CHAPTER-6

COMMUNICATIONS

The study of the development of communications and transportation in Kamataka is very vital to understand the phenomenon of decline of traditional handicrafts. Roads, bridges and railways are the arteries through which the blood called trade flows. Development of communications is crucial to facilitate both internal and external trade. Let us look into the aspect of how the communication network developed in 19th century Kamataka and it's effects on the economy of the state.

Development of Communications:

At least three distinct phases can be observed in this development namely:

(i) From 1800-1840: only few attempts are made and not much importance was given, in this regard.

(ii) 1840 – 1880: The importance of communications was realized and definite attempts were made to improve the situation.

(iii) 1880 – 1900: Rapid development of railways and feeder roads.

Now let us discuss these phases in detail

Initial phase (from 1800-1840):

Communication was poor during this phase, which restricted the internal trade to a greater extent. The quantum of money spent in this direction was also meagre. The rulers failed to recognize the importance of communications and diverted their attention to irrigation, agriculture,
territorial aggrandizement etc.; Even then we notice some development in this regard for strategic reasons. Let us examine the conditions in different parts of the state.
Communications in Princely State of Mysore During the Initial Decades of the 19th Century

Mysore:

During the reign of Dewan Purnaiah the construction of Wellesley bridge on Cauvery at Srirangapattana was undertaken. The British resident in his correspondence to the Governor, Fort St. George, mentions the Dewan’s proposal to construct a bridge on the north of Srirangapattana to be called the “Wellesley bridge”, the entire expenses of which has to be defrayed by the Rajah’s Government. He writes: “I have already had occasion to point out to the notice of the Governor-General, the liberal policy of the Dewan manifested in many works of public use and improvement to the country of Mysore, this bridge will be an additional and lasting monument of the judicious application of the Rajah’s resources. This bridge affords facility to the internal commerce of the country and will be of immense help in future military operations”.

During the reign of Krishnaraja Wodeyar III permission was granted to construct a bridge over Lokapavani river near Srirangapattana. For the period of Maharaja’s rule, information can be gathered only from the conditions in which public works were found at the time of the British assumption. In 1831, there existed only three roads, which can be

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447 Madras political proceedings 31st August 1802; Josiah webbe, Resident to the Governor Fort St. George dated 27th August 1802.
448 Madras Political Proceedings, 26th Nov. 1819, No.3, 2078-79 resolution of the Governor in Council, dated 26th Nov. 1819.
entitled to the appellation viz. the road from Naikneri to Mysore via Bangalore; the road from Srirangapattana to Sira and Bellary; and the road from Bangalore to Harihar; and all of these were very indifferent, having portions running through swamps, the passage of which would detain the baggage of a regiment for the entire day; other places bore the appearance of water course, with beds of rivers sand, the soil having been washed away far below the level of the surrounding country. The better order in which few portions were preserved was in a great measure neutralized by almost total absence of bridges, which in a country like Mysore situated between the two Monsoons was a most serious inconvenience and throughout the year kept the progress of the merchant or the traveller, perpetually liable to interruption. It was no uncommon thing for a regiment or even the ‘tappal’ runners, to be detained for several days at a ‘nullah’ (Canal), at 16 miles from Bangalore and there were several other such impediments in different places on the three roads, where lives were annually lost to a considerable extent. There was not at the time of the assumption of the country by the British in 1831, a single pass through the Western Ghats, practicable for cattle with loads.

According to the Public Works Commission report of 1852, throughout the whole peninsular India, there was not one complete road of any length on which it would have answered to employ wheeled

traffic. The only made roads were those constructed for the use of army during the Mysore wars, but the monsoon rains had washed them away and they were of little use now. Trunk roads were equally defective with the solitary exception of the road to Bangalore from Madras.
Communications in Canara during the Initial
Decades of the 19th Century

Coastal Karnataka:

South Kanara of this early colonial rule, never had a developed system of transport. Sir Thomas Munro, its first collector experienced great difficulty due to the absence of at least a manageable system of transport. In the beginning of the 19th century, there was one main road, which connected one end of the province with the other. It started from Cavai River in the south and ran northwards on the coast of the Arabian Sea upto Sadashivghad, the northern most taluk of the province of Kanara and Sunda (Soonda). The length of this road was 205.5 miles. But this road was interrupted by a large number of rivers, which never had bridges and had to be crossed only with the help of ferry boats. There was another road called Calicut- Pane Mangalore which connected these two places traversing through Bekal (Kasargod taluk), Hosdurg and Vittla. A third road started from Mangalore to the then Mysore frontier passing through Charmadi, Belthangadi and Buntwal to Mangalore. From 1837 onwards some more important lines were opened and one such was the road from the western boundary of the then Mysore state through Coorg to Mangalore. This road was constructed to facilitate the movement of troops and stores between Madras, Bangalore, Mysore and the stations on the West Coast, for there was at the time a revolt against the company

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Government in south Canara (rebellion of Kalyanaswami in 1837) and the road was intended to facilitate the easy movement of troops through some of the taluks. However this road known as the Sampaje-Ghat road was completed only by 1845.
Communications in North Karnataka During the Initial Decades of the 19th Century

Bombay Karnataka:

Limited commercial activity and natural obstacles to easy communication were perhaps mainly responsible for the neglect of communication in this part of Karnataka in the beginnings of 19th century. The district of Dharwar has not a single metalled road to carry, during the Monsoon months, its produce to the coast or to other important marts out of the district. With slight variation this was true of Belgaum district and more so of Bijapur district which was further inland. Even under the British, conditions were none too happy. Like the Romans, the new empire builders were conscious of the importance of good communications for an effective control over conquered territories. So the early planning of roads by the British was done from a soldier’s point of view, and not that of a merchant. Even these military highways that sought to link Poona and Belgaum to one another and to the coast were hardly kept in good repair. Not till the 1840s did the British realize the possibilities of Karnataka developing into one of the richest cotton growing tracts in India. About this time experiments in cotton culture has started. Between 1840-60 the government of India established research stations and brought over American cotton experts to teach Indians how to grow exotic varieties of cotton. Most of these experiments turned out to be utter failures almost everywhere, except in the district of Dharwar, where the
climate was almost like that of the cotton growing regions of America. These experiments were synchronized with the new survey settlement by George Wingate, in which the assessment was placed upon each field, instead of the holdings of a cultivator\textsuperscript{455}. The earlier system of equitable basis of field produce was substituted by a geological basis of assessment. It was soon realized by the authorities at home and in India that good communications were essential for the success of commerce & the new land settlement.

**North-East Karnataka:**

In Bellary district for instance, where a greater part of the district consisted of black cotton soil, there were just 9 miles of "made roads"\textsuperscript{456}. There was not even a single arched bridge throughout the district. Between 1825-50, only a sum of Rs.2180/- per annum was spent on the maintenance of roads, which was less than one tenth percent of its revenue. This was slightly increased between 1840-50 to an average of Rs.3461/- per annum, about one seventh percent of its revenue.

\textsuperscript{455} B.L. Grover and S. Grover, "A New Look at Modern Indian History" -S.Chand publishers, New Delhi, page 170-171.

\textsuperscript{456} C. Ramachandran, "East India company and South Indian economy" --New era Publications, Madras, 1980. page 133.
Second Phase (1840-1880):

The attempts to develop communications during the initial phase were few and made from strategic point of view. These so-called military made roads were not very useful, from commercial point of view. From 1840 onwards the development of communications was done to facilitate trade. Though the progress in this regard was significant, it was not substantial. Let us examine the second phase in different parts of Karnataka.

Mysore:

In 1831, there was no systematic road making in South India. Cubbon found this a severe handicap to his schemes. Therefore he showed himself as a pioneer, in road making in Southern India. He established four classes of roads:

I. The trunk or imperial line.
II. The main or provincial road.
III. The taluk connection.
IV. The village roads or bye-roads.

Only the first and some parts of the second were metalled. The fourth was created in 1859 in connection with the levy of a plough tax. The road system demanded bridge building. In 1834, there had been only 4 bridges in Mysore viz. at Nanjangud, Srirangapatna, Sivasamudram and Closepet. Cubbon added to that number atleast six important one viz. at Fraserpet, Maddur, Hoskote, Benkipura (Bhadrawati), Shimoga and
Hiriyur. Cubbon's reputation however stands on his clearing and opening the four passes in the Western Ghats viz the Agumbe, the Bhoond, the Sampajee and the Periambadi. This may be said to have been hastened by the Canara revolt of 1837. Railways were still in their infancy, but when the Madras railway company was unwilling to construct a line joining Jolarpet and Bangalore until Calicut has been connected with Madras, Cubbon protested and persuaded the Govt. of India to order the commencement of work in 1859.

The roads constructed during this period, not only connected all headquarter stations with Bangalore, but some of them were great through lines, extending on all sides, to the frontiers of the province. Altogether 1597 miles of road, with 309 bridges and 1,988 drains were constructed in the province after the transfer of Government (1831) and before a regular department of public works was organized (1856).

Since the formation of the department of public works in 1856, the expenditure for 20 years on communications was Rs.45,63,658. This was laid out either in the construction of new roads or in rectifying and improving old ones, as well as in the construction of large bridges. In 1875-76 there were 1,552 miles of road maintained by the department at an expenditure of about Rs.3 lakhs and at the rate on an average of Rs.193 per mile, including the travellers bungalows and inspection lodges. The two new ghats – viz. the Bund and Haidarghar were most important.

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additions to the provincial communications and completed six outlets for cart traffic between Mysore and the western coast. The last was laid out at easier gradients than any other and promises to be of special importance, as it stands in direct connection with a well studied network of roads, designed to open out the whole of the Nagar Malnad. This tract of country so rich and fertile in its supari gardens was most difficult to access and presented a serious barrier to all communications with the coast. Opened by these lines, the whole province to its remotest corner is in communication with the western coast.

The construction of numerous bridges also devolved on the department of public works, in connection with both old and the new lines. These were so numerous that only the very largest need here be noticed, from among those, which have been constructed since 1856.⁴⁵⁸

Subjoined are particulars concerning 4 such works:

**Table 6.1: Major bridges date of completion and cost**

<table>
<thead>
<tr>
<th>Name of work</th>
<th>Over what River</th>
<th>On What Road</th>
<th>Date of Completion</th>
<th>Cost Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harihar bridge</td>
<td>Tungabhadra</td>
<td>Bangalore to Dharwar</td>
<td>1868</td>
<td>3,48,096</td>
</tr>
<tr>
<td>Sakaleshpur Bridge</td>
<td>Hemavathi</td>
<td>Bangalore to Mangalore</td>
<td>1870</td>
<td>1,94,620</td>
</tr>
<tr>
<td>Simoga Bridge</td>
<td>Tunga</td>
<td>Bangalore to Honnare</td>
<td>1859</td>
<td>1,07,538</td>
</tr>
<tr>
<td>Benkipur Bridge</td>
<td>Bhadra</td>
<td>Bangalore to Honnare</td>
<td>1860</td>
<td>74,997</td>
</tr>
</tbody>
</table>

The metalling of Tumkoor – Shimoga road and Bangalore- Harihar road was satisfactorily completed in 1867-68. 459

The important original works of road construction undertaken during 1872-73 were:

1) Sarjapura – Attibele road.
2) Tyamagondlu road.
3) Bangalore – Sarjapura road.
4) Chikkaballapura – Goribidanuru road via Manchenahalli ghat.
5) Goribidanuru – Hindupura road.
6) Huliyurdurga – Madduru road.
7) Kunigallu to Huliyurdurga road.
8) Gubbi to Hebbur road. 460

**Bombay Karnataka:**

The attention of the authorities at home was drawn to the neglect of roads, in North Karnataka, because 50% of the cotton exported from the Deccan came from the Dhanwar district, which had so far been favoured with about 7% of all the made roads in that part of the presidency. Conditions were equally deplorable in Belgaum and worse in Bijapur. The growing importance of Karnataka as a cotton growing region made the British realize that there was one more region in India, where considerable quantities of cotton could be grown profitably. Hence between 1850 and 1860, a great advance was made in developing

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communication with the western coast through Canara. In the black soil
villages, communications was easily kept up in fair weather by means of
tracks, but in the hilly portions cart traffic was dependent on the few made
roads which intersected them and which were both difficult to construct
and maintain. The natural line of export of produce was to the coast.
About the beginning of the Wingate’s survey (1844-45) a commencement
was made in Kanara to make cart roads from Sirsi to the coast. Honnavar
was the port to which the first road pointed but that was soon abandoned
and Kumta was selected as the port, the road leading to it by the
Devimani Ghat; but it was not till 1848 that any through communication by
cart road was effected between Hubli and Sirsi, and between 1850 and
1856 a road connecting Bankapur with Sirsi passing near Hangal was
made. Between 1860 and 1865 more roads were constructed from
Dharwar district into Kanara. Generally speaking it is to the opening up of
communications with the West Coast, which as previously stated occurred
between 1850 and 1860 that the hinterland owed its prosperity.461

By 1880 the country was tolerably opened up in several directions
so that the produce could be taken in whatever direction the best market
for it was obtainable. Even the Bijapur district, which was considerably
away from, the coast was benefited by the opening of the Kumbarlekh
Ghat.

461 R.D. Choksey, “Economic life in the Bombay Karnatak (1818-1939)” Asia Publishing House,
Third Phase of Development of Communications
(1880-1900)

During this period railways were rapidly extended and the route mileage increased from 1990 miles in 1881 to 25,363 miles in 1901 on an all India scale. Karnataka was no exception to this expansion. The survey reports from the 1880s onwards were bubbling over with the news on railways and what they are expected to do.\(^{462}\)

**Mysore:**

The construction of the railway between Bangalore and Mysore was commenced as a famine relief work in 1877. A portion of the line from Bangalore to Channapatna was opened on 20th March 1881. The whole line between Bangalore and Mysore was opened for passenger traffic on 25th Feb. 1882 and for goods traffic on 1st June 1882. This line was constructed almost wholly out of the current revenues of the state. A line of railway from Bangalore to Tumkur (43 miles) was commenced in October 1882 and opened for traffic on 11th Aug. 1884 and a further extension to Gubbi (11 miles) was opened on 26th December 1884. The cost of the construction of railway line from Bangalore to Gubbi was met chiefly from the proceeds of the debenture loan of 20 lakhs of rupees, raised by His Highness the Maharaja’s Government in 1882. The survey of the proposed extension of the line from Gubbi to Harihar was made and

surveys of shorter proposed lines between Mysore and Nanjagud, Bangalore and Hindupur and Birur and Shimoga was taken up.

In February 1889, the line was opened from Harihara to Birur 79 ½ miles and in August 1889, it was opened throughout, establishing direct communication between Mysore and Poona, and thus with Bombay. In December 1891, an extension of the line from Mysore to Nanjagud 15 ½ miles was completed from state funds. In December 1890, a line from Yeswantpur junction to Hindupur 51 ½ miles within Mysore was undertaken by the state engineers. The first section to Doddaballapur was opened in December 1892, and the remainder in September 1893, forming through connection with Guntakal, on the Madras – Bombay line. The Kolar Gold fields railway, ten miles on the broad gauge from Bowringpet junction to the Mysore mine was completed by the state in June 1894.

The Birur-Shimoga branch of 38.534 miles in length of the meter gauge was sanctioned during 1896-97. During the year (1897-98) earth work and masonry were in progress. After reconsideration it was decided to construct an entirely new bridge over the Bhadra river at Benkipur (Bhadravati) instead of the original proposal to take the railway over the road bridge, and work on the new bridge was taken up.  

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464 Memorandum of railways operations carried out by the Govt. of His Highness the Maharaja of Mysore during the year 1897-98.
The letter from Major C. Bowen, secretary P.W.D. Govt. of Mysore to the Assistant to the Resident in 1886 gives details about the extensive improvements, which are being carried out by the Govt. of Mysore to the Iyahalli Bisle Ghat road. The letter tells:

“This line of communication connects the western portion of the Mysore province with the district of South Canara and should eventually prove very useful in diverting the heavy traffic of the coffee districts of Mysore and North Coorg, from the Manjerabad Ghat road. This road was first opened out as a pack bullock track during the famine of 1876-77 and the expenditure then incurred in making it, with a minimum width of 8 feet is Rs.61,547/-.

For the improvements now being carried out, an additional expenditure of Rs.32,298/- was sanctioned in June last.”

The development of feeder roads is very essential, if railways have to serve any useful purpose. The action taken by the Mysore Government in this regard was commendable. Feeder roads from Kadur to Chikmagalur, Ajjampur to Hosdurga, Bidarkere to Hosdurga, Saslu to Chitradurga, Kodagnur to Bangalore main road, Harihar to Shimoga, Harihar to Harapanahalli, Yalladabhzagi to Sampige and Gandashi to Arasikere were constructed.

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465 Letter from Major C.E. Bowen R.E. Secretary to Govt. of Mysore P.W.D. to the Assistant to the Resident in Mysore, dated 03-05-1886 No.1911-358.
466 Letter from the secretary P.W.D. Govt of Mysore to the Assistant to the Resident in Mysore, dated 20th Jan. 1890, No.266/28.
**Bombay Karnataka:**

The West Deccan line of railway (Southern Mahrattah railway) from Poona to Belgaum was opened in 1887. The line passed through Khanapur, Belgaum, Chikodi, Gokak and Athni taluks. The line from Hotgi via Bijapur and Bagalkot, known as the East Deccan branch of the Southern Mahrattah railway was commenced as a famine relief work in April 1879. Work on this section, and the Bellary- Hubli line was once again started in November 1881, but from 1st October 1882, the system was made over to the Southern Mahrattah railway company. This was opened to traffic in 1884, ran through five of the 8 taluks of the district (Dharwar) connecting Bijapur with the more prosperous districts and trading centres in the North (Sholapur) and South. It touched Bijapur, Bagalkot, Badami and came to Gadag from where one branch was thrown into the Nizam's dominions of Karnataka and another linked Gadag with Hubli. Because of this branch of M & S.M. railway, the Sholapur-Hubli road, once of considerable importance lost its utility. The opening of this railway in 1884 completely diverted the former course of traffic. Bijapur was brought into direct communication by rail with Sholapur and Bombay. Since the opening of railways, a network of feeder roads, connecting the principle villages & towns with the railways has been constructed. In 1850 there were no cart roads in the district. There were in (1903-04), 748 miles of road of which 184 miles were metalled.

The main line of the Southern Mahrattah railway traversed the district entering near Alnavar and running due east through Hubli and Gadag. From Hubli one-branch ran south eastwards entering Mysore territory near Harihar and from Gadag a second branch ran northwards towards Bijapur. In no part of the Bombay presidency has more been done to improve communications than in Dharwar.

**North East Karnataka:**

The Bellary- Krishna railway was sanctioned for construction on the 26th September 1883. It was made over to the Southern Mahrattah railway company on 1st January 1888.468

The North-West line of the Madras railway (standard gauge) traversed the two eastern taluks passing through the town of Adoni and leaving the district by a large girder bridge over the Tungabhadra at Rampuram. This section was opened in 1870. At Guntakal just beyond the borders of Bellary, there is a junction between the Madras and the Southern Mahrattah railways. The metre gauge line of the latter crosses the district in a westerly direction connecting Guntakal with Bellary and Bellary with Hospet and intum with Dharwar in Bombay Karnataka. Through Guntakal, Bellary is also connected Southwards with Anantapur and Bangalore and to the east with the districts of Kurnool, Cuddapah, Guntur and Krishna. The line from Guntakal to Bellary was finished in 1871 and was originally a part of the Madras railway and on the standard

468 Appendices to the Administration report of Railways for 1891-92.
gauge. It was converted to meter gauge in 1887. Two-meter gauge famine protective lines from Bellary to Rayadurga and from Hospet to Kotturu, 33 and 38 miles in length respectively have been constructed. Bellary has 271 miles of metalled and 582 miles of unmetalled roads, all of which were under the management of the local boards. The main routes were the road from Bangalore, which passes through Bellary and Adoni on the way to Raichur and Secunderabad. The eastern and western taluks were joined by roads passing to the north and south of the Sandur hills and by a third which crosses the state of Sandur by means of two narrow gorges through the hills which enclose it.

There is no railway line in Bidar. The metalled road from Osmanabad to Hyderabad passes through the district and was lined on both sides with avenues of acacia. Humnabad, which was once the chief market, has lost its importance since the opening of the Nizam’s state railway.

Impact of the Development of Communication on Trade

In the first half of the 19th century, the state of communications in India was extremely defective. In most parts of the country roads as such did not exist, and where they did exist, their condition was very unsatisfactory. The first report of the public works commissioners appointed by Madras Government informs us:

"Nearly the whole of the so-called made roads are only so far made as to be just practicable for carts. They admit of carts moving in dry weather, with light roads at a very slow pace and by very short stages. But by far the greater portion of these roads are unbridged and a heavy shower cuts off the communications wherever the stream crosses a line; and they are in many cases so unfit to stand the effects of the wheels while the surface is wet, that is monsoon months, they are out of use except for cattle or foot passengers". 471

It was not surprising then to find that the rates for carriage of any agricultural produce were exorbitant and that consequently there was very little trade in existence. The effect of this lack of communications on the volume of the export trade of a country is obviously important but its effect on the internal trade was even more so. It made the carriage of bulky and cheap goods almost impossible and generally speaking restricted trade to the comparatively light and valuable products. Buchanan tells that silk manufacture seems especially favorable for a country so far from the sea

471 First report of the Public works commissioners, Madras, 1852.
and from navigable rivers as the cost of long carriage on such valuable article was of little importance. The consequences of this was naturally ‘an extremely’ limited market even for the best and most characteristic native products. Thus during the first half of the 19th century, the trade of Karnataka was restricted, within very small bounds, as regards the kind of goods and also as regards the distance traversed. The development of communications by the construction of railways and metalled roads has directly developed, internal no less than foreign trade. Facilities for rapid carriage tend to equalize prices not only over large areas of country, but also over long periods of time. As wheeled carts supersede pack bullocks and as railroads supersede carts, the whole of India was expected gradually to become one country for the purposes of trade. But the extension of transport facilities failed to revolutionize internal trade. On the other hand it promoted external trade considerable.

Fearing that railways might after all encourage Indian industries, a complex system of rates and fares was introduced, which stimulated goods traffic from sea ports into the interior, but hampered internal trade and industry. Rates were lower on goods to and from the ports and high on goods traffic inside the country. Even as late as 1918, the Indian industrial commission quoted the case of hides: “The port rate was 50% less than internal rates which discourage Indian tanning industry”. The

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472 W.W. Hunter, “The Indian Empire, it’s people, History and products”- 1886, P. 593.
trunk lines ran from the big seaports to regions rich in raw materials, which also became markets for Britain's manufactured goods. Built to exploit, the country's natural resources such railway construction aided Europe in becoming manufacturer for India rather than India in becoming the manufacturer for herself.
Railways and decline of traditional industries

However railways were not an unmixed blessing. As Thomer explains they were built for strategic and commercial reasons and had no organic relationship with the growth needs of India. By enabling the cheap machine made produce of England to undersell in India, railways brought about the decline of the indigenous handicraft industries in an astonishingly short space of time. According to G.S. Iyer “every additional mile of railway constructed in the country, drove a fresh nail into the coffin of one industry or another”. Dr. Anstey’s assertion is that “railway’s can’t by themselves, be held responsible for the destruction of these industries—the indigenous industries suffered the most during the first three quarters of the 19th century, that is before the railway network had opened up India”. While it is true that the decline of cottage industries had started before the railway era begun, but this process was slow, confined to certain industries only and had not spread to the interior of the country. Railways by opening up the countryside to foreign manufacturers has tended to hasten the final eclipse of certain industries and directly killed iron smelting, (As forests were reserved for railway construction, the price of charcoal used in smelting went very high) glass and paper industry.

The case of Malavalli iron may be taken as an example. The Rice Gazetteer on Mysore of 1897 tells: "The iron of Malvalli is considered the best in Mysore territory. The ore is procured from the Sravana hills, near Tippur. Of the quantity produced, about half was exported in a crude state: the remainder was manufactured in the taluk into nearly every description of implements and of these the larger proportion were exported in various directions. But the indigenous iron manufacture has much declined and become nearly extinct during recent years, being unable to compete with importations from England". 476

The same Gazetteer also gives the condition of glass and paper industries as follows: "Mattod is celebrated for its glass works, at one time more extensive than they are now. The articles made consist entirely of bangles, the rings worn round the wrists of native women. The furnaces are constructed in a high terrace, built against the inside of the fort wall, but many of them seem to have long been disused. Only two are in good repair". 477

About paper it tells: "of the other manufacturers that of paper, was formerly an important branch, especially in Challakere taluk, the size of the paper made, in which was the standard of a measure called the Dodderigaz or yard". 478

477 Ibid P. 531.
Hand in hand with the extension of railways in India, went on the extension of metalled roads. The policy of trunk lines necessitated the construction of good roads, if the railways were to serve any useful purpose. The extension of roads was as rapid as that of railways and road construction affected the village life of India rather more directly than railway construction. The road increased the importance of weekly market in the village economy and also the importance of local fairs. At the same time expansion of railways made possible the distribution of foreign goods throughout the country with the help of these market's and fairs.

Regarding textiles of Tumkur district, the Rice Gazetteer tells:

"The importation of English piece goods has destroyed the formerly thriving manufactures of Chintz in Sira and Midagesi; the imported cloths being superior and cheaper".  

The second wave of railway building in the 1880s stimulated agricultural output and agricultural exports again, though it may also have indirectly harmed the rural economy. The railways turned carters out of business in Kanara. In other districts several small local artisans, such as the weavers of Belgaum could no longer compete with foreign and domestic manufacturers and may have gone into agriculture.

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479 Ibid page 172
Railways and Famines

As communications in the interior were poor, before the 1850s, villagers had to depend mostly on their own production and every village was required to grow a wide variety of food crops. Again agricultural prices not only fluctuated violently from season to season, but also differed greatly among not too distant places during the same season.

The improvement in means of communication by the construction of railways and metalled roads has directly developed internal no less than foreign trade. Facilities for rapid carriage tend to equalize prices not only over large areas of country, but also over long periods of time. As wheeled carts supersede pack bullocks and as railroads supersede carts, the whole of India gradually became one country for the purpose of food supply. The vicissitudes of a tropical climate always caused local failures of harvest, whether by drought or by flood and no practicable schemes of irrigation or embankment can altogether avert them. But India as a whole has never yet been unable usually to yield sufficient food for her population. The real problem of famine is a problem of distribution. In former times, the inhabitants of one district might be perishing of starvation, while plenty reigned in a district but 100 miles distant. Railways were instrumental in the leveling of prices, especially of food grains through out India. Thus railways were often regarded as an insurance against famines. The place having a railway link need not to worry about

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failure of crop failures and its scarcity was met from outside through railways. Thus Kotturu and Rayadurga lying in the famine zones were protected from the ravages of famines by the laying of railways.

But railways had one more aspect during 19th century, which we have to consider seriously. They encouraged the export of food grains, from the country in the pursuit of higher prices and to maintain a favourable balance of trade. The old practice of storing grains as an insurance against future calamities was given up. Also by encouraging the cultivation and export of commercial crops, railways were responsible for diverting land from food to cash crops thereby causing shortage of food in the country. Therefore railways were often blamed for the increased frequency and greater magnitudes of famines during the last decades of 19th century. Therefore we see dichotomy in the role played by railways and their responsibility for famines.

Commercialization of Agriculture and Communications

As communications in the interior were poor before the 1850s, villages had to depend mostly on their own production and every village was required to grow a wide variety of food crops. Again agricultural prices not only fluctuated violently from among not too distant places during the same season.  

From about 1840 the cultivation of local cotton started to spread gradually in several districts, often displacing wheat, gram, Indigo and other crops. So far as the exotic varieties were concerned, all governmental efforts failed miserably, almost everywhere except in the district of Dharwar, where the climate was almost like that of the cotton growing regions of America. One important reason for this failure in exotic varieties would seem to be that the American variety was unsuitable for the Indian spinning wheel. On the other hand the Indian cotton was of too short a staple for the Lancashire market. Unless there was an assured and constant foreign demand, cultivators would not grow the exotic varieties unsuitable for the home markets. One more serious obstacle that hampered the spreading of cultivation of a commercial crop like cotton for purposes of export was lack of satisfactory means of communication especially from the interior to the coast.

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Though it was generally agreed that the short-stapled Indian cotton gave India, a position of low priority in relation to the British textile industry, the hope of improving the quality of Indian cotton was not entirely given up. Between 1840-60, the Government of India established research stations and brought over American cotton experts to teach Indians, how to grow cotton. Most of these experimental stations turned out to be utter failures and eventually the Indian peasant produced a fine hybrid variety, the Dharwad- American, which proved suitable for Indian conditions. In the meanwhile the imminence of American civil war in 1860 and the possibility of serious interruptions to Lancashire’s cotton supplies gave a fresh impetus to Indian cotton. The demand for Lancashire high it was between 1860-65, proved only temporary, and with the resumption of exports from America, fell off considerably. However India was able to keep up its own exports, largely due to the growth of textile industry on European continent, where the mills were not only looking for the cheapest supplies of raw cotton, but their machinery was more suitable for working with Indian cotton. As the reviewer of India’s external trade pointed out in 1883, of the Indian cotton exported to England, more than half was reshipped to continent and there was also a considerable direct trade in cotton between Bombay and Austria, France, Italy, Belgium, Germany and Spain.

The survey reports from the 1880s onwards were bubbling over with the news on railways and what they were expected to do. On the
opening of the West Deccan line of railway from Poona to Belgaum, was observed in the survey report on Chikodi taluk 1886 as follows:

“What effect the new communication will have in the immediate future, it is difficult to estimate. It will always be advantageous for the ryots - a body of men without capital as a rule to dispose of their agricultural produce as near the place of its production as possible... I believe the facilities afforded by the railway will stimulate production of the more valuable kinds of agricultural produce: these will be bought from the producers in the local markets and thence exported in exactly the same manner as is done now: the only difference being in the healthy stimulus which will be given by the addition of the new communication.”

Take two important centers in the Karnataka - Hubli and Gadag – both centers of cotton industry and trade. Those parts of the line, which traverse the Hubli taluk, were opened for traffic on 1st July 1885. The two lines which connect at Hubli- one the Bellary branch running via Gadag with another branch line northwards from Gadag to Bijapur and the other the Bangalore branch passed respectively through the middle and near the western edge of the great cotton and wheat growing area of the district. By the line running from Hubli northwards, raw cotton and such articles of export as were destined for Bombay reached their terminus.

The most significant event was the revolution in the means of transport. The newly opened roads and railways linked up different parts

of the country thereby facilitating movement of crops from the surplus to
the deficit areas and from the hitherto isolated village to the port towns,
from where it was shipped to distant parts of the world. Every railway
station became a mandi or an export center to which traders and
exporters alike flocked.\textsuperscript{486}

Effect of Development of Communications on Irrigation

The tank system of Mysore was developed in early days and shows that a high degree of empirical skill had been attained in the selection of sites and in the construction of reservoirs. During the administration of Dewan Purnaiah (1800-1810) tank restoration was energetically pursued and the public records of that period show that annually a sum of about 1 ½ lakhs of rupees on the average was utilized for the purpose. During Purnaiah's period money spent on irrigation works constituted 40% of the total expenditure on public works, but that on roads was only 0.86%. The expenditure on irrigation was to a great extent absorbed in the repair of old tanks and channels, the majority of which had fallen into a ruinous condition during the reigns of Haidar and Tipu.

No special activity was visible in the early days of the British administration. From 1831 to 1856 when the Public Works Department (1856) was constituted the money annually spent on the restoration and repair of tanks was considerably less (being about Rs.80,000-00) when compared to that in Purnaiah's time. Cubbon's original system was economical. As labour was scarce, he organized a labour corpse known as the Khalihaths, employed able bodied convicts on roads and induced the ryots to look after their own tanks by granting concessions on their assessments. But if the ryots refused they were not forced or otherwise penalized. Between 1835 and 1855, when two passes in the Western Ghats, two big bridges, and thousands of tank repairs had been finished
only 3.7% of the gross collections had been expended on public works. The duty of carrying out the works was entrusted to Revenue officers, a duty they continued to perform even after the constitution of the Public Works Department in 1856. The need for associating the Public Works Department in the work of restoration was not definitely recognized till 1863, when it was laid down that all major repairs involving an outlay of Rs.500/- or more should be entrusted to the Public Works Department, while the minor repairs were left in the hands of the civil authorities as before.

The Secretary of State summarized the later history of this new department in 1870 in the following words: “The Public Works Department” he wrote “owing to stress of work and to its machinery being inadequate to the task of keeping so large a number of small tanks in repair has during the last fourteen years (14 years), allowed many hundreds to fall into ruins.”

In 1872 a separate irrigation department was formed and the task of dealing with tank’s seriously was put in its hand. But the great famine of 1876-78, suspended the activities of restoration due to insufficiency of funds. After the great famine of 1876-78, however restoration of tanks continued.

Between 1840 and 1872 the British focused mainly on the development of communication network. During this period, the money

annually spent on irrigation, restoration and repair of tanks was considerably less (being about Rs 80,000/-).

The constitution of Public Works Department in 1856 was mainly done to promote the construction of roadways in the state. Only in 1863, it was given the responsibility of major tank repairs involving an outlay of more than Rs500/-. The roads constructed during this period, not only connected all district headquarter stations with Bangalore, but some of them were great through lines, extending on all sides, to the frontiers of the province. Besides numerous bridges were constructed. Money was spent to repair the roads. As a result of it the P.W.D. gave more importance to road construction, road repair and bridges and neglected construction and repair of tanks. Therefore many hundreds of tanks fell into ruins by 1870. Therefore the M.A.R. (1867-68) tells: “Little now remains to be done in laying out new lines of communication, except in the Nagar division”

The aim of the British was to convert India into a colony. The traditional industries of Mysore have declined after the development of road network. Hand in hand British wanted to promote agriculture in India by improving irrigation facilities, so that India could become an agricultural country & ceased to be a manufacturing country, therby supplying agricultural raw materials for the industries in England. Therefore from

489 Mysore Administration Report 1867-68, remarks on communications, page 88
1872 onwards they diverted attention to irrigation. By that time Mysore had a good network of roads and Bangalore was connected by rail with Madras. The Secretary of State in Jan. 1872 decided that the restoration of irrigation works in Mysore should take precedence of the proposed railway scheme from Mysore to Bangalore & the project being in consequence was indefinitely postponed.490

In the following year, however the state of the Mysore finances seemed to the Supreme Govt. to warrant the reopening of the question. The Chief Commissioner was called upon to report. This was presented in October 1873. It appeared that after deducting the sums necessary for the irrigation department and adding a lakh per annum to the funds available for road and bridge work in the Malnad talooks, a clear surplus of 50 lakhs at least would be left during the next five years (1874-79) for railway purposes. After considering the financial and Public Works Department progress a dispatch was sent to the Secretary of State recommended that sanction should be given to the immediate construction of a railway, the cost of which was estimated at a maximum sum of 46 lakhs.491

The Secretary of State did not appreciate this dispatch. He pointed out: "that only about 6 ½ years of British administration remain for Mysore, the young Raja coming of age at 18. The surplus of these years may be calculated at 6 ½ lakhs. The irrigation department wanted a total sum of 106 lakhs of which 72 lakhs are to be provided from the ordinary public

490 No. 87R, dated 11th June 1874, From Secretary for India to the Govt. of India.
491 General A., March 1874, No. 17, K.W. General A., December 1874, No.11
works grant leaving, 34 lakhs to be defrayed from extra ordinary sources. It was proposed that this should be spread over 12 years, but only 6 ½ years is available. The surplus at the disposal of Government for the construction of railway would therefore be only 31 lakhs, an inadequate sum. ⁴⁹²

He (Secretary of State) was of the opinion that the money might be spent more advantageously in road making in the Malnad district, taking for granted that the irrigation department was capable of spending its entire allotment of 34 lakhs within the specified time, if the working staff be increased by the addition of the engineers who would have been employed on the proposed railway from Bangalore to Mysore.

Extract from the proceedings of the Govt. of India, P.W.D. supports this view in the following words: "The surplus revenue (6 ½ lakhs) would amply suffice for either the railway or the irrigation works but is quite inadequate for both; and I cannot consent nor do I understand your excellency to desire that the latter should give way to the former. On the contrary the placing of the irrigation system on a thoroughly sound footing being admitted on all hands to be of prime importance to the well-being of the state, I am anxious that we should take the only full security for this being effectually done by seeing it done while the immediate administration of affairs is still in our hands. Now to do this would require a contribution to the irrigation department from surplus revenue of about

⁴⁹² No. 7, of 20th March 1874, K.W. General A., December 1874, No. 11.
55,000 l. a year and I would strongly recommend that this contribution or as much of it as can be properly used, should be regularly made. I, observe indeed that the irrigation department is described as being at present incapable of utilizing more than 20,000 l, in addition to what it receives annually from the ordinary public works grant; but this assumed inability is apparently due to the deficiency of executive agency, a deficiency which, I presume might at once be supplied by transferring to irrigation works the engineers with their subsidiary staff, who in the event of the railway having been decided upon, would have been employed upon it.

For the balance of about 3,10,000 l., which will remain after completely satisfying the claims of irrigation on the surplus funds, might probably applied with incalculable advantage, to road making, particularly in the western "Malnad" district respecting which "long neglected portion" of Mysore, I see recorded an observation of the late Chief Commissioner, Mr. Bowring, that "what irrigation works are to the Maidan talooks, roads are to the Malnad"\(^\text{493}\).

This extract provides ample proof about the anxiety of the British to complete the arrangements for colonial exploitation at the earliest and before handing over the state to the Maharaja. Besides the terrain of Malnad is suitable only for road construction and not railways. The development of communications (roads) in Malnad might have provided

\(^{493}\) Nos. 1686-87 R. dated Fort William. 22\(^{nd}\) July 1874.
the agricultural produce of both Mysore and Nagar division an easy access to the ports. The neglect of development of irrigation at this stage might have been disastrous to commercialization of Indian agriculture. Therefore railway construction was temporarily given secondary importance.

The Mysore administration report (1867-68), remarks on communications in the province were like this: “Great improvements have undoubtedly been effected, both as regards up keep and the raising of the different roads to a proper standard. The sum expended on original works was Rs.3,09,792/- and on repairs Rs.3,28,161/-, aggregating Rs.6,37,953/-. Little now remains to be done in laying out new lines of communication, except in the Nugur division, where the department has hitherto failed to surmount the natural difficulties of the climate and the dearth of labour”.

This clearly shows that there is a good network of roads in Mysore state except in the Nagar division. Therefore attention was paid to improve communications in Malnad in 1870s, so that the agricultural resources of the entire province of Mysore could be exploited to the advantage of British. Hand in hand with the attention to irrigation, roads have to be constructed in Malnad to facilitate commercialization of agriculture. It was through Malnad that Karnataka has access to the sea and development of communications in that part is vital for the British to carry the agricultural products.
In spite of these efforts, Karnataka faced severe famine in 1876-77. As a result of it several railway lines such as that between Mysore and Bangalore and that between Bijapur and Bagalkot started. Railway construction becomes rapid after 1880. By 1885 the Govt. of Mysore, has spent 68 lakh rupees on railways. Subsequently it concluded a treaty with the Southern Mahrattah railway, for further railway construction, which brought foreign capital for this purpose. Guaranteed interest payment of 4% per annum and pledging of the railway so constructed, for some years with the S.M. railway was promised. Dewan Seshadri Iyer defended this arrangement on the ground that the internal resources of the state can now be employed for irrigation, since railway construction was carried out with foreign capital.

We can conclude that greater attention paid by the British to the development of communications and initial neglect of irrigation works both original and repairs, had resulted in famines during the last quarter of the 19th century. The interest shown in the last quarter of 19th century towards development of irrigation was only with the intention of encouraging commercialization of agriculture and to convert India into a colony of supplying agricultural raw materials. Therefore we see efforts to improve both communications and irrigation during this period.

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494 Dr. Sebastian Joseph (Ed.), "Karnataka charithre volume 6"- Prasaranga Hampi kannada University 1997.
Dichotomy of Rail – Road Competition and Complementation

Like famines and railways, there is a dichotomy in the relation between roads and railways. Hand in hand with the extension of railways in India, went on the extension of metalled roads. The policy of trunk lines necessitated the construction of good roads, if the railways were to serve any useful purpose. The extension of roads was as rapid as that of railways and road construction affected the village life of India rather more directly than railway construction. The road increased the importance of weekly market in the village economy and also the importance of local fairs. At the same time the expansion of railways and roadways made possible the distribution of foreign goods throughout the country with the help of these markets and fairs. We had already seen how the extension of rail & road has led to the decline of traditional industries, like the handloom weaving of Belgaum.

But it is wrong to presume that rail and road complemented with each other everywhere.

Between 1850 and 1860 several roads were laid out from Dharwar towards the Canara coast. Yet the cost of carriage for conveying cotton from the field to the ships was Rs.60, for every 100 rupees worth of cotton. Not till the coming of railways in the 80s did the cotton find a rapid means of transport to the coast. But the layout of the railways carried Dharwar cotton to Bombay and the old routes to Kumta, Karwar and
Honnavar fell into disuse. The same is the case with Humnabad in Bidar. There was no railway line in Bidar. The metalled road from Osmanabad to Hyderabad passed through the district. But the construction of Nizam's state railway in the last decades of the 19th century had its effect. Humnabad, which was once the chief market, has lost its importance since the opening of the Nizam's state railway495.

Another line of M & S.M. Railway entered the Karnataka from Sholapur. It touched Bijapur, Bagalkot, Badami and came to Gadag from where one branch was thrown into the Nizam's dominion (Bellary) and another linked Gadag with Hubli. Because of this branch of the M & S.M. Railway the Sholapur – Hubli road, once of considerable importance lost its utility. The opening of this railway in 1884 completely diverted the former course of traffic. Bijapur was brought into direct communication by rail with Sholapur and Bombay496. The railway especially to the north was the great artery of export of the produce of the entire district and the adjacent parts of the native states. Probably the most immediate and striking change was the diversion to the railway of the export trade in cotton. The difference in cost between road and rail transport varied with the situation of the village. Whatever the cost of transport most of the cotton was sent by rail. It was distinctly an advantage for a village to be near the railway station. In the years that followed the railway diverted to

itself the huge export trade, which formerly went eastwards by road. Every railway station became a mandi or an export center to which traders and exporters alike flocked. But this is not always true in every case. The survey reports of Navalgund and Ron, talukas (1908) tells: "most of the produce was transported by road and not by rail. Because road transportation was cheaper. Railways were more useful during rainy season". Thus there was seasonal complementation between road and rail.

498 Dr. Sebastian Joseph (Editor), "Karnataka Charitre" Vol.-VI, (1800-1900) – Hampi Kannada University.
General Condition of the Roadways

While the maintenance cost of railways, once laid down was not great, the contrary is true about roadways. Though roadways require less capital than railways for original works and construction, they need huge quantities of money for maintenance. We had already discussed the condition of roads in the initial decades of the 19th century. The so-called "made roads" were those constructed for military purposes and had little commercial value. During rainy season they were unfit for transportation.

Even the trunk roads in the Madras presidency were equally defective with the solitary exception of the road to Bangalore. According to the public works commission report of 1852 "throughout the whole of Peninsula there was not one complete road of any length on which it would have answered to employ wheeled traffic." 499

The amount spent on the maintenance of these roads was also meagre. In Bellary district, for instance where a greater part of the district consisted of black cotton soil there were just nine miles of "made roads". Between 1825-40 only a sum of Rs. 2180 per annum was spent on the maintenance of roads which was less than one-tenth percent of its revenue. This was slightly increased between 1840-50 to an average of Rs.3461/- per annum, about one seventh percent of its yearly revenue. 500

The constitution of Public Works Department in 1856, and the realization on the part of the Government that maintenance of good communications is sine-qua-non for trade, improved the condition of roads significantly. The report on the administration of Mysore 1872-73, while dealing with the original works and repairs of roads on Bangalore district tells:

"A greater portion of the grant for repairs viz. Rs. 7514, has been utilized in the upkeep of several roads all of which have been generally kept in good condition, with the exception of the Kanakanahalli road, for the improvement of which special provision has been made in the Budget for 1873-74".

The following table shows concisely the number of miles of road of different classes, kept in repair during the year (1867-68) and the cost of maintenance.  

Table 6.2: Expenditure on the maintenance of roads

<table>
<thead>
<tr>
<th>Executive Division</th>
<th>I Class or Imperial road</th>
<th>II Class or Provincial road</th>
<th>III Class or District road</th>
<th>IV Class or Cusbah road</th>
<th>Total</th>
<th>Total outlay during the year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangalore Division</td>
<td>77</td>
<td>84</td>
<td>156 ¼</td>
<td>34</td>
<td>351 ¼</td>
<td>54,619</td>
</tr>
<tr>
<td>Toomkoor Division</td>
<td>58</td>
<td>62 ¾</td>
<td>192</td>
<td>0</td>
<td>312 ¼</td>
<td>36,961</td>
</tr>
<tr>
<td>Kolar Division</td>
<td>0</td>
<td>145</td>
<td>96</td>
<td>0</td>
<td>241</td>
<td>19,010</td>
</tr>
<tr>
<td>Mysore Division</td>
<td>121 ½</td>
<td>114</td>
<td>80</td>
<td>0</td>
<td>315 ½</td>
<td>43,039</td>
</tr>
<tr>
<td>Hassan Division</td>
<td>0</td>
<td>164 ½</td>
<td>166</td>
<td>0</td>
<td>330 ½</td>
<td>34,001</td>
</tr>
<tr>
<td>Shimoga Division</td>
<td>0</td>
<td>24</td>
<td>277</td>
<td>0</td>
<td>301</td>
<td>36,885</td>
</tr>
<tr>
<td>Cudaloor Division</td>
<td>0</td>
<td>42</td>
<td>122 ¾</td>
<td>11</td>
<td>175 ¾</td>
<td>20,021</td>
</tr>
<tr>
<td>Chitaldroog Division</td>
<td>163</td>
<td>60</td>
<td>22</td>
<td>0</td>
<td>245</td>
<td>35,446</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>419 ½</strong></td>
<td><strong>696 ¾</strong></td>
<td><strong>1112</strong></td>
<td><strong>45</strong></td>
<td><strong>2272 ¾</strong></td>
<td><strong>2,79,982</strong></td>
</tr>
</tbody>
</table>

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501 Report on the administration of Mysore (1867-68).
The Rice Gazetteer tells: "Under communications the expenditure was laid out either in the construction of new roads or in rectifying and improving old ones, as well as in the construction of large bridges. In 1875-76 there were 1,552 miles of road maintained by the department at an expenditure of about 3 lakhs and at the rate on the average of Rs.193 per mile, including the travelers bungalows and inspection lodges."\(^{502}\)

In spite of the efforts made by the Public Works Department, some roads are not in good condition. The report on administration of Mysore in 1867-68 tells: "Great improvements have undoubtedly been effected both as regards upkeep and the raising of the different roads to a proper standard. The sum expended on original works was Rs. 3,09,792/- and on repairs Rs.3,28,161/- aggregating Rs.6,37,953/-. The amount is not small, but the Chief Engineer is of the opinion that the repair allotment is altogether inadequate to keep the lines in proper order".

The report on the administration of Mysore (1872-73), while dealing with repairs in Kolar district tells: "The repairs in this district chiefly consisted of the annual maintenance of the several roads; of this, the road from Chintamani to Bagepalli was provided with a maintenance allowance of Rs.1600/- but only a small sum of Rs.696-13-10 was expended and more could not be spent on the road as the soil is very hard and rocky and the trace had been lost sight of in several places."\(^{503}\)

\(^{502}\) B.L. Rice, "Mysore in General" Gazetteer Vol.I, - Revised edition, 1897, page.742
\(^{503}\) Report on the Administration of Mysore (1872-73).
The above case refers to the geographical barriers and difficult terrain, which hinders effective communication. Similarly the Tyamagondlu road, which links the Bangalore and Tumkur, could not be completed in time because of the presence of water in the Tyamagondlu large tank.\textsuperscript{504}

Besides geographical barriers, dereliction of duty by the authorities concerned was also responsible for the bad condition of some roads.

The letter from Postmaster General dated 28th July 1905, to the First Assistant to the Resident tells that: "The Superintendent of post offices Shimoga division who has been recently touring in the Kadur and Hassan districts of the Mysore state, has brought to the notice that the main roads connecting Kadur with Mudigere and Arasikere with Sakaleshpura are not suitable for wheeled traffic. The first is in want of immediate repairs especially for a few miles east of Chikamagalur, and the local authorities do not appear to have taken any steps in the matter though it was brought to their notice. The other road from Arasikere to Sakaleshpura is reported to be in a bad state of repair and to require metalling throughout in order to render it suitable for traffic."\textsuperscript{505}

Similarly Col. Betham has written to the Resident in 1913 about the unsatisfactory condition of roads leading from Bangalore to Tumkur, Hoskote, Devanahalli, Kanakanahalli and other places, particularly in the

\textsuperscript{504} Report on the Administration of Mysore (1872-73).
\textsuperscript{505} Letter from post Master General Madras, to the First Assistant to the Hon’ble Resident in Mysore, dated 28\textsuperscript{th} July 1905, No.S.I., 1-10.
immediate neighborhood of Bangalore. This shows that road maintenance even in the vicinity of Bangalore was neglected during the closing decade of the 19th century.

Besides the money spent on the repair of roads on an average was approximately Rs.200-300 per mile per annum, which cannot be regarded as substantial during the later half of the 19th century.

Therefore the Imperial Gazetteer of India comments on the roads in the Bellary district as: "Were the roads kept in proper repair the district would be amply supplied with means of communication but money for bridges is scarce and in the cotton soil taluks road metal is difficult to obtain." 

We can conclude by saying that in the later half of the 19th century, though conditions of the roads have much improved and efforts were made to repair and maintain them; yet their condition was not fully satisfactory.

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506 D.O. From F.A. to Mysore Dewan dated, 30th September 1913, No. 5446.
Opening of Suez Canal

The opening of the Suez Canal in 1869 was another event of worldwide importance. The opening of the canal cut-short the sea route between India and England by over 3000 miles and shortened the period of journey by 36 days.\(^508\) Before the construction of this canal, trade between India and Europe was hampered in several ways. Firstly ships had to take the long sea route round the Cape of Good Hope.\(^509\) As a result of it freight rates were high. Secondly it gave weevils ample time to damage cargoes of wheat and oil seeds. The opening of the Suez Canal in 1869 removed all these difficulties. The voyage to Bombay by the new route was reduced from a hundred days or more to about 25 days in ordinary cases and three weeks when faster vessels were employed. What is more the journey became safer as monsoons and storms, which were the common features of the Cape route, were avoided. Quicker transport through Suez Canal released tonnage and increased the shipping capacity competing for employment. This brought about a depression in the shipping industry, partly on account of the shorter distance through the canal and partly on account of the increased competition among the shipping companies, the freight rates between India and Europe were slashed down. Freight rates from Calcutta to

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London fell from 55 shillings in 1869 to 27 shillings in 1881 per ton. Reduction in freight rates together with the linking of Indian ports with the interior of the country led to a remarkable development of commerce. European industries could now supply their manufactures at a cost within the means of the common Indian consumer while Indian goods including bulkier and heavier raw materials could be sold in the European markets not only in good condition but also at competitive prices.

Therefore the decline of traditional handicrafts and commercialization of agriculture took place rapidly during the last quarter of the 19th century, though these tendencies started much earlier.