

SOCIO-ECONOMIC ENGINEERING AND THE BRITISH PROFIT MOTIVES IN COLONIAL PUNJAB, 1885—1922

Abstract

The article tries to strike a balance between the critical and ameliorist view of the colonial impact on the Punjab. Under the British rule Punjab witnessed many socio-economic changes. The article argues that although the profit motive and running the empire on cheap was the primary motive behind all such changes, however, given the size of its territory and population, as compared to the rest of India, Punjab benefited from the colonial interception unprecedentedly. The process of transformation started with the restoration of the seasonal irrigational channels and marked its way through the introduction of perennial irrigation, canal colonization schemes, construction of rail and road network, introduction of telegraph and postal service, and Punjabisisation of the colonial Indian Army. Agricultural prosperity was supplemented by the military pay and pensions. Punjab's economy was transformed from subsistence farming to an export oriented economy. The British did not pay any heed to industrialization as they only favoured agricultural production to deepen the colonial relationship by the export of raw material and expansion of the revenue base.

Key Words: Colonial Punjab; Canal Colonisation; Irrigation; Railways; Socio-economic Changes; Colonial Political Economy; Colonial Indian Army.

Introduction

The British conquered Punjab late on in their process of military and political domination of the subcontinent. This was set on its course by the battle of Plassey (1757). British domination was achieved by a process, which entailed them in 'a series of successful military campaigns, fought mainly by colonial armed forces comprising mainly Indian regiments led by British officers.'¹ Power was wrested in the Punjab following the Second Sikh War. On March 29, 1849, the Punjab's formal annexation was proclaimed at Lahore. Although Punjab throughout its history had been prominent in terms of its strategic frontier location and vast land and water resources it, however, enjoyed unparalleled politico-economic and military significance under the British rule, which not only transformed the area into the granary of India but also made it a base for heavy recruitment for the colonial Indian army. With the advent of British rule, the Punjab witnessed significant socio-economic transformation. Simultaneously the imperatives of colonial control gave rise to a system of informal alliances with the landed aristocracy. Its agricultural potential, manpower and so-called martial races were

* Dr. Tahir Mahmood, Associate Professor, Department of History, Government College University, Lahore, Email: tahir.mahmood@gcu.edu.pk.

efficiently tapped for the imperial interests. Its rural elite acting as natural allies of the British government facilitated and strengthened the imperial process. These alliances were nurtured and sustained through the lavish distribution of colonial patronage and by directing the commercial and agrarian policies to the benefit of the landed elite.²

Socio-economic Transformation

Colonial Punjab had a rural society and an economy based on agriculture as 'around two thirds of the total population was dependent on agriculture for its livelihood.'³ By the mid 1880s, the province witnessed economic growth and massive social engineering carried out through irrigation projects and canal colonization. Barren tracts of wasteland in the *doabs* (inter fluvial plains) of western and central Punjab were transformed into the richest farming area of the British India as 'the British constructed the world's largest irrigation system, leading to twenty six million acres being watered by canals.'⁴ A network of canals was laid and nine canal colonies were established.⁵ The process of canal restoration and construction was started almost immediately after the annexation of the Punjab, which continued until the last years of the British rule. In the period between 1885 and 1947, there was a five hundred per cent increase in the area irrigated by canal water, the major portion of which was situated in these canal colonies. Increased land resources from the canal colonies had tremendous impact on the society and economy of the Punjab. Ian Talbot, along with other scholars considers the canal colonies as the most important project carried out by the British. 'The British', Talbot writes, 'engineered many social and economic changes, the most notable being the development of canal colonies.'⁶ Besides the canal system the British also paid attention to the communication system. Its initial development was prompted by strategic considerations. However later on under agrarian economic imperatives, some improvements were brought solely for this purpose. Transportation and urbanization necessitated by military needs, especially the growth of cantonments, played their part in promoting agricultural growth.⁷

Restoration of traditional modes of irrigation

Before the arrival of the British, large areas of the West Punjab mostly consisted of barren land. Cultivation was limited to the areas which were accessible to irrigation through seasonal canals or ground water through wells. There were 137,600 thousand wells by the middle of the nineteenth century which were fulfilling only limited needs.⁸ Its five rivers, after which the province has been named, had abundance of water but the area cultivated through inundation canals was meager. In central Punjab 50 thousand acres of Gurdaspur, Amritsar and Lahore districts were irrigated by the inundation canals. The inundation canals of Sutlej and Chenab rivers irrigated 20 thousand acres. Similarly the inundation canals of River Sindh irrigated one *lakh* (one hundred thousand) acres and those of Western Jamna irrigated almost three *lakh* acres of land. In this way the total area irrigated by these rivers was just 470,000 acres.⁹ Water through these canals was only available from May to October and therefore, farmers could reap only one harvest in the summer season. The only perennial canal was the Hasli canal which

was 'constructed in 1663 by Emperor Shahjahan's engineer Ali Mardan Khan to bring water from the Ravi to Lahore. It was extended by the Sikhs to Amritsar to fill the sacred tank surrounding the Golden Temple.'¹⁰

Immediately after the annexation of the province, the British paid attention towards the restoration of the canals. In this regard 21 inundation canals of Sindh and Chenab rivers were renovated due to which the cultivated area in Dera Ghazi Khan and Muzaffargarh districts increased fivefold. In 1870 the inundation canals of Jehlum River were brought in use and as a result 743,000 acres in Shahpur district became cultivatable.¹¹

Besides the inundation canals, many private canals existed at the time of annexation. Some of them were taken over by the government and at the same time it also encouraged the 'construction of private canals by leasing out waste land', which gave impetus to cultivation in many districts particularly in the Shahpur District.¹² In this district all except one of the eight private canals were owned by the leading landowning Noon and Tiwana families.¹³ Shahpur, however, was not the only district where private canals existed rather other districts also boasted to have private canals such as the Grey Canal in Ferozepore, Sarusti Canal in Karnal, Gharah and Gharkhana Canals in Montgomery and the Shahan Nahar Canal in Hoshiarpur district.¹⁴

Water from these canals was not only used by the owners of the canals but surplus water was also sold to the other cultivators which entailed a number of problems. Water to the small cultivators could be charged at a high rate; therefore, sometimes it interfered with the government claim of revenue collection.¹⁵ It gave the owners of the canal sole authority to dispense water who through their water lordships could wield considerable power in the area.

However the major change in the socio-economic sector came with the government schemes of agricultural colonization of the crown waste lands and the construction of government sponsored canals in the barren tracts of the Punjab.

Perennial irrigation and canal colonization

Different *doabs* which were hitherto barren tracts and populated only sparsely by nomads were introduced to the perennial canal system. This brought the immigration of agro-settlers from the other parts of the province. These canal colonies enormously benefited some of the districts in which they were situated namely Multan, Montgomery, Lahore, Gujranwala, Jhang, Lyallpur, Sheikhpura, Shahpur, Sialkot and Gujrat.¹⁶

These canal projects and colony schemes rendered vast areas of waste land viable for cultivation 'thanks to 20,000 miles of canals.'¹⁷ In 'less than a generation', the British civil servant and rural expert Malcolm Darling observed that the 'wilderness blossomed like a rose.'¹⁸ The pace and extent with which the increase in irrigation took place can be easily viewed by the figures. In 1887 the area irrigated by the major canals was 1,423,000 acres, which increased to 10,402,000 acres in 1921¹⁹ whereas the total sown area in 1921 was 31,026,000 acres.²⁰

Therefore, nearly 34 per cent of the sown area was irrigated by the canals.²¹ In 1939, 47 percent of the region's total cultivated area was watered by canals.²² Between 1885 and 1947 the overall increase in the canal-irrigated area in the Punjab was from 3,000,000 to around 14,000,000 acres.²³ These figures show that the irrigation system was greatly expanded under the British.

The increased land resources and irrigation through perennial canals brought healthy results in the economy of the Punjab as 'by the 1920s Punjab produced a tenth of British India's total cotton crop and a third of its wheat'.²⁴ The province exported over 500,000 tons of wheat each year and the 'per capita output of all its crops increased by nearly 45 per cent between 1891 and 1921'.²⁵ These figures show marked increase in agricultural growth as Punjab comprised one-tenth of British India's area.²⁶ There was a tremendous increase in the value of agriculture produce. Darling has noted that 'in fifty years, the value of agricultural produce rose from 35 to over 120 *crores* (a *crore* is 10,000,000), and during the years of high prices after the First World War the canal colonies alone produced £20 million a year'. About the rise in the value of land he states 'worth in 1866 about Rs. 10 an acre, it sold in the five years ending 1926 at an average of Rs.238'.²⁷

Transportation and communication

Agricultural boom and military imperatives necessitated the colonial government to pay attention towards transportation and communication system in the Punjab. With the introduction of cash crops there was a surplus produce of agricultural commodities and to fully harness the benefits of improved agriculture, there was a dire need to transport the surplus commodities to different markets from where they could be exported to other provinces and abroad. The railway network could of course serve both strategic and economic needs as was noted at the time 'the lines designed directly for military purpose may incidentally serve the ends of commerce; so, many commercial roads occasionally be used for the transit of troops, stores and munitions'.²⁸ As a result of improvement in the communication system the Punjab had 3,918 miles of metalled roads in 1912, and 25,853 miles of unmetalled roads. In other words 7.5 percent of metalled roads and one fifth of unmetalled road of the British India were situated in the Punjab. This was a very high proportion given the size and population of the province.²⁹ Similarly there were marked improvements in the railway network. The network had grown from just 410 miles in 1872 to 4,441 miles in 1922.³⁰ This had a great impact on the agricultural economy of the province which was facilitated by the establishment of a number of railway stations. By 1920s there were 660 railway stations and only a few places were situated as far away as 25 miles from the railway line.³¹ In this way all the main agricultural regions of the province were linked to the port city of Karachi. There was also marked development in regards to Post and Telegraph. Punjab had just 425 post offices in 1870-71 and with the increase of 901 per cent they figured 4,257 in 1931.³²

As a result of railways, roads and irrigational infrastructure Punjab's agricultural economy became one of the most export oriented economies in the whole of Asia. Statistics for the period between 1890-1 and 1918-9 reveal an increase of exports both in volume and value. In these years export of raw cotton went up from 0.24

million to 2.1 million *maunds* and cereals and pulses from 14.0 million to 40.8 million *maunds*. For the same period value of total exports increased from Rs.71 million to Rs. 522 million. This was indeed a very promising picture.³³

The canal colonies were also responsible for the improvement in communications. The irrigation department had its own telegraphic system, which connected every canal rest-house with the Canal Divisional Headquarters and it was also used to disseminate information on prices.³⁴ For instance, 'Bombay cotton prices were telegraphed to the main cotton markets in the canal colonies by the agricultural department from 1917 onwards.'³⁵ In addition to this the canal colonies also had their own telegraphic system.

Social engineering

These projects were not just experimentation in the agrarian economy but also a grand project of social engineering through paternalist and interventionist imperialism. David Gilmartin observes that the transformation in the colonies was a two way process. No doubt the settlers played the primary role to transform the environment, but the environment also transformed the settlers. The colony landscape was marked by 'ordered and regular patterns of environmental control'. He further argues 'newly ordered and rational environment created by a new, state-designed structure of colony irrigation was to transform the settler into a new, more modern type of man.'³⁶

This is reflected in the symmetrical layout of the fields and residential plots in the colonies. For all settler communities the places were earmarked according to the fixed plans. Special places were allocated to the colony menials and agricultural castes. Streets were straight and wide. Special emphasis was laid on cleanliness and sanitation as it was made part of the rules and regulation. Settlers were not allowed to pile manure inside the compounds and encroachments were punished. The (Punjab) Tenants Act, 1893 had imposed conditions on the grantees relating to residence, succession, alienation of land and sanitation so that they do not become renters and the land should not become uneconomical through numerous subdivisions.³⁷ The whole view of the sites depicted an 'ordered regularity'. As Gilmartin observes '*Abadis* (settlements) were increasingly laid out according to fixed plans, and 'Settlers were compelled to build their compound walls on fixed alignments so as to ensure regular streets.'³⁸

In Chenab Colony, for the education of settlers, model villages were set up on colony extensions, and they were considered to emphasise utmost attention to sanitation and overall improvement of the village. The colonists in these villages were expected to serve as an example to the rest of colonists. The aim was 'to create villages of a type superior in comforts and civilisation to anything which had previously existed in the Punjab.'³⁹ Gerald Barrier explaining British policy writes, 'Healthy agricultural communities of the best Punjab type would be established and kept under constant supervision. These in turn would demonstrate to other Punjabis how proper sanitation, careful economic planning, and cooperation with the government could result in a higher standard of living.'⁴⁰

With the development of the canal colonies, a new phenomenon of market towns became evident. These centers became the hub of all commercial and development activities. As Malcom Darling noted Lyallpur's, 'college and farm and its progressive community' became the 'main centre of agricultural development' of the colony.⁴¹ The British took special interest in designing, planning and regulating these towns. The 'ordered regularity' of these towns is a proof of the 'ordered modernity' which the British introduced to Punjab society. Gilmartin observes that 'the potential for transforming colony peasants into modern men was perhaps most clearly realized in the new colony's market town, whose ordered regularity stood as perhaps the clearest symbol of the transformative goals of the colony as a whole.'⁴²

Popham Young designed the centre of Lyallpur, which was famous for its clock tower and eight bazaars all emanating in regular patterns from the tower *chowk* (crossing). These bazaars were mainly the agricultural markets and were 'intended to be magnets for the surrounding villages'. Together they occupied four 'surveyed colony squares'. The clock tower, a 'telling symbol of middle class regularity was built with the subscription of colonists of the Bar as a Memorial to the late Queen-Empress.'⁴³

Sargodha underwent similar development because of its role as market town and headquarters of the Jhelum Canal Colony. The famous Punjabi writer Prakash Tandon whose family had moved from Gujrat to Sargodha in early twentieth century writes:

'Sargodha, as can be imagined, was a much cleaner and healthier city than Gujrat. It was planned, well laid out and had plenty of light and air. Its streets and lanes were wide and straight. Somehow the clean, hygienic, impersonal layout seemed to mould the population into the pattern that the settlement officer of the late Victorian period must have had in mind'.⁴⁴

Gilmartin observes that the 'image of order and cleanliness suggested by Tandon's vision of Sargodha was the same image that many colonization officers had in mind for the rural canal colony villages whose produce filled Sargodha's markets.'⁴⁵ He is of the view that the transformation of the rural society of the Punjab was to a great extent the result of socially engineered space manifested not only in the market towns but also in the geometrical and regular pattern of agricultural holdings in the countryside which were known as squares.

British profit motives and Punjab's prosperity

The standardised view on the colonial development of the Punjab tends to reflect the uniform and homogenised impact of the British rule. For example it is generally believed that the prosperity generated by these canal colonies was shared alike by the peasants and the government, which had incurred huge capital investment in these projects not matched in the same magnitude anywhere else in India. Soon the investment paid rich dividends to the state as it earned net profit of Rs.128 million from the investment of Rs.410 million.⁴⁶ The Colonial state showed its utmost benevolence in its settlement of revenue policies and therefore

peasants profited a lot from the economic transformation. In Punjab the land settlement was done for 15 to 30 years. The government's demand of revenue was deliberately kept 5 to 50 per cent less than the percentage fixed by the Sikh government in the early nineteenth century.⁴⁷ Islam has noted that although revenue generation was the primary motive behind the state investment landowners were allowed to retain 'a large part of the increased returns from crop production canal tracts.' This was the reason that canal irrigation spread at the fast rate and replaced the irrigation through wells. Moreover, grantees were allowed to acquire proprietary rights just on the payment of nominal price.⁴⁸ Malcolm Darling argues that prosperity was not just limited to the colonies but it also spilled over to non-colony areas of Punjab.⁴⁹ With the extension and expansion of irrigation and agriculture the revenue demand of the government of Punjab also increased. This increase was marginal in the nineteenth century but noticeably exorbitant in the twentieth century. This increase was mainly in the canal colonies where perennial irrigation and secure harvest had made it possible.⁵⁰ Fox writes that 'Government collections from canal irrigated lands rose from less than 20 per cent of total revenue as late as 1913 to over 40 per cent in the 1920s, whereas receipts from other lands remained fixed between 25 to 30 per cent.'⁵¹ The British also earned huge dividends from the railway construction. Indian railways were a highly profitable department so much so that its profits surpassed the total agricultural revenue. Over a period of five years from 1901 to 1906 the Indian government received Rs. 40,360 million from railways whereas it received Rs. 30,260 million from taxes.⁵²

Islam argues that public investment in irrigation works generated many benefits for the colonial government: 'for many years it ensured the loyalty of the dominant section of the rural population, facilitated recruitment in the army, vastly added to the financial resources of the state and strengthened the colonial relationship between England and India.'⁵³ At the same time it brought about rural socio-economic transformation in the Punjab which distinguished it from the other provinces.

'Assured water supply increased agricultural production directly through a vast expansion of cultivated area and indirectly by facilitating/promoting certain changes in crop pattern and spread of new varieties of seeds. Increased crop output together with its commercialization in a situation of rising prices, favourable land/man ratio and water pricing policy of the government led to the rise of a large class of rich peasants and strengthened the position of landlords.'⁵⁴

Islam not only rejects Mridula Mukherjee's contention that there was nothing exceptional regarding this transformation, but he also broadens the concept of "Punjab Tradition" propounded by Dungen,⁵⁵ asserting that this tradition should not be viewed as just a 'desire to create and preserve a stable rural base', which 'ignores the considerable benefits that accrued to the dominant sections of the Punjab rural society from canal construction and colonization programme'. Rather, he writes, it 'should be understood in a wider sense to emphasize the exceptional nature of the Punjab situation' in which the British boosted its agriculture and the interests of the landed classes, 'as well as the rich dividend that this involvement paid.'⁵⁶

The aim of the canal colonies was to relieve pressure of population on the congested districts of the Eastern and Central Punjab, to boost agriculture by settling 'efficient' agriculturists and to improve rural living standards. Revenue and military needs were also important considerations. Nevertheless, these aims too have their politico-economic connotations. Land distribution became a means to strengthen the status and authority of the rural allies so they could become more loyal and serve the government more effectively. Imran Ali, therefore, contends that the real motivation was political entrenchment since the colonial state controlled the canal system and the land distribution; it also controlled the means of production, which greatly strengthened its writ over the society. Through land grants the state earned the loyalty of the rural 'middle class' which it had created. In turn this class became an important prop of the colonial edifice.⁵⁷

Explaining the colonial government's profit motives, Richard Fox writes that 'the paucity of government revenues obliged the colonial authorities to desert a pecuniary colonialism for a colonialism that developed India's productive capacities.'⁵⁸ Agricultural colonization in Punjab was dictated by the imperatives of colonial political economy.⁵⁹ The underlying notion was complementary development of agrarian economy within the empire to the benefit of the mother country's industrial growth. This notion received support from the classical and neo-classical economists and the principles of political economy. Britain was going through the industrial revolution and by the 1870s it was hard-pressed by competition from other industrialising countries. It needed raw materials and, therefore, colonial India came to be seen as a producer of raw materials and a British market for the finished products. J.S. Mill was the main protagonist of the theory of comparative advantage. India's 'comparative advantage in agricultural production received powerful support' and the 'case for India's specialization in agricultural production' continued to be defended as late as 1911 when Keynes criticised the Indian educated classes for 'their patriotic fervour' of the industrialisation of their country. So the 'primary objective' Islam argues 'behind canal (and railway) construction programme was to deepen and strengthen the colonial relationship by promoting the larger production and export of agricultural raw material and wage goods from India' as well as 'to expand the revenue base.'⁶⁰

Military service and socio-economic changes

Prosperity in the canal colonies meant that there would be healthier peasants to be recruited in the army. Punjab became home of the Colonial Indian Army towards the end of the nineteenth-century. Punjabisation of the Army and canal colonization took place almost at the same time and they mutually supported each other. Military service paved the way for socio-economic changes and proved beneficial to supplement the agricultural incomes. In 1901 alone land owners in the Jhelum tehsil earned 'over 500,000 rupees in military pay and pensions, almost three times what they had to pay in land revenue, which was fixed in 1901 at Rs.185,772.' A similar pattern existed in the Shahpur district. Indeed M. S. Leigh the Settlement Officer went so far as to declare that 'the peasant will have to take military service in increasing numbers if they wish to maintain their standard of living.'⁶¹

Military service not only brought material benefits but it also brought about a transformation in the attitude of the common people towards life. Military men exposed to 'new concepts and knowledge', became a catalyst for change in their neighbourhoods. The soldiers who were just confined to their locales before the military service were now equipped with new ideas which had given them a wider world vision. The colonial state sought to take advantage of this by distributing 'literature on rural construction to the members of all the District Soldiers' Boards for publicity, and they were exhorted to take an active part in rural reconstruction by demonstrating by personal example the practical lessons of better living and cleanliness which they had learned during the military service.'⁶²

Conclusion

The study reveals that the British brought about a revolution in the irrigation system in the last quarter of the nineteenth century which rendered the waste land of the Punjab cultivable. Through colonisation schemes the government carried out massive social engineering which resulted into the settlement of agricultural immigrants and grants of colony lands. Punjab became the breadbasket of India. Through the improvement in the communication system its agricultural economy was linked with the world economy and the surplus produce was exported. Punjab's prosperity enhanced its value for the Raj.

British rule did not encourage industrial growth in Punjab, but brought about a revolution in agricultural production. The irrigation system intensified the drive towards commercialization of production. Improved communications also encouraged production for extra-regional and international markets. British rule also bolstered the power of rural elites by bringing not only agricultural prosperity, but also by providing opportunities for military recruitment within Punjab. Punjab's prosperity and its strategic location due to its proximity with Afghanistan made it imperative for the British to give stability and control an utmost importance. The primary interest of the British was to maintain political control and raise revenue and export the surplus produce and the raw material. This could only be achieved by expanding the agricultural production and the revenue base. In the process Punjab benefitted from the colonial policies and emerged as a model province of the British India. Scholars such as Imran Ali and Mridula Mukherjee take critical view of the British rule in Punjab. However, one should not lose sight of the fact that the British policies were mainly driven by their self-interests namely revenue extraction, export of agricultural surplus and raw material and maintenance of political control as enumerated earlier. At occasion they conflicted with the transformatory goals of the British. Therefore, there is a need to strike a balance between the ameliorist and critical approaches, as this article does.

Notes & References

¹ Tan Tai Yong, *The Garrison State: The Military, Government and Society in Colonial Punjab, 1849-1947* (New Delhi: Sage Publications, 2005), p. 22.

² For more details see Ian Talbot, *Punjab and the Raj* (New Delhi: Manohar, 1988).

³ Ian Talbot, *The Punjab Unionist Party and the Partition of India* (Richmond Surrey: Curzon, 1996), p. 4.

⁴ Talbot, *Punjab and the Raj*, p.38.

⁵ For a detailed study of the canal colony projects see Imran Ali, *Punjab under Imperialism, 1885—1947* (Princeton: Princeton University Press 1988).

⁶ *Ibid.*, p.10.

⁷ Rajit K. Mazumder, *The Indian Army and the Making of Punjab* (New Delhi: Permanent Black, 2003), p.64.

⁸ Mufakharul Islam, *Irrigation Agriculture and the Raj, Punjab, 1887-1947*, (Delhi: Manohar, 1997), p.25.

⁹ Zahid Chaudhary, *Muslim Punjab Ka Siyasi Irtiqa 1849-1947* (Lahore: Idarah-e-Mutaliya-e-Tarikh, nd), p. 34.

¹⁰ Islam, *Irrigation Agriculture and the Raj*, p. 25.

¹¹ Chaudhary, *Muslim Punjab Ka Siyasi Irtiqa*, p. 35.

¹² Islam, *Irrigation Agriculture and the Raj*, p.36.

¹³ Ali, *Punjab under Imperialism*, p. 82.

¹⁴ Private canal system functioned side by side the state owned canals and in 1943-4 an area of 495,000 acres was irrigated by the private canals. For full details see Islam, *Irrigation Agriculture and the Raj*, p.36.

¹⁵ *Ibid.*

¹⁶ In the Bari doab situated between the rivers Bias and Ravi five canal colonies Sidhnai (1886-88), Sohag Para (1886-88), Chunian (1896-98), Lower Bari Doab (1914-24) and Nili Bar (1926-) were established. The canal projects which made these ventures a practical reality were Sidhnai, Lower Sohag Para, Upper Bari Doab, Lower Bari Doab, and Sutlej valley project. Rachna doab situated between Ravi and Chenab rivers had two canal colonies namely Lower Chenab (1892-1905) and Upper Chenab (1915-1919) with corresponding Lower Chenab and Upper Chenab canal projects respectively. Similarly Jech Doab situated between Jhelum and Chenab Rivers had two canal colonies namely Lower Jhelum (1902-1906) and Upper Jhelum (1916-1921) with corresponding Lower Jhelum and Upper Jhelum canal projects respectively. Ali, *Punjab under Imperialism*, p. 9.

¹⁷ Malcom Darling, *The Punjab Peasant in Prosperity and Debt* (Bombay: Oxford University Press, 1947), p.207. Malcolm Darling studied at Eton and King's College, Cambridge. He joined the ICS in 1905. Contrary to the bureaucratic norms of the time he closely associated himself with the local society and minutely observed the Indian way of life. Lawrence James, *Raj The Making of British India* (London: Abacus, 1998), pp. 310-11.

¹⁸ Darling, *The Punjab Peasant in Prosperity and Debt*, p. 117.

¹⁹ Islam, *Irrigation, Agriculture and the Raj*, Table C, p. 155.

²⁰ *Ibid.*, table C, p. 158.

²¹ Calculated from *ibid.*

²² Talbot, *Punjab and the Raj*, p. 39.

- ²³ Ali, *The Punjab Under Imperialism*, pp. 9-10.
- ²⁴ Talbot, *Punjab and the Raj*, p. 39.
- ²⁵ Ibid.
- ²⁶ Ibid., p.30.
- ²⁷ Darling, *The Punjab Peasant in Prosperity and Debt*, p. 208.
- ²⁸ *Punjab Administration Report, 1849-51*, p. 128, cited in Rajit K. Mazumder, *The Indian Army and the Making of Punjab* (New Delhi: Permanent Black, 2003), p. 51.
- ²⁹ Mazumder, *Indian Army and the making of Punjab*, p. 53.
- ³⁰ H. Calvert, *The Wealth and Welfare of the Punjab* (Lahore: Civil and Military Gazette Press, 1922), p. 107.
- ³¹ Ibid., p. 109.
- ³² Mazumder, *Indian Army and the making of Punjab*, p. 60. In the Shahpur District post was distributed twice a week. *Rozana Paisa Ikhbar* (Lahore) 7 November 1907.
- ³³ Islam, *Irrigation Agriculture and the Raj*, pp. 144-145.
- ³⁴ Mazumder, *The Indian Army and the Making of Punjab*, p. 60.
- ³⁵ Ibid., p. 87.
- ³⁶ David Gilmartin, 'Migration and Modernity: The State, the Punjabi Village, and the Settling of the Canal Colonies', in Ian Talbot & Shinder Thandi, eds. *People on the Move, Punjabi Colonial and Post-Colonial Migration* (Oxford: Oxford University Press, 2004), p. 5-6.
- ³⁷ Islam, *Irrigation Agriculture and the Raj*, p. 33.
- ³⁸ Ilyas Mohnem, *The Colonial Manual* (Revised Edition of F.C Wace, *Punjab Colony Manual*), (Lahore: Pakistan Civil and Criminal Law Publication, 1984), p.260, cited in Gilmartin, 'Migration and Modernity', pp.7-8.
- ³⁹ *Report of the Punjab Colonies Committee, 1907 – 1908*, p.1, IOR V/10/3514, OIOC.
- ⁴⁰ N. Gerald Barrier, 'The Punjab Disturbances of 1907: the Response of the British Government in India to Agrarian Unrest', *Modern Asian Studies* 1, 4 (1967), p. 356.
- ⁴¹ Darling, *The Punjab Peasant in Prosperity and Debt*, p.149.
- ⁴² Gilmartin, 'Migration and Modernity', p. 8.
- ⁴³ Ibid.
- ⁴⁴ Prakash Tandon, *Punjabi Saga 1857 – 2000* (New Delhi: Rupa & Co., 2000), p. 147.
- ⁴⁵ Gilmartin, 'Migration and Modernity'. p. 8.
- ⁴⁶ Islam, *Irrigation Agriculture and the Raj*, p.136.
- ⁴⁷ Chaudhary, *Muslim Punjab Ka Siyasi Irtiqa*, p. 22.
- ⁴⁸ Islam, *Irrigation Agriculture and the Raj*, p.129.
- ⁴⁹ Darling, *The Punjab Peasant in Prosperity and Debt*, p. 137.
- ⁵⁰ Mazumder, *The Indian Army and the Making of Punjab*, p. 70.
- ⁵¹ Richard G. Fox, *Lions of the Punjab* (California: University of California Press, 1985), p. 56.
- ⁵² *Rozana Paisa Ikhbar* (Lahore) 7 November 1907.
- ⁵³ Islam, *Irrigation Agriculture and the Raj*, p. 149.

⁵⁴ Ibid.

⁵⁵ P.H.M. van den Dungen, *The Punjab Tradition: influence and authority in nineteenth century India* (London: 1972).

⁵⁶ Islam, *Irrigation Agriculture and the Raj*, pp. 146-147.

⁵⁷ Ali, *The Punjab Under Imperialism*, pp.13-14.

⁵⁸ Fox, *Lions of the Punjab*, p. 53.

⁵⁹ The ensuing paragraph is based on Islam, *Irrigation, Agriculture and the Raj*, pp. 15-19.

⁶⁰ Ibid., p. 18.

⁶¹ Yong, *The Garrison State*, p. 83.

⁶² Ibid., p. 41.