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## **Development of Railways during the British Raj in India and its Demographic Impact**

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### **Abstract**

World history has demonstrated that technology always acts as the primary means through which a socio-economic development is achieved. In the present study, a detailed analysis of progress of railway technology, in both magnitude and quality, in the United Provinces for a century has been attempted. It shows in detail how this segment of technological inflow has affected the general population. One of the most significant of these effects has been found to be the breakdown of traditional mores our village societies. Periodic famine and epidemics father added to create a greater distress on the population at large. The total population shows dips on several occasions. Migration within and outside the country drained able-bodied members from the workforce of agricultural activities. Consequently, rural economy remained permanently crippled. Thus, the study can be taken to show that development of railway technology indeed didn't usher in a healthy development in the United Provinces during 1858 to 1947.

**Keywords-** *Railway, Guarantee System, Drain of Wealth, Population, Epidemics, Deindustrialization*

### **1. Introduction**

Till 1848 India did not have a single kilometre of railway line. But by April 6, 1853 a fourteen-carriage train under Great Indian Peninsular Railway (GIPR) drawn by three locomotives, Sultan, Sahib and Sindh, was flagged off Bombay 'amidst the loud applause of vast multitude and to the salute of 21 guns' on the 21-mile-long Bombay and Thane line. (Hunter, 1953)

#### **1.1 British objectives in bringing railways to India**

A serious question is raised by some as to why was such a haste in bringing railways to India by the colonial rulers. Many socio-economic historians of India and elsewhere including noted ICS, economic historian, R C Dutt raised serious questions on the efficacy of rail transport in India and found it as an instrument of draining Indian wealth and exploitation of the general people.

The objectives behind the development railways in India were both strategic and commercial. British Empire in India grew very fast. Sind was captured in 1843, the Punjab was incorporated in 1849 and

Oudh was annexed in 1856. With this phenomenal rise in its geographical limits the new threats of rebellion and invasion also grew. The vastness of the country with three fur flung Presidencies at Calcutta, Madras and Bombay needed a prompt and reliable communication system between them for a cohesive administration. The memories of the Revolt of 1857 was still fresh in the minds of the British rulers. The Revolt, which brought into open the essential weakness of the colonial power tended to further underline the expansion of railways on an extensive scale (Raza and Agarwal, 1986). Movement of the troops to the disturbed areas in quick succession became the need of the hour. The Court of Directors of the British East India Company in London did not like to maintain a huge force to administer the subject nation, instead preferred mobility of the troops from the headquarters to more disturbed areas within a short notice. Indian raw materials in form of cash crops of cotton, indigo, tea, coffee, peeper, jute, sericulture produces, tobacco, rubber, sugar and the food grains from the Indian hinterland to the British homeland needed connectivity to the sea ports for further overseas shipment. In the same way bringing

surplus finished products from England to the Indian markets needed cheap and good connectivity.

Per Karl Marx the development of India Railway was not meant for the welfare of the Indians rather it was for the benefit of the British capitalists. The English maleocracy intend to endow India with railways with the exclusive view of extracting diminished expenses the cotton and other raw materials for their manufacturers. (Marx ,1853).

### 1.2 Role Players and the Guarantee system

At the onset, as large as 19 British private bankers and promoters played their role in the construction and development of the railways in India, of which 9 were actively working in the United Provinces of Agra and Oudh, under a unique guaranteed railway system- a system in which the English investors were granted free land and given a guarantee of minimum returns on capital (<http://www.gktoday.in/blog/guarantee-system-in-indian-railways/>). The government of India provided free land and other facilities including recruitment of cheap labour. (Headric,1981). Two companies, namely, the East Indian Railways(EIR) and Great Indian Peninsular Railway(GIPR) entered contracts with the British East India Company for construction of two small railway lines near Calcutta and Bombay respectively. The British Parliament ensured that under the Guarantee System, any company that constructed railways in India was guaranteed a certain rate of interest on its capital investment. This guarantee was to honoured by the East India Company. The guarantee was for a return of 5% annually, and the right for the railway company to pull out of the venture and get compensation from the government at any time. In return, the companies needed to pay to the Government when they earned more than 5%, half the surplus every year. (Dutta,1906).

### 1.3 Growth

Railway had a phenomenal rise in India. Between 1853 and 1947, more than 40,000 route miles of track were laid in India, of these, 35,406 miles were constructed and opened by 1920 (Derbyshire Ian, 1955). Indian railway has a chequered history. Initially it was the military engineers of the EICo. and later British Indian army who worked for the construction and development of the railways,

mostly owned by the British shareholders of England.

The first Indian rail which plied was between Roorkee and Piran Kaliya, a 10 mile patch, fell under the United Provinces when Sir Proby Cautley, the legendary founder of the Ganga Canal, decided to transport huge clay necessary for the construction of the Ganga on September 30th ,1851. (Cautley, 1860). However, the first commercial train ran between Bombay to Thane, on 16th April, 1853. Robert Mitland Brereton, an English engineer, was entrusted with the task of railway development from 1857 onwards. Lord Dalhousie, known as the 'Father of Indian Railways', took keen interest in the construction of Calcutta-Allahabad-Delhi line of the EIR which became operational in 1864. The Allahabad Jabalpure line was opened for traffic in June 1867. It was connected to GIPR on March 7th, 1870. Viceroy Lord Mayo who graced the opening ceremony commented on this occasion that the whole country should be covered with a network of lines into a uniform system. By 1880 the network extended to 900 miles mostly radiating inwards between the major port cities of Calcutta, madras and Bombay. By 1920 William Acworth Committee delinked railway from the Indian revenue department. The mileage covered touched 38040 miles. By 1946 railway was finally brought under the control of the central government.

### 1.4 Progress made in the United Provinces

In the United Provinces, steady rise of the railway network was witnessed between 1891 and 1931 when it extended from 2571 miles to 4952 miles (Techno Economic Survey of Uttar Pradesh, 1953). Nine companies were engaged in the working of the railways in the state

Table. No1  
English Rail Companies and their network  
coverage in Uttar Pradesh

SL No	Name of the Company	Area Covered	Mileage Covered
1	East Indian Railway	Allahabad, Varanasi, Mirzapur, Kanpur, Mathura, Agra, Meerut	597 miles B. G
2	Bengal North Western Railway	Gorakhpur, Basti, Gonda, Nepal border, Kanpur, Barabanki, Lucknow, Balia, Azamgarh, Varanasi	764 miles MG
3	Great Indian Peninsular Railway	Itarsi, Jalaun, Kanpur	336 miles
4.	Oudh Rohilkhand Railway	Mughal Sarai, Varanasi, Mirzapur, Pratapgarh, Moradabad, Saharanpur and Rampur-Loop line between Jaunpur, Faizabad, Barabanki, Lucknow-Kanpur, Bareilly, Aligarh, Moradabd-Ghaziabad	1187 BG
5	Lucknow-Bareilly State Railway	Sitapur, Kheri, Pilibhit	231 MG
6	Rohilkhand Kumaon Railway	Bareilly - Kathgodam	54 miles
7	Rajputana Malwa Railway	Agra Fort Acchnera, Kanpur	282 miles
8	Bombay Boroda Central India Railway	Took charge of Rajputana Railway Agra Fort Acchnera, Kanpur section	282 miles
9	North Western State Railway	Muzfarnagar Meerut Ghaziabad	107 miles BG

Source: Compiled on : (Mitchel, K.G, Kirkness, L.H. Report 1933, Sanyal, 1930. Sarkar Dutta, 1967, Imperial Gazetteer, vol II. 1907)

The Techno-Economic survey of Uttar Pradesh, 1965 gives us year wise growth in mileage covered by the railways in the United Provinces from 1891 till 1961

Table. No2  
Year wise growth of Railway network in U.P.

Year	Mileage
1891	2571 miles
1901	3423 miles
1904	3636 miles
1931	4952 miles
1961	5410 miles

Source: Techno Economic Survey of Uttar Pradesh, 1965

A sharp fall was witnessed between 1931 to 1961 as only 458 miles were added to the existing mileage. This was due to the gradual disinvestment in India by the British Capitalists in the wake of growing nationalist movement in India. After Independence in 1947 the First and Second five-year plans agriculture and heavy industries were given prominence

Hence, most of the works of the development of railways were carried out during the last quarter of the 20th century. But the United Provinces played no significant role in this regard as construction and development of the railways was mostly supervised by the Centre. The province lacked in raw materials like iron and coal and no big railway linked industries came out during this period.

## 2. SOCIO-DEMOGRAPHIC IMPLICATIONS OF RAILWAYS

### 2.1 Increased Mobility

Introduction of railways led to increased mobility among the people. It enabled people to migrate to the cities, by reducing the cost in terms of time and money, of long distance travel. This is reflected on the changing urban population of cities connected by the railways. It became possible for the ordinary Indians to visit distant family members and to attend religious festivals which ordinarily would have been impractical. (Oliver, 2014). The first trains of the 1860s in north India saw mass adoption. By 1902, 87 per cent of passengers carried by the then Indian Railways were in third class coach. These

passengers represented all segments of Indian society without the expected concern of caste stereotypes. The number of passengers weren't a small segment of Indian society. By 1905, over 200 million passengers travelled together in shared train coaches of India every year, and about the time of India's independence from Britain's colonial rule, people of India were using trains many times within the same year, and one billion passengers a year travelled in Indian trains. (Kerr, 2007).

Table. No3

Year wise passenger traffic and earnings of the EIR (Rs.)

Year	Nos. of passengers (III class)	Earnings
1925-25	69,704,00	54,327,00
1925-26	66,920,00	50,942,00
1926-27	67,260,00	49,172,00
1927-28	69,692,00	51,994,00
1928-29	65,875,00	48,110,00
1929-30	65,650,00	51,176,00
1930-31	60,650,00	45,625,00
1931-32	56,051,00	43,499,00

Source: Mitchell-Kirkness Report, 1933.

This gradual decline in the number of passengers and revenue earnings of the EIR has been ascribed to the growth of road transport (bus) facilities made available to the commuters with choice points of drop and pick up facilities and more connectivity with the rural roads. But with the ensuing second world war when diesel and petrol-fuel became scarce railway traffic again became predominant.

## 2.2 Eradication of Caste System and Growth of Nationalism

Among all the ills railway, nevertheless, brought one good effect in the Indian society was eradication of caste system. Some British administrators believed, Indians would shun train

travel because tradition-bound South Asians were too caught up in caste and religion, and that they would not sit or stand in the same coaches out of concern for proximity to a member of higher or lower or shunned caste. Contrarily, increased mobility has great social ramifications on the centuries old caste system and concept of untouchability. Indians of different castes would inevitably have to travel closed together in the same carriages. Indian carriages are innately very sociable places and it was very good way to learn about Indian customs and practices. (Oliver,2014). Sitting together shoulder to shoulder and purchasing of foods from the railway vendors without inquiring into their caste blew off the so long Brahmanical hierarchy of the society and thereby untouchability at least during the travel hours. Thus, railway somewhat accelerated the natural demise of the caste system in India. After the launch of train services, Indians of all castes, classes and gender enthusiastically adopted train travel without any concern for so-called caste stereotypes the rapid growth of train travel, with coaches packed with passengers from all caste segments of Indian society, suggests that the nature of British stereotypes about caste system in India, prior to 1860s and thereafter through the 1940s, were flawed. (Kerr,2007)

This singular effect paved the way to the growth of nascent Indian nationalism. It helped to unite a country of different languages and cultures. Writing on the Indian railways Sir Edwin Arnold, who authored famous book *Light of Asia*, thus commented, as cited 'Railways may do for India what dynasties have never done-what the genius of Akbar the Magnificent could not effect by government nor by cruelty' (Agarwal,1986). Per Marx, modern industry resulting from the railway system, would have dissolved the hereditary divisions of labour, upon which rest the Indian castes, those decisive impediments to Indian progress and Indian power (Marx,1853).

But contrary to Marx's postulations the United Provinces lacked in basic raw materials of iron and coal which were essential for the industrial development of the province and hence the backwardness and continuance of caste segregation of the society furthered by the political leaderships for their vote bank politics.



### 2.3 Railway and Migration

Railway during the colonial rule had a regressive impact on the Indian on land, economy and the people of India. Too much transportation of the food grains to Europe compelled the Indians to face terrible and recurrent famines leading to mass migration.

Railways paved the way to port connectivity. Besides enabling internal migrations from the rural India to the cities in search of job opportunities railway made it possible to carry the poor Indian labourers to the port cities for large scale emigration overseas. Three major migrations which took place during the colonial rule were Indentured Labour Migration (1834-1920). With the abolition of slavery in the west when African slaves were freed led to the migration of indentured labour from India to Europe, USA and the Caribbean Islands as plantation workers. Labours of the rural areas were initially signed contract for five years but later contract was renewed for indefinite period in lieu of a piece of land or some payment thus depriving them of their right of shipping back home. Indentured Indian labours were kept in camps and barracks and their life almost resembled those of slaves with huge punishment and no health care. Thus, there developed a new form of slavery (Hugh Tinker,1974). In response to severe criticism, the British Imperial Legislative Council abolished the indenture system in 1916. By that time, more than 1.5 million Indians had been shipped to colonies in the Caribbean, Africa, Asia, and Oceania. (Lal,2006). By 1938 severe drought conditions in the Southern part of the country too resulted in the migration of around 6 million Indian labours to Sri Lanka, Malaya and Burma. (Bhatt ,2008.)

Another important issue which involved migration of the able-bodied males to the vulnerable Indian cities and abroad was to fight for the empire. British army in lower rung constitute mostly the Indian recruits. These Sepoys were transported through railroads to anywhere within India and across borders. The one pivotal concern of the British in the development if Indian railways was diminishing cost of military establishment. Colonel Warren, Major of the St. William in his statement before the Select Committee of the British House argued, the practicability of receiving intelligence from distant parts of the country in as many hours as at present it requires day and even weeks, and of sending

instructions with troops and stores in the briefer period are considerations which cannot be highly estimated. Troops could be kept at more distant and healthier stations than at present and much loss of life from sickness would by this means be shed. Stores could not to some extent be required at the various depots and the loss by decay, and the destruction incidental to the climate, would be avoided. The number of troops might be diminished in direct proportion to their effectiveness. (Marx,1853). Migration of the Indian labour to Africa for the construction of railways and colonial establishment followed in thereafter.

### 2.4 Breaking down of joint family system in India and marriage distances

Introduction of the railways enabled people of movement to distant places led to the influx of the rural population to the cities in search of jobs and better earning. Fragmentation of land holdings and incessant demand for production of the cash crops unleashed an immense pressure on land. Cultivation no longer remained a sustainable occupation. The table drawn out from the Census report of 1951 shows how people migrated from their rural homes to the cities in the other natural divisions resulting in the breaking down of the centuries old joint Indian families.

Of the total internal migration in the State of 4,510,304 persons (males 1,388,265, females 3,122,039) 72 per cent. (males 50, females 82) is concentrated in the rural population. The figures for males and females clearly show that the migration is largely marriage migration or birth migration. (Prasad,1951) This indicative that the migrants left their families behind with children. This marriage distance between the spouse might have caused immense loneliness to both till 1990s when the development of modern telecommunication facilities in the country somehow brought the spouse to closeness. The reason behind leaving the families at home might have been low earning, high rental for the accommodation and lack of education facilities for the children in the places of migration. Female migration was mainly due to their marriage with spouse living in other natural divisions out of their place of birth.

Table. No 4  
Internal migration facilitated by railway in the  
natural divisions of Uttar Pradesh

Natural division	Persons	Males	Females
Himalayan	41,445	27,119	14,326
East Plain	119,838	21,529	98,309
Central Plain	339,123	112,909	226,214
West Plain	193,049	54,144	138,905
Hills and Plateau	77,389	17,393	59,996
Natural division	Persons	Males	Females
Himalayan	17,860	7,556	10,304
East Plain	201,441	55,525	145,916
Central Plain	284,388	63,121	221,267
West Plain	176,611	81,232	95,379
Hills and Plateau	90,608	25,693	64,915
Natural division	Persons	Males	Females
Himalayan	23,585	19,563	4,022
East Plain	-81,603	-33,996	-47,607
Central Plain	54,735	49,788	4,947
West Plain	16,438	-27,088	43,526
Hills and Plateau	-13,219	-8,300	-4,919

Source: Census (U P) Report 1951.

### 2.5 Emergence of new trading centres and decay of old trading marts

Development of the railway in the United Provinces led to the decay of old cities like Banaras and emergence of new distribution centres like Kanpur due to their convenient placement in the railway network. The Census Superintendent of 1891 Mr. Bailey thus reported thus large towns and some of the smaller towns which were favourably situated about the railway showed a considerable increase, whilst the great majority of the others either decreased or remained absolutely at a standstill. The old trade marts like Banaras gradually lost their importance owing to their being isolated from the railway. Important railway centres like Kanpur and Lucknow, attracted more outsiders to find employment and gained in male population in comparison to eastern plain. Kanpur had a large industrial population, while all the three cities have a large service class and large railway colonies. New distribution centres promoted with the advent

of railways grew up very fast in towns like Bareilly, Meerut, Moradabad, Rampur, Aligarh, Saharanpur, Jhansi, Mathura, Hathras, Etawah, and Amroha. Kanpur, the first city of the State, owes its origin to trade. A mere village till 1778, it became a frontier cantonment. The advent of the railway in 1863 enabled it to become an important distributing centre. It became the largest railway centre of the State and its collecting and distributing trade is enormous and in addition it has become a great manufacturing centre. In brief, railway led to urbanisation in the new trading centres and de-urbanisation of old trading marts. Then there followed the social changes and the problems of industrial areas that influenced the demographic developments in the province.

### 2.6 Exploitation and Draining of wealth

After the successful crushing of the great revolt of 1857 Railway became an imperial priority and a beneficial project of investment. Four years later the cost of Indian railways amounted to 350 million pounds' sterling, the largest outlet for the export of British capital. (Chandra, 1979). Under the guarantee system all contracts were given only to the British companies (Kerr, 1995) The annual tribute of India to Britain amounted to 35 million pound-sterling and Britain's empire in India became a great asset to the crown. Between 1849 and 1900 a total of Rs. 568 million was paid out from the guaranteed fund. (Kumar and Desai, 2007) India was pushed into an era of classical colonialism by the railways. Once an exporter of finished products India got reduced to an exporter of agricultural raw materials only.

Railways suffered from many irregularities and charges of corruption from the beginning. The companies which funded railway constructions and operation were mostly funded by the British shareholders and bankers. The rates of construction and maintenance were very inflated to show loss and recoupment of the guarantee fund. The English bureaucrats, mostly ICS officers, companies and the suppliers of plants and machineries were hand in glove with each other. While the cost of construction per mile was put at 18000 pounds in India, same time it was billed at as small as 2000 dollar. By 1929 the capital value of the railway figured at 687 million pounds. Resource allocation was too erroneous resulting in the huge debt. It is estimated that from 1903-1945 railway debt

constituted 50% of the total national debt of India. Country was languishing under famines but huge sums as guarantee fund were made to the EIR, GIPR, BBR, all registered companies of England operating in India. These companies earned profits and syphoned them to England and they never invested their profit for the development of India. (Tharoor, 2015)

Poor Indians lost their employment as the present railway system of India constructed by foreign capital and pays interest to foreign shareholders; and millions of boatmen and boat-builders, cart men and bullock owners, have lost their living. The guarantee system proved to be a disincentive to many railway companies as they took no interest in the development works but win the guaranteed amount from the Government revenues-a covert way of draining of Indian wealth to England. Thus, an amount of £225,000,000 were spent on railways, resulting not in a profit, but in a loss of £40,000,000 to the Indian taxpayer up to 1900. As against this colossal loss only £25,000,000 were spent in irrigation works up to 1900. (Dutta,1906).

### 3. RAILWAY AND EPIDEMICS: DEMOGRAPHIC CATASTROPHE

The introduction of new technologies, mainly, the railways and irrigation projects, aggravated the spread of malaria, yellow fever, plague, and cholera.

#### 3.1 Malaria

Railway helped spread malaria which took an epidemic form resulting in huge loss of human life and since it affected the women of reproductive age group between 15 to 35 birth rate suffered a drastic change in the early 20th century. The Construction techniques in which earth for the railway embankments often was dug from the borrow-pits along the railway tracks. But these pits were not filled and became cell pool of rain water and growth of vegetation in them became mosquito hatcheries (Samanta, 2002). Railway lines which were laid on raised beds, Kerr rightly observed, interfered with the natural lines of drainage and created unwanted ponds and waterholes that became breeding grounds for malaria vectors (Kerr, 1995). Another factor which raised the proliferation of malaria in India was the British irrigation projects which led to the waterlogging, salinity and malaria deaths (Guha, 1995)

#### 3.2 Plague and cholera

The spread of plague and cholera had a definitive railway connection in India and in rest of the world. Reports on Public Health No.3: The Progress and Diffusion of Plague, Cholera and Yellow Fever Throughout the World, 1914-17 by The Ministry of Health,1917 in very specific terms clarified plague epidemic between 1896-1917 in India took a toll of 10 million deaths and which the United Provinces alone returned 2.5 million. Mortality rate of this dreaded disease stood at 49.45 per 1000 population. Cholera took a toll of 90,000 lives during 1915 and mortality rate stood at 1.93 per 1000 against the mean rate of 1.41 in the previous years.

International Sanitary Congress held at Istanbul in 1866 concluded that cholera spread with great swiftness in proportion to the great rapidity and activity of human movement. Being able in a short time to carry contagion a great distance, railways were deemed the most potent transmitter of Cholera, after maritime communications. (Prasad,2016).

Official analysis on the status of epidemics in 1867 in northern India emphasized how the spread of railways had hastened the spread of cholera. The Railway Act of 1890 thus permitted the railway companies to refuse to carry any passenger suffering from the contagious disorders. After Kumbh Mela in Haridwar in 1915 the returning pilgrims who travelled by the railway spread cholera all over India with in a very short span of time. Year wise figures between 1914-1916 indicates the vigour in which the cholera epidemic struck the people of the United Provinces. During 1914 total numbers of 32,498 people of the province were attacked by the disease, which raised to 90,000 in 1915 with the mortality rate as high as 1.93 per 1000 population. The year 1916 showed some respite and total numbers reduced to 33,300 with mortality rate at 0.71/1000. Though the Europeans blamed the prevalence of cholera on the 'filthy' habits of the Indian people,( Harrison,1999) it was railway which gave impetus in the spread of the disease.

The Ministry of Health, Government of U K, reports during 1916, 110 persons died of plague in Calcutta and Birbhum district which was carried by the Marwari traders who travelled in E.I.R. The epidemic in East Khandesh in the Central Province was carried by a railway guard.

In the rest of the world by the end of 1917 in china railway had to suspend all its traffic in Peking-Kalagan line. Peking Hankow railway threatened



plague in the very heart of China. same happened in Dackar, Senegal, Havana, St. Louise and so on.

### 3.3 Railway caused famines and negatively affected demography

The advent of railways was directly linked to the frequent occurrence of famines. The infrastructure of railways did not help to meet out the crisis of famine. All they did was to make the transport of food grains towards the coastal ports, to be transferred to Britain. (Meena,2015). The colonial state had all the investments in railroads and very little on social projects (Davis,2001).

During 1876-78 India's wheat export to England increased from 308 (1000s of Quarters) in 1875 to 757 in 1876 to 1409 in 1877. Only in 1878 export decreased to 420. Again, the crop failure in England during 1895 witnessed almost 25% of the India's total wheat produce to England. The country was starving, the speculators earned profits and railway transported food grains food grains to ports for export. During 1877-78 famine, Sir Arthur Cotton and Florence Nightingale decried the utter worthiness of the railways in relieving distress of the people whereas it cost the poor Indians 160 million rupees a year. The consequence of these famines conjoined with epidemics was grave. The famines of 1876-79 and 1896-1902 estimated toll of as high as 10.3 million and 19.0 million lives respectively. Government under the garb of free trade did nothing to prevent grain speculators from using railways to transfer food reserves held in places stricken with dearth to another part of the country, where they would fetch a higher price. (Watts,1997.) Use of electric telegraphy by these speculators also helped them in hiking the prices of grains in hundreds of towns at once. Modern markets connected through rail accelerated rather than relieving famine. Rail connectivity resulted in the rising prices of food grains throughout the famine periods. The peasantry that was already groaning under the crushing weight of taxes to finance the railroads was now hit with high grain prices that brought starvation and death (Davis, 2001). The foregoing table will amply show how rampant was the crude death rate of the Indian population following 1880 until 1920. There was a high death-rate of 40-50 per 1000 inhabitants, whereas a clear decrease took place after 1920 (Davis,1951)

### 4. De-Industrialisation Of India Fostered By The Railways

British railways followed a policy of monopolistic pricing and discriminatory freight policies. The companies were open to levy charges freely as they wish. there was no regular of rates and thus the private companies tried to fleece as much as and as quick as they can and maximize their return on investment. Indian industries especially those which were situated in relatively in rural areas suffered double whammy first due non-availability of feeder roads and racks for transport of their goods and heavy charges levied as freights for their consignment. Discriminatory rate slabs by which foreign merchants and manufacturers were charged less compared to the Indian counterparts made competition one sided. It worked to the detriment of India's industries, especially infant industries, particularly those not located at the ports. This step-motherly treatment reflected in the structure of railways rates brought huge complaints from the nationalist leaders. For example, cartage for imported matches from Bombay to Delhi were the same as those shipping matches made in Ahmedabad to Delhi, even though Ahmedabad was 300 miles nearer to Delhi. In case of sugar, special rates at 13 ½ annas per maund were quoted for the dispatch of sugar from Bombay to Kanpur—840 miles, Indian-made sugar paid 18½ annas per maund for 640 miles (from Kanpur to Akola). Similarly, grant of port rates for leather nearly 50 p.c. less than the internal rates led to destruction of Indian leather industries. High transportation cost raised the manufacturing cost to Indian Manufactures which in turn made foreign competition even harder to compete

As against the postulation of Marx no Industries were either allowed to grow or if some bold attempts were made by indigenous business man he was simply wiped off by way of double taxation and discriminatory fare rates. A classic example can be cited about the railway industry itself. In its early decades, rails, sleepers and pre-fabricated bridges, along with the engines and even their drivers were imported from Britain. Though by 1880-1890 India attained the capacity to develop locomotives Britain thwarted the development of Indian competition. Between 1850 and 1940 more than 14000 locomotives were sold to India as against a bare 700



pieces allowed to be manufactured in the country. This way the British engineering firms profited at the expense of India's productive capacity. (Lehman,1965) England's industrialisation was thus accomplished through deindustrialization of India.

Unlike Great Britain or the USA, Indian Railways also did not help in urbanisation of the country but relocation of the people from the rural areas to cities in search of employment and food. It led to the decline of the old cities and commercial centres. Mirzapur, in the United Provinces, which had flourishing stone industries during the Mughal rule, declined in population because of the exodus to the colonial port cities putting all the traditional industries located in such inland centres at a disadvantage. (Kumar and Desai,2007). Rather railways brought about this new process of de-urbanisation in the 19th century. (Habib, 1995)

## 5. Conclusion

Foregoing discussion on heralding of technological facets of the railway on traditional United Provinces during 1858 to 1947 has been dealt in meticulous details. It has been successfully demonstrated that the devolution of technology in India by the colonial rulers had one and only deep altruistic motive was to enable the colonial power to ensconced deeply within India. However, it is wrong to say that this did not have any effect on the indigenous Society of the region. In our analysis, we have tried to enumerate the various socio-economic changes caused by the railway technology.

- a. The caste and religious distance practiced meticulously in the traditional Indian society and most specifically in the United Provinces started becoming loosened because of the railway and the services which were generally caste anonymous. People started interacting between hitherto avoided caste groups and even accepting food from the railway vendors without questioning their caste. Consequently, caste become anonymous at least during the sojourn.
- b. United Provinces has traditionally practiced village exogamy as the mode of social structure. Availability of the fast-moving modes of communication enabled the village exogamy to extend its relationship to a larger distance than the traditional bullock carts have

earlier permitted. This is very significant change which enabled isolated villages to seek support of economy and relief in case of Crop failure from far off villages where kinship relationship was established.

- c. Cholera, plague and other vector borne diseases have been perennially being a problem of health in the traditional village society. Railway enabled mass mobility of the people during such medical crisis to neighboring regions where kinship relationship has been established earlier.
- d. During this period advancement in European Medicine and health care has been witnessed. It cannot be denied that availability of the first moving transport system enabled the successful functioning of the hospitals and mobility of life saving drugs.
- e. Last but not the least, the transformation of the peasant society which was ensconced with traditional values and mores, for the first time, could get alternative to change. It is not true that such changes were wholesome. But we cannot deny that selective changes were being adopted from the time of the introduction of railways.

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