2.1 INTRODUCTION

Industrialization has always been considered a necessary path to economic development. In fact one cannot think of modern civilization without a considerable development of industries. A vast section of the population in developing countries such as India still largely depend upon agriculture and since there had not been enough efforts to increase the productivity in agriculture and also because it is relatively difficult to escape diminishing returns in this sector it becomes imperative to create alternative sources of gainful employment. Industry and especially manufacturing had proven itself to be the drivers of economic growth. The geography of industrialization also changed over time. Historically it had been linked to availability of raw materials but later on it created its own space which had been also linked to the growth of urban centers. In other words, beyond certain level of development, industrial growth had been the drivers of the emergence of urban centers. Industrialization and urbanization went hand in hand. Later on, of course, in a more recent phase, there had been a delinking of industrial development and urbanization. The trajectory of industrial growth often resembles to a definite pattern and theories offer explanation to such patterns. The relative importance of various size categories of firms changes in different phases of industrial development. This also depends on technological development. However all these depend on the nature of industrial regime a country follows and the broader economic questions it aims to answer. In other words, the demand pattern and its macro-management, the availability of resources in terms of labor and capital, the technologies that evolve depending on specific historical necessities that largely defines the contours of industrialization of a specific country. This implies that there can’t be any unique pattern of industrialization and the paths differ on the basis of specific historical and social contexts. Industrial development in Europe and in other developed countries had often been conceived as something homogeneous and also referred to as ideal pathways to industrial growth. But these notions are not grounded on serious inquiry. The idea of ‘catching up’ to the developed world although drives the mental models of industrial development in developing countries but the two trajectories hardly match. And industrial development literature offers a pluralistic vision of industrial development rather than sticking to Western ideal typologies.
Industrial development had often been equated to the growth of large industrial structures involving huge capital investments either from private or public monopolies. The Fordist structure as it is termed defines an industrial pattern that is primarily meant to cater huge demands of standardized goods or goods of mass production. Hence, capital investment with large oligopolies as leaders was conceived to be the drivers of industrial growth. But with the decline of welfare states and Keynesian demand management industrial regimes also underwent a change. Not only in terms of size structure of industry but also in terms of emerging technology and demand patterns. Large size, huge investments and command structures no longer remained to be the guiding principle of industrial growth. Knowledge and human capital became important inputs to trigger cumulative growth of industries. Economic theories tried to capture these changes and explained how simple linear relations between physical inputs and output hardly capture the dynamic relations within industrial growth. The rising proportion of knowledge inputs coupled with a massive decline in the cost of transacting information has also led to a relocation of industries and also new markets for knowledge related activities. There had been a rising trend towards division and re-division of tasks which are performed across the globe and managed by multinational corporations or trans-national corporations. Global production networks are emerging and firms or regions of developing world are increasingly drawn into the global value chains. The globalization process induced liberalization had also triggered a surge in cross-border capital flows that to a large extent influences the industrialization process of a country.

In this unit on urban industrialization we would discuss issues that provide a comprehensive understanding of the past and present trajectories of industrial growth.

After reading the unit, you will be able to:

- Explain industrialization, growth and phases of industrial development
- Describe perspectives on size-structure of firms
- Analyze agglomerations and industrial clusters
- Discuss Foreign Direct Investment Flows, Industry and employment

### 2.2 INDUSTRIALIZATION AND GROWTH

Economic growth has been conceived as a process of increasing output per capita by enhancing productivity and employment. The growth of population adds to the labor force in a country which if employed use other resources and give rise to new output. But addition of labor also requires additional sources for survival and if the output generated gets exhausted for sustenance of the labor force then there will be no net addition to output or growth. In other words growth involves a process of rising productivity such that output produced per capita should be at least higher than the amount required for survival of the labor force. On the other hand if the growth of productivity is much faster than the growth of labor force there would be increasing possibilities of unemployment. In developing countries the typical problem is the persistence of surplus labor largely engaged in agricultural or other low productivity activities. The surplus labor implies a situation where the marginal product of labor is close to zero, but since people can’t survive without subsistence output produced by others, they are shared among community members. This is precisely the reason why the wages in the
Kaldor (1966, 1967) introduced the concept of dynamic economies of scale explaining the role of manufacturing as the ‘engine of growth’. The advantages of creating higher returns in manufacturing flow from both demand and supply sides. On the supply side manufacturing unlike agriculture and services entails a process of ‘learning by doing’ that gives rise to a cumulative growth of productivity. On the other hand, on the demand side the income elasticity of demand for manufacturing use to be higher than that in agriculture but more or less similar to services. The growth of manufacturing and growth of the economy does not imply a simple correlation but it is a causal relation and Kaldor’s first law states that the faster the rate of growth of manufacturing the faster would be the growth in the economy. In other words, higher the rate of growth of manufacturing compared to the growth of GDP, the higher would be the overall growth. This of course acknowledges the fact that manufacturing grows much faster than the growth of GDP. The other important aspect of manufacturing is that productivity increases much faster than that in services. As a result prices of manufacturing goods increase slowly. The income elasticity of demand for services beyond a certain level of income could be similar or even higher to that in manufacturing but since prices for most services rise much faster than manufactured products the rise in the elasticity of demand is to an extent counterbalanced by rising prices. There are studies that show that some services show characteristics very similar to manufacturing and could be considered as an additional engine of growth.

The relation between growth and industrialization is also important in the way the two mutually influences each other. Growth gives rise to incomes which should be distributed to various social classes. If we consider two broad groups for reasonable abstraction, growth is distributed between labor and capital in terms of wages and profits. The trajectory of growth results in various distributional patterns that influence demand and the commodity composition of the economy. Moreover, the growth depends on profit income less would be the impact of income on consumption demand. This is precisely because capitalists save more in proportion to income than the workers. On the contrary if the growth enhances the share of wages then there would be relatively higher impact on consumption demand. The other aspect of course is indirect. The growth of profit incomes in the economy raises the demand for luxuries and importable that always have lower employment elasticities. In other words the growing share of the income of the rich would entail a demand pattern that requires higher technologies and declining use of labor force. The question basically is linking growth with a proper distribution that would create adequate demand for industries. Otherwise higher growth with a skewed distribution of income together with higher dependence on imports might lead to de-industrialisation.

Finally industrial development in the modern age signifies a marked shift from artisanal production to factories and manufactures. The growth of large industries
required a massive supply of labor force who would be working in factories and as a result people from rural areas were drawn in to urban centers. This is precisely the reason why the trajectory of growth of industries matches with the growth of modern urban cities. In other words at the advent of modern industrialization growth of manufactures drove the growth of urban centers. This involves a creation of new space that brings together labor and capital and defines the new geography of production.

2.3 PHASES OF INDUSTRIAL DEVELOPMENT

Industrial development changed across space and time. On the one hand the nature of work that arise in given historical periods are often conditioned by the dominant paradigm of technology on which they rely. On the other, necessities and endowments create contours of space that define the changing geographical distribution of industries. In other words, the technological development and the relations of production that emerged in definite historical periods and in various geographical locations tells us about the phases of industrial development in the world. The first phase marked by the origin of industrialization in Western Europe and USA in the eighteenth and nineteenth centuries were mainly concentrated around coal fields. Most industries were to be found in locations where water power was available for use in the production of basic consumer goods such as clothing and textiles (Hudson, 1988). These industries gradually grew from artisanal or home-working basis onto a factory form and then relatively small emergent capitals with the subsequent introduction of mechanization and an increasing division of labor within the factory. The second phase that constituted the ‘old’ industrial regions of Western Europe originally UK and USA were associated with coal fields, where coal could be mined by existing technologies. The natural endowments along with the emerging factory structures gave rise to industries of natural extraction and processing industries, iron and steel plants and gradually spreading to various industries producing means of production for other industries. There were also developments in extending transport, roads and railways and also basic consumer goods. Industries were basically controlled by large oligopolists who cartelized several industrial lines. The third phase is marked by a shift in location of industries, a movement away from coal mines to urban centers. The industrial areas were surrounded by non-industrial locations but these locations provided the market for growth of consumer goods industries as well as those producing machines for other industries. However in all these phases we did not find that activities belonging to the same industry are splinted up and distributed across space. Only since 1940s we find that the whole production being split into segments depending on the requirement of skill and technology and deployed onto regions where such inputs are easily available. This was made possible by increasing integration of nations and markets. The reservoir of disposable labor in developing economies was made accessible to all and productivities of such labor were made comparable to developed countries by taking recourse to longer hours of work and other precarious forms of labor process. Furthermore, division and subdivision of the production process were made in such minute details along with increased use of technology and routinization that the need for skilled labor gradually declined.

The growth of industries in developing countries had always been conceived on the notion of ‘catching up’ the developed West but historically they had been
different. Expansion of industries in developing countries, especially manufacturing, has never been a smooth trajectory. It normally involves enclaves of growth which later diffuse to a more dispersed process of industrialization. Faster growth experienced in developing countries has been correlated to the extent of sophistication and diversity of their manufacturing output and exports. These patterns substantiate the notions of "new structuralism" that says that growth of a developing country is not only dependent upon the extent of structural change from agriculture to manufacturing but also on the structural composition of the manufacturing output itself. The theory suggests a U-shaped relationship between specialization of production and per capita income of the country (Imbs and Wacziar, 2003). This means that at a low level of income a country specializes in producing low value added product and as income level grows countries produce diverse range of products and finally beyond a higher level of income countries again specialize but more on producing high value added goods. The same pattern is visible in the case of exports as well. Increasingly industrialization is becoming "lumpy" in products, space and time. In terms of products it is lumpy in the sense that it is becoming increasingly difficult to shift from one product range to another and the choice is becoming increasingly limited to moving up the ladder in a given range of production.

The pattern of industrialization in developed countries and that in developing world is neither independent of each other nor could be comprehended as something symmetric, rather the pattern of industrialization in developing countries had largely been influenced by a dependent relationship. The relationship is essentially asymmetric. The dependent and truncated patterns of industrialization of the developing countries were largely driven by the imperial needs of the developed countries in the colonial periods. Later on, the dependence became although less explicit the gap between the two continues to exist not only for the initial lag but because of a complex hegemony of the developed world.

2.4 PERSPECTIVES ON SIZE STRUCTURE OF FIRMS

The trajectory of industrial growth involves a changing distribution of various size categories of firms. In the initial stage there would be predominance of household enterprises. Gradually these would be replaced by workshops and factories and finally large scale enterprises take over. These phases although are not very distinct and there would be different degrees of overlap depending on the specific situations of countries. Moreover this trajectory has little resemblance to industrialization process in developing countries. Industrial structure at the beginning would be predominated by large enterprises mostly led by large oligopolies or state owned firms. The growth of industrialization involves a deepening process and that creates demand for smaller firms in backward linkage. The advantages of large and small scale enterprises and the appropriate size structure of firms had been a major area of debate both in theory and policy.

Larger scale primarily relates to higher labor productivity and hence higher efficiency wages to labor, that in a way increases the mass market as well as demand for modern goods. The scale advantages flow out of several aspects starting from those linked to marketing and managerial gains to those related to
technology and innovation. In some sense or the other the principal arguments in favor of small are generation of employment and efficient use of capital in a labor surplus or capital scarce economy. The other important objective of protecting and promoting small enterprises was the creation of employment in a capital scarce labor abundant economy. But in that case, the little amount of available capital needs to be spread over the vast number of labor and in which case the marginal product of labor could be even lower than their subsistence wage, very similar to the case in agriculture in developing countries. As a result the creation of employment without generating adequate income ultimately lands up to a case of poverty sharing. In this view in order to increase income especially in a capital scarce country, small units can be preferred since they operate at less capital-income ratio compared to large enterprises. But on the other hand, large enterprises usually produce at lower unit costs compared to the small producers and hence would automatically emerge as winners in the market. As a result given the structure of endowments, if the policymakers believe in increasing income, employment becomes relevant only in the sense it might help in saving scarce capital. And to achieve higher income although small scale production may be considered suitable but it would not be supported by the market and hence requires protection and reservation from the state. There is also a counter argument in this context which says that in order to increase income in the long run it would be wise to maximize surplus for future investments and on that count small enterprises would no longer be a favorable choice. The policies to protect the small enterprises are based on the assumption that small enterprises are labor intensive compared to larger units and hence could create more employment opportunities, although, the unit costs of production might be greater in small scale enterprises. However this presumption is not beyond doubt as it cannot be generalized for all industries with varying organic composition of capital.

We come across four major strands of literature on optimal size of the firm and these are the following:

i) Arguments based on technology say that optimal size of the firm is determined at the minimum point of the long run average cost curve of the firm.

ii) The transaction cost based analysis underlines how firms reduce transaction costs through cooperation and integration.

iii) Industrial organization literature primarily points to the market imperfections and distribution of market share among monopoly or oligopolistic firms.

iv) Finally there is a political economy perspective that assumes small firms as petty capitalist or proto-capitalism in the waiting and it is assumed that those would eventually emerge as large structures once the asymmetric power relations and access to resources get dissolved.

Although these arguments provide some insights to explaining the size distribution of firms in varying reference frames yet gaps remain in capturing all the micro and macro factors those that influence the size distribution of firms. In the macro sense, the size distribution of firms are influenced by factors such as demand situations, nature of market segmentation, levels of capital intensity, supply of credit and infrastructure and also institutions that conditions exchange relations. Inequalities in income and endowment in a country is highly correlated to wage
gaps by size of firms and to size distance within the industry as well. Structural changes in the economy impact upon the size distribution in the sense that more the economy, it depends upon service activities the less would be the share of large firms because requirements of fixed costs are relatively less in services. There are studies showing how historical patterns of land holdings influence the size distribution of firms that evolved in a region. As a result large number of factors including issues related to technology, coordination, market and non-market institutions as well as historical conditions need to be brought in to analyze size distribution of firms.

The techno-allocation paradigm could not determine the exact optimal size of the firm if the long run average cost curve has flat stretches that makes the minimum indeterminate. And according to this argument if there is a global decreasing returns to scale then appropriate size would be infinitesimal while if there is global increasing returns to scale then optimal scale would be infinite. So, how and when diseconomies of scale due to organization and technology set in remains largely unexplained in theory. One can say that the appropriate size of the firm will be determined at the intersection between rising economies of scale flowing from increasing returns and diseconomies of organization arising from increasing size. But this involves a dynamic analysis that cannot be limited to technological factors alone. The transaction cost argument in some sense is also driven by technological determinism as it assumes that transaction costs arise exogenously given technology and organizations take shape in order to reduce such costs. Moreover how different forms of coordination take place depending upon the complementarities and similarities of activities within firms in various industries need to be looked at. Finally the macro factors, those influencing demand although are of great significance but in a globalised world, scale advantages can be reaped by depending upon foreign demand and emerging global value chains also throw up possibilities where firms could derive scale advantages not only by producing finished goods but also by supplying intermediate tasks at a large scale to the global production process.

In this section, you studied industrialization and growth, phases of industrial development, perspectives on size structure of firms. Now, answer a few questions related to these aspects in Check Your Progress 1.

Check Your Progress 1

Note: a) Write your answer in about 50 words.

b) Check your answer with possible answers given at the end of the unit.

1) What are the phases of Industrial Development?

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2) What do you understand by size structure of firms? Explain briefly.

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2.5 AGGLOMERATION AND INDUSTRIAL CLUSTERS

The phenomenon of disintegration of large hierarchical firms and subsequent rise of post-Fordist structures, such as dense network of small enterprises embedded in clusters, gained importance to academics and policy makers. This was primarily driven by a perceivable shift in the demand pattern towards customized goods with multiple styles produced in smaller batches using flexible technologies. As a response, flexible specialization emerged as the new paradigm of industrial organization that involves flexible machines, flexible labor process and flexible production organizations. Fixed costs were drastically reduced by increasing use of malleable technologies, particularly machines capable of doing multiple tasks. As a result the functional durability of machines increased - thereby, reducing average costs to a large extent. In a Fordist structure average costs could be reduced only by mass production, however by increasing use of flexible technologies average costs could be brought down even at a much lower scale of operation. The moments of competition also changed - producing only at a lower cost did not work much, what became important is responding to the customized needs of consumers at the lowest possible price.

This perspective once again brought back small enterprises into the agenda of course with a caveat - emphasis was less on the rigid notions of scale and more on the flexible production organization that helps reducing transaction costs, costs of inventory and time of response. Attributes of cumulative competitiveness in an industrial cluster do not depend much upon strict homogeneity in size. Organizational synergies and interdependence of firms in vertical and horizontal linkages are more important issues than strict notions of size and scale of firms. Agglomeration of firms defined by an organic interaction, deriving benefits from positive externalities created through localization and contained in a dense network of formal and informal institutions defined the new order of industrial organization- the industrial cluster.

The large volume of literature evolved from the success stories of European clusters offers a different paradigm in capturing the problems of small producers as a constellation of interlinked factors. The key point is that successes of clusters cannot be analyzed investigating individual firms, their strength lies in clustering and cooperative competition that opens up efficiency and flexibility gains which individual producers can rarely attain in isolation. Marshall (1920) first coined the term ‘industrial district’ identifying the major causes of localization of industries that generates economic gains through positive externalities. However, in mainstream theory external economies can never be a deliberate creation of
Urban Industrialization

an individual firm but is always incidental and involuntary because in these situations economic agents cannot capture in the price of their product, all the benefits of their investment. Schmitz (1999) goes beyond the conventional perception of external economies and recognizes an element of consciously pursued joint action as the sufficient condition for a growing cluster. This opens up the study of interlinked enterprises in a dynamic way and recognizes the fact that clustering enterprises are both recipients and providers of external economies and underinvestment ceases to be the necessary or dominant outcome. Thus collective efficiency, that characterizes successful clusters is the outcome of both the incidental external effects of individual action and consciously pursued joint action. This kind of industrial organization is believed to be appropriate in the context of rapidly changing pattern of demand. It distributes risks of investment, stabilizes labour redundancies tied to business cycle, and is resilient to external shocks (Brusco, 1982). To be competitive is never a static attribute, but a continuous process of responding to changing and emerging markets. In the context of industrial cluster this implies a cumulative progress of joint action and cooperative endeavor.

Porter (2003) defined clusters as geographically close groups of interconnected companies and associated institutions in a particular field, linked by common technologies and skills. They normally exist within a geographic area where ease of communication, logistics and personal interaction is possible. Clusters are normally concentrated in regions and sometimes in a single town. Using multi-criterion approach clusters are categorized into some very general types based on either spatial characteristics, inter firm linkages or both (Markusen 1996).

**Marshallian:** Clusters comprising primarily of locally owned, small and medium-sized firms concentrated in craft-based, high-technology, or producer services industries. Substantial trade is transacted between firms. Specialized services, labor markets and institutions develop to serve firms in the cluster.

**Hub and spoke:** These are clusters dominated by one or several large firms surrounded by smaller suppliers and related activities. Cooperation exists between small and large firms but noticeably absent is cooperation among competitor firms to spread risks, stabilize markets and share innovations.

**Satellite platforms:** Industry clusters dominated by branch facilities of externally-based multi-plant firms. These branch plants are large and relatively independent. Minimal trade or networking takes place among the clusters’ branch plants and the incidence of spin-off activities is relatively small.

**State-anchored industry clusters** are regions where the local business structure is dominated by a public or non-profit entity (e.g. military base, university, government offices). Supplier and service sectors develop around these public facilities, but these local firms are relatively unimportant to the development of these clusters.

Porter (1998) points to the paradox of economic geography during an era of global competition. It is recognized that changes in technology and competition have diminished many of the traditional roles of location. Yet, clusters, or geographic concentrations of inter-connected companies, are a striking feature...
Urban Challenges of virtually every national, regional, state and even metropolitan economy. Peer production is emerging as an alternative mode of production that can harness human skill, ingenuity and intelligence more efficiently and effectively than traditional firms. It is assumed that short geographical distance facilitates knowledge spillovers between firms for reasons those stem from the nature of the innovative process (Audretsch and Feldman, 1996). These are uncertainty, complexity, reliance on basic research, importance of learning-by-doing, and cumulativeness.

In the case of hierarchical structures vertical differentiation may be effective for routine tasks, but less effective when tasks are non-routine. On the other hand, market is not the efficient mechanism to allocate knowledge in a socially optimal way since the marginal cost of supplying an additional unit of knowledge is close to zero. Hence, between authority and competition emerges the space of community relationship and trust - an additional mode of exchange compatible with the growing use of knowledge in production. Industrial clusters seem to be the appropriate site bearing traits of the evolving pattern of knowledge exchange.

2.6 FOREIGN DIRECT INVESTMENT FLOWS

Foreign Direct Investment is generally defined as a financial phenomenon that takes place whenever a company acquires ten per cent or more of the voting stock in a commercial entity incorporated in a foreign country (Cohen, 2007). However this limited definition could not capture the importance of FDI in the present context of globalization and underlays the fact that FDI is related more to ownership and control over a firm and assert long term influence on the trajectory of growth of a business entity. The degree of influence however does not always depend on the percentage of voting shares that a foreign investor acquires and could be maneuvered by several ways using the legal structure of a specific country depending on the nature of interdependence between collaborating partners (Rao and Dhar, 2010). There are large variations in the definition of FDI used by various countries where some define on the basis of equity share while others relate to the power enjoyed by the foreign player. As a result there is little uniformity in defining FDI across countries and absence of a standard measure on this count for cross country empirical study.

In spite of the ambiguity that exists in arriving to a standard definition of FDI, one can easily comprehend the increasing influence of FDI in the course of industrial development in the past decades. In the past two decades FDI grew much faster than GDP. During the period 1982 to 2004 value added of foreign subsidiaries worldwide increased six-fold while world output only tripled during the same reference period. Moreover FDI emerged as the largest single source of external finance although for poorer countries foreign aid and workers’ remittances remains to be the most important source. Sales of foreign subsidiaries were almost twice as large as world exports of goods and services and almost one half of the size of the world GDP (Cohen, 2007). Exports by foreign subsidiaries in 2004 were about one-third of world exports and if we include exports from headquarters, this amounts to be two-thirds of world trade in goods. Intra-firm trade of multinational companies accounts for one-third of international trade which clearly depicts the increasing importance of FDI and MNCs in the world economy.
The nature and pattern of FDI has undergone changes depending on the shifting motivations of foreign investors over time. As a brief review of such evolution we may come across the following patterns of FDI:

a) Resource seeking strategy: This was the dominant pattern of foreign investment in the pre-World War II and continued to be so in the neo-colonial regimes of 1950s and 1960s. The host country used to be the supplier of raw materials for the industries located in the developed North and the decision whether to allow such outflow primarily depended upon political dependence as well as cost-benefit analysis of the host country. The home country could access cheap raw materials and there was little to lose on their side since such trade did not replace any existing export or employment.

b) Market seeking strategy: This strategy emerges based on a perception that export based marketing strategy has peaked and setting up business abroad could protect the existing markets as well as could help in extending further. The rationale of such strategy was based on the idea that setting up production sites abroad would reduce transaction costs, provide better knowledge about existing and potential markets and help pacifying the opposition of nationalist sentiments since production takes place within the territory of the host country. Since 1960s this was the major concern for foreign investors and FDI inflow was primarily targeted towards industrialized countries that could provide large markets as well as supply of skilled labour.

c) Efficiency seeking strategy: In a later phase FDI was looking for host countries that could provide inputs at a relatively lesser cost and help increase the competitiveness of existing produce. The primary concern was to get access to the large pool of cheap labor in developing countries and even though large gaps in productivity exists it could be mend to a large extent by extended working hours and other precarious forms of working conditions that could hardly be allowed in developed countries.

d) Asset seeking strategy: The emergence of an economy in which the speed of innovation largely determines the competitiveness of a firm had changed the strategies of FDI to a large extent. Reducing input costs and getting access to markets goes to the back seat since firms are looking for assets that are perceived to be capable of strengthening the overall competitive position of the acquiring company. Acquisition of strategic assets might help in understanding and improvising the existing product, broaden its output portfolio or upgrade the technologies embedded in its products.

The reorganization of the global production process takes plays in both horizontal and vertical lines and sometimes it emerges as a complex network of interconnected production arrangements. The horizontal process is shifting of a portion of jobs to host countries abroad that used to be carried out by the parent firm itself. However, a growing subcategory that increasingly draws our attention is the global value chains or a more holistic concept of global production networks. The unit of investigation spreads beyond specific industries and also specific regions. This signifies a marked change in the sphere of industrial research in the sense, value chains include all activities, both within and beyond the specific industry, related to the final act of profit making. The production and distribution of profits is viewed as an ensemble of several factors in place of linear relations.
between inputs and output and might include activities related to agriculture or services mediated through a complex web of relational structures (Coe et al., 2008). However, splitting up of production and the spatial organization of the chain of activities has given opportunities to less developed countries in contributing to the global production process. This reduces the entry barrier for developing economies because a highly skill intensive final product might have a low-skilled component and a region endowed with low-skilled labor would get the opportunity in contributing to the production of a high-valued product (IDR, 2009). Nevertheless, participation is not all and the distribution of value-added as well as the realized profit draws us to the issues of power relations involved in the governance of such value chains.

2.7 INDUSTRY AND EMPLOYMENT

Industrial development is supposed to generate employment which increases earnings of the urban population, create demands for goods and services and through multipliers give rise to a virtuous circle of growth and employment. Industrial employment in countries such as India is all the more important because it provides avenues to shift the surplus labor from decreasing returns activities to increasing returns activities. The vast number of people engaged in agriculture either have their marginal product equal to zero or less than their average product and one way of employing this vast labor surplus is to engage them in industries. However the relation between industrial growth and urban employment is not always linear in the sense the growth of industrial output does not necessarily lead to higher growth of urban employment. It depends on the nature of industrial growth and the kind of demand such growth is relying upon. In the case of India the precise reason for a disconnect between high growth and employment is the specific growth trajectory which the reforms have given rise to. The fruits of growth are unequally distributed between wages and profits that resulted in a widening gap between the share of wages and share of profits in the organized manufacturing sector. Since the proportion of income spent on consumption demand is much higher for the wage earners, such a skewed distribution in favor of profit incomes damps the aggregate demand and also results in composition of the consumption demand. Higher incomes for middle class and upper classes generate demand for luxuries that could be met either by producing goods using higher technologies or rely on imports. In both the cases there would be increasing dependence on labor saving technologies that reduces employment elasticity. On the other hand because of opening up of markets there is little dichotomy left between domestic and global market. In fact domestic producers have to compete with foreign goods not only abroad but within the domestic market itself. This has insisted large domestic producers to depend on increasing use of labor saving technologies and get a larger share of the monopoly rents that they could make by collaborating with the big players in the global market. In other words the act of profit making hardly depends on catering to the needs of the mass market which involves labor using technologies. Studies show the rise in capital intensity in India’s manufacturing sector in the past two decades in spite of availability of cheap labor. And this can be explained by the fact of relative cheapening of capital by increased availability of credit. The other reason being the nature of goods demanded requires higher quality to compete with foreign goods and that requires high precision and accuracy which is sometimes beyond the capacity of human labor.
The shrinking base of consumption demand had not been compensated by a rise in investment demand precisely because of lowering expectation of profits. However, there had been a shift in employment from rural to urban areas as well as from agriculture to non-farm employment. The shift is primarily caused by declining absorption capacity of agriculture that resulted because of declining public investments in the reform period and consistent neglect of agriculture at policy levels. The attraction to urban employment was not because of a rising expectation of getting a formal job in the organized sector because in the post-reform period employment growth in the organized industry was almost close to zero or negative. Therefore, the shift was largely because of non-availability of employment and declining per capita share in agricultural value added that in fact triggered the shift in employment. The sectors which are major absorbers in non-agricultural employment are construction, hotels and restaurants, transport and communication, and services related to finance and business services. The other important fact being that the major absorption has taken place in the informal sector of these industries. Expanding informal employment raises questions about the quality of jobs and vulnerability of the workforce in the urban segment. There has also been an increase in the share of urban population and Census data shows that for the first time since Independence the absolute increase in population in the last decade had been higher in urban compared to rural areas. The reasons being the following: natural growth of population, declaring new areas as urban and rise in the number of Census towns. The rise in Census towns signifies the growth of non-farm employment. The growth perhaps is not driven by industrialization, rather there seems to be a disconnect between urbanization and industrialization. Urbanization is primarily driven by a convergence in demand pattern across classes and that has increased the scope of trading and related services resulting in a growth in non-farm activities.

In this section, you studied agglomeration and industrial clusters, foreign direct investment flows, industry and employment. Now, answer a few questions related to these aspects in Check Your Progress 2.

**Check your Progress 2**

**Note:**
- a) Write your answer in about 50 words.
- b) Check your answer with possible answers given at the end of the unit.

1) What do you understand by knowledge economy?
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2) What is foreign direct investment flows?
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2.8 LET US SUM UP

The relation between industrialization and growth is a causal relation and the growth of manufacturing industries assumes the role of an engine in driving the growth. The growth of urbanization in the initial phase had been linked with industrialization. Industrial development in the world has undergone several phases and the geographical location and concentration of industries was primarily driven by endowments and availability of technologies to use resources. There had also been various phases of specialization in industrial activities. The typologies in the developed and developing countries were not very similar. There had been a marked shift in industrial organization from rigid hierarchical Fordist structures that catered the mass market of standardized goods to post-Fordist regimes of flexible organization that responds to customized demand depending on malleable technologies. The rise of the ‘knowledge-economy’ characterized by enormous increase in the dissemination of knowledge is actually a process of increased commercialization of knowledge inputs. The precondition of higher commercialization is increased standardization and codification. However higher codification also demands increased capacities of contextualizing codified knowledge. The decline of hierarchical structures gave rise to agglomerations and clusters as the new organizational form that is based on cooperative competition and collective efficiency. It primarily relies on internalizing within the cluster the externalities created by individual firms. It depends on an organic relationship among firms both vertically and horizontally linked and facilitates cumulative collective action. The role of foreign direct investment has assumed importance in industrialization in the current phase of globalization. Foreign investment takes place with different motives in different phases of engagement with the host country. The geographically dispersed nature of production and their mutual dependence through value chains has increased the opportunity for developing countries in getting linked to global production structures. The process of industrialization in India had taken a peculiar course, in the sense; higher growth had been accompanied by declining employment elasticities. The opening up of competition to global market and increased reliance on profit incomes in the domestic economy gave rise to demand for goods that invokes increased capital intensity. Major employment in non-agriculture is taking place in the informal segment and urban growth is increasingly delinked from the process of industrialization.

2.9 REFERENCES AND SELECTED READINGS


2.10 CHECK YOUR PROGRESS-POSSIBLE ANSWERS

Check Your Progress 1

1) What are the phases of Industrial Development?

Ans. The first phase marked by the origin of industrialization in Western Europe and USA were mainly concentrated around coal fields. The second phase that constituted the ‘old’ industrial regions of Western Europe originally UK and USA were associated with coal fields, where coal could be mined by existing technologies. There were also developments in extending transport, roads and railways and also basic consumer goods. The third phase is marked by a shift in location of industries, a movement away from coal mines to urban centers. The industrial areas were surrounded by non-industrial locations but these locations provided the market for growth of consumer goods industries as well as those producing machines for other industries.

2) What do you understand by size structure of firms? Explain briefly

Ans. The trajectory of industrial growth involves a changing distribution of various size categories of firms. In the initial stage there would be predominance of household enterprises. Gradually these would be replaced by workshops and factories and finally large scale enterprises take over
Check Your Progress 2

1) What do you understand by knowledge economy?

Ans. The ‘knowledge economy’ signifies a structural break from the capitalist relations of production, arguing to the extent that the economy of mind has triumphed the economy of matter and the knowledge worker is the owner of the key input, hence capable to escape the traditional exploitative relations between labor and capital.

2) What is foreign direct investment flows?

Ans. Foreign Direct Investment is generally defined as a financial phenomenon that takes place whenever a company acquires ten per cent or more of the voting stock in a commercial entity incorporated in a foreign country.