Conclusion

Conclusion:

According to our research problem and area, we have selected our research objectives. To achieve our objectives, we selected eleven hypotheses and the hypotheses are tested or discussed individually in our selected ten chapters. Here, it is mentionable that we have discussed two hypotheses (Hypotheses: 5 and 6) in one chapter (Chapter No. 3.5). We conclude here the result or findings of every chapter, which will indicate how far the hypotheses are close or contrast from our findings.

The foundation and development of the railways in North Bengal conducted according to colonial commercial and political interest. This is our first selected hypothesis. The hypothesis has been tested basically at the Chapter No: 3.1. The findings clearly support our hypothesis. Our first selected hypotheses towards the policy of railway foundation and development, which is completely true. The attraction of the colonial authority towards the Northern Bengal was due to the wide and affluent agricultural production of the region, basically for enormous quantities of tea, jute, rice, tobacco, wood & silk. It is remarkable; the natural feature of northern Bengal was not too much encouraging for the foundation of railways. Huge numbers of water cannel, river, rough soil conditions with land sliding, mountains and dense forest were real obstacles for railway foundation. Even so, the obstacles were no longer, and faded by the colonial commercial and political interest. They also ignored the ecological stance, and the authority extended the railway lines through the dense forest region of North Bengal.

Strategically, Northern Bengal was politically significant for the existence of Sikkim, Bhutan and Tibet to the north, and Nepal to the west. So, the foundation and development of railways in North Bengal were also necessary according to military and political point of view. Therefore, the authority needed armed base camp to protect the north –eastern boundary of the British Indian Empire. Due to geopolitical situation, northern part of North Bengal, mainly Darjeeling and Duars region were highly important to the colonial authority. Dalhousi emphasized the consolidation of the eastern frontier of India. It mentioned in his famous minute dated on 20th April 1853. After the conquest of Pegu or the Lower Barma, the question of military defense of the eastern frontier was very essential to the colonial authority for the easy transport of troops. Therefore, the findings in the Chapter No: 3.1 strongly agree with our selected hypothesis.

Railways had a revolutionary impact on the traditional communication system of North Bengal. Within few years, railways emerged as a superior carrier from any conventional mode in respect of cost, capability and reliability. This hypothesis has been tested at the Chapter No: 3.2. In respect time and capability, the railway is incomparable with other conventional modes. The railways had a massive loading capacity, whereas the

capability of the conventional modes was inadequate and nature centric. Within few decades, railway extended a unique network all over India; therefore, the transporting capability from one place to another, even for the longer distance, was undoubtedly more than the river-borne traffic. Obviously, railway destructed the importance of the river-traffic. The foundation of Railway in North Bengal reduced and solved the problem of conventional communication systems. It helped to regularize the communication system instead of climate centric, seasonal, irregular communication system. Railway, moreover, reduced the traveling period where the bullock carts would cover a maximum 12 miles in a day. Instead of hurt journey, Railway introduced comfort and smooth journey, which inspired the people, as per as possible to avoid the conventional system.

Our findings clearly signify that the fare of roadway was more than four times double from the fare selected by the Eastern Indian Railway (EIR). Significantly, the railway transport-cost increased @0.45% hike yearly. The growth rate of the transport cost by bullock cart was extremely high. At Dinajpur district within 34 years the transport cost turned into double, which increased @2.94% yearly. If we calculate the hike rate, in the year 1899, the actual difference of the transport cost between Bullock cart and the railways is (0.576826-0.079044) = 0.497782 pies, which more than seven times double from the railway fare. We have already calculated the cost of the roadway and railway (in the Table No.3.2.5) in rupee per mound-kilometer. We have calculated the hike trend of the roadway transport cost from the year1833 to year1866 in the Table No.3.2.5 to find out the proximity of transport cost between railway and conventional modes. The findings point out the high probability of the proximity between the railway and river transport cost in the last decade of the 19th century. The Table No.3.2.9, it signifies that for a while, the cost of river borne trade was lower than the railways. The most important finding is that, the bullock cart gradually lost their importance due to maximum transport cost. The acceptance of other two modes (railways and waterways) of transportation systems was better than the bullock cart. Therefore, the probability of the internal and external merchandise traffic was very little by the bullock cart, but for the seasonal (due to lack of water communication in the dry season), shorter and interior distance the acceptability of the bullock cart continued.

In fact, instead of the proximity between the railway and waterway transport cost, in the final count, the railways dominantly emerged as the superior carrier in relation to the traditional alternatives due to various important factors. The Table No.3.2.10 indicates the notable seasonal fluctuation by the river-borne traffic in North Bengal, even in the bigger rivers. The table clearly mentions the river-borne traffic for the internal and external trade highly affected during the dry season. In spite of proximity of the transport cost, technologically railway has unique transportation capability throughout the year. Railway had an exceptional network to export and import the products all over India within a short time. So the river traffic failed to serve the purpose of transportation within the state, but

took an important role in export and import trade before the foundation of the Railway with Bengal, Burma and Assam. Therefore, the all findings agree with our selected hypothesis.

Instead of all, it has some limitation. In Darjeeling district after the beginning of the modern motor vehicles in 1930, the road way communication rapidly developed and now days it became the main way of communication, and the DHR gradually lost his importance. It failed to solve the remoteness of the communication in the hilly track like Darjeeling district. In the lower districts of North Bengal, in the rainy season roadway communication was impossible. At the same time, extension of railway was unachievable to connect the water logging village. Therefore, a fruitful transport policy was indispensable. The railway companies and the colonial authority initiated railway for the commercial purpose which created an unparallel competition with the conventional modes. That ruined the water transport system, which was highly useful in the big rivers like the Ganges and Brahmaputra. Indeed, according to economic point of view, a good coordination was essential to flourish the communication system in North Bengal, not competition.

Railways took a dominant role in the export-import merchandise traffic in North Bengal where the role of conventional mode was insignificant. The hypothesis has been tested at the Chapter No: 3.3. According to our hypothesis, transformation of the primitive mode of the transportation system by applying the modern technology like railway should have a notable impact on the merchandise traffic. In this chapter, we have practically examined the acceptance of the railways as a superior carrier for the internal and external trade, and the findings indicate the comparatively better acceptance of the railways from the other formal modes. According to our present analysis, instead of the cost proximity between the railway and river traffic, as a whole the railway emerged as a superior carrier according to same analysis. In average, between the years 1891 to 1921, more than 80% of the total import and export were conducted by the railways.

However, we have also exceptional findings, where the role of river was more dominant thence the railways even after passing forty years from the foundation of the railways in North Bengal. The study of the import trade between North Bengal and Assam (Table No.3.3.14) indicates the role of river was more dominant from the railways even up to the year 1921. It was possible due to the river Brahmaputra, which took an essential role in the import trade from Assam to North Bengal. Therefore, clearly after 43 years from the foundation of the railways in North Bengal, few water routes obviously succeeded to hold the dominant role. At the same time, traders selected way of communication according to nature of products and its destination. The Table No: 3.3.21 indicates even up to 1931 the rice, principal commodity of the Malda district mostly exported by the river Ganges (52%) but at the same time from the same district more than 90% jute exported through the railways. The findings clearly indicate the significant role of few water routes in the merchandise traffic, which disagree with our selected hypothesis.

Foundation of railways helped to expand the agricultural market. Agriculture production of North Bengal linked with the national and international market which helped to commercialize the agriculture products of North Bengal. The hypothesis has been tested at the Chapter No: 3.4. The graphical interpretation of this chapter (Table No.3.4.1) signifies the proportional growth of the total export and import trade in North Bengal between the years 1891 to 1921. The total import and export both remarkably increased up to 1921. In average, the entire export from North Bengal was near about 60% from the total export and import. In export, the agriculture productions were the principal item from North Bengal. Naturally, North Bengal enriched for the affluent and wide agricultural productions, basically for the enormous quantities of tea, jute, rice, tobacco, wood & silk. The export-import trade reports between the years 1891 to 1921 specify that in average, the export quantity from north Bengal remarkably increased, which indicates the massive expansion of the agriculture market in North Bengal. It was possible because the agrarian economy of North Bengal linked with national and global market, which helped to commercialize the agriculture products of North Bengal.

The study (Table No.3.4.8) clearly indicates the gradual expansion of the agriculture market of North Bengal, though; at the initial stage, the export quantities were nominal. It was possible due to the expansion of railways, because the export trade from North Bengal by the rivers had some limitations. Therefore, this analysis not only consolidates the argument of the widening of agricultural market but also indicates the significant trend of the expansion of agricultural market by the railways in North Bengal. The study as well indicates, that the export trade badly affected during the First World War. This is a strong example which indicates that the prices of the agriculture products would fluctuate according to the international price position. The above study significantly indicates that, the farmer benefited due to widening of the agriculture market by the higher cost of the crop. Undoubtedly, the products like jute, tobacco, tea remarkably exported due to huge global demand, and the products rose as an important commercial crop of North Bengal. At the same time, due to quick development of the communication system the silk, one of the most important profits making products of North Bengal gradually ruined and failed to protect from the worldwide market competition.

The commercialization of agriculture had a positive impact on the development of small-scale agriculture-base modern industry in North Bengal. Plantation industry was significantly traced by the colonial authority than any agriculture base industry. The hypothesis has been tested at the Chapter No: 3.5. The process of industrialization does not only depend on the factors of communication, but it is a unique feature to develop the industry in any particular region. The plain of Northern Bengal is highly fertile for cultivation,

and the hilly *Tarai* is also appropriate for the development of plantation industry. There was a very thin probability of heavy industries like Bombay and Calcutta industrial belt, due to the absence of sufficient essential criteria. Commercialization stimulated modern small industry in North Bengal, leading to the growth of towns that had large spot markets and settlement of merchants. These towns saw the growth of small-scale industries such as rice and oil mills, sugar mills, cotton gins, etc.

Our study (Table No.3.5.1) signifies the growth of the registered industries in North Bengal. According to the list of factories by the Chief Inspector of Factories in Bengal, out of 367 registered factories 277 were tea factories, which indicate that 75.47% of the total enrolled factories of North Bengal belonged to tea factory. We have already discussed the growing export quantity of the tea in the Chapter No.3.4.7.3. The second important factory was rice mill; total 43 rice mills were continuing up to May, 1935; in-between 29 factories were in the district of Dinajpur. Third was jute industry, basically eighteen jute press factories remarkably developed in the districts of North Bengal. However, the major foreign investment occurred in the plantation sector. The expansion of railways in the northern districts of North Bengal accelerated the progress of tea industry in North Bengal. The railway itself took the mandatory role to develop few engineering and workshop factories for their own requirement. Seven engineering and workshop factories took the essential role to create the employment opportunities in North Bengal.

Expansion of the railway was highly responsible for accelerating the process of de-industrialization in North Bengal, which destroyed the handloom industry of North Bengal. The hypothesis has been tested at the Chapter No: 3.5. According to our hypothesis, the railway was highly responsible for accelerating the process of de-industrialization in North Bengal. Railways accelerated the decline of handloom industry by making imported and Indian factory-made cloth available at prices lower than local weavers could charge. According to few scholars, the market position of handloom cloth was actually solidified by the railways due to the new availability of low priced factory-made yarn and that the numbers of weavers did not decline. The findings disagree with the hypothesis and partially support the above argument.

The study significantly indicates that the handloom industry of Northern Bengal was more or less stable up to 1921, because the demand of Indian and European factory-made yarn continued for making the handloom cloths. The weaver liked to use the cheap yarn and there was no negative and positive impact of the railways on the handloom industry of North Bengal between the years 1891 to 1921. It is also right that the import of foreign and Indian cotton piece goods highly accelerated by the railways (see Table No.3.5.11). As a whole, the demand of the factory-made cotton goods declined after the post-world war

period, due to the decline of the purchase power in North Bengal (see in the Chapter No. 3.7.2) and economic depression. The handloom industries in Pabna which has survived with the competition of the European and Bombay mills and was still the most important cottage industry in the district till 1923. It was estimated that there were 9500 looms in the districts, of which 3000 were the fly –shuttle looms, and the outturn of the cloth was 7,500,000 yards a year. It is notable that due to the impact of industrialization, the handloom manufacturing also affected and modernized by using of fly–shuttle and foreign yarn. In 1920, only three modern hosiery factories were successfully continuing in the Northern Bengal. Within fifteen years six modern registered hosiery industries successfully continued in the Pabna district up to 1935. We may conclude that the development of railway had no adverse effect on the cottage industry of North Bengal when the other places of India were largely affected.

Railway took a significant role to reduce the price gap and also took an important role to convergence the price of essential commodities in North Bengal. The hypothesis has been tested at the Chapter No: 3.6. In order to calculate the hypotheses that the railway reduced the price difference between the districts of North Bengal, we select the years 1861 to 1921. We have selected two necessary products for common people; the rice, one of the main export products and salt, most essential import product of North Bengal.

Before the foundation of railways in North Bengal (1861-1877), the average CV of common rice for the 17 years is 15.35, whereas, in Bengal, it is 21.98. Though, the railway was established in 1878, but the CV of Northern Bengal and Bengal mainly stabled after 1883. In 1884 to 1912, for the 29 years, the CV remarkably decreases in North Bengal where the average CV is 7.8 but in Bengal, it is 10.88 for the same period. Though, after that the CV gradually goes upward, during the First World War (1914-18) the mean of the CV of North Bengal is 13.23 which near about twice from the CV of the previous years (1884-1912). It is also remarkable during that time the average price of common rice highly increased and the import of rice into North Bengal was as well increased (Table No. 3.6.1). However, the condition was no longer same. Again, the CV moves down between the years 1919 to 1921 and the average of CV for the three years is 5.79 in North Bengal, and in Bengal, it is 7.58.

The study also indicates the trend of the comparative price convergence of salt. In the pre-railway period in North Bengal, the average CV of salt is 7.34, for the same period in Bengal; it is 8.38. In the post-railway period, the CV of North Bengal and Bengal are respectively 5.65 and 9.63. Therefore, we may assume that in the post railway period due to communication development the price was significantly converged. However, we have some special findings in the same study. If we study the years 1871 to 1877, the price of salt already converged due to an available river communication system. The CV of North Bengal exceptionally decreased after 1870, and the CV between 1871 and 1877 is only 3.82. It was possible due to river traffic facility between Calcutta and North Bengal and the nature of

product. The salt may stock any time within the year, and the traders may continue the salt for long time at the store house, and they sell when the price goes up. The price of salt extremely converged between the years 1871 to 1902; here the CV of North Bengal is 3.75 at the same period in Bengal is 7.62. In the year 1905 to 1921, the CV goes up and stands on 8.55 and 12.87 respectively, in North Bengal and Bengal.

We have also applied different methodology to test the impact of railways on the price convergence in North Bengal. We calculate the difference of the annual average price of Bengal and North Bengal for rice, and then find out the percentage of the price gap between North Bengal and Bengal. The findings clearly signify that the percentage of the price gap between North Bengal and Bengal outstandingly reduced at the post railway period after 1878. According to our analysis, the average price gap between the years 1861 to 1877 are 7.18%, whereas, for the years after the foundation of railway 1878-1921, the average price gap is only 2.68% between Bengal and North Bengal (see the Table No.3.6.3).

In case of salt, the pre-railway (1861-77) average price gap between Deltaic and North Bengal is Rs. 0.49526 and the post–railway (1878-1921) average price gap is Rs. 0.278787. Primarily, according to our findings, the difference of the mean of the average price of one mound salt in the pre and post railway period between the Deltaic and North Bengal is Rs.0.216. Our findings indicate that the price gap between production region (Deltic Bengal) and North Bengal reduced 77.64% in the post railway period. It is calculated according to the difference of the mean of annual average prices of pre and post railway years. We have also calculated the percentage of the price gap. That indicate the pre-railway average percentage of the price gap between Deltaic and North Bengal is 10.80% and the post railway average percentage is 8.52%. The study also indicates some different findings. In 1878, the railway established in North Bengal, the minimum price gap we follow in the years 1880 to 1905, here the average price gap remarkably declined and stable at Rs.0.261, and the rate of the average price gap fall is 112.36% for the same years.

Wage structure and purchase power of the common labourer significantly improved due to commercialization of agriculture with development of railways in North Bengal. This hypothesis has been tested at the Chapter No: 3.7.

Hypothetically, we accepted that the wage structure and purchase power of the common labourer significantly improved due to commercialization of agriculture with development of railways in North Bengal. Our findings clearly indicate that at the initial stage 1878 to 1888, both positively improved, but after that the wage rate and purchase power not developed as we hoped. There are several factors ware responsible behind the significant decline of the wage rate. The scarcity of the labour was the prime factor behind the wage hike after 1872. However, the condition was no longer same. In Bengal, due to population growth, the land-man ratio changed dramatically. Whereas, during the nineteenth century, with the expansion of cultivation for the commercial crops and

depletion of population because of famines and epidemics, the land-man ratio was highly suitable to man. In the first half of the twentieth century, the favorable land-man ratio reversed due to high population growth. Afterward, the land–man ratio was continuing against the labourer interest. In North Bengal, between the years 1891 and 1921 enormous migration changed the demography of this region. That undoubtedly affected the land-man ratio due to high population growth, at the same time the area under cultivation was stagnant, which reduced the wage structure and purchase power of the common labourer. Colonial rent policy and system were as well responsible for the same.

Hence, we may conclude that the railways undoubtedly helped to accelerate the commercialization of agriculture in North Bengal, but the fruit of the commercialization only restricted to the bigger *jotedars* and very little for the commoners. Land–man ratio was against the labourer due to huge migration and available seasonal labour. Simultaneously, the development of railway accelerated the easy migration of seasonal labour. Both favored the *jotedars* to achieve available chief labourer. The consideration of wage hike was very thin because the *jotedars* also bound to pay high rent for every year. For these reasons, the cream of the commercialization exactly did not filter to the common agriculture laborers. instead, it established preferential and superior right of few persons over the majority.

The construction and development policy of the railways by the colonial authority was highly responsible for the huge deforestation in North Bengal. This hypothesis has been tested at the Chapter No: 3.8.

The rapid development of railways in the northern districts of the Bengal basically took place at the cost of huge deforestation for the incessant supply of railway sleepers. Obviously, the huge densely natural forest was cleared for the spread of the railway line which also ignored the stipulation of ecologic balance. If we see the foundation area of BDR, CSR and DHR, we may easily understand did how the colonial authority ignored ecological stance. The Bengal Dooars Railway passed across the three important wildlife sanctuaries like Buxa, Garumara and Mahanada, DHR as well as passed through the Mahananda wildlife sanctuary. Therefore, the colonial aim was to connect the tea gardens and the forest regions for their commercial interest at the same time for the military interest also. At the initial stage, the forest of North Bengal failed to capture the timber market due to uneasy access, and the production cost was comparatively high from Assam and Burma. Huge numbers of the railway sleepers were imported from the different provinces of Bengal for the construction of railway between the years 1891 to 1900.

After that they changed their policy, between the years 1874 to 1900, the authority aggressively used the forest property of North Bengal, for the construction of the railway line in North Bengal and thus the huge amount of wooden sleepers were used usually free of cost. Soon the authority recommended to use this resource for the construction of the nearest railway line of Northern Bengal like DHR, CSR, BDR, and NBSR. According to their

point of view, the demand for railways would be large enough to exhaust the forests but the price at which the timber had to be supplied would not provide enough profits to the department. The governments also provided free of cost certain timber for sleepers for first construction Bengal Dooars Railway line.

However, the condition was no longer same. With the development of railway communication, the remoteness of the region gradually diluted and the wood became easy to access for marketing. The development of communication reduced the transport cost and helped to compete with the Burma, Assam, and Australian timber. The study also indicates the increasing demand of the timber of North Bengal, and the railway took a significant role to export the product for the external market.

Our study and analyses clarify the brutal forest policy of the colonial authority, and we may as well conclude that the construction of the railway in North Bengal it occurred at the cost of deforestation, which continued for the further period.

Smooth and rapid development of communication by the railways, reduced the population density gap between the police stations and administrative blocks of the districts of North Bengal, thus railways took a significant role to the convergence of the population distribution. This hypothesis has been tested at the Chapter No: 3.9.

The study evidently denotes district wise variation and the trend of convergence in the population distribution between the years 1872 to 1951. Our findings, as a whole, indicate the trends of gradual downward movement of the CV in the post railway period except in the Darjeeling district. We may conclude that the impact of the railway communication was comparatively batter in the Jalpaiguri and Malda district. Darjeeling district is the top position in the divergence of the population distribution.

In Darjeeling district, though the average increase of the density of all police stations from the year 1872 to 1951 is more than four times double, but the CV is exceptionally static 70 to 80. In the last year, it is remarkably high, 80.54.

It basically happened due to the nature of land; Darjeeling is a highly mountain region where the extreme facility of transport for all the police stations was too difficult. In average, in Coochbehar state the convergence of the population in the selected police stations is highest from any other district. In North Bengal before the foundation of the railway, CV is above 70, and after the development of railway, the CV fluctuates between 40 to 50.

The stagnant medieval social structure of North Bengal was highly affected by the foundation and development of railways with the entrance of modern education and influence of western and Bengali middle-class culture. Development of railway had a significant impact on the native society and culture. This hypothesis has been tested at the

Chapter No: 3.10.

Undoubtedly, the stagnant medieval social structure of North Bengal was highly affected by the foundation and development of railways. With the changing economic structure, the society of North Bengal adversely affected. However, according to our study area and period, it was a mainly one-sided impact due to a particular socio-economic condition. The long-term colonial supremacy over India established European culture as a dominant culture. At the same time, the native cultures were treated as a backward and subordinate. With the growing demand of western education, we follow a westernization trend all over India from the second half of the 19th century. Accordingly, the northern part of Bengal not differed from it. We follow mainly two important trends; one, indirect westernization and sanskritaization through the influence of Calcutta base Bengali middle-class culture another, direct westernization by the European culture. First, one happened in case of the indigenous community like Koch and Rajbanshi, and second one happened in case of Mech, Gorkha and Nepali community. Though the westernization and sanskritaization occurred in a particular socio-economic condition, but the role of railways was inevitable to accelerate both the processes. We may conclude that the railways undoubtedly helped the natives to compare themselves with the other community. It was possible because the remoteness gradually diluted by the development of railways.

Pilgrimage is one of South Asia's oldest and most popular cultural practices. It was influenced by the new transportation technology in the form of the railways. Accordingly, railways helped to build up the region as a pilgrimage and tourist centre and as well linked the people of the region with subcontinent pilgrimage practices.

Due to development of the communication system in the northern region of Bengal, it was easy to penetrate the western industrial finished goods. We already discussed the impact of industrialization on the handloom production of North Bengal (in the Chapter No. 3.5.3). The native people started to use the mill made cloth instead of handloom cloth. Not only, in cloth, the industrialization touched every corner of life. The concept of fashion dramatically changed with the development of communication. The Rajbanshi women started the practice of *ghomta* and began to wear the *sari* like as Bengali women. Few elites and educated Rajbanshi men some time occasionally wear shirt, pant and coat like as the Europeans and Bengali Babu. At the early stage, this fashion style basically practiced in the higher-class Rajbanshi people, but gradually it penetrated to the lower strata.

So, we may conclude that the railways had a mixed impact to the people of North Bengal. Undoubtedly, railways had a great impact on the society and economy of North Bengal. However, the commercialization of agriculture, massive growth of the export-import trade, high transport facility by the railways had a positive impact on the economy of North Bengal. Railway, as a technological device it has an additional and massive benefit from any

other conventional mode. Speed, capability, reliability and cost, in all respect it was better than any other traditional mode of transport systems. According to our analysis, economically, the poor marginal people of North Bengal did not get too much benefit. At the same time, all the railway companies of North Bengal get huge benefit. It happened due to colonial policy. Science and technology always generate profit. How far will reach the profit to the lower strata or whom do you give the profit? It totally depends on the policy and policy maker. At last, it is to be remembered that the railways not only changed the transport culture it brought a new revolution in the communication system. Obviously, it changed the dimension of the medieval static socio- economic structure of North Bengal.