access.  
Supplement Business (January 6, 2021)  
<https://howtostartanllc.com/business-ideas/supplement>
- ShalbyHospitals. Retrieved from <https://www.shalby.org/international-patients/compare-rates/>
- Technofunc. Overview of Health Care Industries.  
Retrieved from <https://www.technofunc.com/index.php/domain-knowledge/healthcare-industry/item/overview-of-healthcare-industry>
- United Nations.(2008).Economic and Social Affairs. International Standard Industrial Classification of All Economic Activities Revision 4. New York
- Watson, O.J., Barnsley, G., Toor, J., Hogan, A.B., Winskill, P. and Ghani,A.C., (2022)  
Global impact of the first year of COVID-19 vaccination: a mathematical modelling study,  
*The Lancet Infectious Diseases*, Retrieved from  
[https://doi.org/10.1016/S1473-3099\(22\)00320-6](https://doi.org/10.1016/S1473-3099(22)00320-6).

---

## 9.12 SUGGESTED READING

---

- Rao, K. S. (2017). Do We Care: India's Health System? Oxford University Press, India.