CHAPTER I
INTRODUCTION

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INTRODUCTION

We are living in the era of industrialization. The era is characterized by the replacement of human muscles by machines run with the help of inanimate power, giving rise to multi-product, multi-plant and multinational corporations. This increasing size of the firm is accompanied by division of labour which is giving birth to new complex organizations. There has emerged the use of new sources of energy and metals and even increasing mass production of number of entirely new products as well as products based on improvements in the earlier products. All this has been possible due to the domination of science and technology.

The rise of the modern industrial era is not a sudden dropping from the heavens. It is the culmination of a long drawn out process of evolution of human society. While many characteristics of the primitive man are still manifest, the evolutionary features of the industrial era are very closely connected with those of the immediately preceding stage, namely, agriculture. These two recent and interconnected stages in man’s evolution have significantly altered his life, making him very distinct and sharply differentiating from other animals.

WORLD INDUSTRIALIZATION

The progress of man as man is really described in terms of two revolutions the Neolithic Revolution (or the discovery of agriculture) and the Industrial Revolution. Cultivation of crops and rearing of
livestock together form the prime part of agriculture. The beginning of agriculture goes back to the domestication of animals and plants. The Neolithic Revolution thus brought together, at a higher level, the two oldest economic activities: those of food gathers and hunters. The domestication of animals and plants created a process whereby man came to control, increase and improve the supply of food. During this stage of human existence the easily available elements obtained from the exploitation of earth and nature were linked into one operating system. Man’s life style, thus, depends upon the limitations set by the physical and natural environment. The birth of this new economic activity led to the migration of man down from highlands and through valleys on to vast alluvial plains. Increasing attachment to land led to man becoming more and more immobile. His nomadic existence was transformed into settled life. In this kind of existence, ‘space’ appeared to him something permanent and absolute. The settled life had very many facets. It gave birth to social organizations, collective learning and beliefs. These provided the basis of the discovery of new crops and methods of cultivation. The expanding knowledge about plants and animals created the possibility of production of food exceeding the producer’s own requirement. This was a remarkable development because it entailed the emergence of economic surplus which could sustain several activities like arts, crafts, trade, in addition to the procurement of food. The ever increasing economic surplus resulted in the formation of towns, urban culture and handicrafts. It also created historical conditions for the possibilities of inter-regional and international trade.
At the apex of this process came the ‘age of discovery’, which connected various centers of trade and craft to one another through long-distance trade and gave birth to the global process of merchant capitalism? It was during the unfolding of the age of discovery that the commercial horizons of Europe were vastly extended and economic ties, which had formerly been restricted to Europe and parts of the Mediterranean, were pushed thousands of miles across the oceans of Africa, Asia, North and South America and Australia. The discovery of new ocean routes and colonies gave birth to rudimentary intercontinental economy, of which Western Europe was centre.

In Great Britain which formed a part of the European core region, there simultaneously sprang up a series of inventions regarding the processing of cotton. These, and the invention of the steam engine among many other technological changes, transformed the manufacturing activity and means of transportation. This could be taken as the beginning of industrial revolution.

There are different opinions regarding the exact dating of industrial revolution. Difference exists due to variations in the approaches to specify which was being revolutionized-economy or industry. Those who emphasize revolutionary changes in industry, analyze the change with the help of quantitative changes in the output of the industrial sector. Therefore, these scholars accept industrial revolution as a period of discontinuity. On the other hand, those who lay stress on the transformation of the economy, explain the process with the help of certain qualitative changes. Hence, they believe in the continuity of the process. The latter approach emphasizes that what is termed as revolution (like industrial
revolution) is itself the culmination of a long and continuous process. But there is no dispute on the issue of the year 1760 being the turning point in the rate of growth of industrial output.

This new era caused a shift from the use of human and animal power, wind and falling water to the use of controlled inanimate power (like steam, electricity, petroleum etc.). Agricultural revolution had created a process whereby man came to control and increase the supply of biological converters (i.e., plants and animals) for his requirements of energy. The new era, on the other hand, made it possible to exploit new sources of tools and inanimate powers changed the meaning of the word ‘manufacture’ and gave rise to the factory system.

The above changes were also preceded by certain institutional changes in agriculture like the ‘enclosure movement’, abolition of ‘serfdom’ and ‘attached workers’. These institutional changes had far-reaching effects. They created, on the one hand, a shift from subsistence farming to commercialization and mechanization of agriculture which resulted in increasing agricultural surplus and a large army of surplus labor. The land owners, on the other hand, got transformed into entrepreneurs, whose activity was influenced by market conditions.

The surplus manpower was pushed away from agricultural sector and was attracted by the pulls of factory towns. This process resulted in mobility of the working force from agriculture to industry and from rural areas to urban centers. This mobility, in turn, gave birth to industrial wage labor and also strengthened the trend towards rapid urbanization.
The transformations occurring in industrial as well as agricultural sectors developed strong inter-sectoral linkages, each reinforcing the other. As both the sectors were producing essentially for the market, the inter linking of these sectors of the economy resulted in the dominance of market forces. These forces, subsequently, "substituted the medieval privileges and traditions." Hence, society had to respond to infinitely more flexible order of the market place, to continuous changes in tastes, output, technology and movements of factors of production geographically to embrace new economic opportunities.

As industrialization means mass production can it materialize if there are possibilities of opening up of distant markets, discovery of new sources of raw – materials and means for the free mobility of factors of production. Expansion in the size of market and increase in the distance between market and the place of production results in an increase in the turnover time of capital. The larger the turnover time of capital, the smaller is its annual surplus generating capacity. Under these circumstances, spatial distance reduces itself to time. Therefore, it is not the distance *per se* which assumes significance but the speed with which it can be reached. Hence, the inventions in the means of transportation and communication are an essential built-in-characteristic of modern industry.

The revolutionary changes in the means of transportation and communication increase the capability of man to overcome spatial – friction distance in increasingly shorter time. This process of shrinking space has created conditions for the spatial integration of the entire global economy. Not merely that, far reaching changes has
taken place in the intellectual, social, political and spheres. Besides, changes have occurred in demography, arts and literature – all resulting from the shrinking of spaces. Spatial spread of the powerful force of industrialization operated in three different conditions: within the European core region; the distant lands where European settlers went and dominated the economy; and other inhabited regions where old social orders were invariably pre-industrial type and were integrated into the European core regions as colonies. The encounter with industrialization experienced by these economies gave birth to a dual structure, a part of them being modernized, developed and industrialized; and a part still traditional, agrarian and underdeveloped.

The spatial spread of industrialization in the third direction registered some distinct changes after World War I. Up to World War I and even during the inter-war period, policies of imperial powers attempted to influence the spatial spread of industrialization as to be consistent with their own interests. The world at that time was, by and large, divided among imperial powers. World War II, however radically changed the situation. The process of decolonization which set in during the post-world war II period gave birth to independent nation-states. The new independent states had the option to leave the process of industrialization to free play of market forces of the global economy, or to evolve certain new institutions, regulations and policies to give a definite direction to the process of industrialization. The newly independent states invariably followed the pattern of deliberate and regulated industrialization.
An important question which emerges with regard to the spread of industrialization in these underdeveloped countries is whether industrialization, even when regulated, will retain its structural uniformity in all spatial units (nations) where it enters or assumes certain characteristics which are specifically chosen to be emphasized by the respective national governments. This is essentially an empirical question.

The former alternative is based on the view that spatial differences in the forces that have a bearing on the process of industrialization do not really matter because it is an autonomous scalar process independent of socio-political system. The other viewpoint highlights the variety of forms that industrialization takes when it enters different spatial units depending upon the differences in physical features, social and cultural institutions, history and polity. These diversities are reflected in the specific nature of the collective entity called ‘State’. In the latter alternative, therefore dissimilarities which produce spatial peculiarities are clearly manifest in the State policies.

Another problem worth exploring is the dichotomy between clustering and spread of industries. Industries may enter into a spatial unit depending upon the availability of localized raw-materials, nodal and transshipment points of transportation network, cheap labor locations and market, or the subjective preference of entrepreneurs. The reason for entry may be any, but once the industry enters a particular spatial unit it sets into motion a set of mechanisms which encourages further clustering of industries. In the beginning, concentration emerges due to
economies of scale enjoyed by existing plants. Afterwards, other units enter these spatial units to enjoy various kinds of linkages with existing plants. These linkages are of their different kind: (a) production linkages, (b) service linkages, and (c) market linkages.

Further, clustering of economic activity in space may emerge due to agglomeration economies, which are another type of external economies. The other contributing factor in intensifying the cluster form is the multiplier-effect. Multiplier effect works in the regional context with the help of the expansion of exports of the region, expressed variously as export base or economic base. These concepts are associated with stable theory.

Along with these characteristics of modern industry which create spatial concentration, the industrial system has certain built-in-characteristics which provide indication of its spatial spread but they exhibit a contrast with those pertaining to agricultural spread. Agricultural activity is deeply affected by certain natural and earthbound factors like climate, soil, altitude, slope, wind-speed, sunlight, rainfall and geographical limits to cropping pattern. Industrial activity, on the other hand, by its very nature is an attempt to reduce the influence of these geographical and natural factors. It is the economic history as shaped by organized power of the State and science (including technology) that are crucial in shaping the course of industrial development.

For the first time, in the wake of the industrial revolution, nature has become purely a matter of utility. It has ceased to be a power by itself, and the scientific knowledge of its autonomous laws appear merely as a tool to harness it for human needs, whether as
an aid to the process of production or as an object of consumption. The declining importance of geographical factors creates certain objective conditions which help the industrial activity to have its own logic and autonomous laws of spatial spread. It also develops the capacity to alter the organization of space to serve its own needs.

The analysis of the spatial spread of industries in historical perspective also suggests that the spread of industrialization depends, partly on the attempts made by industrialized human groups to form contact with other human groups in search of markets and materials, and also on the desire of non-industrialized human groups to emulate and internalize the process of industrialization. The spread of agriculture is also of course, among human groupings, but this spread is limited to a great extent by geography. In contrast to this, the spread of industry seems to take place in an autonomous manner, in the sense of being dependent upon certain indigenous factors with only an oblique relationship with geography.

The declining importance of geographical factors is accompanied by the nature of industrial capital which has a capacity to move anywhere depending on the rate of return on it. The birth of synthetic substitutes for natural raw-materials makes the industry footloose. The collective result of these forces is that they increase the importance of markets. It is the growing importance of markets which creates another important condition for the spread of industry. Marx writes “...capital must... strive to tear down every spatial barrier to intercourse, i.e., to exchange, and conquer the whole earth for its market”.
To sum up, the modern industrial system contains within itself two opposing streams of influences. One set of forces compels it to spread from one human grouping to another. The other set leads to formation of clusters within the industrial system internalized by a particular human group. Hence, spatial spread of industry can be defined as the spread of clusters.

The central theme of the present study subsumes the idea of clustering in order to focus on an examination of the spatial spread of modern industry to India and within India. To reiterate the idea of spatial spread of industry is co-terminus with the spread of clusters.

INDUSTRIALIZATION IN KARNATAKA

Though the people of Karnataka depended mainly on agriculture for earning their livelihood, many crafts and industries also flourished in the State in the ancient times, and the various caste names like the Devangas, the Panchalas, the Pattegars, the Kumbaras, etc., indicate the craft or industry which they followed. Most of these crafts were hereditary and some of them had reached some kind of perfection and standard to be treated as a 'science' as can be evidenced from texts like "Manasollasa" and other literary works. Among the 18 traditional castes, a majority indicated that craft followed by the people of a particular caste of the industries of Karnataka, production of textile was the most notable. It had its centres in ancient times spread all over Karnataka and it included places like Binnamangala and Aigandapura (Bangalore District), Beligavi (Shimoga District), Arasikere, Halebidu (Hassan District), and Chinthamani (Kolara District) to speak of the most prominent centers spoken of in inscriptions. During the medieval times, Hubli,
Gadag, Badami, Ilkal and Guledgud became notable centers. A British factory founded at Karwar exported cloth produced at Hubli. Under Chikkadevaraya of Mysore, Bangalore had 12,000 families of weavers and Doddaballapura also grew to be a major centre of textile production. Under Tippu, many weavers from Baramahals in Tamilnadu settled down in Bangalore and surrounding places. Buchanan, while speaking of Mysore State during his visit, says that there were a class of weavers called Togataru who wove a coarse, thick, white cotton cloth with red borders and ‘Holiars’ who wove coarse, white, strong cloth called Parakali. “The weavers of Bangalore seem to be a very ingenious class of men and with encouragement, to be capable of making very rich fine elegant cloths of any kind that may be inscription”. Buchanan speaks of Pattegars or silk weavers from Lakshmeshwara and Varagiri (both in Dharwad District). Though in ancient times raw silk was imported, Tippu introduced sericulture in Mysore on a large scale. Buchanan speaks of the Khatries (Kshatriyas, people from the southern parts of Gujarat) in Bangalore who prepared very “strong and rich cloths”. They dyed much of their silk and were wealthier than other weavers, he adds. These people had also settled in Hubli in good numbers. They were well-versed in brocade work too. Weaving coarse blankets (Kambali) also flourished and inscriptions speak. Davanagere and Doddaballaour are the two centres of this industry. Dr. A. Appadorai speaks of Budihal (Chitradurga district.) as a centre of producing cloth from hemp fibre and Vijnyaneshwara calls it Kshauma. The chippigas or tailors were a flourishing group of craftsmen and a Halebeedu record speaks of their remarkable talent in sewing ornamental dress with variegated designs, embellished with many pieces of cloth etc.
Production of oil was another flourishing industry spread over the whole State. Oil was required both for edible and lighting purposes and temples consumed oil in huge quantities for the latter purpose. *Ettugana* or press drawn by bullock, *Mettigana* or that operated by foot and *kaigana* or hard press were all in use and “oil mongers were a fairly well-to-do class”, and that “the oil-mill industry was a favorite target of taxation by government authorities”. According to Dr. G.R. Kuppasswamy, Sesame was the chief raw material. Honge seed, castor, coconut and kusube (sunflower) were also used to extract oil.

The Panchalas included blacksmiths, goldsmiths, copper smiths, bronze smiths and carpenters and they were also called *Vishwakarmas*. Use of iron was known in South India a few centuries earlier than in the North during the pre-historic period and the earliest discovered iron implements from the South are from Hallur in Dharwad district. Inscriptions and literary sources speak of various agricultural implements from the South. An inscription of 11\textsuperscript{th} century from Mysore district speaks of a blacksmith who was an expert in producing swords. “Manasollasa” has a section called Shastravinoda, which deals with the weapons like swords, daggers, spears, etc. and speaks of the methods of testing their quality. Sale of iron goods was a State monopoly under Mysore rulers and Chikkadevaraya had Kabbinasachavadi the iron department perhaps to supervise production. Tippu continued this monopoly and he also founded a State foundry at Kanakapura where even canons were forged. Buchanan speaks of manufacture of iron from sand, accumulating in the rainy season at places like Madhugiri, Chennarayadurga, Hagalavadi and Devarayanadurga and this was a
seasonal industry. He gives the technical details of iron smelting too at these places. He speaks of iron ore from Ghattipura in Magadi taluk. He also talks about the manufacture of steel which was used to produce sword blades, stone cutters, chistles etc. He tells us that “Channapatna was a centre for the production of steel wires and this had a demand all over as it was used in musical instruments.”

Production of jewellery was also a flourishing industry, and “Manasollasa” gives a very long list of jewellery worn by both men and women. Gold too was mined in Karnataka, especially in Kolar district and “Manasollasa” has a section on Khani Shastra or the science of mining. Among the Panchalas, the goldsmiths were a flourishing section and they also minted coins by paying a fee called “tanke” to the State. There were State owned mints too at Lakkundi, Sudi, Kudutini, Beligavi, Mangalore, Barkur and the capital cities.

The Kasaras or Kanchugaras (braziers) produced bronzeware which included vessels, musical instruments like bells and trumpets, lamps of various kinds, mirrors and images of various deities. They were mentioned in many records and the one at Lakshmeshwar of the 8th Century is notable among them. Carpentry was another profession of the Panchalas and in addition to the production of agricultural implements and household furniture; they also produced chariots, boats and palanquins and built palaces with decorated pillars, panels and ceilings. “Manasollasa” speaks of furniture with inlay work of ivory. This profession too was followed by the Panchalas and the Vardhaki (badagi-carpenter) and it is spoken of in many inscriptions.
Production of footwear, water bags, shields, beds and cushions, drums, etc., was undertaken by leather workers called *Samagaras* (tanners) and *Mochis*. Footwears produced by them were of a variety of colours and designs as testified by “Manasollasa” and a Badami record speaks of their guild. The *Kumbaras* or *potters* were producing earthen vessels and tiles and their kilns were known as avuge, and the vessels were both handmade and wheel turned. Production of salt and lime were two other notable industries. Salt was produced from sea water on Uppinamogaru, Uppinapatna, Uppuru, Uppalli, Upppinangadi, etc., are reminders of the fact that these were centres of salt production. The *Upparas* were a caste engaged in producing salt. This traditional industry which supported many came to be ruined after the British made salt production a State monopoly. (The Upparas had to take up masonry work and production of lime due to this). Buchanan speaks of the industry as flourishing at Tekal (Kolar District) and gives details of the techniques of production adopted at the place. Similarly lime was produced both from sea shells on the coast and from lime stone mines, and Buchanan also describes the kilns at Kadugodi near Whitefield (Bangalore District). There was a community called *Sunagaras* engaged in this industry.

Production of glass bangles was also a flourishing industry. A record of 1161 A.D from Belgaum district speaks Senahalli, Kallakundarge (Kaikundri) and Nitturu as centres of the Industry. The *Balegaras* formed a separate caste and the renowned Kannada poet Ranna belonged to this caste. Some of them had the surname *Setti*, as seen from inscriptions. Buchanan speaks of Muttodu in Chitradurga district as a centre of bangle manufacture, and he
mentions that these bangles were of five colours, viz., black, green, red, blue and yellow. He also states that glass produced there was opaque and coarse, and that materials needed for glass making were available in the neighbourhood of the place. He also describes manufacture of glass bangles and bottles at Channapatna, and here this industry was started under the initiative of Tippu. Beads of glass earth and stones were prevalent even during the pre-historic days.

Production of jaggery, sugar and sugar candy were other notable industries, though they were seasonal. Inscriptions speak of ‘alemante’ found in many parts of Karnataka where cane juice was boiled and a tax, aledere as being levied on this. Basaveshwara speaks of sugar resembling sand. Jaggery was also manufactured from toddy juice in the coastal region and it was even exported. Buchanan also speaks of this manufacture as seen by him at Maddur and surrounding villages. Tippu had made special efforts to foster sugar industry and had even secured the assistance of Chinese technicians. He kept the technique secret and sugar candy was cheaper in his kingdom than elsewhere. Buchanan speaks of sugar produced at Chikballapur which he describes as very white and fine and the sugar candy of the place was “equal to the Chinese”. He also says that manufacture of perfumes was another industry. “Manasollasa” in its section “Snanabhoga” (on enjoying bath) refers to perfumed oil and ointments and also speaks of the processes of their production, using mostly the raw materials had from the vegetation sources. Gandhikas were producers and sellers of these perfumed items and cosmetics.
Processing of betel nut, manufacture of baskets, winnows and other such containers (like huge barns) from bamboo by the *Medars*, making of ropes and mats, etc., were other minor industries which provided jobs to many. All industries were domestic in which all members of the family and a few hired servants were engaged. Machines or mechanical devices were simple and production was labour intensive. Only a few capitalists engaged a number of craftsmen and made them work under one roof, and even here, the number of workers did not exceed a score or two. Only royal workshops engaged more workers as in the case of workshop founded by Tippu at Kanakapura or those of the Vijayanagara emperors or the Adilshahis of earlier times.

A good number of craftsmen, especially in the villages, were partly agriculturalists’ and also pursuing their craft which was hereditary and the training too was mostly imparted by father to son. Most of the village craftsmen, together with other village servants like the barbers or the washer men, received their remuneration in kind during the harvesting season from each of the peasant family whose needs they catered all through the year, like the potter supplying a specified number of pots or the carpenter supplying the agricultural implements and servicing the old ones. This was the ‘*ayagar*’ system. The ayagars were also called ‘*kaivadadavaru*’ and ‘*balutedars*’. Their traditional number was twelve and referred to as ‘barabaluti’. Tippu made special efforts to introduce new industries, and modern techniques in producing sugar, glass, etc. Buchanan noted that under arrangements made by Tippu, broad cloth, paper watches and cutlery were manufactured under new techniques, but the techniques were kept secret. He had brought technicians from China
to improve sugar production, men from Bengal to introduce sericulture and European experts, especially the French, to produce watches and cutlery and even carpenters and blacksmiths.

The craftsmen had their flourishing guilds, and even the Shatavahana records make mention of these migamas, nikavas or Shrenis. We hear of Kolikanikaya or (weavers’ guild) and Vasakara nigama (guild of the basket makers). In Kannada the guilds were called kottal, sheni, smayangal, samuha or hittu. A record of the days of the same dynasty from Lakshmeshwar mentions the guild of the braziers and another of the Pattegars (silk weavers). The great Jurist Vijnyaneshwara in his Mitakshara speaks of the guild of weavers, shoemakers etc., and “Let the king preserve their peculiar rules and conduct and also conserve their hereditary craft” he enjoins. The State did protect the guilds and maintained their privileges. Inscriptions speak of saligasamaya or jedagottali, the guilds of weavers, oddagottali (the stone –cutters’ guild) or telliganakhara (oilmen’s guild). Some of the guilds are mentioned with certain numerical suffixes attached to their professional name such as telliga ayvattu (fifty) or Ugura munnuru (300), ugrurus or pluckers of betel leaves or gale munnuru (300) pluckers of fruits and orchards. Ugurur literally means nail and they plucked leaves by attaching a small chistle to their nails, ugurol; gale or bamboo was used to pluck fruits. “The information regarding their organizational patterns is so meager at present that it is difficult to come to any conclusions”. Said by Dr. G.R.Kuppuswamy, who has studied the guilds in detail but the guilds continued to be a living force in ancient Karnataka. They looked after the professional interests of
their members; they accepted deposits from individuals and charitable institutions like temples and other such organizations and lent money to their members and thus worked as banks. They supplied raw materials and helped the marketing of finished products. They engaged themselves in charitable works like financing services in temples, providing shelter homes, feeding centres, etc. When a temple at Beligavi (Shimoga District), was renovated, various crafts and trade guilds volunteered to provide for the regular services in the temple. The Kuruba shenigas of Navilur helped in erecting a school building near Hubli (Poorballi). The guilds settled disputes arising among its members. They framed rules pertaining to wages. Young apprentices were trained by them and the interests of these apprentices were also safeguarded by the guilds. The guilds were like veritable trade unions and chambers of commerce in ancient times.

This kind of industrial pattern continued almost till the advent of industrial revolution and even after the advent of mechanized sector of production many traditional crafts are flourishing even today. There is a demand and also a taste for the products of these craftsmen. No doubt for long, the British tried to continue their colonial economic policies in some form or the other from the beginning after they came to have control over the Karnataka between 1799 and 1818. They took raw materials from this land like wood, hides, cotton, etc., to Europe and brought back finished products for which Karnataka, like other parts of India, was a ready market. But Swadeshi Movement (1906-1907), the First World War and other developments forced them to yield to the pressure of local aspirations to start new industries.
Dewan Rangacharlu had stated, as early in 1881, his clear conviction that ‘no country can prosper unless its agricultural and manufacturing industries were equally fostered’, and that “the development of various industries on which the prosperity of the country is dependent equally demand our consideration”. The later Diwans like Sheshadri Iyer, Sir M.Vishveshwaraya and Sir Mirza Ismail also had such a conviction and they formulated their policies based on it.

Karnataka had developed the necessary infrastructure for the growth of modern Industries. The roads and railway had been provided to connect all important towns and administrative centres with each other to suit both the strategic needs and administrative convenience. The periodic famines had helped in the expansion of the transport and communication facilities. This was true not only of princely Mysore but also of areas in Hyderabad State and Madras and Bombay Presidencies. The State enjoyed rich and sizeable supplies of rich mineral resources, forest products and crops to support industrial activity.

INDUSTRIALIZATION IN KODAGU DISTRICT

Rapid industrialization of the country has been one of the main objectives of the Five Year Plans and the district of Coorg can take its due share in this effort on the basis of its considerable potential for industrial growth by utilizing its forest wealth, agricultural raw materials and by the generation of power. Though Coorg is agriculturally prosperous, it must be admitted that it has been so far backward in industrial development. Out of the total area of 1,590 square miles, 30% is under forests and Coorg’s prosperity in
the future will depend on the judicious exploitation of forest wealth for industrial development. It is clear that the district of Coorg is rich in forest wealth. In the past, very little effort was made to utilize the abundant resources or even to systematically assess the extent of this wealth. However, since planned development was taken up in 1951, various attempts have been made to take stock of the district’s resources, thus carrying out one of the functions of the Planning Commission of making ‘an assessment of the material resources’ for formulating ‘a plan for the most effective and balanced utilization of the country’s resources’.

As the main commercial crops of this district happen to be coffee, cardamom, and pepper, there is possibility to develop agro-based industries related to these crops. The Cauvery and its tributaries, namely the Hemavathi, Harangi, Lakshmanathirtha, and Suvarnavathi that form the excellent water resources, are helpful for industries and irrigation. Since magnesite, molybdenum and quartz are available to some extent, they can be utilized, for industrialization. Its rich forest is considered to be suitable for production of Tassar silk.

It appears that importance was not given in the district for industrialization either during ancient times or during recent centuries. There were a few small-scale industries in the past. The capital invested in each industry was meager and was mostly indigenous. It was the local craftsmanship that accounted for the early industries rather than either the organization of the technique among them. The industrial section of the population was mostly concerned with woodwork in its various forms. For such labour there
was a natural demand. The textile industry was practically non-existent; it was probably cheaper to buy readymade cloth than to important cotton and other raw-materials for weaving. An important old-times industry was pottery. The pottery consists of pots and urns of burnt clay and is of red or black colour.

It is a record that the Kammarbands or girdle scarfs with an ornamental border which were worn by the Coorgs were manufactured in the village of Srimangala. In North Coorg, the coarse cotton cloth worn by the field labourers was made and a fine variety of cloths was woven in very small quantities at Kodlipet. It is surprising that the Coorg knives some of which were highly finished and handsomely chiseled were the only articles in Coorg worthy of notice. In a report given in 1912 it is stated that there were 196 male blacksmiths in Kodagu and they were manufacturing the swords traditionally used by the Kodavas. The typical metal work of Coorg is the heavy Coorg knife, carried at the back in a simple but ingenious metal clasp.

Almost every article used in this part of the country was important, the village carpenters and blacksmiths did nothing but the rudest work. There was absence of organized industries of any kind conducted on large-scale. By 1931, however, one tea factory at Hudikeri in South Coorg and two rice mills in North and South Coorg came into being. Though Coorg is agriculturally prosperous, it is a fact that it is backward in industrial development. After the Second World War a few cottage industries like pottery, mat weaving- basket making etc., started. But they are all unorganized, conducting their operations by time-worm materials and un-assured of regular or
remunerative markets. Leaving apart these unorganized cottage industries, it is to be mentioned that even now, there is not a single large scale industry in the whole of Coorg. The government has started a saw mill at Murkal and a central industrial workshop at Madikeri; but even these do not come under the description of large-scale industries. But, under the impact of planned activity, there is bound to be a change in the near future, and the district is sure to take its rightful place in the industrial development of the state.

FACTORS THOSE AFFECTED INDUSTRIAL PROGRESS

There are a number of factors responsible for the absence of industrial progress in the district of Coorg. First, there has never been any pressing “economic necessity” which accounts for the starting of an industry. With its rich coffee, pepper and cardamom plantations, with its ever smiling rice fields which get unfailing rainfall year after year, the district of Coorg has produced a class of people comparatively affluent and normally above want. This has resulted in the people’s attention being diverted more towards the development of their agricultural pursuits rather than to starting industries.

Among the economic factors which also account for the absence of industries – large and small in the district, lack of power, transport difficulties and scarcity of labor may be mentioned.

No part of Coorg is connected by rail. But there are seven main high way connections, one to South Kanara, another to Kerala and four high ways to the old Mysore area. Hence, whatever raw materials have to leave the borders of Coorg would have to be
conveyed only through Lorries (Trucks) which results in excessive transports costs. It also results in a hike of the cost of production and the market price of the product. Besides, it would be difficult to find markets outside because the products made in Coorg would have to bear sometimes double transport costs - that of conveyance of raw materials and of the finished product out of the district. This factor has to be kept in mind whenever an attempt is made to start an industry in Coorg.

The people of Coorg are more 'hand conscious' than 'machine minded'. The Jamma type of tenure and the family system (resembling the joint family system) which ensures bread to everyone including the lazy, the infirm and the unemployed have created a peculiar situation in this part of the country. An instance that will describes the extent of dearth of labour in Coorg is that out of 40,000 labourers employed in coffee plantations, only about a third are indigenous labourers and the rest have been imported, mainly from Kerala. But this situation of scarcity of labour should not be taken to mean that everyone in Coorg is fully employed; on the other hand, there is a lot of under employment even among the agricultural classes and therefore the problem that has to be tackled in Coorg is not one of unemployment but of under employment.

Added to this, the economic security of the people is another factor which has been responsible for the un-interestedness on the part of the people for certain industries. The people of Coorg are strongly bound by conventions and social prejudices which have gone so deeply into the social structure that a blacksmith's son can Darley become a mat-weaver or a cane worker. These conventions
are of-course, fast losing out but personal prejudices against certain vocations still persist among the people of Coorg. For instance, the people of Coorg seem to have a dislike to carpentry. Carpenters’ work is considered to be beneath dignity and thus we find a total absence of this industry despite the rich timber wealth of Coorg. Similarly rattan work and cane craft also face a dearth in the district.

The government is fully conscious of the industrial backwardness of the district and very much alive to the need to improve present situations. Serious attempts are being made to start and encourage new industries, mainly cottage and small scale, both in the public and private sectors and to reutilize the existing industries, by extending all possible aid to them under the successive Five year plans. The Government, to mention only a few of its achievements in the industrial sector, has revived the languishing handloom industry, popularized and put on a healthy footing to the bee-keeping industry, started training courses in carpentry and blacksmith and formulated development schemes for half a dozen other industries like bee-keeping, pottery, blacksmith, sericulture, carpentry and hand pounding of rice.

**STATEMENT OF THE PROBLEM AND NEED FOR THE STUDY**

Given these rich endowments in the district, there is an ample scope for industrial activities for maximum utilization of the forest wealth (about 30%) and the agricultural raw materials. As the main commercial crops of this district happen to be coffee, cardamom and pepper, there are plenty of possibilities to develop agro based industries related to these crops. The Cauvery and its tributaries offer excellent water resources and are helpful for industries and
irrigation. Since magnesite, molybdenum and quartz are available, they can be utilized for industrialization. Its rich forest is considered to be suitable for production of tassar silk.

It appears that importance was not given to this district for industrial growth, either before independence or after independence. The fact that investment of capital in this district is not forthcoming must be the reason for the existence of only a few small scale industries. Since only local skills were prominent there was not much progress in other industries. Most of the finished goods were being used to come from outside. The village carpenters and the blacksmiths were not trained to do skilled or refined work. There was an unorganized industrial system in vogue. Though this district was progressive in agriculture it did not develop in industrial activities. After the Second World War, industries like pottery, mat-making, basket weaving, cane work and blacksmith work were started. But all these were unorganized and were adopting time consuming methods, and hence were not employment ensuring and remunerative. Perhaps due to the very reason that industrialization moved in slow pace, there are no large industries even today. Similarly medium industries are also not in large number.

Thus, it is clear from the above that, for the industrialization of the district, effective entrepreneurship is very much necessary. In order to encourage the younger generation to undertake industrial activities, exhibition and workshops are to be conducted in this district under the auspices of the department of industries in order to help growing entrepreneurs in a faster pace. Hence, the present study attempts to dig-out the hidden opportunities and potentialities
to foster entrepreneurship in the study area after making a probe into the industrial growth in the district. It is this issue that the present study intends to address.

RESEARCH QUESTIONS

The present study titled "Industrialization in Karnataka – A Study of Industrial growth in Kodagu (Coorg) District" is an earnest attempt to bridge the current research gap and to come out with new findings with regard to the challenges and problems faced by the entrepreneurs in the liberalized era and to find measures to face such challenges and problems successfully. The study was conducted in Kodagu district of Karnataka state.

The present study intended to seek answers to the following questions.

1. What are the reasons for slower pace of industrial growth in the district?
2. What are the major problems that the industries confront in this district?
3. Do they face any difficulty in marketing the produce?
4. Is the income that the industries get every year is sufficient enough to meet the cost of production?
5. Are the owners satisfied with the subsidy / support extended by the Government?
6. Are the entrepreneurs satisfied with KIADB / District Industrial Centre is serving their interests?
7. Are they satisfied in their business?
8. Are they satisfied with the government policy?
9. Are they aware of the opportunities for business after liberalization?
10. Do they think that after liberalization, availability of labour has become a problem?

OBJECTIVES OF THE STUDY

Apart from the objective of examining the industrial growth in Kodagu district, a few specific study objectives have been laid down.

1. To study the evolution of industries in the district.
2. To study the survival and growth of industries in the district based on capital employed, year in business, and type of unit with reference to the district.
3. To study the socio-economic background of entrepreneurs in the district.
4. To analyze the reasons for slower pace of industrial growth in the district.
5. To study the problems faced by the entrepreneurs.
6. To suggest measures to improve the industrialization in the study area in the light of the problems faced by the entrepreneurs.

HYPOTHESES OF THE STUDY

In order to achieve the above objectives, the following hypotheses have been formulated.

1. $H_0$ : There is no dependence between the awareness as to government schemes and category of unit.
   $H_1$ : There is dependence between the capital employed and the category of business unit.
2. \( H_0 \) : There is no dependence between the awareness as to government schemes and category of unit.

\( H_1 \) : There is dependence between the capital employed and the category of business unit.

3. \( H_1 \) : There exists dependence between sufficiency of income and category of business unit.

4. \( H_0 \): The lack of infrastructure facilities is not the reason for existence of only a few small scale industries.

\( H_1 \): The lack of infrastructure facilities is one of the reasons for existence of only a few small scale industries.

5. \( H_0 \): There is statistically significant difference in various problems faced by industrial units and category of units.

6. \( H_0 \): There is statistical significance between the performance of industries and the category of industrial unit.

\( H_1 \): There is no statistical significance between the performance of industries and category of industrial units.

**SOURCES OF DATA AND METHODOLOGY**

The research design is stated below

a) Sample Design

In order to test the hypotheses, address the research questions and to meet the objectives of the study, the required data were collected from both primary and secondary sources. With the help of the well designed and presented questionnaire, the primary data were collected through personal interview method by giving due representation to all the 3 taluks of the district. Due weightage was given to age of respondents and units, range of investment, nature of activity and category/region. The respondents were categorized on
the basis of size of the industrial units to see whether there were any differences in the nature of problems faced by the entrepreneurs.

b) Collection of Primary Data

The questionnaire incorporates all the above factors. The field study was carried out and data were collected through interviews and administering questionnaires. A total of 175 respondents (industrial units) were chosen from 3 Taluks of the district namely Madikeri, Somwarepete and Virajpete. (The questionnaire used for data collection in Annexure – 1.)

The Table 1.1 presents the place-wise distribution of sample units.

Table 1.1

Place-wise Distribution of Units

<table>
<thead>
<tr>
<th>Kodagu District</th>
<th>Madikeri Taluk</th>
<th>Virajpete Taluk</th>
<th>Somavarpete Taluk</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of Units</td>
<td>No. of Units</td>
<td>No. of Units</td>
<td>No. of units</td>
</tr>
<tr>
<td>Madikeri</td>
<td>23</td>
<td>5</td>
<td>8</td>
<td>36</td>
</tr>
<tr>
<td>Murnad</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>Sampaje</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Bhagamandala</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>Napoklu</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Makandur</td>
<td>7</td>
<td>4</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Bettigeri</td>
<td>5</td>
<td>2</td>
<td>27</td>
<td>34</td>
</tr>
<tr>
<td>Total</td>
<td>57</td>
<td>53</td>
<td>65</td>
<td>175</td>
</tr>
</tbody>
</table>

Source: Field Survey
c) Secondary Data

The secondary data were collected from the following sources.


ii) Annual reports and publications of the government, KIADB, KSSIDC and The Directorate of Industries and Commerce.

iii) Project reports, study reports and unpublished doctoral theses.

iv) Magazines and national and international journals.

v) University libraries.

vi) Web sources.

d) Statistical Tools

The data collected were analyzed by using statistical tools such as percentage, growth rate, time series analysis, Chi-square Test and ANOVA. Geographical presentation is also made in few cases.

e) Scope of the Study

i. The researcher has made an extensive study of the challenges and problems faced by the entrepreneurs of Kodagu district and also made several suggestions to face those challenges and problems successfully. Therefore the findings, inferences and conclusion of the study may be useful for the entrepreneurs of the district to understand the various dimensions of their challenges and problems and also to find the ways and means to overcome those challenges and problems successfully.

ii. The findings and conclusion can be used by the policy makers, namely, the government, banks and other financial institutions to understand the challenges and problems faced by the entrepreneurs of the district.
iii. The study conducted will be helpful in carrying out further research in this domain.

LIMITATIONS OF THE STUDY

The study has made an attempt to cover exhaustively the various dimensions of the challenges and problems faced by the entrepreneurs; however no research activity especially social science related activity is free from limitations.

1. The data gathered through primary survey are supposed to be facts

2. As the chosen district is industrially backward, eliciting information from different sources was somewhat difficult.

3. The findings, inferences and conclusion of the study can not be generalized so as to make them applicable to entrepreneurs in other parts of the India or abroad in due course.

CHAPTER SCHEME

Chapter - I: Introduction

This Chapter deals with the introduction to the industrialization, world industrialization, industrialization in Karnataka and industrialization in Kodagu district. This chapter also deals with the nature and scope of the research study, research questions, objectives of the study, hypotheses of the study, research methodology, limitations of the study and the chapter scheme.

Chapter- II: Literature Review

It is intended to provide comprehensive review of literature of the subject. It identifies the research gap and scope for the research study in Coorg district.
Chapter-III: Concept Of Industrialization - Karnataka Scenario

This chapter contains a conceptual framework of industrialization in Karnataka, with clear elaboration of industrial policies. The functions of institutions for entrepreneurship development are also presented in the chapter.

Chapter-IV: Profile of Karnataka State and Study Area

This chapter deals with the profile of the state of Karnataka and Kodagu district.

Chapter-V: Industrialization Scenario in Kodagu District – An Analysis

This chapter deals with the profile of the entrepreneurs to elaborate the basic information about the sample entrepreneurs in Kodagu, profile of the sample units/enterprises and problems and challenges faced by the entrepreneurs in the Kodagu, slower pace of industrial growth, reasons and causes. The testing of hypothesis are also carried out.

Chapter-VI: Summary of Findings, Suggestions and Conclusion

Findings and suggestions on the basis of empirical study conducted are listed in this chapter. It presents a capsule summary of the entire study with regard to discussions and results presented in the earlier chapters. Based on study findings, suggestions are offered, direction for further research is given and conclusion is drawn.
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