CHAPTER – IV

STUDY AREA

4.1 INTRODUCTION

The chapter gives overview of the structure and composition of the study area. The chapter provides overview to understand the genesis of regional disparities in educational development owing to several geographical, socio-economic, administrative, historical profiles of the state. There is exhaustive account of locational setting, evolution, and administrative structure, physical and cultural landscape of Karnataka.

For present research, study area is confined to one of the four southern states of India called Karnataka, formerly known as Mysore state and was as Karnataka in 1973. The name is derived from the Kannada words karu and nādu, meaning elevated land. Karu nādu may also be considered as Karu (black) and nādu (region), as a reference to the black cotton soil found in the Bayaluseeme region of Karnataka. The British used the word Carnatic (sometimes Karnataka) to describe both sides of peninsular India, south of the Krishna River. The state is situated within 11°35' North and 18°30' North latitudes and 74°5' East and 78°35' East longitudes. It is situated, in the western part of peninsular India. It constitutes the southern extension of Deccan Plateau and is rhomboid in shape. The state is bordered by the Arabian Sea to the west, Goa to the northwest, Maharashtra to the north, Andhra Pradesh to the east, Tamil Nadu to the southeast and Kerala to the south-west. The state extends to about 750 km from North to South and about 400 km from East to West. (Map 4.1) The state is spread over an area of 1,91,791 sq km. It occupies
5.83 percent area of India and it is eighth largest India state by area and ninth largest by population by sharing 5.05 percent of total population of the country.

Map 4.1: India – Location of State of Karnataka

4.2 EVOLUTION OF THE STATE

As the present study is restricted to the 30 revenue districts and 176 revenue talukas of Karnataka, it is pertinent to note the evolution of these administrative units. The state has long evolved history of evolution which leads to regional imbalances in
the state. The erstwhile princely State of Mysore came into existence after the Fourth Anglo-Mysore war in 1799 A.D. and it formed the core for the new state of Mysore under the States Reorganization Act of 1956. The area reported corresponding to the unit was 75,412 sq. km. In 1881 this unit consisted of only seven districts namely Bangalore, Tumkur, Kolar, Kadur, Mysore, Chitradurga and Shimoga. In 1886 Hassan district was carved out as eighth district and in 1939, Mandya district was created as ninth district. In 1953, Bellary district of Madras State (excluding Adoni, Alur and Rayadurga taluks) was transferred to Mysore State when the State of Andhra Pradesh was formed, resulting in an addition of 9,897 sq. km. to the area of the State.

Political movements for the creation of new, linguistic-based states developed around India in the years after independence. The movement to create a Telugu-speaking state out of the northern portion of Madras State gathered strength in the years after independence, and in 1953, the 16 northern, Telugu-speaking districts of Madras State became the new State of Andhra. In December 1953, Prime Minister Jawaharlal Nehru appointed the States Reorganisation Commission to prepare for the creation of states on linguistic lines. This was headed by Justice Fazal Ali and the commission itself was also known as the Fazal Ali Commission. The efforts of this commission were overseen by Govind Ballabh Pant, who served as Home Minister from December 1954. The commission created a report in 1955 recommending the reorganization of India’s states.

The States Reorganization Act of 1956, which went into effect on November 1st, eliminated the distinction between parts A, B, and C states. It also reorganized the state boundaries and created or dissolved states and union territories. On November 1st, 1956. The Mysore State was enlarged by the addition of Coorg state and the Kannada speaking districts from southern Bombay state and western Hyderabad state.
Map 4.2: Karnataka – Evolution of the State, 1956
The State of Mysore (rechristened as Karnataka with effect from 1.11.1973) with its territorial content as it exists now was formed on 1st November 1956 under the States’ Reorganization Act. It comprised of:

a) The old Mysore State including Bellary district;

b) Bijapur, Dharwad and Uttara Kannada district and Belgaum district excluding Chandgad taluk with an area of 54,347 sq km.

c) Gulbarga (Except Kodangal and Tandur taluks) 16,274 sq km; Raichur (except Alampur and Gadwal taluks)-14,078 sq km; and Bidar district (except Ahmedpur, Nilanga and Udgir taluks, Nayalkar Circle of Bidar taluk, Zahirabad taluk except Nirna circle and three villages of Homnabad taluk and Narayankhed taluk) with an area of 5,363 sq km from former Hyderabad State;

d) Dakshina Kannada (except Kasargod taluk and Amindivi islands) with an area of 8,385 sq km; and Kollegal taluk of Coimbatore district with an area of 2,786 sq km from former Madras State;

e) Former part C State of Coorg (Kodagu) district with an area of 4,131 sq. km.

In 1969, Savanur taluk was created and in 1974, Hagaribommanhalli taluk was created by the abolition of the former Mallapuram taluk In Bellary district. During 1986, Bangalore Rural district was carved out of the former Bangalore district. Bangalore district includes Anekal taluk, Bangalore North taluk (including Jala hobli of the former Devanahalli taluk and Dasanapura hobli of the former Nelamangala taluk), Bangalore South taluk (including Tavarekere hobli of the former Magadi taluk and Bidarahalli hobli of the former Hosakote taluk) and Bangalore Urban Agglomeration areas. The Jurisdiction of Karnataka state extends over portions land-locked within Maharashtra i.e. Dhamne S. Bailur and Kudrimani of Belgaum taluk and Mukhed of Aurad taluk of Bidar district.
In August 1997, seven more districts were newly formed raising the number of districts in the State to 27. Bijapur district was bifurcated into Bijapur and Bagalkot districts. Out of eleven taluks, Jamakhandi, Mudhol, Bilgi, Bagalkot, Badami and Hungund taluks were brought under the new Bagalkot district. The present Bijapur district has Indi, Sindagi, Bijapur, Basavanna Bagevadi and Muddebihal taluks. The new Davanagere district was formed by transferring Davanagere, Harihar and Jagalur taluks from Chitrardurga district, Channagiri and Honnali taluks from Shimoga district and Harapannahalli taluk from Bellagiri district. Dharwad district was divided into three districts viz. Dharwad, Gadag and Haveri. Haveri district included Shiggaon, Savanur, Hangal, Haveri, Byadgi, Hirekerur and Ranibennur taluks. Gadag district comprises of Nargund, Ron, Gadag, Mundargi and Shirhatti taluks while the remaining five taluks viz. Dharwad, Navalgund, Hubli, Kalghatgi and Kundgol constituted Dharwad district.

Raichur district was bifurcated into Raichur and Koppal districts. Gangawati, Koppal, Kushtagi and Yalburga taluks were brought under the newly formed Koppal district while the remaining five taluks viz. Devadurga, Lingsugur, Manvi, Raichur and Sindhnur taluks constituted new Raichur district. Dakshina Kannada was bifurcated into Dakshina Kannada and Udupi districts. Beltangadi, Bantwal, Mangalore, Puttur and Sulya taluks remained in new Dakshina Kannada while Karkala, Kundapur and Udupi taluks were transferred to the newly created Udupi district. Out of the eleven taluks of old Mysore district, Chamarajanagar, Gundlupet, Kollegal and Yelandur taluks were transferred to the newly formed Chamarajanagar district while the remaining seven taluks viz. Heggadadevankote, Hunsur, Krishnarajanagar, Mysore, Nanjangud, Piriyapatna and Tirumakudal Narsipur taluks formed part of Mysore district.
During August 2007 Ramanagara district was formed by altering the limits of Bangalore Rural District and Chikkaballapura District was formed by altering the limits of Kolar District vide Government Order No RD 27 Bhudapu (p-3), Bangalore, date 3rd August 2007 and subsequent amendment dated 17th August 2007 with effect from 23-08-2007.

In 2001 there were 175 taluks but after census 2001 one taluk in Bangalore Urban District was created Vide Government notification no RD 58 Bhudapu 1998 dated 15.11.2001, i.e. Bangalore East Taluk. As such there are 176 taluks in Karnataka. Yadgir (Yadgir in Kannada) is newly created district out of Gulbarga District. The district was officially declared as 30th District of Karnataka on April 10th, 2010. It is also headquarter of Yadgir taluk one of the three taluks of Yadgir.

4.3 ADMINISTRATIVE DIVISIONS

Karnataka State has been divided into four Revenue divisions, 52 sub-divisions, 30 districts, 176 taluks, 747 hoblies/Revenue Circles, 347 towns, 220 Statutory Towns, 127 Census Towns, 29,340 Villages for administrative purposes. (Maps 4.3 & 4.4) District of Uttara Kannada has maximum number of eleven taluks whereas minimum number of taluks is three in the districts of Kodagu, Udupi and Yadgir.
Map 4.3: Karnataka – Administrative Divisions
Map 4.4: Karnataka – Administrative Divisions
The Bangalore Division: Comprises of Bangalore (Urban), Bangalore Rural, Tumkur, Kolar, Chitradurga, Shimoga and Davanagere districts with headquarters at Bangalore. It consists of 25.91 percent of geographical area of the state and shares approximately 38 percent of population of the state’s total population. This division has maximum number of 52 taluks.

The Mysore Division: Consists of the districts of Mysore, Mandya, Hassan Chikmagalur, Dakshina Kannada, Kodagu, Udupi and Chamarajanagar districts with headquarters at Mysore. The division occupies 22.67 percent geographical area of the state and approximately shares 20 percent population of the state’s total population. There are 44 taluks in this division.

3. Belgaum Division: It has Belgaum, Bijapur, Dharwad, Gadag, Haveri, Uttara Kannada and Bagalkot districts under its jurisdiction with headquarters at Belgaum. This division shares 28.42 percent area and approximately 24 percent population of the state. It consists of 49 taluks.

4. The Gulbarga division: With headquarters at Gulbarga covers the districts of Bidar, Gulbarga, Bellary, Raichur, Koppal and Yadgir districts. The division consists of 23 percent area of the state’s total area and shares 18 percent population of the state’s total population. There are only 31 taluks in this division.

State has 29,340 villages and 220 Statutory Towns and 127 Census Towns, 22 urban agglomerations and 54 outgrowths, 176 taluks and 747 hoblis/ revenue circles.

4.4 RELIEF

The state of Karnataka has representatives of all types of variations in topography – high mountains, plateaus, residual hills and coastal plains. (Map 4.5) The State is enclosed by chains of mountains to its west, east and south. It consists mainly of plateau which has higher elevation of 600 to 900 meters above mean sea
level. The entire landscape is undulating broken up by mountains and deep ravines. Plain land of elevation less than 300 meters above mean sea level is to be found only in the narrow coastal belt, facing the Arabian Sea. There are quite a few high peaks both in Western and Eastern Ghats systems with altitudes more than 1,500 meters. A series of cross-sections drawn from west to east across the Western Ghats generally exhibit, a narrow coastal plain followed to the east by small and short plateaus at different altitudes, then suddenly rising up to great heights, then follows the gentle east and east-north-west sloping plateau. Among the tallest peaks of Karnataka are the Mullayyana Giri (1,925 m), Bababudangiri (Chandradrona Parvata 1,894 m) and the Kudremukh (1,895 m) all in Chikmagalur district and the Pushpagiri (1,908 m) in Kodagu district. There are a dozen peaks which rise above the height of 1,500 meters. The percentage of area coming under different elevations is as follows: less than 150 meters-5.16; 150 to 300 meters-1.95; 300 to 600 meters-43.51; 600 to 1,350 meters-48.81 and more than 1,350 meters-0.57.

Physiographically the State may be divided into four distinct regions, viz., the Northern Maidan, the Southern Maidan, the Malnad, and the Coastal region.

The Maidan: The maidan is an open country with a rolling surface that stretches to the east of the Malnad. This region is divided into the Northern Maidan and the Southern Maidan.
The Northern Maidan Region: The Northern Maidan lies to the east of the Malnad region and to the north of the high plateau. It is at about 365 to 610 meters in height. The Krishna, the Bhima and the Tungabhadra river systems drain the area. The basement here is formed by the peninsular gneiss and Dharwars, which are found in the form of high ridges lying in the synclines as at Siruguppa. This pattern is
interrupted by the Deccan trap in the Bhima valley. Generally, red lateritic soils in association with the regur is mainly found in this part. Sands and silts are found only over the flood plain zone. This region is situated in the rain shadow region. The rainfall ranges from 350 to 900 mm. There are pockets of irrigated areas served by tanks, wells and canals. The major crops that are grown in this area are jowar, wheat and cotton. Districts of North Karnataka like Bidar, Bijapur, Gulbarga, Yadgir, Belgaum, Bagalkot, Gadag, Bellary, Koppal lies in this region.

The Southern Maidan Region: This region lies to the eastern ridge of the Malnad and is at about 915 to 975 meters in height. The Tungabhadra, the Cauvery, the Pennar and the Palar river systems drain this region. The red soil with varying shades with not so fertility predominates here. This is also a rain shadow region like northern maidan and receives a rainfall of 500 to 750 mm and the amount decreases from west to east. Rice and Ragi are the major crops of the area. Some favoured areas have areca nut, coconut and mulberry cultivation. Districts of Davanagere, Chitradurga, Tumkur, Kolar, Bangalore Urban, Bangalore Rural, Chikkaballapura, Ramanagara, Mysore, Mandya, Chamarajanagar lies in Southern Maidan region of Karnataka state.

The Malnad region: The Malnad in Kannada refers to ‘hilly country’ where male refers to hill and nadu refers to country. Almost the whole area is traversed by the Western Ghats running NNW to SSE 320 km in length. It is a land locked area with a height of more than 152 meters above the mean sea level in the west gradually rises towards the east, thus culminating in a series of ranges of hills with an average height of about 900 meters. The Malnad is a region of hills, a thick range of forest, perennial rivers with magnificent waterfalls and of many canyons. This is the region of heavy rainfall. The climate is generally hot and wet. Due to heavy rainfall the soils are leached and became lateritic. The relief is undulating broken up by chains of rocky
hills and scored by deep ravines. It has been worn out into a narrow watershed by headward erosion of the Bay and Arabian Sea rivers. In the north, the Kalinadi, the Gangawati and the Shravathi have cut through the crest from the Arabian Sea side and also drain part of the eastern flank in the south; the Bhadra and Hemavathi from the east and the Netrawathi from the west have narrowed down the crest. Kodachadri (1,343 m) in Shimoga is the peak, south of which the peaks are above 900 m. The name ghat is derived from step-like scraps of the western edge. The eastern slope is comparatively gentler.

The major crop that is grown in Malnad area is paddy. In the ghat area coffee, cardamom, areca nut and coconut plantations are also found. The well-known Mysore Sandalwood is found in the southeastern fringes of the region. Districts of Kodagu, Hassan, Chikmagalur, Shimoga, Haveri, Dharwad and certain parts of Belgaum lies in this region of Malnad.

**The Coastal Region:** This region extends between the Western Ghats edge and the Arabian Sea. It extends for 320 km from north to south in Karnataka and 13 to 32 km wide in the north and 50 to 65 km wide in south. It is also known as the Konkan or the Kanara coast. It includes coastal part of three districts of Udupi, Uttar Kannada and Dakshina Kannada. Though it is a low land region, it is not a flat plain. At certain parts foothills and spurs of the Western Ghats almost reach the Arabian Sea. Several streams and isolated hills stretch across the region and separate areas of level land. Few lagoons and backwaters are situated here. The average height of the lowlands is 75 meters above mean sea level but there are some parts rising to nearly 150 meters.

The climate is hot but equable, with very high rainfall in the monsoons. The region receives very heavy and assured rainfall, which exceeds 2,500 mm. However the entire coastal line enjoys maritime influences. The total area is about 7,770 km².
The soils are lateritic except in isolated stretches near the seaside where alluvium is found. The major crops here are rice, coconut and areca nut. Few people are engaged in Coastal fishing and boat making.

4.5 DRAINAGE

The drainage system of Karnataka can be easily classified into two, the east flowing and the west flowing. The east flowing system can be further divided into four drainage basins. Krishna occupies a larger area compare to all the other rivers in Karnataka. Next in order, is the Cauvery basin, north Pennar, south Pennar, Palar rivers are the other important drainage systems. In the west flowing system, Kali, Bedti, Shravathi, Netrawathi are important river system. The Krishna River System: This forms the most important river basin. The river Krishna rises in the Western Ghats and is spread over three states viz., Maharashtra, Karnataka and Andhra Pradesh. The area under (covering the basin is) this is about 2.59 lakh sq km. 43.74 per cent of area lies in Karnataka. The Krishna flows about 483 km of length in Karnataka. This flows in the districts of Belgaum, Bagalkot, Bijapur, Gulbarga and Raichur. The main tributaries are the Koyna, the Yerla, the Varna, and the Panchaganga, the Dudhganga the Ghataprabha, the Malaprabha, the Bhima, the Tungabhadra and the Musi.

The Bhima, the northern most major tributary of the Krishna in Karnataka state, passes through only two districts of the state viz., Gulbarga and Bijapur. Its total catchment area in the state is 18,315 sq km. It rises in the Western Ghats at an elevation of 675 meters near the village Bhima Shankar in Pune district of Maharashtra. It flows about 299 km in Karnataka before joining the Krishna. The Tungabhadra like the Bhima is a major tributary of the Krishna. Its tributaries are the Tunga, the Bhadra and the Hagari. The Tunga and the Bhadra take their rise in
Gangamula peak of the Western Ghats in Chikmagalur district at an altitude of about 1,200 meters. Tunga and Bhadra join at Kudli to form the Tunga Bhadra river, which later joins the Krishna at Kurnool in Andhra Pradesh.

The river Ghataprabha rises in the Western Ghats at an altitude of 884m and flows eastwards for a length of 283 km before joining Krishna. Two of its tributaries in Maharashtra are the Hiranyakeshi and the Markandeya. The river created a 53 m falls at Gokak (10 km from Gokak) in Belgaum district.

The Malaprabha rises in the Western Ghats at an altitude of 792.4 m, 16 km west of Jamboti in Belgaum district of Karnataka. It joins Krishna at Kudalasangama, about 304 km from it source. The reach near Saundatti is through a deep gorge known as Navilteertha or the peacock gorge, which is across colourful sandstone. Its principal tributaries are the Bennihalla, the Hirehalla and Tas nadi. The catchment area of the Malaprabha and its tributaries is 11,549 km².

**The Cauvery System:** The Cauvery, though irregular in profile, has been the mainstream of the regional culture since long. It rises in Brahmagiri at Talacauvery in Kodagu District. It furnishes one of the best and oldest power and irrigated facilities in the region through Shivasamudra power station and the K.R.S. reservoir. It flows about 320 km in Karnataka and its total catchment area is 81150 km². Out of which 42.2% lies in Karnataka and rest in Tamil Nadu the Harangi, Hemavathi, Lokapavani. Arkavathi and Shimsha join this through its North bank and Laxmanateertha, Kapila Suvarnavati, Bhavani and Amravati from the south bank. The Cauvery basin covers 18% of the state area comprising 7 districts; Mysore and Mandya, which lie wholly in the basin and Kodagu, Chikmagalur, Hassan, Tumkur and Bangalore district lying partially in the basin.
The course of Cauvery is tortuous, its bed is rocky, and its banks are high and covered with luxuriant vegetation. There are number of falls in the bed of the river and it forms three well known islands Shrirangapattana, Shivanasamudram and Srirangam. The first two are in Karnataka and the last in Tamil Nadu. The important falls along the course of the river are the Chunchanakatte falls, Shivasamudra falls and Hogenkal falls. At Shivanasamudram, the river branches into two and each branch has a fall of more than 100 m; the western is known as Gaganachukki and the eastern fall as Barachukki. The two branches then meet to pass through the Mekedatu gorge, before the river forms the common boundary between Karnataka and Tamil Nadu.

The Hemavathi is one of the chief tributaries of the Cauvery. It rises on the Western Ghats at an elevation of 1,219 m and runs southeast. The length of the river is about 245 km.

The Kapila, a tributary of the Cauvery, rises in the Western Ghats at an elevation of 2,140 m in north Waynad. The Kapila forms the border between Kerala and Karnataka for nearly 12 km before entering Karnataka.

The Arkavathi rises at Nandidurga hills at an elevation of 1480 m and joins the Cauvery after traversing 161 km. It has got a drainage area of 4351 km².

The Shimsha rises in Tiptur taluk of Tumkur district at an elevation of 914 m. It joins Cauvery after 215 km in its course. Its drainage area is about 8470 km². Before joining Cauvery Shimsha makes a descent of 94m as the Shimsha falls.

The Moyar River, a tributary to the Cauvery, forms the common boundary between Karnataka and Tamil Nadu in Mysore and Nilgiri districts. It joins the Bhavani in Tamil Nadu.
Godavari Basin: Only a small portion of the state lies in the Godavari basin. The Manjra River in Bidar district is the tributary of Godavari River. Manjra River rises in the Bhalghat range in the Beed district of Maharashtra at an altitude of 823 m. The Karanja river joins the Manjra in Karnataka state. It receives the water of Karanja joined by Chulkimala and Madhuranala. Other tributaries are Hebbalavadi, Dewas, Kantas, Nallavager and Tirna.

The Pennar and Palar river basins comprise of the whole district of Kolar and there is little scope for major and medium projects. The aggregate basin area of all these rivers in the state is 13,160 km².

The Uttara Pinakini, an interstate river. This is flowing in Karnataka and Andhra Pradesh rises in the Chennakeshava hills of the Nandidurga range of Karnataka. It is known as Pennar in its lower reaches. It flows in a northwesterly direction through the Kolar in Karnataka and Ananthapur district of Andhra Pradesh. The total length of this river is 597 km. The major tributaries in Karnataka Jayamangali in Tumkur district, the Chitravati and Papaghni in Kolar district. The river drains about 6,937 km² area in Karnataka.

The Dakshina Pinakini is an inter-state river. This flowing in Karnataka and Tamil Nadu and union tertiary of Pondicherry rises near Harvashettyhalli village in Kolar district at an elevation of about 900 m in the hill ranges of Nandidurga. In Tamil Nadu it is known as ‘Ponnaiyar’. It joins the Bay of Bengal near Cuddalore.

The west flowing rivers: There are number of west flowing rivers and the area is unsuitable for extensive irrigation from canals. The important West flowing rivers are Gangawati (Bedti), the Sita, the Swarna, the Gurupu, the Netravathi, the Kali, the Shravathi and the Aghanashini, A small catchment area of these rivers however lies in Dharwad, Shimoga, Chikmagalur, Hassan, Belgaum and Kodagu districts. The total
catchment area of west flowing rivers is 26,214 km². The basin of these rivers comes under the direct influence of the southwest monsoon and receives heavy rainfall between June and August.

The Nethravathi is the biggest river in the Dakshina Kannada district with a total length of 96 km and catchment area of 3,355 km². It takes its rise on the western side of the Western Ghats i.e., Charmadi hills and drain into the Arabian Sea in the vicinity of Mangalore. It flows through the districts of Uttar Kannada and Dakshina Kannada. The main tributaries of the Nethravathi are the Neriya hole, the Kumaradhara, the Beltangadi hole and the Shashila hole (hole in Kannada means river).

The Kali, a major west flowing river takes its origin in the Western Ghats in Uttara Kannada district, with a catchment area of 4,841 km². It joins Arabian Sea at Karwar after covering a total length of 184 km. As the river flows through black rocks, the river appears black and the name Kali (in Kannada black) is derived. The major tributaries of this river are the Pandari, the Tattihalla, the Kaneri and the Vaki.

The Shravathi River takes its origin in the Western Ghats near Ambuthirtha in Tirthahalli taluk of Shimoga district. Its length is about 128 km and has a drainage area of 2,771 km². The river drops to a vertical fall of about 253 m near Jog, which is world famous. It joins the Arabian Sea at Honnavar in Uttara Kannada.

The river Bedti known as Gangawati in its lower reaches takes its origin in the range of hills round about Dharwad-Hubli at an elevation of 700 m above M.S.L. The river has a length of about 161 km and a drainage area of 4,446 km². It joins the Arabian Sea near Gangawati village in Ankola taluk of Uttara Kannada district. The river drops with a clear fall of 137 m near Magod, popularly known as Magod falls at a distance of about 72 km from the source.
The Aganashini originates in Sirsi taluk of Uttara Kannada at an elevation of 732 m above M.S.L. It flows entirely in Karnataka state for a length of 121 km before joining the Arabian Sea. The catchment area is 1,470 km$^2$.

The Varahi River known as the Halady River in lower reaches takes its origin near Guddakoppa in Hosanagar taluk of Shimoga district at an altitude of 762 m above M.S.L. The bed level of the river drops suddenly in cascades by 457 m in a short distance and is known as Kunchical falls. The river joins the Arabian Sea near Kundapur in Udupi district. The Barapole, an inter-state river flowing in Karnataka and Kerala, originates in the Western Ghats in Kodagu district. The river flows in a deep valley forming either side very steep. The total length of the river is about 105 km and of which is about 31 km in Karnataka and 10 km forming the common boundary. The catchment area is 608 km$^2$ in Karnataka.

Of all the river systems mentioned above, the Krishna and the Cauvery are the most significant in Karnataka from the point of view of their economic value. All the dams, reservoirs constructed in state are confined only to the two rivers. Further these two basins are the source of water disputes between Karnataka and other states. The entire irrigated area is also restricted to these systems only. The west flowing rivers are important for generating hydroelectricity while the Pennar and the Palar basins hardly here any significance for the south since they remains dry almost throughout the year and hold little water only during rainy season.

4.6 CLIMATE

The State enjoys three main types of climates. For meteorological purposes, the State has been divided into three sub-divisions namely (a) Coastal Karnataka (Dakshina Kannada, Udupi and Uttara Kannada districts), (b) North Interior Karnataka (Belgaum, Bidar, Bijapur, Bagalkot, Dharwad, Gadag, Haveri, Gulbarga of all west
flowing rivers is 26,214 sq km (Raichur and Koppal districts) and (c) South Interior Karnataka (the remaining districts of Bangalore Rural, Bangalore, Bellary, Chikmagalur, Chitradurga, Davanagere, Kodagu, Hassan, Kolar, Mysore, Chamarajanagar, Mandya, Shimoga and Tumkur districts). The Tropical Monsoon climate covers the entire coastal belt and adjoining areas. The climate in this region is hot with excessive rainfall during the monsoon season i.e., June to September. The Southern half of the State experiences hot, seasonally dry tropical savannah; while most of the northern half experiences hot, semi-arid, tropical steppe type of climate.

The climate of the State varies with the seasons. The winter season from January to February is followed by summer season from March to May. The period from October to December forms the post-monsoon season.

The period from October to March, covering the post-monsoon and winter seasons, is generally pleasant over the entire State except during a few spells of rain associated with north-east monsoon which affects the south-eastern parts of the State during October to December. The months April and May are hot, very dry and generally uncomfortable. Weather tends to be oppressive during June due to high humidity and temperature. The next three months (July, August and September) are somewhat comfortable due to reduced day temperature although the humidity continue to be very high.

4.6.1 Temperature

Both day and night temperatures are more or less uniform over the State, except at the coastal region and high elevated plateau. They generally decrease south-westwards over the State due to higher elevation and attain lower values at high level stations. April and May are the hottest months. In May, mean maximum temperature shoots up to 40°C over the north-eastern corner of the State, decreasing south-
westwards toward the Western Ghat region and the Coastal belt. The highest
temperature recorded at an individual station in the State is 45.6°C at Raichur on 1928
May 23 which is 6° higher than the normal for the warmest months. December and
January are the coldest months. The lowest temperature at an individual station was
2.8°C on 1918 December 16 at Bidar.

4.6.2 Rainfall

The annual rainfall in the State varies roughly from 50 to 350 cm. In the
districts of Bijapur, Bagalkot, Raichur, Koppal, Bellary and southern half of
Gulbarga, the rainfall is lowest varying from 50 to 60 cm. The rainfall increases
significantly in the western part of the State and reaches its maximum over the coastal
belt. The south-west monsoon is the principal rainy season during which the State
receives 80% of its rainfall. Rainfall in the winter season (January to February) is less
than one per cent of the annual total, in the hot weather season (March to May) about
7% and in the post-monsoon season about 12%.

South-west monsoon normally sets in over the extreme southern parts of the
State by about 1st of June and covers the entire State by about 10th of June. The rainy
months July and August account individually to about 30% and 18% of annual
rainfall. There are about 26 rainy days (with daily rainfall of at least 2.5 mm) in
Coastal Karnataka and 8 to 11 days in interior Karnataka in each of these months. The
withdrawal of the southwest monsoon begins from the northern parts of the State
around 2nd week of October and by the 15th October monsoon withdraws from the
entire State Temperatures at selected centres are The retreating monsoon current i.e.
the north-east monsoon (October to December) effects the eastern parts of South
Interior Karnataka and accounts for about 30% of rainfall in this region during the
above period.
Out of the 14 heavy rainfall stations in India, with annual rainfall of more than 500 cm. four stations are situated in Karnataka. They are Agumbe in Tirthahalli taluk of Shimoga district (annual rainfall-828 cm) and Bhagamandala (603 cm), Pullingoth (594 cm) and Makut (505 cm) in Kodagu district. Agumbe can be called as the Cherrapunji of Southern India. District-wise monthly, seasonal and annual rainfall (mm) for taluk headquarters (1901-1970).

4.7 FORESTS

According to report ‘State of Forests’ of the Department of Forests and environment of India, the total area of forests in the state is 36,190 sq km which is about 18.87 percent of the geographical area of the state whereas the extent of forests in the country as about 20.6 percent. The state of area under forest in Karnataka is lesser then the percentage of area under forests in our country. The state accounts for 5.83 percent of the total area of the country whereas its share in forests is about 5.2 percent of the country’s total.

It may be noted that districts lying in Western Ghats and hilly tracts have larger area of forests. The district of Kodagu had maximum share of area under forests (81.40 percent) followed by district of Uttara Kannada (75.99 percent). Five districts of Udupi, Dakshina Kannada, Chamarajanagar, Shimoga and Chikmagalur had forest area between 50-75 percent. There are seven districts where forest area is less than 5 percent; this category includes the drought prone districts of North Karnataka like Bidar, Bijapur, Raichur, Gulbarga, Gadag, Bagalkot, and Chitradurga.

4.8 DEMOGRAPHY

4.8.1 Size and Distribution

According to the 2011 census of India, the total population of Karnataka is 61,130,704, of which 31,057,742 (50.80 percent) are males and 30,072,962
(49.18 percent) are females. In other words there are 968 females for every 1000 males. The state has a better sex ratio among the other states and UTs in the country and is placed at rank eleventh rank. Districts like Udupi (1093), Kodagu (1019), Dakshina Kannada (1018); Hassan and Chikmagalur (1005) had witnessed favourable sex ratio in the state. On the other hand Bangalore Urban district has recorded only 908 females per 1000 males in the state. Bangalore district, home to the state headquarters, with its share of 15.69 percent population is the most populous district of the state. In other words, for every six persons in a state one belongs to Bangalore district. Belgaum with share of 7.82 percent occupies the second place, followed by Mysore (4.90), Tumkur (4.39), Gulbarga (4.20), and Bellary (4.14) districts. All these five districts have more than 2.5 million population each and together contribute one fourth to the state’s population. Among these five districts four of them have Municipal Corporations within their jurisdiction, which is a factor for them to have more population. Kodagu with population of just 0.55 million is the least populated districts in the state, it shares 0.91 percent share in the state’s total population. All other districts have more than one million population.

4.8.2 Density of Population

The population density of state is 319 persons per sq km which is lesser than the national average of 382 persons per sq km whereas it was 267 persons per sq km in 2001. The state ranks 19th among other states and UTs of the country. Bangalore district with 4,378 persons per sq km is most densely populated and ranks first in the state, Bangalore district which includes Bruhat Bangalore Mahanagara Palike limits its jurisdiction has increased its inhabitants by 1,393 per sq km during the decade. Kodagu is the least populated district in the state with the density of 135 persons per sq km. Kodagu which ranked 29th place in 2001 has slipped to the last position.
The density of Chikmagalur remained the constant over the last decade at 158 persons per sq km.

4.8.3 Growth of Population
Size of the population in 2011 in the state registers a 15.67 percent increase over the population in 2001. The state ranks 22 in decadal growth rate (2001-2011) and is below the national average of 17.64 percent. Bangalore Urban district has recorded a significantly decadal growth of 46.68 percent whereas district of Chikmagalur had recorded negative growth of -0.28 percent.

4.8.4 Population Composition
Rural–Urban Composition: Karnataka has 38.57% of urban population. Bangalore Urban has highest percentage of urban population (90.94) contrary to that Kodagu has the least share of urban population (14.62%). Bangalore (90.94%), Dharwad (56.83%), Dakshina Kannada (47.60%), Mysore (41.35%) are the four most urbanised districts of the states whereas Kodagu (14.62%), Koppal (16.79%) Mandya (17.08%) Chamarajanagar (17.17), are the least urbanised districts of the states. (Map 4.6) The state has 25 urban agglomerations/cities having population of one lakh and above. Bangalore UA is the largest urban centre of the state with population of 8,499,399 and is the only primate city of the state. The other important urban centres are Mysore, Hubli-Dharwad, Mangalore, Belgaum and Gulbarga. Map 4.6 provides the spatial patterns of distribution of urban population in the state.
4.8.5 Age Composition

Karnataka has 28,37,486 persons in the age group of 14-16 years, which constitutes the target population at secondary stage. Out of which 14,89,920 were males and 13,47,566 were females (2010). In rural areas the figures corresponds to 17,38,118 for total, 92,29,223 for males and 8,15,195 for females. In urban areas there
were 46,39,614 persons out of which 41,09,873 were males and 5,29,740 were females. In 14-16 years age group it was estimated that there were 45,875 were from scheduled castes and 1,81,181 were from scheduled tribes communities.

4.8.6 Sex Composition

The state ranks tenth in sex ratio among various states and union territories of our country. The sex ratio of the state was recorded as 968 females per 1000 males. Sex ratio in the state is above the national average of 940 females per 1000 males. Udupi district has highest sex ratio of 1093 females per 1000 males whereas Bangalore Urban district is at the bottom with 908 females per 1000 males. Udupi (1093), Kodagu (1019), Dakshina Kannada (1018), Hassan (1005) and Chikmagalur (1005) have surplus female population in their districts.

4.8.7 Literacy

The state is ranked at 23 position in literacy rate among all other states and UTs of our country. In 2011, 75.60 percent of total population were literates. (Map 4.7) The corresponding figures for total male literates are 82.85 percent, whereas it was 77.92 percent in rural areas and 90.54 percent in urban areas. Female literacy rate was recorded as 68.13 percent for total females, 81.71 percent for females in urban areas and 59.60 percent females were literate in rural areas. There was significant gap in literacy rate recorded in rural and urban areas. Whereas 86.21 percent of total persons were literate in urban areas only 68.86 percent were literates in rural areas. Map 4.6 presents the spatial patterns of female literacy in the state.
4.8.8 Social Groups: Distribution of Scheduled Castes and Scheduled Tribes

In Karnataka Scheduled Castes are not confined to one or two districts; they are distributed all over the state. According to 2011 census, there were 1,04,74,992 scheduled castes people accounting for 17.15% of the total population. (Map 4.8) There is heavy concentration of SC population in the districts of Kolar (30.32%),
Chamarajanagar (25.42%), and Gulbarga (25.28). Districts of Coastal Karnataka had significantly less number of SC Population. Udupi district had the least concentration with (6.41%), Uttara Kannada (8.1%) and Dakshina Kannada (7.09%). Map 4.8 presents the spatial distribution of scheduled caste population in the state.

Map 4.8: Karnataka – Spatial Distribution of Scheduled Castes Population, 2011
Scheduled Tribes: According to 2011 Census Karnataka had 4248987 persons from scheduled tribes. This accounts for 6.95% of total population of state. There is heavy concentration of ST population in the districts of Raichur (19.03%), Bellary (18.41%) and Chitradurga (18.23%). On the other hand districts with low concentration of ST population are Mandya (1.24%), Bijapur (1.81%), and Hassan (1.82%). Map 4.9 reflects spatial patterns of distribution of scheduled tribes’ population in Karnataka.

Map 4.9: Karnataka – Spatial Distribution of Scheduled Tribes, 2011
The SCs and STs Order Amendment Act, 1976, has notified 101 SCs in Karnataka. The state had highest number of SCs notified and living compared to other states/UTs of the country. Two of the SCs namely Adiya and Bant have been notified with area restriction. Adiya have been notified in Kodagu district and Bant in Belgaum, Bijapur, Dharwad and Uttar Kannada districts. Out of 101 SCs, Adi Karnataka, Madiga, Banjara, Bhovi, Holia, Adi Dravida and Bhambhi together constitutes 85 percent of the SCs population of the state.

By religion, 83% of the population are Hindu, 11% are Muslim, 4% are Christian, 0.78% are Jains, 0.73% are Buddhist, and with the remainder belonging to other religions.

Kannada is the official language of Karnataka and spoken as a native language by about 64.75% of the people. Other linguistic minorities in the state as of 1991 are Urdu (9.72%), Telugu (8.34%), Tamil (5.46%), Marathi (3.95%), Tulu (3.38%), Hindi (1.87%), Konkani (1.78%), Malayalam (1.69%) and Kodava Takk (0.25%).

The state has a birth rate of 2.2%, a death rate of 0.72%, and an infant mortality rate of 5.5% and a maternal mortality rate of 0.195%. The total fertility rate of the state is 2.2.

4.9 ECONOMY AND DEVELOPMENT

The Karnataka Economy is one of the leading economies among all the states in the country in terms of economic development. The state’s GDP at constant prices (2004-2005) at Rs. 2,57,125 crore. Maps 4.10 and 4.11 portray the share of primary sector and secondary sector in GDP.
Map 4.10: Share of Primary Sector in GDP for the current year 2008-2009 at Current Prices
KARNATAKA
SHARE OF SECTOR SECTOR IN GROSS DOMESTIC PRODUCT FOR THE YEAR 2008-2009 AT CURRENT PRICES
(DATA BY TALUKS)

% SHARE
0.28 - 2.39
2.39 - 5.03
5.03 - 9.24
9.24 - 14.32
14.32 - 24.97


Karnataka economy is largely service oriented and income from the sector contributes half the state’s GDP with the agricultural and the industrial sector contributing to nearly 25% each. The major manufacturing oriented industries in the state include: Sugar, Paper and Cement. Among the service oriented sectors, Karnataka leads the Indian biotechnology industry. IT/ITeS is another thriving
industry in the state, concentrated in and around Bangalore – the silicon valley of India.

The state has a strong infrastructure base. There are 20 ports across Karnataka, the two major ones being the Mangalore port and the Karwar port. A number of national and state highways facilitate inter-city and town communication. Map 4.12 portrays the density of road network in the state.

Map 4.12: Karnataka – Density of Roads, 2010
Karnataka also has a strong railway and airport network. Karnataka is relatively more preferred destination for investments. The Karnataka Udyog Mitra is a single contact point for all investors who wish to invest in the state.

4.10 HUMAN DEVELOPMENT

It is observed that the level of human development is much higher in Karnataka (0.650) than at the all-India level (0.621). Among the major Indian states, it ranks seventh, with Kerala occupying the first place. At the international level, Karnataka’s position is at 120 while India is at 127. The attainment of human development in Karnataka is more or less on par with that of Egypt and considerably above the level of Pakistan, Nepal, Bhutan and Bangladesh. It can thus be argued that the state is well placed in the context of human development in South Asia. The HDI for the state has increased from 0.541 (revised) in 1991 to 0.650 in 2001, showing a 20 per cent improvement (KHDR, 2005).

With respect gender development though the GDI in Karnataka (0.637) is much higher than the all-India figure (0.609) in 2001, Karnataka is sixth among the 15 major states in gender development and seventh in human development. At the international level, Karnataka’s rank in terms of the GDI is 99th as against 103rd for the entire nation. The GDI at state level has improved from 0.525 in 1991 to 0.637 in 2001, registering an increase of 21 per cent in ten years. The pace of reduction in gender disparities, however, has been rather slow. It is only marginally higher than the increase of 20 per cent in the HDI during the same period. The values for the GDI of districts are lower than the corresponding values for the HDI (KHDR, 2005).

4.11 REGIONAL IMBALANCES IN KARNATAKA

Owing to its large geographical area, vast north south and east-west extension, huge population base, varied natural environments and endowments, history of state
reorganisation had led to regional imbalances in the state. The princely state of Mysore had achieved relatively more development under the native Woodyar. In contrast the newly added areas such as Hyderabad Karnataka, Mumbai Karnataka were lagging far behind of Mysore Kingdom in terms of socio-economic conditions. Even after independence the successive governments have given priorities for different sectors.

A high power committee for the redressal of regional imbalances (HPCFRRRI) was constituted by the government in 2000. The HPCFRRRI identified 35 indicators encompassing agriculture, industry, social and economic infrastructure and population characteristics to measure and prepare an index of development. The committee went beyond the district as administrative unit to focus on inter district disparities. Taluks with index value in the range of 0.89 to 0.49 were classified as backward taluks with index value of 0.80 to 0.88 were classified as more backward taluks and taluks with index value of 0.53 to 0.79 as most backward. To reduce the backwardness of these taluks, the committee has recommended the implementation of special development plan. The high levels of regional, caste and gender disparities imply that not all children have equal access to education in the state. This hindered the economic growth and human development which, in turn slowed down the rapid progress that the state could have made otherwise.

The district wise education index reflects serious imbalances in educational attainments across districts. According to Human Development report 2005 the districts with least education index were Bijapur (0.642) Koppal (0.576) Chamarajanagar (0.570) Gulbarga (0.572) Raichur (0.524). All below the state average of 0.712. On the extreme Bangalore District had an index value of 0.887 and is the most advanced district of the state.
4.12 CONCLUSION

Karnataka is one of the largest states of our country. Owing to its vastness there are wide variations in its physical and cultural landscapes. These variation leads to imbalanced development of various sectors like agriculture, industry, services like health and education. The chapter facilitates research study in analysing determinants of regional disparities in secondary education in Karnataka. Basic background knowledge about various historical, socio-cultural, economic characteristics of the state will lead to outline meaningful explanations to understand the nature and extent of regional imbalances in the development of secondary education in Karnataka.