

HISTORICAL ROOTS OF REGIONAL IMBALANCES IN INDIA

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The paper examines the historical roots of the regional imbalances found in the Indian economy. It is argued that a highly spatially uneven pattern of development took shape during the British rule in India due to the imperialist policies of the British. In the agricultural sector the main regional differentiation was between the irrigated and the non-irrigated areas. Geographically uneven investment by the British in canals created pockets of agricultural prosperity in selected area leading to growth of agricultural output and productivity and promoted commercialization of agriculture in these areas. The railway network also supported the process of commercialization of agriculture in these regions. The paper, however, does not find strong statistical support in favour of the hypothesis that the differences in the land tenure system led to a differential pattern of growth in the zamindari and the non-zamindari areas. Regional concentration of modern industry was much sharper. Several factors contributed to the concentration of modern industry and finance in the Bengal, Madras and Bombay Presidencies. Being located on the coastal region they benefited from the expanding foreign trade. The process was supported by the development of the railway system which connected the ports with the hinterland. The railway freight policy which was designed to favour the movement of finished goods from the ports into the hinterland and of raw materials from the hinterland to the ports promoted location of industries in the port cities. Most of the modern commercial and banking activities was also concentrated in these three port cities. The presence of an organised indigenous class of capitalists and financiers in Bombay and Madras regions helped in the industrial development of these regions. Absence of a well developed urban hierarchy contributed to the concentrated pattern of development without multiplier effects on the surrounding regions. The paper concludes that the distorted and uneven pattern of regional development which India inherited from the British has continued to shape the pattern of development in the post-independence India.

INTRODUCTION

At the time of Independence the Indian economy was marked by a highly unbalanced spatial structure. Most of the modern industry and commerce was concentrated in a few metropolitan centres. Large parts of the country were almost unaffected by the process of economic growth. The unbalanced regional pattern of growth has continued in the post-Independence period inspite of several deliberate efforts of the government to achieve a more balanced pattern of growth. The present regional imbalances in the Indian economy have to be traced back to the prolonged period of colonial subjugation under the British rule, which affected the different regions of the country differently. As Kundu and Raza observe: 'The spatial structure of the colonial India acquired its basic contours during the second phase of the colonial rule – that of British industrial capital (1813-1914) particularly with the development of the railway network – and got further crystallized during the third phase – that of British finance capital (1914-47)' (Kundu and Raza 1981, p. 2).

In a similar vein Krishna Bharadwaj (Bharadwaj 1982, p. 605) in a seminal article has observed that:

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India's developmental experience cannot be studied without referring to the historical fact of a protracted colonial domination and the way the mechanism of imperial exploitation affected the different segments and regions of the economy. The imperialist strategy itself altered, from period to period, reflecting partly the varying requirements of the growth of the metropolitan economy, and partly the exigencies of the world political scene. It also differed as among the separate regions of India depending upon the locally specific economic conditions and the placement of the region in the scheme of colonial exploitation.

A number of explanations have been put forward to explain the spatially uneven pattern of development. A major explanation is in terms of the institutional factors, particularly the land revenue system, established during the British rule. It is argued that the regions under the zamindari system were subject to higher exploitation and did not provide for incentive for investment and agricultural growth as compared to the ryotwari system which provided security of tenure to the farmers (Bharadwaj 1982). This theme has been picked by a number of economic historians in the recent years to highlight the differences in the growth trajectory in the zamindari and ryotwari regions in the pre and post-Independence period (Banerjee and Iyer 2005; Kapur and Kim 2006; Iyer 2010).

The second explanation of regional imbalances underlines the role of regionally uneven public investment under the British rule, particularly with regard to canals and railways, which was aimed to serve the colonial interests. The uneven pattern of investment linked a few selected areas to world trade opening up opportunities for economic development, while the less favoured areas continued to stagnate.

A third and linked explanation is in terms of enclave type development in selected areas generated by the colonial policies, resulting in a distorted urban hierarchy, which did not lead to the development of the hinterland (Kundu and Raza 1981, p. 2). A fourth explanation runs in terms of the availability of local entrepreneurship (Bharadwaj 1982). Another explanation is in terms of the geographical factors and resource endowments of different regions (Roy 2014).

We explore these explanations in more detail in this paper.

IMPACT OF THE AGRARIAN STRUCTURE

The first explanation emphasizes the impact of the different patterns of land revenue collection introduced by the British in different parts of the country. Land revenue was the major source of government revenue during British times. In 1841, it constituted 60 per cent of total British government revenue, though this proportion decreased over time as the British developed additional tax resources (Banerjee and Iyer 2005: 1192).

Three major types of land revenue system were created under the British rule, namely, the landlord or the zamindari system, the individual settlement system or the ryotwari system and the collective settlement called Mahalwari (Baden Powel 1892; Banerjee and Iyer 2005). Under the zamindari system the revenue settlement was made with the landlords, while in the ryotwari system individual cultivator or ryot was responsible for payment of land revenue. Under Mahalwari system the whole village was made responsible for payment of revenue. It is estimated that roughly 57 per cent area under British rule was under zamindari system, 38 per cent under ryotwari system and 5 per cent under mahalwari system (Kapoor and Kim 2006: 26).

The landlord system mainly prevailed in the eastern region which was the first to come under the British rule and covered Bengal, Bihar, Orissa, parts of the Central Provinces and some parts of Madras presidency. Some of these areas were covered under the 'Permanent Settlement' of 1773, under which the landlords' revenue commitments to the government was fixed in perpetuity. In other zamindari areas a 'temporary' settlement was implemented whereby the revenue was fixed for a certain number of years, after which it was subject to revision.

The ryotwari system was adopted in most areas of Madras presidency (the present states of Tamil Nadu and Andhra Pradesh), Bombay Presidency (covering states of Maharashtra and Gujarat), and in Assam. In these areas, an extensive cadastral survey of land was done and a detailed record-of-rights was prepared. Unlike the Permanent Settlement areas, the revenue commitment was not fixed and was adjusted periodically in response to changes in the productivity of the land.

The Mahalwari system was adopted in the North-West provinces (western UP) and the Punjab. Under this system village bodies which jointly owned the village were responsible for the payment of land revenue.

The reasons for adopting different land revenue settlement systems in different parts varied. The stage at which the area was annexed, the prevailing thinking of administrators, the historical practices prevailing in the region all played their role (Banerjee and Iyer 2006, p. 1195). There was a fierce debate among the British administrators as to the merits of the two main revenue settlement patterns namely zamindari and ryotwari. A major voice was that of Sir Thomas Munro who argued for the establishment of the individual cultivator system in Madras on the grounds that it would raise agricultural productivity by improving incentives, that the cultivator would be less subject to arbitrary expropriation than under a landlord; that they would have a measure of insurance through government revenue remissions in bad times, that the government would be assured of its revenue since small peasants are less able to resist paying their dues (Banerjee and Iyer 2006: 1195).

The administrators favouring the landlord system argued that large landlords would have the capacity to invest more and therefore productivity would be higher; the peasants' long term relationship with the landlord would result in less expropriation than the short term one with a government official; a big landlord would provide insurance for small farmers; a steady revenue would be assured because the landlords would be wealthy and could make up an occasional shortfall from their own resources (Banerjee and Iyer 2005, p. 1195). William Muir, Member Board of Revenue of North West Provinces in his minute dated December 5, 1861 listed the following benefits of a permanent settlement: saving on the expenditure of periodical settlements; deliverance of the people from the vexations of resettlement; freedom from depreciation of estates at the close of each temporary settlement; prosperity arising from increased incentive to improvement and expenditure of capital; greatly increased value of landed property and content and satisfaction among the people (Dutt 1960, p. 200).

The two major land revenue settlement types created by the colonial power are supposed to have created different incentive climate for investment. The peasant property was relatively insecure in the landlord areas and therefore investments that made the land more productive were discouraged because of the risk of expropriation by the landlord. In contrast, in the raiyatwari areas the proprietary rights of peasants were based on an explicit written, contract with the

colonial state.

It has been argued by scholars that the differences in the land revenue system had a long term impact on the growth trajectory of the different regions. Bharadwaj (Bharadwaj 1982, p. 605), for instance, argues that:

"The imperial policy differed considerably from region to region, in terms of the types of land settlement and the extent of commercial penetration into the agrarian economy. This, coupled with the differential policy towards public investment in irrigation and railways, had a very diverse impact on the different regions. These differences were important in shaping the future pattern and rate of industrialisation, during the inter-war and post-Independence years, and the rise of the capitalist and financier classes in the regions."

According to her (Bharadwaj 1982, p. 606) the Zamindari system adopted in Bengal led to pauperization of peasantry and artisans in the region:

"With the Zamindari system adopted in some parts such as Greater Bengal, a number of consequences followed. A class of revenue collectors came up whose primary interest was not in productive cultivation. With growing sub in feudation, usury, rising ground rents, following increasing pressure on land of population and pauperised artisans, the surplus in the region was diverted from the direct producers to the traders, moneylenders and feudal landlords. This meant that productive investment in agriculture did not grow; on the other hand, it resulted in the parasitical growth of unproductive consumption and the proliferation of unproductive commerce. This is reflected in the relatively poorer growth of agricultural output, and of yield per acre in the region as compared to others There was very little incentive for the rentier lords or for the impoverished, over-exploited tenants, to invest in capital assets and in productive activity."

In the ryotwari areas, on the other hand, where there was a more direct connection between the producers and the State, a better recognition of the legal occupancy rights and greater restrictions on the transfer of land from the indebted small operator to moneylender/trader, productive investment was more attractive than in the predominantly zamindari *areas* in the eastern region (Bharadwaj 1982, p. 606).

Kundu and Raza also emphasize that the change brought about by the British in agrarian relations considerably widened the gap between land ownership and production responsibility. The rentiers were essentially interested in extorting a higher amount of rent from the tenants rather than in improving the quality of land. Absentee landlordism and the system of multi-layered sub-feudation were prevalent on a significant scale (Kundu and Raza 1981, p. 40).

Some recent studies have also emphasized the role of differences in the land settlement pattern on long term growth of the regions. According to Banerjee and Iyer the greater security of tenure in the *ryotwari* areas provided better incentives for the peasants for investment in agriculture than in the landlord areas (Banerjee and Iyer, 2005, p. 1198). They also argue that the land revenue system also had an effect on the motivation for public investment. According to them:

Since it was easier for the colonial government to raise rents in non-landlord areas, it meant that the state could capture some of the productivity gains from these areas, and

hence had more reason to invest in irrigation, railways, schools, and other infrastructure in these areas during the colonial period. In this context, we should note that almost all canals constructed by the British were in non-landlord areas. If, indeed, these areas had better public goods when the British left, it is plausible that they could continue to have some advantage even now (Banerjee and Iyer 2005, pp. 1198-99).

Kapoor and Kim (2006) also attribute differences in the economic performance of the landlord and non-landlord areas to the differing institutional developments. They lay emphasis on the issue of agency costs in supervising agriculture. To quote:

"While it is extremely difficult to establish the causes of divergence in the economic performances between landlord and non-landlord districts, we believe that the divergence was caused by differing institutional developments in these two regions. In the pre-independence period, agricultural investments and productivity in landlord areas were more likely to suffer from agency costs and greater uncertainty in property rights. The ability of landlords to extract effort and rents from tenants was likely to be functions of land tenancy reforms. When landlords possessed considerable power, they were likely to extract a significant level of effort from tenants through threats of eviction or extra-legal coercion and maintain high levels of productivity. However, when tenancy reforms reduced the landlord's bargaining power, agricultural productivity likely fell as the effort levels of tenants declined" (Kapoor and Kim 2006, p. 10-11)

They also argue that the differences in the property rights also influenced investment decisions by local bodies on public goods like education and health. To quote:

"Because the bargaining power of landlord elites increased when the economic alternatives of their tenants were more limited, landlords had incentives to limit the economic and geographic mobility of tenants and laborers. Landed elites who controlled district boards were less likely to promote spending on public education. They were also less likely to promote infrastructural investments for urbanization. Even in the post-independence period, while other factors such as collective action costs may have become important over time, we believe that agency costs and property rights uncertainty continued to depress investments and productivity in the historically landlord areas" (Kapoor and Kim 2006, p. 11).

Several scholars have attributed the decline of agriculture in the landlord areas to the low capacity of investment due to uncertainty of tenure and diversion of surplus in the hands of the landlords who had little interest in investment in agriculture (Bharadwaj 1982; Kundu and Raza 1982; Banerjee and Iyer 2005; Iversen et al 2012). The decline in foodgrain yields in Bengal and United Provinces observed during the period 1891-95 to 1941-46 is cited in support of this argument (Table 1).

This analysis ignores the impact of other factors which may have been operative. For one thing, yield of non-foodgrains do show a marked rise during this period in Bengal and United Provinces though less than that in Madras and Punjab (Table 1). This would suggest that the surplus in these provinces was diverted towards non-foodgrain crops which were more profitable and had an export market. An important factor causing decline of foodgrain yields in Bengal was the extension of cultivation to inferior land due to increasing population pressure. In the Bengal delta,

income from rice had to be shared between too many people dependent on land. As Roy as pointed out: 'By early in the twentieth century, population growth in this region had led to the cultivation of inferior land. The rice areas that did well commercially, such as coastal Madras, had lower population densities and received canal irrigation that made it possible to combine rice with dry season crops' (Roy 2002, p. 116).

Table 1
Per Cent Change in Yield Per Acre: 1891-95 to 1941-46

Provinces	All Crops	Foodgrains	Non-Foodgrains
British India	6.45	-7.31	52.96
Greater Bengal	-12.85	-22.17	54.55
Madras	46.02	30.35	79.84
Greater Punjab including NWFP	35.6	19.24	74.2
United Provinces	2.62	-8.63	29.32

Source: G. Blyn, *Agricultural Trends in India*, Appendix Table 4C as quoted in Bharadwaj (1982).

The quality of agricultural data has also been questioned by some scholars. Maddison (1971), for example, raises doubts about these trends in area and productivity of crops on the basis of faulty statistical system. According to him there was some incentive for farmers to bribe *patwaris* to under-report land for tax purposes, and chowkidars are all too often illiterate and drowsy people, who would usually report that things were normal, i.e. the same as the year before. There is, therefore, a tendency for under-reporting of both levels and rates of growth in areas covered by statistics, and the areas not covered by statistics were generally on the margin of cultivation and may have had a more steeply rising trend than the average area covered. Thus, Blyn shows no growth in output in Bengal where the chowkidars did the basic reporting. He did not cover the Sind desert area in which the British built the huge Sukkur barrage in 1932 (Maddison 1971, Ch. 3).

We may now look at the presumed impact of the land tenure systems on investment in land. No direct evidence of private investment in agriculture during this British period has been put forward in support of this hypothesis. Also in the traditional foodgrain growing areas the opportunity for investment was missing in the absence of any technological change in wheat and paddy crops. Public investment in irrigation was also limited in the landlord areas. On the other hand, public investment in canals was higher in the non-landlord areas and contributed to higher yields and enabled shift towards non-foodgrain crops.

R.C. Dutt, a member of the British Civil Service, well familiar with local conditions, wrote about the beneficial effects of Permanent Settlement in 1906 (Dutt 1960, pp. 335-36) in the following words:

The beneficial results of the Permanent Settlement of 1793, which limited the State-demand from landlords, and the Rent Acts of 1859 and 1985, which limited the landlord's demand from tenants, are obvious in every part of Bengal at the present day.....And there is a resourceful peasantry, able to demand their rights, and able also to resist the first effects of a drought and a failure of crops. The rents are light; the cultivators are not under the thralldom of money-lenders; and British administrators can

view with a just pride a province where their moderation insured agricultural prosperity to a nation.

Dutt finds the condition of cultivators in the Bombay and Madras provinces which were under the ryotwari system in sharp contrast to those in Bengal, the land of permanent settlement. To quote:

It is a lamentable truth that the present proprietors of Madras and Bombay, paying the land tax direct to the State, have, at the present day, less security than the tenants of private landlords in Bengal. The Bengal tenant pays 11 per cent of his produce to his landlord; the Gujrat Ryot pays 20 per cent to the State.....Certainty and definiteness in the rental make the Bengal tenant value his tenant-right, and enable him to free himself from the thralldom of the money lender; uncertainty and indefiniteness in the State demand make the Madras and Bombay Ryot till his land without hope, without heart, without motive to save, and year by year he is sinking deeper in indebtedness (Dutt 1960, p. 376).

Available evidence indicates that in spite of lack of public investment in irrigation the zamindari areas continued to enjoy a higher level of productivity per acre because of the favourable soil and climatic conditions. The zamindari areas (Bengal and United Provinces) had higher value productivity than the non-zamindari areas (Bombay and Punjab) in 1931 (Table 2). Only Madras province among the non-zamindari areas shows a relatively high agricultural productivity because of better irrigation facilities.

Table 2
Agricultural Productivity, 1931 (Rs. per Acre)

Province	Kapoor and Kim	Blyn's
Bengal	73.1	64.5
Bombay	37.2	50.0
Central Provinces	32.2	32.8
Madras	66.2	65.3
Punjab	39.3	51.7
United Provinces	50.9	59.5

Source: Kapoor and Kim 2006, p. 26.

The above arguments also overlook the fact that the burden of land tax fell substantially over time. According to Maddison by 1947 land tax, which used to be about 30 per cent of agricultural produce in the Mughal period, was only 2 per cent of agricultural income (Maddison 1971, Ch. 3). The fall was most marked in Bengal where the tax was fixed in perpetuity in 1793. One estimate puts land revenue per cultivated acre at Rs. 2 in zamindari areas and Rs. 2.5 in non-zamindari areas (derived from Roy 2014: Table 2, p. 26).

The governmental policies contributed to the process of regional differentiation in Indian agriculture by promoting commercialization of agriculture in some areas (Kundu and Raza 1981, p. 41). Indeed, the non-zamindari areas of Bombay, Central Provinces, Punjab and Madras were more commercialized with larger areas under non-foodgrains as compared to the zamindari areas in Bengal and United Provinces (Table 3).

Table 3
Percent Area under Non Food Crops by Provinces: 1901 and 1931

Province	Blyn		Kapoor and Kim	
	1901	1931	1901	1931
Bengal	14.5	11.5	15.8	12.3
Bombay	18.0	23.0	6.1	31.6
Central Provinces	28.4	29.7	25.0	26.4
Madras	13.8	21.7	17.4	23.1
Punjab	14.0	15.6	43.7	27.6
United Province	16.0	19.4	12.7	11.7

Note: The geographical coverage of the provinces differs in the two studies. For Bengal, Blyn's definition also includes present day Bangladesh; for Bombay, Blyn's definition includes Sind; for Punjab, Blyn includes Delhi and the Northwest Frontier province. For Madras, Central Province, and Bombay, the coverage overlaps closely with those of Blyn's. In addition, there are a few differences in our coverage of crops between the two studies. Blyn, Kapoor and Kim we include coffee and other food-grains but exclude indigo.

Source: Calculated from Kapoor and Kim 2006, p. 26.

In the first half of the twentieth century the differences further increased (Table 4). In fact, Greater Bengal shows a shift towards subsistence farming and a sharp decline in non-foodgrain crop area during the period 1891-95 and 1941-46, while in Madras and Greater Punjab area under non-foodgrains nearly doubled over the period.

Table 4
Per Cent Change in Acreage by Provinces: 1891-95 to 1941-46

Provinces	All Crops	Foodgrains	Non-Foodgrains
British India	16.27	25.55	19.84
Greater Bengal	-3.37	0.79	-29.54
Madras	16.45	3.89	82.95
Greater Punjabincl. NWFP	51.69	46.42	94.38
United Provinces	28.18	27.93	29.12

Source: G. Blyn (1966), Appendix Table 4C as quoted in Bharadwaj (1982).

The differences in the cropping pattern are attributed by scholars like Bharadwaj (1982) and Sumit Sarkar (1983, p. 32) to a process of forced commercialization suggesting involvement of peasants in the process on unfavourable terms under coercion to meet the growing burden of revenue and rents in cash. This is challenged by Roy who believes that: "Commercialization had a positive correlation with productivity growth. The vision of moneylender power in forced commercialization was a fiction. The thesis of perilous commercialization exaggerated the shift in cropping pattern, presumed knowledge about intensity of famines in precolonial period, was inconsistent with data and underplayed the fundamentally climatic origin of famines?" (Roy 2002, p. 123).

Maddison points out that the enlargement of markets through international trade was less of a stimulus in India than in other Asian countries such as Ceylon, Burma or Thailand as the two primary staples, tea and jute, were less than 3.5 per cent of the gross value of crop output in 1946 (Maddison 1971, Ch. 3).

The differences in the cropping pattern in different areas were determined by a number of factors geographical, demographic and economic. Variations in climatic and soil conditions played an important role. The landlord areas had more favourable geographical situation with lower altitude, higher rainfall and alluvial soils as compared to the non-landlord areas which had higher altitude, lower rainfall and higher proportion of black and red soil (Banerjee and Iyer 2005, p. 1200). The former areas devoted higher proportion to growing foodgrain crops, while the latter areas specialized in the cultivation of non-foodgrain crops (Iversen et al. 2012, p. 17).

The role of demographic factors was equally important. The landlord areas had much higher density of population. In 1911 there were 404 persons per sq. mile in landlord areas as compared to 304 in non-landlord areas (Kapoor and Kim 2006, p. 29). Roy reports a much higher difference in population density - 419 per sq. mile in landlord areas and 203 per sq. mile in non-landlord areas (Roy 2014, p. 26). There was also higher crowding in agriculture as urbanization was lower in these areas and the proportion of workers in manufacturing and services was also lower (Kapoor and Kim 2006, p. 29). Under these circumstances it was only natural that a higher area was devoted for the cultivation of the foodgrains crops. The shift away from non-foodgrains towards foodgrain crops in Bengal noted above seems to be caused by the higher population growth which took place in this region after 1901.

The economic factors also played their role in promoting commercialization of agriculture. Thus, Kapoor and Kim argue that the non-landlord areas were responding faster to the commercialization of agriculture and shifting their production toward non-food cash crops which were generally more productive (Kapoor and Kim 2006, p. 16). Iversen et al (2012) argue that greater uncertainty in property rights in landlord areas contributed to lower levels of agricultural investments and were likely factors responsible for the concentration of their agriculture in food crops, especially in paddy rice. According to them since a switch from food to non-food crops involves significant new investments in technology and a change in the organization of production, landlords may have been less willing to take on such a venture when their property rights status was more uncertain. In addition, a switch from traditional paddy rice to non-food crops probably increased the monitoring costs of tenants (Iversen et al., p. 26).

Roy in a recent article has argued that geographical rather than the institutional factors (land tenure system) were responsible for the differential performance of the different regions (Roy 2014). He points out that by virtue of possession of more fertile land, the deltas, floodplains, and coasts were better situated to gain from the nineteenth century globalization, which encouraged export of crops like wheat and rice, increased the capacity of the states as well as commercial actors, and led to more spending both on private and government accounts on roads, railways, schools, and hospitals (Roy 2014).

PUBLIC INVESTMENT IN IRRIGATION

The evolution of regional structure of the Indian economy was greatly influenced by the pattern of public investment during the British rule particularly in case of canals and railways. The regional distribution of public irrigation was markedly uneven. The lion's share of canal investment went to Punjab because of its strategic importance. The permanently settled and densely populated regions of Eastern India did not receive much investment in public irrigation.

Punjab, Madras and Bombay accounted for largest part of public investment in irrigation during the period 1860-61 to 1946-47 (Table 5). Punjab was the chief contributor to wheat exports and Madras and Bombay of cotton exports. Western UP, a wheat and sugarcane growing region, was also a favoured destination of investment in canal irrigation in the second half of the nineteenth century but its share declined sharply in the twentieth century. Canal investment was lowest in the high rainfall provinces of Bihar, Bengal and Orissa throughout the period.

Canal irrigated area expanded rapidly in late nineteenth century rising from about 6 million acres in 1880-81 to 13.42 million acres in 1895-96 (Whitecombe 2002, p. 676). The pace of expansion slackened after that. By 1925-06 canal irrigated area increased to 22.97 million acres or about half of the total irrigated area in the British provinces, though the importance of canals varied from province to province (Table 6). While most of the area in Punjab, NWFP, Sind, CP & Berar was irrigated through canals, over half of the area in UP and Bombay was irrigated by wells. Tanks were an important source of irrigation in Madras, Bengal and Bihar.

Table 5
Province-wise Distribution of Public Investment in Irrigation in British India During 1860-1947 (in Rs. Million)

Period/States	Punjab	Bihar	Madras	Bombay	UP	Others	Total
1860-61 to 1897-98	135 (24.2)	34.48 (6.1)	112 (19.7)	50 (9.0)	135 (24.52)	94.52 (16.28)	558 (100)
1898-99 to 1919-19	315 (47.0)	28.09 (4.2)	119 (18.0)	96 (14.4)	58 (8.7)	529 (7.9)	669 (100)
1919-20 to 1946-47	590 (30)	46.2 (2.3)	284 (14.8)	514 (26.1)	360 (18.3)	170.8 (8.6)	1968 (100)

Note: Figures in brackets are percentages.

Source: MVK Thavraj, Public Investment in India taken from Bharadwaj (1982: 607).

Table 6
Area Irrigated by Source, 1925-26 ('000 acres)

Province	Canals	Wells	Tanks	Others	Total
Assam	191		1	172	364
Bengal	289	32	615	557	1493
Bihar & Orissa	1812	628	1709	1205	5354
Bombay	290	531	109	38	968
Sind	2930	43	1	127	3101
CP & Berar	946	117		46	1109
Madras	3803	1654	3362	467	9286
NWFP	769	89		57	915
Punjab	9836	3385	15	120	13356
UP	2080	4737	65	2317	9199
Minor Admin.	28	88	28		144
Total	22974	11304	5905	5106	45289

Source: Royal Commission on Agriculture 1929 as given in Sharma (1975: 175).

In 1945-46 public works irrigated 32.8 million acres, i.e. about half of total irrigated area of British India and one-fourth of India's cropped area (Whitcombe 1982: 677). However, spread of canal irrigation was highly uneven across states. Madras, Sind and Punjab accounted for 25%, 22% and 21% of the canal network by the end of the British rule in India (Table 7). Their combined share in capital invested was 60% and their share in total irrigated area was 72%. The canal system of these provinces was also the most productive in terms of returns and contributed 86% of net revenue.

Table 7
Extent of the Irrigation System and Its Financial Results by Provinces for the Triennium 1943-44 to 1945-46

Provinces	Mileage in Operation				Average area Irrigated per annum		Total Capital	
	Productive		Total		Produ- ctive	Total	Produ- ctive	Total
	Main Canals	Distri- butaries	Main Canals	Distri- butaries				
Madras	28	7	25	18	13	12	15	13
Bombay	0.6	--	6	2	--	1	0.1	7
Sind	28	12	22	10	16	14	24	17
Bengal	--	--	0.8	0.8	--	0.8	--	1
Bihar & Orissa	3	3	5	5	3	4	3	5
United Provinces	13	21	16	26	15	17	17	21
Punjab	26	39	21	30	53	46	39	30
North Western Provinces	0.7	0.4	1	1	0.8	2	0.7	2

Source: Whitcombe 1982: 736.

Table 7 (contd.)
Extent of the Irrigation System and Its Financial Results by Provinces for the Triennium 1943-44 to 1945-46

Provinces	Net Revenue			
	Average		As % of Capital	
	Produ- ctive	Total	Produ- ctive	Total
Madras	10	9	8	5
Bombay	0.2	2	17	10
Sind	19	18	10	5
Bengal	--	--	--	0.4
Bihar & Orissa	1	1	7	5
United Provinces	12	14	9	6
Punjab	57	53	19	9
North Western Provinces	0.9	2	17	4

Source: Whitcombe 1982: 736.

The differential pattern of investment in canal system in different provinces was guided by the ecological, commercial and strategic considerations. The prime motive of investment in canals was to stabilize and to increase the revenues from agriculture (Bharadwaj 1982). The British invested more in canal irrigation in the non-landlord areas as rents could be frequently revised in these regions and the British could expect a share in the increased productivity through higher

rents (Kundu and Raza 1981; Banerjee and Iyer 2005). There was no such motivation working in the *zamindari* areas where the revenue was fixed in perpetuity.

Kundu and Raza elaborate the reasons behind such a differential approach on the part of the British rulers in the following words:

"First, the permanent settlement, introduced by the British in eastern India, made it extremely difficult for the empire to collect additional revenue consequent upon increased productivity induced by modern irrigation. Since the British were primarily interested in increased revenue, and not in increased productivity *per-se*, they did not favour investments in the irrigation of eastern India contrary to the explicit and clear technical advice given by various governmental committees and experts. Second, dietary habits and markets in Britain were in greater need of the crops grown in India's western regions as compared to those in the east. As a consequence, there was greater pressure from the 'home' country to invest in irrigation in the western region. Third, the relatively open spaces of the western region in general and of the western Punjab in particular made it possible for the British to work, so to say, on a clean slate and establish canal colonies with rectangular plots, wherein measurement and calculation of rates was easier. This contrasted sharply with the high rural density, the complex web of land rights and mosaic of tiny holdings in eastern India. Fourth, the British were quite keen to settle the demobbed soldiers, with whose help they ruled internally and hoped to meet the external challenge posed by the Czarist expansionism along the north-western frontiers of the empire" (Kundu and Raza 1981, p. 42-43).

Table 8
State-wise Per Cent of Net Sown Area Irrigated, 1950-51

State	Major & Medium	Minor	Total
Andhra Pradesh	7.3	7.1	14.4
Assam	2.7	21.5	24.3
Bihar	4.5	18.6	23.1
Bombay	1.0	5.2	6.2
Jammu and Kashmir	6.0	35.7	41.7
Kerala	11.6	15.3	26.9
Madhya Pradesh	1.9	2.9	4.9
Madras	12.9	17.1	30.0
Mysore	4.1	13.9	18.0
Orissa	2.6	15.4	17.9
Punjab	22.4	15.5	37.9
Rajasthan	3.5	8.7	12.2
Uttar Pradesh	11.3	18.4	29.7
West Bengal	2.2	22.5	24.7
All States	6.1	11.4	17.5

Source: Calculated from official data of Ministry of Agriculture, Government of India

Public investment in irrigation was among the main factors which determined growth of agricultural output and productivity in different regions. It boosted agricultural export. Export of cotton and wheat from India in value terms increased by about six times (Dutt 1960, p. 116 and p. 251). According to one estimates the exports of wheat increased at an annual rate of growth of 92.3 per cent during the period 1867-68 and 1875-76; at the rate of 39.3 per cent during the period

1875-76 and 1880-81; and at the rate of 36.6 per cent during the period 1880-81 and 1885-86 (Saini 1968, p. 111). The major contribution to wheat exports came from the Punjab region which witnessed a fast expansion of irrigation and cultivated area. The growth rate of rice exports was much lower at 8.3 per cent, 6.7 per cent and 1.5 per cent during the three periods respectively.

Canal investment by the British, geographically uneven as it was, created pockets of agricultural prosperity in selected area leading to growth of agricultural output and productivity and promoted commercialization of agriculture in these areas. These developments, however, had a limited impact and left large parts of agriculture in the country unaffected.

It needs to be noted that public irrigation works (major and medium) covered only about 6 per cent of net sown area in the country and about one-third of the net irrigated area in 1951. Minor works (mainly wells) remained the more important source of irrigation in all states both in landlord and non-landlord areas except Punjab and Andhra Pradesh, where canal irrigation covered a larger area (Table 8).

The increase of the area irrigated by private means is estimated to be considerable though reliable data on this aspect are not available (Gadgil 1924, p. 139). The higher proportion of irrigated area by private means in the states erstwhile under the zamindari system (Assam, Bengal, Bihar, Orissa and Uttar Pradesh) also casts doubt on the hypothesis that there was no incentive for the tenants to invest in agriculture in the zamindari areas. Available evidence shows that the tenant farmers did make substantial investment in private means of irrigation in the zamindari areas of United Provinces (Table 9).

Table 9
Increase in Number of Masonry Wells in United Provinces: 1924-37

Division	No of Masonry Wells			% increase In Nos.	% Share In increase
	1924-25	1936-37	Increase		
Meerut Division	53428	61326	7898	14.78	7.38
Agra	78012	86160	8148	10.44	10.36
Rohilkhand	17974	21333	3359	18.69	2.57
Allahabad	75306	82936	7630	10.13	9.98
Jhansi	41664	46171	4507	10.82	5.55
Nainital	123	138	15	12.20	0.02
Benaras	103650	116900	13250	12.78	14.06
Gorakhpur	140856	165864	25008	17.75	19.95
Lucknow	79682	81755	2073	2.60	9.83
Fayzabad	158086	168737	10651	6.74	20.30
Total UP	748781	831320	82539	11.02	100.00

Source: Department of Land Records United Provinces (1925 and 1937).

As Table 9 shows, the number of masonry wells in United Provinces of Agra and Oudh increased by 82,539 between 1924-25 and 1936-37, i.e. an average increase of 7500 wells per year. What is more striking is the fact that the four revenue divisions of Benaras, Gorakhpur, Lucknow and Fyzabad, falling in the zamindari areas, accounted for nearly two-thirds of the number of masonry wells. These were areas in which no canal network was created under the British rule. Hence the farmers built up their own sources of irrigation.

Data collected by the Famine Commission 1980 show that the yield levels were higher in the zamindari areas of NWP & Oudh and Bengal and these areas were also food surplus areas (Table 10).

Table 10
Estimates of Food Area, Output and Yield in British Provinces: 1880

Province	Food Crop Area (000 acre)	Outturn of Food (tons)	Yield (tons/acre)	Surplus (tons)
Punjab	18500	5330	0.288	620
NWP & Oudh	31450	11230	0.357	660
Bengal	48000	17100	0.356	1200
Central Provinces	12000	2750	0.229	300
Berar	3700	620	0.168	80
Bombay	21500	4500	0.209	350
Madras	26000	8500	0.327	940
Mysore	5100	1500	0.294	215

Source: Famine Commission 1880 as reported by Bhatia (1975: 131).

Even 70 years later the states of West Bengal, Uttar Pradesh, Assam and Orissa (all belonging to the erstwhile zamindari area) showed better agricultural performance in terms of per capita agricultural NSDP as compared to the ryotwari states of Madras and Maharashtra (Table 11). Bihar was a major exception. Thus, it looks that the geographical factors like climate and rainfall rather than the land tenure system were more important in shaping agricultural performance of different regions as argued by Roy (2014).

Table 11
State-wise Per Capita Agricultural NSDP in 1950-51 (Rs.)

States	Per Capita Agricultural NSDP (Rs.)
Punjab	135
Assam	131
West Bengal	116
Kerala	107
Orissa	106
Uttar Pradesh	105
Gujarat	103
Mysore	100
Rajasthan	94
India	93
Andhra Pradesh	89
Madhya Pradesh	79
Maharashtra	75
Madras	69
Bihar	64

Source: Based on Sampat (1977).

The view that there was greater impoverishment of rural population in the zamindari areas is also not supported by data on rural consumption and poverty. As per the NSS round for 1955 per capita rural consumption expenditure was higher in the states of Assam, Uttar Pradesh and West Bengal, falling in the zamindari areas as compared to the states of Tamil Nadu, Andhra Pradesh and Maharashtra (Table 12). The erstwhile ryotwari states of Gujarat, Maharashtra and Tamil Nadu also showed a much higher incidence of rural poverty as compared to Bengal.

The poor condition of masses in the rural areas of Maharashtra, Gujarat and West Bengal point out to the fact that the growth of manufacturing in these states did not have a strong dispersal effect on the surrounding rural areas. Thus, a dichotomous pattern developed with islands of manufacturing growth surrounded by stagnating hinterland (Bharadwaj 1982, p. 609).

Table 12
State-wise Per Capita Consumption and Poverty in Rural Areas, 1955

States	Household Monthly Consumption per capita (Rs.)	Cumulative percentage of persons below poverty line (Rs.0-18)
Andhra Pradesh	16.93	67.06
Assam	25.39	34.01
Bihar	17.40	63.61
Gujarat	17.15	64.21
Jammu & Kashmir	22.77	43.65
Kerala	16.61	68.26
Madhya Pradesh	18.56	71.11
Maharashtra	17.15	64.21
Mysore	21.02	53.95
Orissa	13.43	83.42
Punjab	27.15	36.57
Rajasthan	24.00	54.08
Tamil Nadu	14.96	73.61
Uttar Pradesh	17.81	65.06
West Bengal	19.15	55.34

Source: NSS round for 1955 as reported in Ganguli and Gupta (1976, pp. 167-168).

PUBLIC INVESTMENT IN RAILWAYS

Apart from canals railways were the main avenue of public investment during the British rule in India. The idea of constructing railways in India was put forward in 1831-32 within a few years of the start of the early railway age in Great Britain (Dube 1975, p. 327). The work on railway construction started in 1850 and the first railway line from Bombay to Thane was opened in 1853.

Railway system in India was developed by the British to serve their strategic and commercial interests (Dube 1975, p. 327). Railways provided a quick mode for transfer of army personnel and weaponry to help control the British territories. They were also expected to provide access to areas supplying raw material for British industries and open markets for their finished goods.

Lord Dalhousie himself laid down the plans of the main trunk lines of the railways. According to Gadgil (Gadgil 1924, p. 131):

Attention was not directed to connecting contiguous trade points, and to exploring thoroughly the trade of each district through which the railway passed by a systematic construction of feeder lines. Instead, the scheme followed was to construct grand trunk lines traversing the length and breadth of the country and connecting the big cities of the interior with the big ports-Calcutta, Bombay and Madras. By 1875 most of the big centres were so connected. The construction of these trunk lines was mostly the work of the guaranteed companies. The routes from the ports were generally sketched with the intention of traversing the important agricultural tracts of the interior, so as to facilitate the export of agricultural produce. From Bombay, for example, Ahmedabad and the Gujarat cotton tract, Nagpur, with the Khandesh and Berar cotton tracts and Sholapur with the adjacent Karnatic cotton tract were reached before 1870. From Calcutta the first extension were towards the rich but congested tract of the North West Provinces and the coal-fields near Raniganj, the route taken to the big cities of the north being through Mirzapur, Allahabad, Cawnpur and Delhi. Bombay and Calcutta were connected via Jubbulpore in 1870; Bombay and Madras in 1871. Calcutta had been connected with Delhi in 1867, but for a long time Bombay and cities of north India were not directly connected. This helped greatly towards establishing the position of Calcutta in the export trade of other products of the North-West Provinces.

As Kundu and Raza point out:

"The railway network was far more important than irrigation from the point of view of the imperialist objectives. It was this network which was intended to operationalize the suction mechanism – to carry raw materials from the interior to the port of embarkation for export to Britain and to carry manufactured goods from the port to the huge inland market. Eastern India, well integrated with the port of Calcutta, was, as a consequence, a major recipient of investments in railways" (Kundu and Raza 1981, p. 42).

The development of railways had a profound impact on the Indian economy. Hurd has succinctly summarized the impact that the railway network had on the Indian economy:

"From its beginnings in 1853, India's railway system expanded rapidly to become, by 1910, the fourth-largest in the world. This network, which covered most of the sub-continent, radically altered India's transportation system. Vastly increasing the speed and availability for transport, it also lowered costs substantially, thereby permitting new opportunities for profit. Regional specialization began to occur and trade expanded. From a country of many segmented markets, separated from each other by the high costs of transport, India became a nation with its local centres linked by rail to each other and to the world. Railways, by establishing these links, had an impact throughout the Indian economy" (Hurd 1982, p. 737).

The volume of freight carried by railways increased rapidly - from 12 million tons in 1859 to 46 million tons in 1902 (Dube 1982, p. 336). The value of India's foreign trade also increased by about four times during this period - from Rs. 570 million in 1856 to Rs. 2460 million in 1901 (Dube 1982, p. 336). The export of agricultural products such as wheat, rice, jute, leather, oilseeds and cotton expanded vastly promoting regional specialization in agriculture. As pointed out earlier export of cotton and wheat from India in value terms increased by about six times. Greater specialization and the opportunity to export agricultural commodities raised the value of farm output in districts with access to railways (Hurd 1982, p. 747).

The development of railways played a key role in promoting the regionally distorted pattern of development. The railway freight policy further contributed to this distorted pattern of development. The railway freight policy was designed to favour the movement of finished goods from the ports into the hinterland and of raw materials from the hinterland to the ports. The concessional rates for ports provided incentive to business in the interior to ship long distances to ports. Total exports from the provinces to the ports accounted for more than half to over three-fourths of the total exports (Hurd 1982, p. 757). The structure of rates favoured the setting up of industries in the ports which could get raw materials from the hinterland and 'export' finished products to the hinterland (Hurd 1982, p. 757). For instance, the structure of railway rates helped the export of cotton from Rajasthan to other parts, while encouraging the manufacturing centres to export cotton textile products to Rajasthan leading to the huge decline in employment in cotton textiles in Rajasthan (Krishnamurty 1982, p. 549). Similarly, the eastern Indian rail system in conjunction with the other facilities already present in Calcutta for the jute and tea trades, helped develop steel and steel-using industries in the Asansol-Calcutta region (Krishnamurty 1982, p. 549). The freight rates had been particularly hard on the industrial centres in the interior of the country, and resulted in a concentration of industries at the ports (Gadgil 1924, p. 133). Lack of linkages between agriculture and local industry further obstructed the process of a more regionally diversified pattern of development. This issue is further probed in the next section.

REGIONAL CONCENTRATION OF INDUSTRY

The growth of modern factory industry in India started with the establishment of a cotton mill in Bombay in 1854 (Morris 1982). Cotton textiles remained the most important industry of India for nearly a century. In 1948 the cotton textile industry contributed 51.2 per cent of total industrial output. Therefore, the regional concentration of industry in India can be studied in terms of the concentration of cotton textile industry in the country.

Table 13

Regional Distribution of Cotton Mill Capacity in India: 1875-76 to 1913-14 (in per cent)

Years	Mills			Employment		
	Bombay City	Elsewhere in Bombay Presidency	Elsewhere in India	Bombay City	Elsewhere in Bombay Presidency	Elsewhere in India
1875-76	61.7	21.3	17.0	--	--	--
1883-84	54.4	21.5	24.1	60.0	15.0	25.0
1893-94	48.6	21.1	30.3	54.6	14.6	30.8
1903-04	41.4	28.3	30.4	48.6	20.5	30.8
1913-14	31.4	36.2	32.5	42.3	26.2	31.5

Source: Morris (1982, p. 576).

Initially cotton industry was concentrated in Bombay and nearby places. In 1875-76 over 83 per cent of textile mills in India were concentrated in Bombay presidency, Bombay city accounting for nearly 62 per cent (Table 13). Overtime new centres of textile industry like Ahmedabad and Kanpur emerged and the share of Bombay Presidency in textile mills gradually came down though it remained the most important centre of textile industry. Thus, by 1913-14 the share of Bombay Presidency declined to about 67 per cent and that of Bombay city to 31.4 per cent. The average employment in Bombay mills was also relatively large. The city accounted for 42 per cent of the textile workers in 1913-14, though its share in number of mills was lower at 31.3 per cent.

Similar trends continued in the first half of the twentieth century. By 1948 the share of Bombay city in number of cotton mills came down to 16 per cent and was overtaken by Ahmedabad with a share of 18 per cent (Table 14). The share of Bombay in textile workers declined between 1911 and 1948 from 45.2 per cent to 26.4 per cent. New textile mills came up in other parts of India. Largest increase in the number of textile mills took place in Madras. But largest concentration remained in the Bombay Presidency with nearly half of the mills located there in 1948. Madras accounted for about 18 per cent of textile mills in 1948.

Table 14
Regional Distribution of Cotton Mills and Workers, 1911 and 1948

Province	No. of Factories		% of India		Workers (%)	
	1911	1948	1911	1948	1911	1948
Bombay City & Island	87	65	33.33	15.93	45.2	26.4
Rest of Bombay Presidency	45	70	17.24	17.16	10.8	14.6
Ahmedabad	50	74	19.16	18.14	13.0	16.3
Madras	12	73	4.60	17.89	7.8	12.7
United Provinces	14	28	5.36	6.86	5.2	6.4
Central India	4	17	1.53	4.17	1.4	5.6
C.P. and Berar	10	11	3.83	2.70	5.5	4.7
Rest of India	39	70	14.94	17.16	11.1	13.3
Total	261	408	100.00	100.00	100.00	100.00

Source: Mehta (1949).

At the beginning of the twentieth century the coastal states of Gujarat, Maharashtra, Kerala, Madras and Bengal had a relatively higher proportion of manufacturing workers in the total work force (10 per cent or more) as compared to the land locked states. The coastal states also had a relatively larger share of trade and commerce and transport, storage and communication employment. The proportion of manufacturing workers rose in all these states during the first half of the twentieth century (Krishnamurty 1982, p. 542).

In 1947, Bombay had a share of 30.69 per cent in industrial employment in the country closely followed by West Bengal with a share of 29.33 per cent, while Madras was at the third place with a share of 12.18 per cent (Anonymous 1949, p. 19). At the time of Independence the three Presidency states (Bombay, Madras and Calcutta) accounted for 76.7 per cent of the total industrial workers, 77 per cent of the total value of industrial production, 82.2 per cent of the value of engineering and electrical goods, and 87.2 per cent of the value of chemical goods in the country (Bharadwaj 1982, p. 609).

Commercial and banking facilities were also concentrated in these areas. Bengal, with Calcutta as the chief centre of commercial activities in the country, alone accounted for 37.5 per cent of the registered joint stock companies in the country in 1947-48 (Prasad 1964, Vol. 2, p. 84). The share of Bombay was 18.2 per cent and that of Madras 14.2 per cent. Similarly, out of the 2876 bank branches of scheduled commercial banks in India in 1949 as many as 557 (19.4%) were located in Madras, 477 (16.6%) in Bombay and 442 (15.4%) in Uttar Pradesh (RBI 1954). Most of the bank branches were located in the bigger cities. Calcutta alone had 197 bank branches, Bombay 159

branches, Madras 92 branches and Delhi 86 branches. In terms of advances, the regional concentration was even sharper. West Bengal accounted for 30.9 per cent of total bank advances, Bombay for 27.7 per cent and Madras for 11.3 per cent.

FACTORS CONTRIBUTING TO REGIONAL CONCENTRATION

Several factors contributed to the concentration of modern industry and finance in the Bengal, Madras and Bombay Presidencies. Being located on the coastal region they benefited from the expanding foreign trade. As noted by Krishnamurty: 'It is significant that the states in which there was a marked shift away from agriculture – Kerala, Madras, Maharashtra and West Bengal – had extensive coastal tracts with sea-ports and in each the ports were well connected with the hinterland. These regions had long traditions of foreign contract and commercial development, and the expansion of the railway system in the latter half of the nineteenth century widened the possibilities of development for some coastal areas' (Krishnamurty 1882, p. 549).

The role of transport facilities in determining the location of large-scale Indian industries has also been emphasized by Vera Anstey (Anstey 1952, p. 37). According to her: 'Bombay, which became of first-class importance as an industrial and commercial centre only after the construction of the Great Indian Peninsula and Bombay, Baroda and Central Indian Railways linked it up with the cotton-fields of the Deccan and with the wheat and cotton-fields of the Punjab and of the United Provinces, received an enormous stimulus during the cotton boom caused by the cutting off of American supplies to Lancashire during the American Civil War, and has competed with Calcutta for first place amongst the ports since the eighties' Anstey 1952, p. 149).

The railway freight policy, which favoured the movement of finished goods from the ports into the hinterland and of raw materials from the hinterland to the ports, further helped in promoting industrialisation in the port towns both for the domestic markets and export as pointed out earlier.

Foreign trade of India expanded rapidly in the second half of the nineteenth century following expansion of canal system and linking of agricultural regions with the ports through the railway network. The ratio of trade to domestic product in India is estimated to have increased from 1 to 2 percent around 1800 to a little less than 10 percent in the 1860s and to 20 percent by 1914 (Roy 2002). The port cities of Calcutta, Madras and Bombay were the main beneficiaries of this process. In fact, over 90 per cent of the total foreign trade of India passed through the five premier ports: i.e. Calcutta, Bombay, Karachi, Rangoon and Madras (Anstey 1952, p. 148).

THE ROLE OF ENTREPRENEURIAL CLASS

Another factor which helped industrial development of Bombay and Madras regions was the presence of an organised indigenous class of capitalists and financiers who had better hold over the domestic markets, e. g. the Parsi and Gujarati entrepreneurs in Bombay and Chettiars in Madras region. Most of the new factories were set up by these local entrepreneurs with access to capital. Morris observes that: 'The vitality of Bombay's native businessmen was attributed to the role of the Parsis. It was argued that Parsis were ideologically and culturally outside the mainstreams of Indians life and therefore were free to respond to new economic opportunities. Parsis, of course, did play an important role in the economic life of western India, particularly in the cotton textile industry. Of the ninety-five mills established in Bombay city before 1914, Parsis were credited with having promoted at least thirty-four, while Hindus promoted twenty-seven, Europeans fifteen, Muslims ten, Jews five...' (Morris 1882, p. 580). The Parsis had acquired huge

wealth through trade and ship building in early nineteenth century, which enabled them to enter into cotton textile manufacturing (Morris 1882, p. 581).

On the other hand, it is argued that in the eastern region capital and trade was largely in European hands (Bharadwaj 1982, p. 609). The Europeans tended to get largely involved in sectors of the economy which were mainly oriented to external markets or were closely supported by the state (Morris 1882, p. 580). It needs to be mentioned that the opportunities existing in the eastern region attracted a large number of Marwari entrepreneurs to this region, who played an important role in the development of trade and commerce.

Pandit (1957) has emphasized the regional factor in the emergence of entrepreneurial class. According to her unlike northern and eastern India, where business was looked down as an activity to be pursued, Gujarat had a cultural revolution where the bourgeoisie came to dominate the community, where occupation and not caste or birth was significant. According to her: 'Such a social set-up in Gujarat had given businessmen to all the other regions of India, as well as to the neighbouring countries like Burma, Ceylon, East Africa, South Africa, Aden and many other regions including some in the South-east Asia. The same factors made them innovators in the field of modern methods of trade, banking and industry' (Pandit 1957, p. 315).

THE DISTORTED SPATIAL STRUCTURE

The growth of the metropolitan centres of Bombay, Calcutta and Madras did not lead to development of the hinterland in the absence of spread effects. Consequently, the development remained basically of the port-enclave type in the periphery of Madras, Calcutta, and Bombay (Bharadwaj 1982, p. 609).

The distorted spatial pattern that emerged in the British India is elaborated by Kundu and Raza in the following words:

"The industrialization process in colonial India was not only structurally inverted but also was regionally distorted. The demands of the suction mechanism were operationalized by a metropole-colony relationship which had the three ports of Calcutta, Bombay and Madras at the apex. The port oriented centrifugal network of transport and communication, which was built at quite a huge cost, contributed to the emergence of dysfunctional enclaves of industrial underdevelopment around the ports. As a consequence, the industrial map of colonial India was characterized by the fact that the resource rich regions were, by and large, industrially backward" (Kundu and Raza 1981, p. 82).

A number of towns in different parts of the country did come up during the British period and new industrial centres came up in places like Kanpur, Indore, Delhi, etc. However, these towns were not well integrated with the regional economy but basically served to act as part of the suction mechanism to supply agricultural raw material to the metropolitan centres, which were linked to British economy. Thus, the urban hierarchy which developed in India during this period remained dysfunctional and did not generate multiplier effects on the surrounding regions.

CONCLUSION

It is thus clear that a highly spatially uneven pattern of development took shape during the British rule in India. The imperialist policies of the British played an important role in creating a concentrated pattern of development.

In the agricultural sector the main regional differentiation was between the irrigated and the non-irrigated areas. The British followed a policy of investing in canal development in selected areas notably in the Punjab, Bombay and Madras. Canal investment by the British, geographically uneven as it was, created pockets of agricultural prosperity in selected area leading to growth of agricultural output and productivity and promoted commercialization of agriculture in these areas. These developments, however, had a limited impact and left large parts of agriculture unaffected.

The development of the railway system also encouraged the commercialization of agriculture in selected areas, which benefited from the export of agricultural produce like wheat, rice, cotton and sugar. The major beneficiary of the process of agricultural development were the deltas, floodplains, and coastal areas, which by virtue of possession of more fertile land were better placed to gain from the nineteenth century globalization, which encouraged export of agricultural produce.

We did not find strong statistical support in favour of the hypothesis that the differences in the land tenure system led to a differential pattern of growth in the zamindari and the non-zamindari areas. The data on rural consumption and poverty around mid-twentieth century do not show greater impoverishment of rural population in the zamindari areas as compared to the non-zamindari areas.

Regional differentiation was more marked in case of the modern manufacturing. At the time of Independence the three Presidency states (Bombay, Madras and Calcutta) accounted for over three-fourths of the industrial workers and output. Several factors contributed to the concentration of modern industry and finance in the Bengal, Madras and Bombay Presidencies. Being located on the coastal region they benefited from the expanding foreign trade. These regions had long traditions of foreign contract and commercial development. The process was supported by the development of the railway system which connected the ports with the hinterland. The railway freight policy was designed to favour the movement of finished goods from the ports into the hinterland and of raw materials from the hinterland to the ports and promoted industrialisation in the port towns. The port cities of Calcutta, Madras and Bombay were the main beneficiaries of this process. Most of the modern commercial and banking activities was also concentrated in these three port cities. Another factor which benefited Bombay and Madras regions in industrial development was the presence of an organised indigenous class of capitalists and financiers who had better hold over the domestic markets, e. g. the Parsi and Gujarati entrepreneurs in Bombay and Chettiars in Madras region. The eastern region attracted a lot of Marwari entrepreneurs who played an important role in trade and commerce.

The development remained basically of the port-enclave type in the periphery of Madras, Calcutta, and Bombay. The growth of the metropolitan centres failed to generate development of the surrounding area in the absence of forward and backward linkages with the hinterland. The urban centres which grew in different parts of the country were not well integrated with the regional economy and basically served to act as part of the suction mechanism to supply agricultural raw material to the metropolitan centres, which were linked to the British economy. Thus, the urban hierarchy which developed in India during this period remained dysfunctional and did not generate multiplier effects on the surrounding regions.

The distorted and uneven pattern of regional development which India inherited from the British has continued to shape the pattern of development in the post-independence India. The regions which were agriculturally and industrially developed have continued to develop in the post-independence period due to their initial advantages. The laggard regions have continued to develop at a relatively slower pace. As Kundu and Raza observe: 'the inherited spatial structure still determines the hard core of industrial base; and ... the development impulses generated in independent India have not materially affected some of the enclave characteristics of its space economy' (Kundu and Raza 1981, p. 107). Most of the new industrial units which came up in the early decades of Independence were located in the old industrial centres of Calcutta, Bombay and Madras and surrounding areas. The big industrial projects which the government set up in the resource rich but poor regions remained unconnected with the local economy with little regional spread effects. Urbanisation process picked up largely due to the out-migration from the rural areas. But the growing urban centres were mainly service oriented rather than manufacturing centres and failed to act as growth foci for the surrounding region. The process of planned development did help in generating growth impulses in different regions but the process of development continues to be regionally concentrated and spatially unbalanced even after six decades of planned development.

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