

TRENDS OF ECONOMIC GROWTH AND INCOME DISTRIBUTION IN BURMA, 1870 - 1940*

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List of Abbreviations

- CIB* : Census of India, Burma.
RAB : Report on the Administration of Burma.
RBBC : Report of the Burma Provincial Banking Enquiry Committee, 1929-30.
RLAC : Report of the Land and Agriculture Committee, 1938.
RSO : Report on the Settlement (including revision settlement) Operations in the various districts.

PART I. TRENDS OF ECONOMIC GROWTH OF BURMA, 1860-1940.

1. Introduction

Burma is one of the countries of the Indo-China Peninsula in Southeast Asia, occupying the north western part of the peninsula. It has a total area of 262 thousand square miles forming a fairly compact and isolated area, being enclosed in the north and in the east by a ring of mountains and in the west and the south by the sea. The British occupied Burma in three stages, following the three Anglo-Burmese Wars, in 1824, 1852 and 1885. After the first war, the British occupied the maritime provinces of Arakan and Tenasserim; the former was governed directly from Bengal and the latter, for about ten years, from Penang and subsequently transferred also to the charge of the Bengal Government. In 1852, the then province of Pegu was annexed and in 1862 the three provinces were combined to form into the Province of British Burma, which was governed as a province of India. To this the remaining part of Burma was added in 1885 and politically it remained a province of India until 1937 when Burma was separated from India. Then the Japanese invaded Burma in early 1942 and it was re-occupied by the British in 1945. Finally it was granted independence in 1948. Since the British Government did not stay long enough after the Second World War to have any significant influence on the course of future economic development of the country, we will limit our study of economic development of Burma under British Rule up to 1942. Moreover, we will focus our attention to the period from 1870 to 1942 because the former year may conveniently be

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taken as the starting point¹ of feverish economic expansion which has transformed the Burmese economy from a mainly subsistence economy to a market-oriented export economy. It is this transformation which we would like to analyse and to give a new interpretation.

Therefore, when the Suez Canal, which was one of the most important factors responsible for the tremendous changes in the East, was opened in 1869 only Lower Burma was under British Rule. When Upper Burma was added to the Province, economic expansion in Lower Burma had been going on for almost two decades. In fact, the history of economic growth in Burma, under British Rule was mainly that of economic expansion in Lower Burma, which was a semi-empty area at the time of British occupation. For an area of 90,000 square miles, there was barely one and a half million population, with a total cultivated area of about one million acres out of a total arable area of 22 million acres. If the country was to pay its own administrative expenses it must be developed; the fertile lands must be brought under cultivation, the luxuriant forests exploited and the mineral resources tapped. But to do these it required labour and capital, both of which were scarce in Burma. Consequently the Government set out to take measures to create the necessary conditions which will "pull" these resources into the area. Law and order was maintained, a code of laws suitable for freedom of enterprise was provided, easy conditions for occupying lands were granted, attempts were made to improve the means of communication and transportation; restrictive regulations on trade and labour supply were abolished to promote trade and commerce, laissez faire and free trade doctrines were adopted as the basic economic policies to stimulate economic development in Burma.

These favourable conditions did "pull" immigrants from Upper Burma, India and other neighbouring areas. But before 1870 the rate of inflow² was far from being satisfactory to the British administrators, for during the twenty years between 1852 and 1872, the population increased only by about one million, and the area under cultivation also increased by about one million acres. But what was more disturbing was the fact that the majority of the immigrants, including those from Upper Burma, did not settle down permanently in Lower Burma. Land was so abundant that immigrants from Upper

1. It is for the purpose of analytical convenience that we have suggested this demarcation line of historical periods, although economic development is essentially a continuous process. Cf. H.L. Beales, "Historical Revisions. I—the Industrial Revolution", *History*, (July, 1929), pp : 125-129.

2. Before 1870, immigration from Upper Burma was more important than from other areas, although reliable data are not available. The figures given in the annual *Report on the Administration of Burma (RAB)* are not very useful because these are "district figures" which are based on the returns of capitation tax. When a certain tax payer moved out from a district he would be classified as an emigrant from the district but he might not have emigrated from the Province. In fact, a large number of persons moved from district to district and they were not immigrants in the real sense of the word. (*RAB*, 1868-69, p : 28). However, the *RAB* of 1861-62 noted that there was a steady stream of immigration from Upper Burma (p : 32) and it was estimated that between 1865 and 1875 average number of net immigrants from Upper Burma was 20,000 per annum.

Burma did not not hesitate to abandon the land after the harvest to go back to Upper Burma or to leave a piece of land after cultivating it a year or two for another piece of land. The Government tried to encourage a more permanent occupation of land by giving concessions in Land Revenue, such as assessing lands which were left uncultivated for a season at a reduced rate of Land Revenue called fallow rate at 2 annas per acre. The annual Administration Reports of those years noted frequently the reluctance of the farmers to take advantage of even this concession. They preferred to abandon the land rather than pay even 2 annas per acre to retain their occupancy rights. It was partly because of the abundant supply of land and partly because of the uncertain nature of rice export trade at that time, that the volume of rice export fluctuated considerably, depending on the domestic output of the external markets. When there was demand, the "exporters bought more or less according to the external demand and paid cash for such supplies as cultivators had in store".³ The farmers sold whatever surplus they had and sometimes squeezing a little bit out of the stock kept for own consumption. On the other hand, if there was no demand, they reaped only for their own consumption leaving the surplus unharvested. The external demand was so uncertain that it was a risky venture for an individual farmer to grow much more than what was required for his own consumption. In other words, cultivation for own consumption was as important as for market. And the processing of paddy was done by hand-pounding as and when necessary. Rice trade then was a "leisurely business". Thus during the 1860s although population and area under cultivation were increasing, the increases were so slow that the decade was described by Furnivall as a period of "comparative stagnation".

2. Transformation Into an Export Economy

This stagnant situation was changed into a state of feverish expansion in agricultural production beginning from the middle of 1870s. Cultivators then no longer abandoned their land or left part of it uncultivated because they could sell as much as they grew. The secure demand was provided by the rice millers. And at the same time there were attractive imports on which the cultivators could spend their income. Production became predominantly for market and everyone tried to get hold of as much land as possible and cleared them for cultivation as quickly as possible. Thus the average annual increase in acreage under paddy rose from 50,000 acres during the decade of 1860s to 130,000 acres in the quinquennium from 1875; it rose to higher levels in the following decades reaching a peak of 200,000 acres per annum in the second half of 1890s. The expansion of area under paddy in Lower Burma was shown in Table No. 1.

In the past, this rapid expansion of paddy production in Burma was usually explained by the opening of the Suez Canal which made it possible to ship white rice from Burma direct to Europe. But this explanation has been found to be not tenable. During the ten years following the opening of the Suez Canal, the quantity of rice exported through it remained relatively small. For instance, even in 1878 only about 16%

3. J.S. Furnivall, *A Study of the Social and Economic History of Burma*, (mimeographed), Part IV, p : 17.

of rice exported to Europe from Burma went through the Canal; but this proportion increased fairly rapidly thereafter, and by 1890 about 80% went through the Canal.⁴ Similarly, for some time after the opening of the Suez Canal, the bulk of rice exported

TABLE No. 1

Growth of Area Under Paddy in Lower Burma

Year	Quinquennial Average Area (In thousands of acres)	Average Annual Increase	Average Price of paddy per 100 baskets at Rangoon (in rupees)
1851-1852	1000	—	18
1861-1865	1486	—	40
1866-1870	1686	40	68
1871-1875	2094	82	63
1876-1880	2738	129	89
1881-1885	3529	158	78
1886-1890	4150	124	87
1891-1895	5062	182	90
1896-1900	6064	200	94
1901-1905	6927	173	94
1906-1910	7762	167	113
1911-1915	8182	84	122
1916-1920	8426	49	133
1921-1925	9058	126	184
1926-1930	9702	129	145
1931-1935	9678	- 5	78
1936-1940	9912	49	105

Sources : *Report on the Administration of the Province of Pegu, 1855-56, RAB, Season and Crop Reports, various RSOs, Agricultural Department, Burma, Agricultural Survey No. 17, Market Section Survey No. 9.*

to Europe continued to be in the form of cargo rice. Only in 1881 export of white rice became sufficiently large for separate recording in the trade returns. Even in that year cargo rice still formed about 80% of the total rice export, although the share of white rice was increasing.⁵

4. See M. Shein, *The Role of Transport and Foreign Trade in the Economic Development of Burma Under British Rule, (1885-1914)*, unpublished Ph. D. thesis (Cambridge, 1959); pp : 202-203 and also J.S. Furnivall, *op cit.*, Part IV, p : 17.

5. By 1910, cargo rice accounted for only 10% of the total rice export. But increasing importance of white rice export was mainly because of the Eastern markets which became more and more important. Regarding the rice export to Europe, cargo rice continued to be fairly important; even in 1910 about 30% of rice sent to Europe was in this form. It was because the Continental countries either prohibited the importation of white rice or provided tariff protection for their rice milling industry.

Furnivall had given an alternative explanation, in which he suggested that the more direct influence and the immediate result of the opening of the Suez Canal was "a new stimulus to the import of machinery for steam rice mills"⁶ into Burma rather than the possibility of direct shipment of white rice to Europe. He suggested that the emergence of rice milling industry provided the missing link of secure demand to the paddy cultivators, because the millers had to buy paddy in advance before the harvest in order to ensure sufficient supplies of paddy to keep their mills working as long a period as possible during the year. The initial investment in rice mills was so heavy that the rice millers could not afford to leave the mill idle for a period longer than what was absolutely necessary. Thus the secure demand for paddy on the one hand, and the attractive consumer's goods imports on which money could be spent on the other hand, provided the necessary incentives to the cultivators to expand area under cultivation and the scramble for land followed. Again this explanation, so far as the beginning of rapid agricultural expansion was concerned, does not stand close scrutiny because the development of rice milling industry in Burma was taking place before the opening of the Suez Canal. By 1870 there were already 20 rice mills in Burma. Only one of these mills could produce white rice; all others were set up to produce cargo rice only.

Moreover, the advantage of the Suez Canal route over that of the Cape was the speed with which goods could be sent to or from Europe. But in the case of rice mill equipment speedy transportation was not an important factor. The more relevant consideration would be the costs of transportation. In this respect, the sailing vessels, which went around the Cape, continued to retain advantage over the steamers of the Suez route for many years after the opening of the Canal. As late as 1880 the freight rate of sailing vessels for paddy from Burma to England was lower than that of the steamers by ten to fifteen shillings per ton.⁷ Therefore, there seems to be no particular reason why the opening of the Suez Canal should have given a new stimulus to the import of machinery for steam rice mills into Burma. What would then be the immediate cause or causes of the beginning of rapid agricultural expansion in Lower Burma about that time? It was true that the emergence of the rice milling industry had provided the necessary secure market to induce the cultivator to expand the area under cultivation. However, as we have just mentioned, the development of rice milling industry preceded the opening of the Suez Canal. And this was the result of the realisation by the British traders of the potentiality of Lower Burma as a rice exporting area. With the removal of restriction on rice export and the consequent rise in the paddy price from Rs. 8 per 100 baskets in 1848 to Rs. 40 in 1853, production and the export of rice from Lower Burma was rising. Between 1852 and 1870 rice export from the ports of Rangoon and Bassein increased fourfold, from an average of 60 thousand tons per annum in 1850s to an average of 240 thousand tons in 1860s. And in the Province of Pegu, which was to become the main area of economic expansion in later

6. J. S. Furnivall, *op.cit.*, p: 17.

7. M. Shein, *op.cit.*, p:198.

period, area under cultivation rose from 400 thousand acres in 1852 to 1.5 million acres by 1870. Therefore, towards the later part of 1860s, the Province of Pegu was exporting about 30% of her paddy output.⁸ This expanding volume of rice export was responsible for the emergence of rice milling industry in Burma. When the quantity of rice export was small, it was adequate to use the method of hand-pounding for unhusking paddy. But when the quantity of paddy to be processed became relatively large, it then became necessary and economic to replace hand-pounding by rice mills for a number of reasons. Firstly, paddy had to be unhusked within a relatively short period of three to four months after the harvest. It was both to avoid the payment of heavy demurrage charges to the waiting ships at the ports and to avoid the equally heavy cost of storing rice through the following rainy season if paddy could not be processed in time to be shipped away before the onset of the monsoon. Secondly, to process a large quantity of paddy with hand-pounding would require a large supply of seasonal labour. But before 1870 Burma was a labour-scarce and high-wage country.⁹ Cheap Indian labour had not yet come in sufficient numbers. Thirdly, although the initial capital outlay of a rice mill was high, its operating costs were relatively low because of the possibility of using rice husks as fuel to run the mills. This had an incidental advantage of solving the problem of disposal of thousands of tons of paddy husks, which previously were thrown into the creeks, blocking the much needed waterways for the transportation of paddy and rice. Thus the expanding rice export led to the development of rice milling industry in Burma, and this in turn provided the necessary secure market to the cultivators causing, thereby, a rapid expansion in paddy production.

If the Suez Canal was not the originator of the agricultural expansion in Lower Burma, it was certainly an important factor which had accelerated and sustained the rate of agricultural expansion, particularly through its effect on the Eastern countries, which, with economic expansion, became more important markets for Burma rice than the Western markets, especially after the turn of the century. It may also be mentioned that the expanding domestic market itself was one of the important factors for the sustained growth in rice production over a fairly long period in Burma. The growth of her rice export, changes in the direction of rice trade and the importance of the domestic market are shown in Table No. 2.

8. The paddy output was estimated to be about 770 thousand tons. This was obtained by multiplying the paddy area by 30 baskets of 50 lbs each, which was given as the average yield of paddy in the RSO in the Syriam Township of the Hanthawaddy District for the season 1879-1880.

9. In 1856 the Commissioner of the Province of Pegu complained that "the price of labour (in Burma) is treble and sometimes quadruple of what it ever is in India" and therefore that "the Cost of Government is thereby greatly increased and the progress of commercial enterprise impeded." *Report on the Administration of the Province of Pegu for 1856-57*, p: 46. Because of labour shortage at that time attempts were also made to introduce tractors and other agricultural machinery into Burma. However, before the technical problems of using tractors in rain-fed paddy cultivation could be solved, the influx of cheap Indian labourers took place, making mechanisation of agriculture unnecessary.

TABLE No. 2

Growth and Direction of Rice Export of Burma

Quinquennium ending	Quinquennial average of rice exports ('00 tons)	Percentage Distribution of Rice Export to				Export as % of Production
		England	Total West	India	Total East	
1875	679	72.1	74.7	1.2	25.3	62
1880	796	63.2	73.6	13.2	26.4	58
1885	946	44.3	78.1	4.1	21.9	53
1890	982	23.7	70.8	5.1	29.2	62
1895	1226	16.8	65.5	15.2	34.5	56
1900	1492	11.3	55.3	25.2	44.7	58
1905	1937	7.4	46.1	15.9	53.9	56
1910	2052	6.1	48.4	29.7	51.6	67
1915	1970	8.3	42.3	26.3	57.8	62
1920	2062	13.0	24.6	44.5	75.5	46
1925	2402	3.3	31.5	26.2	68.5	53
1930	2678	1.7	26.8	36.9	73.2	57
1935	2998	2.0	21.1	48.1	79.8	63
1940	2877	2.1	16.0	53.3	84.1	55

Sources: *Annual Statements of Seaborne Trade and Navigation of Burma*, RAB, *Statistical Bulletin*, No. 2 and the *Annual Season and Crop Reports* of the Office of the Commissioner of Settlement and Land Records, Burma.

3. Growth of Population and Foreign Investments

If secure demand for paddy and the attractive consumer's goods imports provided the necessary conditions for economic growth, the increasing inflow of factors of production, both of labour and capital, made it possible for the economy to expand. We have already mentioned that there was increasing number of immigrants coming down from Upper Burma to Lower Burma to colonise the Irrawaddy Delta even before 1870. Then came the influx of Indian immigrants beginning from the second half of 1880. During 1870s the average number of Indian immigrants that came to Burma was about 15,000 per year but by the end of the 1890s it rose to nearly 100,000 and by the end of the century it was about 150,000. The peak period of Indian immigration was during 1920s when the average number of Indian immigrants was about 400,000 per year. This large annual inflow of unskilled labour had changed Burma from a labour-scarce to a labour-abundant country, resulting in far-reaching economic consequences. Similarly, population of other foreign races increased. The growth of population and its racial composition are shown in Table No. 3.

The 1872 Census area can be taken as roughly corresponding to the area of Lower Burma; between 1872 and 1901 its population grew at an average rate of 2.4% per annum which may be compared with the average annual growth rate of paddy acreage of 4%. But between 1901 and 1940 the former became higher than the latter, which were 1.3% and 0.9% respectively. It may be mentioned that inspite of the large number of Indian immigrants annually coming into Burma after 1880, the Indian population in Burma had never been more than 7% of the total population. It was because of the equally large number of Indian emigrants from Burma. Most of them stayed in Burma only long enough to save some money and then went back to India, although more and more Indians settled down in Burma as time went on.

TABLE No. 3
Growth of Population in Burma
(In thousands)

Year	Population in 1872 Census Area	Provincial Total Population	Population of Foreign Races*		
			Indian	Chinese	Others
1862	2021	—	73	10	4
1872	2737	—	137	12	9
1881	3737	—	246	14	12
1891	4603	7722	433	42	18
1901	5580	10490	606	63	19
1911	6393	12115	745	123	24
1921	7047	13212	887	149	27
1931	7964	14667	1010	194	34
1941	9066	16824	—	—	—

* Figures for the first three years are for Lower Burma only.

Sources : *RAB* for the year 1865-66, and *CIB-Reports*.

A great majority of the immigrants that came to Lower Burma whether they were from Upper Burma or from India, were very poor with practically no capital of their own. Typical unskilled Indian immigrants came only "with a mat and an earthen receptacle which contains their food for the voyage"...and with only "a dirty cloth covering their loins and a similar strip wound round their heads" and their passage was financed by the mestries or contractors of the enterprises.¹⁰ Similarly, typical immigrants from Upper Burma came down to live and work with their relatives or friends, who had migrated before, and they would stay with them for a year or two during which they would try to save as much as they could so that they could set up on their own. But when there was the scramble for land after 1875 they could not wait that long to save enough and therefore they usually would borrow to supplement their savings. This demand for loans was met by the Chettyars who began to lend to the cultivators on a considerable scale beginning from 1880. Most of the early rice mills, in fact so also the saw mills, were

10. E. J. L. Andrew, *Indian Labour in Rangoon*, (Calcutta, 1933), pp : 20 and 38.

built by the Europeans,¹¹ who first came to Burma as traders.¹² There were also the borrowing of the Government of Burma from abroad in connection with its public works construction,¹³ especially railway and irrigation works. Thus the Chettyars financed the agricultural expansion directly whereas the European investments were mainly in the processing industry and trade.

There was very little information on the amount of foreign capital that flowed into Burma, especially for the early period. The existence of export-surplus from the very beginning of British Rule in Burma made it doubtful whether there was any net import of capital into Burma at all. Myint has attributed this sort of phenomenon to the nature of foreign capital and to the high rate of profits of the foreign enterprises. He argued that most of the foreign investment in the underdeveloped countries was in the form of short-term trade capital which could be turned over within one year and that in spite of the short period of investment their profits were so large that the remittances of these profits covered all other foreign investment in the form of durable capital goods, resulting in the emergence of export surplus from the beginning of the opening-up of the underdeveloped countries.¹⁴ Profits of most of the European firms were high¹⁵ and these large profits soon became one of the main sources of capital for these firms to expand their activities in Burma as well as outside. Furnivall believed that until the beginning of the 20th century, most of the European capital were "provided by local business men or firms out of the surplus profits of their business; or else by their relations and friends in Europe."¹⁶ In other words most of the European enterprises began as small one either in the form of individual proprietorship or the association of two or three partners.¹⁷ But with the

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11. In 1880-81 there were 49 rice mills; of these Europeans owned 41, Indians 3, Chinese 3 and Burmans 2.
 12. This is the usual pattern of the development of Western enterprises in the East. They began as trading concerns and then they went into processing industry. At a much later time some of them went into manufacturing activities. Cf. G.C. Allen and A.G. Donnithorne, *Western Enterprises in Far Eastern Economic Development, China and Japan*, (London, 1954) and *Western Enterprises in Indonesia and Malaya*, (London, 1957).
 13. It may be mentioned that expenditures on road buildings were never financed with loans, but out of the current revenue. The Government borrowed to build railways and irrigation works. In 1935 the assets of the Burma Railways was valued at Rs. 485 millions, which became a part of Burma's debt to India after the Separation in 1937.
 14. H. Myint, "The Gains from International Trade and the Backward Countries", *Review of Economic Studies* (1954-55), p : 138.
 15. For example, the Bombay Burmah Trading Corporation Ltd., paid dividend averaging 20% during the few decades following 1870. See R. H. Macaulay, *History of the Bombay Burmah Trading Corporation Ltd., 1864-1910*, (London, 1934) and see also H. G. Callis, *Foreign Capital in Southeast Asia*, (New York, 1942), p : 93.
 16. J. S. Furnivall, *op.cit.*, Part IV a, p : 45.
 17. Most of the large European firms in Burma had their progenitors in the form of individual entrepreneurs who either started on their own or in partnership with their relatives or friends, e. g. William Wallace of the Bombay Burmah Trading Corporation, Ltd., Ferdinand Foucar of the Foucar Brothers, William Strang Steel of the Steel Brothers, David Syme Cargill of the Burmah Oil Company. In the case of many Indian and Chinese firms, their owners began their career with very little capital.

development of non-agricultural production, such as oil and other minerals, raising of capital by the association of a few partners became inadequate; more and more joint stock companies were formed and registered in Burma and by the turn of the century this form of business organisation had become sufficiently important that the annual Report on the Administration of Burma included, beginning from the report for the year 1907-8, a section on joint stock companies. However, this additional information throws little light on foreign capital in Burma, partly because it does not provide information on the nationality of ownership and partly because most of the more important foreign firms were not registered in Burma.¹⁸ In 1906, there were 55 registered companies with a total nominal capital of Rs. 24 millions and paid-up capital of Rs. 13.2 millions. Thereafter, there was some-what rapid growth of joint stock companies registered in Burma as shown in Table No. 4.

TABLE No. 4
Growth of Joint Stock Companies in Burma

Year	No. of Companies on register.	Total Authorised Capital (Rs. in millions)	Paid-up Capital
1906	55	24.6	13.2
1910	104	107.3	30.3
1915	106	91.7	53.8
1920	190	428.5	n.a.
1925	259	490.0	n.a.
1930	311	n.a.	n.a.
1935	387	n.a.	n.a.

Source: RAB.

In 1925 the total amount of nominal capital of the joint stock companies registered in Burma was Rs. 490 millions, which may be compared with Rs. 630 millions as the total foreign business investment in 1941 as estimated by Callis.¹⁹ The growth of joint stock companies in Burma was the result of the continued growth of peasant export production as well as the development of other export staples such as timber, mineral oils, other minerals and rubber. We will turn to consider the growth of the various sectors of the economy.

18. The Indian Companies Act of 1913 gave certain advantages to the companies operating in Burma to be registered also in Burma. Thereafter increasing number of companies registered elsewhere either transferred their registration or filed papers in Rangoon. The first large British firm registered in Burma was the Burma Corporation Ltd., in 1919.

19. This amount (£47.2 millions) does not include "rentier investment" and Chinese capital. See G. H. Callis, *op.cit.*, pp: 94-96. Harvey believed that it was an underestimate, he put the estimate at £51.25 millions. Even this figure refers only to the original share capital. He put the actual amount of foreign business investment at £70 millions. See G. E. Harvey, *British Rule in Burma*, (London, 1925), pp: 67-68. Then there were rentier investment, Chinese and Indian Capital. Andrus estimated the total amount of foreign capital in Burma in 1941 to be about £155 millions. J. R. Andrus, *Burmese Economic Life*, (Calcutta, 1957), p: 184.

4. Sectoral Economic Growth: (a) Agriculture

With the inflow of labour and capital into Lower Burma, the "colonisation" of the fertile plain of the Delta took place. We have already described the rapid growth of area under paddy, which accounted for more than 85% of the total cultivated area in Lower Burma throughout this period of study. Between 1870 and 1940 area under paddy in Lower Burma increased by more than eight million acres with two peak periods of expansion; one was during 1890s and the other was in 1920s, but the growth practically ceased after the Great Depression of 1930. This was partly due to depressed economic condition and partly due to the exhaustion of arable area in Burma proper that could economically be brought under cultivation without considerable amount of investment in such things as irrigation, embankment and drainage.²⁰ In other words, the "horizontal expansion",²¹ which had been taking place since 1870, reached the limit by 1930. There was no indication of the continuation of growth in the agricultural sector through increased intensity of agricultural operation. Nevertheless, the growth was a remarkable one in the sense that it was sustained over a fairly long period and for a few decades. The rate of growth in area was above that of population growth.

The spectacular expansion in paddy area in Lower Burma had overshadowed the progress of other crops in Burma. For instance, groundnut was successfully introduced in Burma in 1903 when there was about 4,000 acres. Within ten years the acreage rose to 250,000, and then by 1923 it became more than 400,000. Similarly, area under beans and pulses increased from 160,000 acres in 1891 to 1.5 million acres in 1940. Area under cotton was trebled during the same period. With the growth of urban areas, acreage under fruits and vegetables had also grown considerably. The only important plantation in Burma was rubber, which became important only towards the First World War and in 1940 there were about 110,000 acres under rubber. Table No. 5 shows the distribution of area under different crops in Burma.

Table No. 5 indicates that there was a tendency, though not to any marked degree, towards diversification within agriculture in Burma. However, it may be mentioned that most of the crops other than paddy are grown in Central and Upper Burma. In the case of Lower Burma paddy acreage never fell below 83% of the total cultivated area and therefore, by and large, it remains a mono-crop area.

20. See *CIB-Report*, 1931, pp: 14-15.

21. By horizontal expansion we mean increase in production was achieved without significant technological progress, but merely by bringing in more land under cultivation with more or less the same technique. However, it may be mentioned that the wasteful method of "shifting cultivation" and broadcasting of paddy seeds gave way to fields with permanent boundaries and transplanting of seedlings. But these changes are in the direction of labour-intensive rather than capital-intensive method of production.

TABLE No. 5

Distribution of Area Under Various Crops in Burma
(Area in thousand of acres)

Crop	1891		1911-1915		1936-1940	
	Area	%	Average Area	%	Average Area	%
Paddy	5749	72.3	10169	71.5	12269	66.7
Millet	665	8.4	789	5.5	491	2.7
Maize	179	2.3	159	1.1	209	1.1
Beans & Pulses	160	2.0	568	4.0	1552	8.4
Oilseeds	217	2.7	1328	9.3	2281	12.1
Sugar Cane	13	0.2	14	0.1	56	0.3
Cotton	152	1.9	237	1.7	468	2.5
Tobacco	46	0.6	91	0.6	108	0.6
Fruits & Vegetables	183	2.3	562	4.0	671	3.6
Rubber	n.a.	-	55	0.4	109	0.6
Other food crops	489	6.1	124	0.9	86	0.5
Other non-food crops	94	1.2	129	0.9	166	0.9

Sources: Data for 1891 are from the *RAB* and others are from the *Season and Crop Reports*.

(b) Forestry

However, the economy itself was reducing its dependence on rice export through the development of "capitalist industries."²² One of them was the timber industry, which in fact was an older and at one time more important industry than the rice export trade. As in the case of agriculture, forest industry was dominated by one particular product, viz., teak timber.²³ Also as in the case of rice trade, at the earlier period the chief market

22. This concept was used by Furnivall in *Colonial Policy and Practice*. By "capitalist industry" we mean an industry directly operated by enterprises of joint stock form, with considerable amount of capital, but it does not necessarily follow that their method of operation is capital-intensive. For instance, the Bombay Burmah Trading Corporation, Ltd., which was the largest timber firm of joint stock form, used very little mechanical power in the extraction of timber. The firm was organised in a joint stock form because of its scale of operation. It also required a large amount of working Capital because it took about four years for a log to reach the mill from the time a tree was felled in the forest.

23. Timber, other than teak, never became important in the export trade. For instance, at the beginning of the century the volume of teak export was about 200 thousand tons a year whereas that of all other timber was barely 10 thousand tons; the position was not significantly changed in later periods. However, other types of timber were more important in the domestic market. Other important forest produce that entered the export trade were cutch and lac, but in terms of value of export these were also relatively unimportant as compared with teak export; the average value of cutch and lac export during 1920s was about Rs. 6 millions as compared with Rs. 37 millions of teak export.

for teak was the European market, but the demand for teak from India rose rapidly especially because of the railway construction, and, therefore, as early as 1860, the export, in terms of volume, to India was as large as the quantity exported to Europe. Thereafter, the increase in the volume of teak export was mainly due to the increasing demand from India. Again, as in the case of rice export trade, timber export was increasing before the opening of the Suez Canal, but it was accelerated by the opening of the Canal. The growth and direction of teak export was summarised in Table No. 6.

The development of the economy and of the domestic market was reflected, as in the case of agriculture, in the growth in output of other forestry products. We have mentioned that timber other than teak were mainly used in Burma and their output rose from about 250 thousand tons in 1900 to an annual average output of 500 thousand tons in 1920s. Similarly, the output of firewood, charcoal and other minor forest produce such as bamboo and canes, which did not enter the external trade at all, was trebled during the same period.

One important fact of the development of timber industry was that not only the Burmese firms were replaced by foreign enterprises, but also the Burmese foresters were replaced by European assistants. By 1905, the "big five"²⁴ European firms accounted for 75% of teak extracted in Burma.

(c) Petroleum Industry

Another important "capitalist industry" was the petroleum industry which had a more spectacular growth than the teak industry and which quickly developed into the second most important export industry of Burma. In this case also foreign enterprises and capital replaced the Burmese producers but unlike teak industry, the method of operations became highly mechanised. The Burma Oil Company, which leased and bought oil wells from the native producers as well as from the British Government, introduced machine drilling in 1888; the oilfields were electrified, a pipe-line was constructed to pump crude oil from the oilfields at Yenangyaung to the refinery in Syriam, near Rangoon, and it had its own tankers for export. Thus the production of crude oil rose sharply from a mere two million gallons in 1886 to the level of 40 million gallons by 1900; and then to 230 millions by 1907.²⁵ From that time to the outbreak of the Second World War, the output level fluctuated about 260 million gallons a year.

24. These big-five European firms are the Bombay Burmah Trading Corporation, Ltd., Steel Brothers and Co. Ltd., MacGregor & Co. Ltd., Foucar & Co. Ltd., and T. D. Findlay & Son, Ltd.

25. The increase in output was also due to the extension of the area of operation from the main centre of Yenangyaung to other new fields in the neighbourhood, such as Yenangyat, Singu, Minbu and Lanywa. There were also new entries into the industry; other important oil companies were the Indo-Burma Petroleum Co., the British Burmah Petroleum Co., Rangoon Oil Co., Nathsingh Oil Co. and the Moola Oil Co.

TABLE No. 6

Teak Production and Export of Burma
(Quinquennium average: in thousands of tons of 50 cu. ft.)

Year	Output in Burma	Total Quantity Handled ¹ in Burma	Total ² Export	Export		Export to India as % of total Export	Average value per ton
				to India	to Europe		
1856-1860	24	73	66	28	33	43	—
1861-1865	44	110	113	52	48	46	—
1866-1870	56	111	87	n.a.	n.a.	n.a.	—
1871-1875	71	180	118	n.a.	n.a.	n.a.	68
1876-1880	73	198	135	85	47	63	—
1881-1885	102	241	152	100	30	66	100
1886-1890	147	254	166	119	36	72	—
1891-1895	227	286	189	132	46	70	73
1896-1900	290	360	239	143	72	60	—
1901-1905	205	263	153	98	44	64	94
1906-1910	268	320	155	117	33	75	109
1911-1915	287	324	161	115	36	72	130
1916-1920	938	428	168	137	22	82	146
1921-1925	530	553	195	173	24	89	147
1926-1930	469	499	215	168	33	78	183
1931-1935	415	458	174	140	27	81	144
1936-1940	454	485	227	133	40	59	146

Sources: Government of Burma: Office of the Chief Conservator of Forests, "*Certain Statistics Relating to the Forest Department in Burma* (Rangoon, 1948), and *Annual Statements of Seaborne Trade and Navigation of Burma*.

¹ Includes teak imported from Karenni and Siam.

² Export tonnage was in converted timber and the figures should be multiplied by two for comparison with the output data.

As in the case of the previous two export commodities India was the chief market, where the Burmah Oil Co., after a period of competition with the Royal Dutch Shell Group, formed a marketing combine called the Burmah Shell Oil Storage and Distributing Co. of India, Ltd., in 1927. About 80% of petroleum output was sent to India. Other petroleum products exported were petrol benzine, lubricating oil, paraffin wax and candles. The first two products were mainly exported to India whereas the latter two products had more diverse markets. The total value of the export of petroleum products rose from about Rs. 2 million in 1895 to an average of Rs. 150 millions per annum during 1930s, forming the second most important export product of Burma.

(d) Other Minerals

Some of the important minerals of Burma other than petroleum were tin, wolfram, lead, silver and zinc. In these cases also some of the native producers were replaced by the capitalist enterprises. Early attempts made by the Western enterprises to exploit the tin resources were not successful. For instance, in 1870 two European firms tried to work the tin mines in the Tenasserim Division but they had to give them up. It was the First World War which had created enormous demand for these metals making their production profitable. The first sharp rise in the value of mineral export, other than petroleum products, came with a large export of lead in 1910; the second jump was between 1915 and 1916 when substantial quantity of tungsten was exported, then came remarkable increases in tin concentrates, copper and zinc about 1920. Therefore, the total value of mineral export rose tenfold between 1900 and 1910 and it rose again about tenfold during the next six years. In spite of all these phenomenal increases the share of these products had never exceeded 12% of the total value of export.

(e) Other Industries

We have mentioned that one of the incentives for the agricultural expansion was the availability of attractive imported manufactures on which money could be spent. Free import of these consumer's goods caused declines in most of the domestic industries, but, surprisingly enough, these did not disappear altogether. One of the first victims to the economic growth and specialisation was the salt-boiling industry, which was one of the important industries at the time of the opening-up of the country. Beginning from 1869 ships coming from Europe to Burma for the bulky cargo of paddy and rice carried salt as ballast. At that time the imported salt paid a customs duty of 25% *ad valorem*, which was about three times as high as the excise duty on salt manufactured locally. However, even at these rates the imported salt was able to compete favourably with the local salt. Thus the production of local salt declined from more than 70,000 tons in 1869 to about 18,000 tons in 1885, whereas the quantity of imported salt rose from 8000 tons to 65,000 tons during the same period. Nevertheless, the local salt industry was not completely extinguished; annual production remained at about 18,000 tons until the beginning of the century when it began to rise gradually towards the First World War. During the War it reached the 70,000 tons level but after the War, it declined again and remained about 30,000 tons to the end of the period.

The salt industry was able to hold on because of a special demand, which, as we shall see below, also had prevented a few other cottage industries from dying out completely. This demand came from fish-paste and dried-fish making industries. As a matter of fact, the dried-fish making industry also declined or at least was prevented from growing *pari passu* with the growth of the economy.²⁶ However, the production of one

26. There was very little data on the production of fish. The fishery revenue figures were also not very useful for the amount of revenue varied with the method of selling the fishery leases by the Government. In any case, sea-fishing died out and only inland fishing remained. Import of dried-fish grew rapidly e.g. in 1869 the import of salted-fish was negligible, and in 1880 the value of import of salted-fish was about Rs. 1 million.

particular type of fishery product remained unaffected and that was the Burmese fish-paste ('ngapi') which was one of the most important items of the Burmese diet. For making fish-paste the local salt was preferred to the imported salt. Thus the local salt manufacturing industry managed to survive at the margin and it got fillips from time to time when, for some reason or other, the supply of foreign salt declined; for instance during the First World War local salt production rose back to the 1870 level of 70,000 tons a year but with the cessation of the war it declined to less than 30,000 tons.

Another important domestic industry which had suffered from foreign competition but was not completely extinguished was the weaving industry, both of silk and cotton textiles, although home spinning virtually died out by the turn of the century. Again, as in the case of salt, silk weaving industry was protected from being completely wiped out by a special demand for silk longyi (sarong) of Burmese design. As it is luxury good catered to the Burmese taste only its market was small and, therefore, foreign producers did not show much interest to produce similar product to compete directly with it.²⁷

In the case of cotton textiles it had to face the keen competition of imported textiles; but the industry was able to survive in the production of coarse but strong and very cheap cotton longyi and blanket. These were relatively cheap mainly because of cheap labour which was provided by rural females who took up weaving as a subsidiary occupation²⁸ working with handlooms at their homes and in their spare time, especially during the seasonally off periods. Despite the advantage of cheap labour, this industry was believed to have suffered a serious decline. This view was held by the Superintendents of the population censuses of 1891, 1901 and 1911.²⁹ However, the trade returns on the import of cotton yarns show a rising trend, which can be seen in Table No. 6.

If we assume that the level of weaving activity varies with the volume of cotton yarns import³⁰ then the data suggest that there was in fact expansion in the cotton

27. However, it may be mentioned that fake Bangkok longyi which is a high quality silk sarong, made of rayon in India and Japan did appear in Burma market, but they could easily be distinguished from the genuine silk sarong. The fake ones were used by poor people who, in any case, could not afford to buy the genuine one. On the other hand, the higher income group would not buy these imitations. Thus there was no direct competition between the genuine Bangkok longyi and its imitation.

28. The 1921 *CIB Report* shows that the total number of persons engaged in "cotton sizing and weaving" was a little over one hundred thousands, of which 78% were females. Of the female workers about 50% was engaged in weaving as a subsidiary occupation, and of these 93% was shown to have agriculture as their principal occupation. In other words, most of the weavers were female workers from the rural area.

29. See *CIB Part I* 1891, p:263, 1901, p: 141 and 1911, p: 322. Their conclusion was primarily based on the decreasing number of persons returned as cotton textile weavers, although they were never satisfied with the reliability of the data which were also difficult to compare even for two consecutive censuses.

30. Some of the imported yarns were used in the factories, which were owned by Indians, for making hosiery and towels. In 1938-39 the Violin Hosiery Works, the largest knitting factory in Burma, produced knit-wears weighing a little over half a million pounds. Therefore it was unlikely that the total consumption of yarns of the hosiery industry will be more than one million pounds a year.

TABLE No. 6

Import of Cotton Yarns and Cotton Piece Goods into Burma

Year	Cotton Yarns	Cotton Piece Goods (In million of yards)		Total
	(In million pounds)	Grey and White	Coloured	
1876-1880	5.4	31	13	44
1881-1885	7.5	37	15	57
1886-1890	10.1	45	26	70
1891-1895	12.3	47	26	73
1896-1900	14.3	52	32	85
1901-1905	14.1	52	50	101
1906-1910	13.1	60	60	120
1911-1915	13.6	71	76	147
1916-1920	15.6	48	63	111
1921-1925	19.1	52	57	109
1926-1930	15.2	68	87	155
1931-1935	13.8	70	85	154
1936-1940	15.7	75	88	163

Source : *Annual Statements of Seaborne Trade and Navigation of Burma.*

weaving industry during the period of this study. The contradiction of these two conclusions may be explained by the fact that the nature of domestic weaving had undergone a fundamental change during the period. At the early stage of agricultural expansion the thrifty rural women folks, who had handlooms and also some spare time, continued to weave the coarse cotton textiles at home mainly for own consumption. But when the tempo of agricultural expansion rose to a high level during 1880s, weaving for own use died off rapidly in most part of Burma. However, because of cheap labour weaving continued to exist; but it was primarily for market and not for own use. The scale of production of each worker became large and the industry became localised especially in Central and Upper Burma.³¹ Thus in many parts of Burma there was decline³² in cotton weaving, but the industry as a whole had not suffered a decline in terms of its total output. Nevertheless, it is still true that the development of textile industry, especially that of higher quality cotton textiles, was greatly hampered by foreign competition. During 1930s about 75% of the total requirement of cotton piece

31. The 1921 Special Industrial Census shows the distribution of handlooms in Burma. About 68% of the handlooms were located in the Central Districts, of which the important ones are Pakokku, Shwabo, Myingyan, Meiktila, Magwe and Prome Districts. There was also localisation of weaving within the district and specialisation in certain products e.g. Shwedaung in Prome District was noted for its coarse cotton longyi, Meiktila for better quality longyi, Pakokku for blanket, etc.

32. Thus the Superintendent of the 1901 Census noted that "sound of the loom which used to be heard continuously from morn till eve in almost every house in the village was heard not so continuously nor so frequently as formerly." *CIB, 1901, Part I. Report*, p: 322.

goods was met by imports.³³ Since the domestic weaving depended on the supply of cotton yarns from abroad, it may be said that Burma depended completely on imports for her cotton textile requirements.

Some other important domestic industries which also had not died off were tobacco manufacturing, (cheroot and cigar rolling), footwear (slippers), pottery (earthen pots), lacquer wares and Burmese umbrella making industries. Similar imported commodities such as cigarettes, boots and shoes, aluminium and other sort of hardwares etc. remained luxury commodities for the lower income groups. However, as income increased these commodities were increasingly substituted in place of domestic products. This took place, by and large, through increase in imports rather than emergence of "residential industry" producing these new types of consumer's goods catering for the domestic market. The new industries were predominantly export-base or its auxiliary industries. Thus at the end of the 19th century, with already three decades of feverish agricultural expansion, rice mills and saw mills constituted about 90% of the total number of industrial establishments and accounted for nearly 70% of industrial employment. Two other export-base industries, namely petroleum refining and cotton ginning, accounted for another 11% of industrial employment and practically all the remaining industrial workers were employed in the auxiliary industries.³⁴

This feature of the structure of industry of Burma remained more or less the same until 1930s when Burma, with a few manufacturing industries such as cotton spinning factories, was at the "beginnings of industrialisation."³⁵ Some indication of the industrial development of Burma is shown in Table No. 7.

It may be mentioned that large increase in the number of factories between 1911 and 1931 was partly due to the extension of the Factories Act, which until 1911 covered establishments with 50 or more workers. In that year, the lower limit was reduced to 20 workers. Furthermore, large increase in the number of rice mills was due to the increase in the number of small mills which were mostly set up in the districts by Burmans with profits made during the First World War and the post-war boom. The growth of industry was mainly in the processing industry of rice and timber, and the manufacturing industry remained insignificant to the end of the period. In 1931, the total number of workers in the "factories" was 90,593 which was only 1.5% of the working population (earners and working dependents) of the country, and of this more than 53,000 were employed in the rice mills and saw mills.

33. See Table No. 6; the estimate was based on the assumptions that (a) 80% of the average annual import of 15 million pounds of cotton yarns was used by the domestic weaving industry, and (b) that a pound of yarns gives three yards of cloth.

34. Among the auxiliary industries there were small foundries of the Burma Railways, of the Rangoon Municipality and of a private firm; one dockyard of the Irrawaddy Flotilla Company. See *Report of the Working of the Indian Factories Act for the year 1899*.

35. See O. K. Spate's "Beginnings of Industrialisation in Burma" *Economic Geography*, Vol. XVII, No. 1.

TABLE No. 7

Number of Factories in Burma

Factory		1899	1911	1931	1940
A. Export-Base Industries					
1.	Rice Mills	81	165	589	673
2.	Saw Mills	46	88	141	166
3.	Cotton Ginneries	1	2	31	54
4.	Petroleum Refinery	2	5	9	10
5.	Metal Ore Treatment	—	—	2	7
6.	Metal Smelting	—	1	2	2
B. Auxiliary Service Industries					
7.	Dockyard	1	2	8	9
8.	Railway Workshops	1	1	5	12
9.	Other Workshops	1	3	10	19
10.	Electrical Engineering	—	—	3	7
11.	General Engineering	3	13	25	19
C. Residentiary Industries					
12.	Vegetable Oil Mills	—	6	32	29
13.	Flour Mills	1	2	5	3
14.	Sugar Mills	—	—	1	5
15.	Tobacco	—	1	1	1
16.	Cotton Spinning and Weaving	—	—	1	1
17.	Hosiery and Knitwears	—	—	2	2
18.	Ice and Aerated Waters	2	5	11	7
19.	Matches	—	—	6	5
20.	Soap	—	—	1	1
21.	Chemicals	—	1	1	1
22.	Aluminium Wares	—	—	2	2
23.	Cement and Potteries	—	—	1	3
24.	Rope Works	—	2	4	4
25.	Rubber Goods	—	—	6	2
26.	Printing Press	—	6	22	17
27.	Others	2	4	26	27
Total		141	307	947	1027

Source: *Reports of the Working of the Indian Factories Acts*, of 1881, 1911 and 1934.

(f) Transportation and Communication

Economic expansion that we have described was accelerated by progress in the means of transportation. In overseas shipping it took the form of replacement of sailing vessels by steamships. The annual Statements of Seaborne Trade and Navigation began to record the tonnage of steamers coming into the ports of Burma beginning from 1869-70, when the steamer tonnage in external shipping accounted for only 7% of the total tonnage of ships that called at the ports during that year. But by the turn of the century steamship tonnage accounted for 90%. The replacement of sailing vessels by the steamers in the coastal shipping took place much quicker; even as early as in 1880 the tonnage cleared by the sailing vessels accounted for only about 9% of the total tonnage cleared. The steamships were not only quicker, but also were more regular in their service because they were less dependent on and influenced by the monsoon. A regular service between Burma and Europe was begun in 1872 and for a time two British shipping companies, namely the Bibby and the Henderson Lines dominated this route. Then with the increase in the direct export of rice to the European countries, more and more of the ships of those countries called at the ports of Burma. Then came the Japanese ships beginning from 1907. Consequently, the share of British shipping declined from 90% of the total tonnage cleared in 1897 to 40% in 1918. After the First World War the share of British shipping went up again to about 80%, and thereafter it varied between 60 and 70% until the end of the period of this study. Regular service began earlier in the coastal shipping than in the external shipping. The British Steam Navigation Company started its regular fortnightly service between Calcutta, Akyab, Rangoon and Moulmein in 1861.

Progress in steam shipping resulted in the continual decline in freight rates. The open charter freight rate of rice between Rangoon and Europe was halved between 1880 and 1892, and at the beginning of the century it declined by another 20%.³⁶ This was one of the main factors which had greatly stimulated international trade. Between 1880 and 1930, the tonnage of foreign shipping increased by about three times and that of coastal shipping by six times, reflecting the greater importance of economic relationship between Burma and India than with the West. Bulk of seaborne trade went through Rangoon, which displaced Moulmein as the main port of the Province. The tonnage of shipping which went through Rangoon rose very rapidly, rising from 66 thousand tons in 1855 to 314 thousand tons in 1870. Despite the rapid growth of shipping, facilities at the port remained extremely poor until the beginning of the century. Thus "in 1896 the commercial interests (in Rangoon) had represented that the port was then lacking in adequate accommodation for sea-going steamers, appliances for handling cargoes, and proper storage accommodation."³⁷ Although considerable improvements were effected after the re-organ-

36. M. Shein, *op.cit.*, p: 200. His index of open charter freight rates per ton of rice from Rangoon to Europe fell from 181 in 1880 to 87 in 1892, and it averages a little over 60 at the beginning of the century. Cf. C.P. Kindleberger, *The Terms of Trade, A European Case Study*. (M.I.T., 1956), pp: 19 and 157.

37. B. R. Pearn, *A History of Rangoon*, (Rangoon, 1939), pp: 285-6.

isation of the Rangoon port administration in 1901, the other chief ports, viz., Moulmein, Bassein and Akyab, remained in primitive condition till the end of the period of this study. In 1942, the Rangoon port had more than 4000 feet of quayage for the sea-borne trade, enough shedding accommodation for several ship-loads, cranes and railway sidings. But with other ports Akyab was the only port where large vessels could anchor along the docks. In Moulmein and Bassein, lighters were used for loading and unloading.

Inland navigation was the first kind of means of transportation that was developed. The multitude of rivulets and streams that crossed the deltaic area, which was the main centre of economic expansion, and the main artery of the Irrawaddy itself served as natural routes for the transportation of bulky cargo of paddy and timber, the two main export staples of the country. To a certain extent, inland waterways made up the deficiency in the development of other types of transportation. The Irrawaddy Flotilla Company, whose predecessor started as the Government contractor for riverine mails and transportation with a subsidy in 1862, grew into a giant company owning more than 260 powered vessels and 380 dump vessels and handling nearly one and a half millions tons of freight per year during 1930s. Nevertheless, this tonnage was estimated to be less than half the total inland water freight because in addition to many small shipping companies, the large export firms had their own flotilla to carry paddy, timber and petroleum.

The development of other types of transportation was also conditioned by the needs of an export economy. Roads and railways converged on the primate city of Rangoon, which was also the main export point. The first railway lines were constructed from Rangoon to Prome in 1874, the second lines from Rangoon to Toungoo in 1885 and it was extended to Mandalay in 1889. Then in 1898 it was further extended to Myitkyina and to Lashio in 1902. In the same year Bassein was connected with Rangoon by rails. When the Moulmein-Rangoon line was opened in 1907, the main trunk lines of the country had been completed. At that time the total mileage was about 1500 miles and further extension of branches raised the total mileage to about 2000 miles by 1940.

Being conditioned by the same factors of foreign trade and topography, development of road system assumed the same pattern as that of the railways. In fact, the trunk roads and the railway trunk lines run more or less parallel; furthermore, the total mileage of surfaced roads in 1935 was also 2000 miles although there were over 7000 miles of unsurfaced but all-weather vehicular roads. Development of roads was very slow and extremely unsatisfactory inspite of the immense enthusiasm shown by the British administrators who wanted to build not only a net work of roads inside Burma but also to link it up with the neighbouring countries, especially western China. However, this dream was realised only towards the end of the period of British Rule by the military needs of the Second World War. There was also great deficiency in the feeder roads. Almost all the villages were landlocked during the cultivating season and at that time, excepting the villages on the banks of rivers or streams, the only link for them with the outside world was a narrow footpath or mud road along the bunds of the fields. After the harvest the carts used the improvised roads to carry paddy to the buying depots. Consequently,

improvement in transportation, though it had a great indirect impact on the economy as a whole, had very little effect on the daily life of the great majority of the rural population.

5. Secular changes in the foreign trade sector

We have described the trends of economic growth in a number of sectors of the economy of Burma between 1870 and 1940. These changes were reflected in the pattern of her foreign trade and of her international economic relationship in a number of ways. Firstly, the rapid expansion of paddy production and of rice export outstripped the growth of teak production and export, which was then the only other important export staple, with the result that the share of rice export in the total value of export increased to as much as 73%. This trend of increasing dependence on a single crop was reversed by the development of petroleum industry towards the end of the 19th century and later of other mineral resources. In spite of this tendency towards diversification, rice remained the single most important export staple throughout this period of study. These changes in the commodity composition of exports are shown in Table No. 8.

TABLE No. 8

Growth and Commodity Composition of Exports of Burma, 1870-1940

(Value in millions of rupees)

(Quinquennial averages)

Quinquennium ending	All Rice Products	Forest Product	Petroleum Product	Other Minerals	Total Exports	Rice Products as % of Total Exports
1875	28	7	—	—	45	62
1880	46	9	—	—	66	69
1885	53	13	—	—	77	68
1890	58	10	—	—	88	66
1895	86	14	2	0	118	73
1900	115	17	4	0.2	162	71
1905	152	15	20	0.3	209	73
1910	212	17	34	1.3	302	70
1915	246	22	47	5.6	355	69
1920	233	28	74	15.8	441	53
1925	375	43	109	27.6	653	57
1930	428	45	115	45.9	705	61
1935	235	29	159	38.8	481	49
1940	227	40	148	46.7	518	44

Source : U Chit Maung, unpublished mimeograph on Foreign Trade of Burma in *Materials for Studying the Social and Economic History of Burma*, (Rangoon, 1957).

Secondly, the development of petroleum and other mineral industries had increased the degree of dependence on export for Burma. It was because a large proportion of the output of these industries was exported. For instance, in 1926 about 88% of Burma's output of kerosene and petrol was exported to India,³⁸ and for all the chief metals of Burma exports were approximately equal to production.³⁹ We have mentioned above that even in 1860s the Province of Pegu was exporting about 30% of her paddy output and at the beginning of the present century, before the petroleum industry was fully developed, the value of exports was also about 30% of the net domestic product. This percentage rose as high as nearly 50% in 1936. This increasing dependence of Burma on exports can be seen from Table No. 9.

TABLE No. 9

Ratio of Value of Exports to Net Domestic Product of Burma, 1901-1938

Year	Value of Exports (In millions of Rs.)	Net Domestic Product*	Percentage of the value of Exports to NDP %
1901-02	174	575	30
1906-07	267	631	42
1911-12	335	826	41
1916-17	374	1067	35
1921-22	616	1320	47
1926-27	654	1804	36
1931-32	441	1107	40
1936-37	555	1115	50
1938-39	478	1003	48

*See Appendix A, Table V.

Thirdly, the development of the petroleum and other mineral industries, which are relatively more capital-intensive than agriculture, did not reduce the importance of consumer's goods imports relative to the import of capital goods. The value of consumer's goods imports varied between 60 to 70% of the total value of imports throughout the period, whereas that of producer's goods, especially that of machinery and equipment, remained relatively insignificant. These were again the reflections of the nature of economic development and of the foreign capital that flowed into Burma. We have earlier noted that the bulk of foreign capital was short-term capital to finance agriculture and trade. The only important fixed capital in the rice trade were rice mills, which cost

38. Government of Burma, *Report of the Capitation and Thathameda Taxes Enquiry Committee, 1926-27*, (Rangoon, 1949), p. 9.

39. See J. R. Andrus, *op.cit.*, p : 130.

about Rs. 30,000 each during 1880s. As the agricultural expansion was not based on technological improvement, only simple and low value tools of hoes and ploughs had to be imported. Therefore the financing of agricultural expansion consisted mainly of circulating capital to finance the import of consumer's goods needed by the cultivators. Similarly, in the case of forestry very little mechanical power was used and the only important fixed capital was saw mills. When the relatively more capital-intensive industries, such as petroleum and other mining industries, were developed, the expansion in the agricultural production and of its exports had reached such an extent that the relative share of the import of machinery and equipment in the total value of imports did not rise appreciably. Growth and the commodity composition of imports are shown in Table No. 10.

TABLE No. 10
Growth and Commodity Composition of Imports of Burma, 1870-1940
(Value in millions of rupees)
(Quinquennial averages)

<i>Quinquennium ending</i>	<i>IMPORT OF Consumption Goods</i>	<i>Machinery and Equipment*</i>	<i>Other Production Goods</i>	<i>Total Import</i>	<i>Consumption Goods as % of Total Imports</i>
1875	23	6	12	34	67
1880	35	9	16	49	71
1885	42	10	18	61	70
1890	36	12	22	85	43
1895	62	14	25	89	70
1900	68	15	29	97	70
1905	91	18	44	137	67
1910	120	20	63	185	65
1915	142	22	66	212	67
1920	175	37	104	282	62
1925	221	41	137	365	61
1930	231	32	108	367	63
1935	128	18	68	201	64
1940	136	21	87	229	59

Source : U Chit Maung, *op.cit.*

* Includes factories, millworks, machineries, belting and parts, railway plants and rolling stocks, vehicles, chassis and parts, tele-communication equipment.

Fourthly, the high degree of specialisation in the production of a single export product led to the import not only of manufactured goods but also of a considerable amount of simple and staple foodstuffs such as salt, salted and unsalted-fish, cooking oil

and dried meat, all of which are the essential elements in the diets of Burmans, both of the rich and the poor. Moreover, the increasing number of immigrants was another factor causing an increasing level of food import of the kinds they were used to. Thus import of foodstuffs expanded *pari passu* with the growth of export of foodstuffs and its share in the total value of imports was continually rising. For instance, in 1870, food imports accounted for about 25% of total consumer's goods import as compared with 61% of clothing imports. By the turn of the century food imports became as important as clothing imports each accounting for about 40% of total consumer's goods imports. Then during the last decade of the period its share varied between 45 to 52% whereas that of clothing import remained about 40%. Thus from the beginning of the century the import of foodstuffs was as important, if not more, as that of clothing import which was usually regarded as the most important import of agricultural countries when they were opened-up to international trade.

Fifthly, the course of economic development effected the direction of trade. We have noted that the early stimulus to the expansion of rice export was given by the demand from the Western markets. After the turn of the century the economic development of the Eastern countries made these countries more important customers of Burma rice than the Western countries. The development of the railways in India and consequent increase in the demand for timber also made the Eastern markets more important than the West in timber export. Then came the development of the petroleum industry which exported its most important product exclusively to India and thus the economic importance of India to Burma was increased. Therefore India's share of our export rose from 25% in 1870 to 39% in 1913, and then rose further to 60% in 1940. On the other hand the share of the United Kingdom declined from 65% in 1870 to about 9% in 1913, recovering slightly to about 13% in 1940.

If there was growing importance in the position of India in our export trade, her position in the import trade had not undergone similar changes. Her share in the import trade of Burma fluctuated about 50% of the total value of imports.⁴⁰ However, the share of the United Kingdom in the import trade followed more or less the same trend as that of her share in the export trade of Burma. It declined from about 40% in 1870 to 20% during 1930s. This change was due to the competition from other European countries as well as from Japan and India, particularly in textiles trade.

Sixthly, these secular changes in the direction and commodity pattern of foreign trade had important bearing on the movement of terms of trade of Burma. The emergence of India as the main market for Burma's rice at the beginning of the century made up for the decline in the demand of the Western market and therefore the external demand for rice was sustained. Consequently, the trend of the export prices of rice and rice

40. Actually her share of import trade was less than 50% because of a considerable amount of goods of Western origin which were imported to Burma through India. Beginning from 1901 such imports were shown in the trade returns separately as import of foreign merchandise from India and at that time these accounted for about 7% of the total value of imports from India.

products was rising⁴¹ until 1922, whence these declined from the peak of the post-war boom and further depressed later by the Great Depression. Similarly, as a result of economic expansion, particularly in India, there had been continual growth in the demand for timber and petroleum products. Thus, the unit value index of exports of Burma rose steadily until 1922, whence it declined with a sharp drop in 1932.⁴² On the other hand, the unit value index of imports had remained fairly constant until the First World War with the result that Burma's term of trade was secularly improving during that period. Then the import prices rose more sharply than the export prices during the War, turning the terms of trade against Burma. Again it moved in favour of Burma in the post-war period until 1931 when the sharp decline in the export prices resulted in the deterioration of the terms of trade. In short, with the exceptions of abnormal periods, such as war time and world-wide depression, Burma had not suffered from the adverse terms of trade effect on economic growth, as is supposed to be the rule for the exporters of primary products, especially of foodgrains.⁴³

Lastly, but not the least important, is the effect of the pattern of economic expansion on the balance of trade, which is shown in Table No. 11.

Table No. 11 shows that with the exception of the quinquennium ending 1890, during which the British Government annexed Upper Burma, there was export surplus throughout this period. Moreover, this export surplus increased, both in absolute and relative terms, as time went on, and after 1920 it became as much as half the value of export. We have referred earlier to the existence and a possible explanation of export surplus in Burma from the very beginning of the opening-up of the country to external trade. We will now consider the rising ratio of export surplus to the value of exports. For this purpose, we may divide the period of this study into two parts, taking 1900

41. Other contributory factors to the rising export prices of rice and rice products were (i) changes in the composition of rice and rice products exported, e.g. replacement of cargo rice by white rice, (ii) possibility of direct sale to the European consumers by the Rangoon exporters, (iii) the decline in the freight rates, (iv) and the depreciation of the Rupee between 1870 and 1914.

42. See Appendix B, Table I.

43. It has been argued that what is more relevant is "internal" terms of trade rather than "external" terms of trade. The former is the ratio between the prices received by the farmers for their products and the "up-country" prices of goods they bought. Myint has argued that in the long run the two indices would move, with possible time lag, in a parallel way. H. Myint, *op.cit.*, pp: 132-133. For the purpose of calculating the internal terms of trade, statistical data are available for the prices received by the farmers in the form of harvest prices, but these are not available for the retail prices of consumer's goods paid by the farmers. As a substitute we use the import prices of certain consumer's goods. It is reasonable to assume that the behaviour of import prices of these goods and their retail prices was very similar because of high degree of competition in the retail trade, excepting in the case of credit sale by the village shopkeepers. The result of our calculation is shown in Table II of Appendix B, which shows that the trends of the "external" and "internal" terms of trade are very similar, but the amplitude of the variations of the latter is much greater than that of the farmers vis-a-vis the monopolistic exporters.

TABLE No. 11
Value of Exports and Imports of Burma, 1870-1940

(In millions of rupees)
(Quinquennial averages)

(a)	(b)	(c)	(d)	(e)	(f)	(g) %
1875	45	34	11	7.5	3.5	8
1880	66	49	17	11.9	5.1	8
1885	77	61	16	8.8	7.2	9
1890	88	85	3	5.8	-2.8	-
1895	118	89	29	7.7	21.3	18
1900	162	97	65	9.7	55.3	34
1905	209	137	72	8.6	63.4	30
1910	302	185	117	7.6	109.4	36
1915	355	212	143	6.2	136.8	39
1920	441	282	159	-5.6	164.6	37
1925	653	364	289	-7.9	296.9	46
1930	705	367	338	-7.2	345.2	49
1935	481	201	280	-12.4	292.4	61
1940	518	229	289	-9.2	298.2	58

Explanations: (a) = Quinquennium ending in the year shown.

(b) = Value of exports.

(c) = Value of imports.

(d) = Merchandise export surplus.

(e) = Net private import of treasures.

(f) = Export surplus including net private import of treasures.

(g) = (f) as per cent of value of export.

Source: *Annual Statements of Seaborne Trade and Navigation of Burma*.

roughly as the line of demarcation between them. During the first period, economic growth was mainly due to increase in paddy production, which was mainly the result of the efforts of Burmans and for which imports were necessary to provide incentives for increased production. Therefore, the value of exports and imports grew more or less proportionately. Although agriculture continued to expand in the second period, its relative importance declined with the development of the petroleum and other mining industries. In the development of these industries, as we have mentioned earlier, Burmese entrepreneurs, labour and capital were mostly replaced by foreign factors. Very few Burmese people were employed in these industries. For instance, in 1911 the total number of Buddhist people, which may be taken roughly as equivalent to Burmese people, employed in the mines, oilfields and petroleum refineries was only 2800, which was only about 20%

of workers engaged in these industries and only about 0.04% of the total working population in Burma.⁴⁴ Even in 1930s, after a decade of deliberate Burmanisation, the average number of Burmese labourers employed in the oilfields was barely 8000, which was only about 0.1% of the working population.⁴⁵ Consequently, in these industries a large part or almost the whole of incomes, both of profits and wages, was accrued to the "income remitting foreign factors."⁴⁶ In other words, the rising trend of export surplus was a result of the nature and pattern of economic development that had taken place particularly in the period after 1900.

TABLE No. 12

The Current Balance of Trade and Payments of Burma, 1938-39

Payments	Rs. millions	Receipts	Rs. millions
1. Imports (c.i.f.)		3. Exports (f.o.b.)	
(a) Consumer's goods		(a) Rice	223
(i) Food and Drink	45	(b) Timber	34
(ii) Textiles	54	(c) Minerals	57
(iii) Other	43	(d) Other	171
Total	142		
(b) Materials for manufacture	47		
(c) Capital Goods			
(i) Building materials	3		
(ii) Machinery	17		
(iii) Vehicles	6		
Total	26		
2. Total Merchandise Imports	215	4. Total Merchandise Exports	485
5. Balance of Trade	270		
6. Investment Income to Burma (net)	-85		
7. Donations to Burma			
Private (net)	-10		
Public (net)	...		
8. Other Payments (net)	-18		
9. Balance on Current Transactions	157		

Source: Government of the Union of Burma, *The National Income of Burma*, (Rangoon, 1951), p: 10.

44. See CIB, 1911, Vol. IX, Part I - Report, p: 321 and Part II, Imperial Tables, Table XV-D, p: 240.

45. See Report of the Oilfields Labour Enquiry Committee, (Rangoon, 1941), p: 13.

46. J.V. Levin, *The Export Economies, Their Pattern of Development in Historical Perspective*, (Harvard, 1960), p: 7.

However, there are indications that the net income payments abroad alone would not be sufficient to account for the enormous amount of export surplus, especially after 1920. U Tun Wai has shown that during the second half of 1930s the commercial banks in Burma transferred part of their resources from Burma to India for investment in the latter.⁴⁷ Even before the First World War some foreign firms were already "utilising part of their profits to make investment elsewhere."⁴⁸ But to show that there had in fact been a net export of capital from Burma it will be necessary to compute the balance of payments of Burma, for which there is very little information. The first attempt to compute the balance of payments for a pre-war year was made by Miss Ady as part of her work in estimating the national income of Burma for the year 1938-39. It was only the current account of the balance of payments statement, which is reproduced in Table No. 12.

Miss Ady took Rs. 157 millions of the balance on current transactions as a net lending abroad of Burma in 1938-39. Making use of whatever fragmentary information available we have checked Miss Ady's estimates of (i) net investment income payments, (ii) net private donations and (iii) other payments (net). We have found that all her three estimates are on the low side. Our estimates for them are Rs. 140 millions,⁴⁹ Rs. 75 millions⁵⁰ and Rs. 25 millions⁵¹ respectively. However, it may be mentioned that

47. U Tun Wai, *Burma's Currency and Credit*, (Calcutta, 1953), pp: 124-146.

48. J. S. Furnivall, *op.cit.*, Part IVa, p: 45. See also H. G. Callis, *op.cit.*, pp: 89 and 93, and R. H. Macaulay, *op.cit.*, pp: 32-33, 49-50.

49. Callis gives an estimate of the average annual transfer of commercial profits by all foreign companies at £10 to £12 millions (Rs. 133 to Rs. 160 millions) for the total business investment of £50 millions, giving an average transfer of 20 to 25% of their investment. This appears to be high (see Andrus, *op.cit.*, p:186) and we estimate the business transfers as follows.

Company	Investment in £ millions	Assumed rate of transfer	Estimated amount of transfer in £ millions
Oil companies	16	20%	3.20
Other mining companies	15	15%	2.25
Other companies	16.2	10%	1.62
Total			7.07 = Rs. 94 millions

To this we add the Chettyars' transfer of Rs.50 millions i.e. 10% of their capital of Rs. 500 millions, giving a total income payments of Rs. 144 millions. We take Rs. 140 millions as the estimated net income payments abroad.

50. This amount is the sum of the estimated amount of Indian remittances at Rs. 40 millions, that of the Chinese at Rs. 8 millions and that of the Europeans at Rs. 30 millions. The estimate for the remittances of Indians is based on the family budget data of Bennison, collected in 1927; 760 budgets of the Indian families selected in the sample give an average remittance of Rs. 101 per annum. See J. J. Bennison, *Report of an Enquiry into the Standard and Cost of Living of the Working Classes in Rangoon*, (Rangoon, 1928), pp:152-171. This amount was adjusted for changes in the value of total external trade and multiplied by the number of Indian workers in 1940. The estimated amount of Rs. 40 millions as Indian remittances during quinquennium ending 1940 may be compared with the average annual amount of money order of Rs. 30 millions sent to India from Burma. This may also be compared with Rs. 40 millions, given by the Reserve Bank of India, as the remittances of Indian labourers in Burma. See *Reserve Bank of India Bulletin*, (November, 1953), p: 894.

51. In Other Payments we include payments of interest and repayments of debts by the Government, superannuation allowances, pensions and salaries paid abroad, and some other minor payments. The main sources of information are the *Burma Provincial Estimates* for the year 1936-37 and the *Annual Financial Statement of the Government of Burma*, for the year 1939-40.

our estimates are not for any particular year, but these are annual averages for the quinquennium ending 1940. The average annual export surplus for the same period was Rs. 297 millions, giving an average annual net foreign lending of Rs. 60 millions. Thus towards the end of a long period of economic expansion in Burma, increased savings were flowing out of the country instead of spilling over into investment in "residential industries"⁵² to provide the much needed stimulus to the stagnant agricultural economy as a result of exhaustion of arable land that could readily be brought under cultivation.

6. Summary

We have given an analytical account of the transformation of the economy of Burma from a subsistence to an export economy and the growth of the various sectors between 1870 and 1942. We begin with an explanation of the rapid expansion of paddy area in Lower Burma from the second half of 1870s. We have pointed out that the preceding decade of 1870s was the "warming-up" period during which the economy was responding, though slowly, to the new economic and political environments and that during that period, Lower Burma had already become an export economy, exporting about 30% of her paddy production. What was more important was the fact that the volume of paddy export was rising, and this led to the development of rice milling industry which in turn provided the necessary secure market to the paddy cultivators for the rapid expansion of paddy cultivation. This process was accelerated by the opening of the Suez Canal in 1869. One particularly important effect of the Canal was the economic expansion of the East, which had sustained the external demand for Burma's rice and thereby its feverish agricultural expansion, which lasted for more than half a century. Between 1870 and 1900 paddy acreage was growing at an average rate of 3.5% per annum as compared with 2.4% of population growth per annum. After 1900 the former declined to a lower level than the latter, at 0.9% and 1.1% respectively.

But the decline in the rate of growth of the agricultural sector was compensated by the development of other export staples, especially the petroleum products towards the end of the 19th century and other minerals at a later period. The development of these industries had increased the extent of dependence of Burma on foreign trade, although these had sustained the growth rate of output at a level higher than that of the growth of population. Between 1901 and 1931, the average annual growth rate of the net domestic product was 1.9%⁵³ whereas that of the population growth was 1.1%. In short, between 1870 and 1931 the average rate of growth of net product had remained above the growth rate of population. Nor had Burma suffered from the adverse effect in the movement of the terms of trade during the greater part of the period.

52. See D. C. North, "Location Theory and Regional Economic Growth", *Journal of Political Economy*, (June, 1955).

53. See Appendix A, Table VI.

And yet at the end of this fairly long period of economic expansion, Burma had remained an underdeveloped country, possessing almost all the important features of such an economy. Her per capita net product in 1938 was only Rs. 54, which was about one-twentieth of that of the United Kingdom.⁵⁴ She remained an exporter of primary products with 63% of her net domestic product originated in the agricultural, forestry and mining sectors as compared with 69% at the beginning of the century.⁵⁵ In 1931 about 73% of her labour force was directly engaged in primary production whereas in 1881 it was only 61%.⁵⁶ In other words, economic expansion in Burma during the period of this study was almost exclusively in primary production. This was one of the results of development with foreign capital, which, under condition of free trade, followed the traditional pattern of starting with investment in trade, followed by investment in processing industry and in other primary production such as plantation or mining. And when such investment opportunities were exhausted, savings of these foreign enterprises flowed out of the country, seeking profitable investments elsewhere either in primary production in similar countries or in manufacturing industry in their own countries, depriving thereby the country in which such savings originated of the spilt-over effect of economic growth for a sustained economic growth. Thus towards the end of the period of this study when readily available land had been exhausted the leading sector of the economy relapsed into a state of stagnation. This was the outcome of economic growth in Burma inspite of the absence of population explosion and continually improving terms of trade, and, above all, in active contact with the more advanced countries through international trade. In recent years, it has increasingly been recognised that the failure of the foreign enclave to produce the spread effect from the export sector to the rest of the economy was one of the main reasons why the underdeveloped countries have failed to capitalise on their economic expansion. But the more interesting question is why foreign capital, having come all the way from the advanced countries to the underdeveloped countries, had not sought to invest, to any significant extent, outside the export sector of primary production in these countries. We cannot go into this question in this paper because it is only a part of a more comprehensive work in which we make an attempt to provide an explanation of underdevelopment of present-day underdeveloped countries.

54. In 1938 per capita net product of the United Kingdom was £ 97 (or Rs. 1292), which is obtained by dividing £ 4610 millions, the net product at factor cost, by the estimated population of 47.5 millions. See *National Income and Expenditure of the United Kingdom, 1938-1945*, (cmd: 6784), Table I, and the U.N. *Demographic Yearbook*, 1960, Table 4.

55. See Appendix A, Table VI.

56. In this respect Burma presents an interesting case of underdeveloped countries; the proportion of population engaged in primary production increased with economic development. This is, of course, unexpected because as Kindleberger has pointed out, Fisher-Clark thesis of correlation between income level and employment in the secondary and tertiary industries should be qualified for an open-economy, where primary products may be exchanged for manufactures in foreign trade with the result that allocation of resources by sectors does not reflect the state of demand of a developing economy. See C. P. Kindleberger, *Economic Development*, (New York, 1958), p : 117.

PART II: TRENDS IN DISTRIBUTION OF INCOME, 1870-1940

1. Introduction

The trends in economic growth in the various sectors of the economy of Burma have been traced in Part I for the long period of British Rule, especially from 1870 to 1940. The general picture that emerges from this study of economic development of Burma is that of a long-drawn-out boom, at the end of which there resulted an under-developed and stagnant economy. It is one of the most puzzling features of this history that all this development, without population explosion and adverse movement in the terms of trade, failed to establish self-sustained economic growth in Burma. An attempt at the theoretical explanation will be made in another paper and it will there be shown that a contributory cause was the trends in income distribution between indigenous and foreign sections of the people. In this part, some aspects of these trends will be briefly discussed.

2. Labour and Wages

We shall first consider the trends in wages. It has been mentioned above that before 1880 Burma was a labour scarce country and, therefore, it might be expected that rapid economic development would lead to a rise in wages. Money wage rate had in fact risen between 1870 and 1890 as can be seen from Table No. 13. It rose gradually during the first half of 1870s, when the average annual increase in paddy area was about 40 thousand acres. The acreage increase doubled, tripled and quadrupled in the following three quinquennial periods,¹ resulting in a sharp rise in money wages, which began to attract a large number of Indian labourers.² The influx of Indian immigrants caused a decline in the money wage rate during 1890s. However, the volume of Indian immigration continued to grow because of the continued expansion of agricultural production and the development of other sectors of the economy. Consequently, despite the continued influx of cheap labourers from India, money wage rate rose again after 1905, reaching a peak during the post-war boom of 1920s. Although the trend of money wage rate was rising, the increase in money wages lagged behind that of paddy price with the result that

1. See Table No. 1, p: 6 above.

2. The economic forces had achieved what previously the Government failed to do through its State Immigration Scheme of 1874, under which the Government tried to import Indian coolies by offering advances to the potential immigrants in India. When this failed to attract sufficient number of Indian immigrants, the Government turned, in 1881, to the method of offering subsidy to the shipping companies to induce them to carry more deck passengers to Burma, and at the same time attempts were made to solve the problem of labour shortages by mechanisation of agriculture. The Government bought some American reaping machines to be hired out from village to village; improved ploughs and threshing machines were also introduced. When the influx of cheap Indian labour took place subsidy to the shipping companies was abolished in 1884, when it was deemed to be unnecessary and so also the annual Administration Reports thereafter did not mention any more of mechanisation of agriculture. In fact, the method of cultivation became more labour-intensive through the substitution of transplanting of seedlings in place of broadcasting of seeds.

TABLE No. 13

Trend of Wage Rate of Unskilled Labour in Lower Burma and Indian Immigration, 1870-1940

Year	Index of Money Wage Rate	Index of Paddy Price	Deflated Index of Wage Rate*	Average annual Indian immigrants (in thousands)
1870	100	100	100	n.a.
1875	101	93	109	n.a.
1880	113	131	86	16
1885	119	115	103	61
1890	128	128	100	94
1895	122	132	92	135
1900	115	138	83	147
1905	114	138	83	178
1910	127	166	77	362
1915	112	179	63	337
1920	125	196	64	274
1925	160	271	59	367
1930	136	213	64	406
1935	107	115	93	299
1940	86	154	56	260

Source: *RAB, Reports on the Working of the Indian Factory Acts, RSOs, J. Baxter, Report on Indian Immigration, (Rangoon, 1941).*

* Index of Money Wage Rate as per cent of Index of Paddy Price.

the "real wages" relative to paddy price³ remained below the level of 1870 for most part of the period of this study; and in particular their trend was in the downward direction beginning from 1890.⁴

3. We have deflated the money wage rate index with the index of paddy price partly because cost of living index was not available for the period before 1914, and partly because paddy (rice) is the most important single item of wage-goods as well as the chief product of most of the labourers. According to Bennison's estimates, expenditure on rice accounted for about 20% of the total consumption expenditures of all races, excepting the Hindustanis, of working class families in Rangoon in 1927. J. J. Bennison, *Report of an Enquiry into the Standard and Cost of Living of the Working Class in Rangoon*, (Rangoon, 1928). Regarding the rural consumption pattern, data on cost of living of agriculturists given in the Settlement Reports vary considerably from district to district; the reports on the revision Settlement Operations in the Tharrawaddy and the Insein Districts during 1912 to 1915 show that expenditure on foodgrains, which are mainly rice, was generally more than 30% of total consumption expenditures.

4. A. J. Page has compared the earnings of rice mill labourers between 1914 and 1928. The average earnings of such labourers in Rangoon increased by 40% whereas cost of living index, also for Rangoon working class families, rose by 45%. See A. J. Page, *Report on Wages in Rice Mills in Burma*, (Rangoon, 1931), pp: 4-5, and see also E. J. L. Andrew, *op.cit.*

However, it may be mentioned that in Burma wage labourers, in the ordinary sense of the words, were not important, because agriculture, the leading sector of the economy, was organised on the basis of small peasant farms and therefore most of the farmers were self-employed persons. Although seasonal labourers were employed by these farmers, it was only towards the later part of this study that agricultural labourers became a significant social class.⁵ Similarly, labourers engaged in small scale manufacturing and business were mostly self-employed persons, being owners and their dependents. We, therefore, will consider both the wages of agricultural labourers and the average income of the cultivators.

If the money wages of unskilled labourers relative to paddy prices were sticky, the wages of agricultural labourers, which were "largely fixed by custom and were paid in kind"⁶ were extremely rigid. In 1930, the Settlement Officer of the Hanthawaddy District⁷ observed that "the rate of wages paid for in paddy for the different agricultural operations are much the same as corresponding wages at the time of last settlement,"⁸ which was carried out in 1907-10 by Arbuthnot, who in turn stated that the then prevailing rates of wages were "much the same as the corresponding wages paid at the time of first settlement"⁹ in 1879-1880. In short, the rates of wages of agricultural labourers paid in kind for the various agricultural operations remained more or less unchanged between 1879 and 1933. However, the conditions of agricultural labourers were seriously effected by the influx of cheap Indian labourers, who made it possible for the employers to hire agricultural labourers on seasonal basis, different labourers for different operations, instead of employing them for the whole year, resulting in a decline in the earnings of agricultural labourers. Before 1890, it was customary to hire them on annual basis, that is to say for a period of about ten months during which the hired labourers were fed by their employers. Then it was found that it was cheaper¹⁰

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5. Even in 1910 the Settlement Officer of the Syriam District observed that there was no sharp dividing line between the (small) and owners, the tenants and the agricultural labourers and that there was "a constant ebb and flow between these classes". Thus prior to the 1911 Population Census, these three classes of people were not distinctly classified. In the 1911 Census an agricultural labourer was defined to include only those who were landless agriculturists, resulting in a large decline in their number from 4.3 millions in 1901 to 1.5 millions in 1911. Even this latter figure was believed to be too large. See *RSO, Hanthawaddy District, 1907-10*, p: 17 and *CIB - 1911, Part I - Report*, p: 315.
 6. *RAB, 1901-2*, p: 28, *RSO, Bassein District, Season, 1912-14*, p: 23.
 7. We have selected the wages prevailing in the Hanthawaddy District for analysis because it is not only an important paddy growing area but also close to Rangoon. Indian labourers were extensively used as seasonal agricultural labourers in this district and after the harvest these Indian labourers worked in the rice mills, at the ports etc. Therefore there was close relationship between the wages of agricultural labourers in this district and the wages of unskilled labourers in Rangoon. Moreover, conditions relating to the wages of agricultural labourers were more or less the same in all other districts.
 8. *RSO in the Hanthawaddy District, 1930-33*, p: 25.
 9. *RSO in the Hanthawaddy District, 1907-10*, p: 8.
 10. In 1897 McKerron enquired into the relative costs of employing labourers on annual basis and on seasonal basis: the average costs were found to be Rs. 5.42 and Rs. 5.36 per acre respectively. However, according to the calculations of Binns the gains by employing the second method could be as much as 20% of the cost of the first method. *RSO in the Hanthawaddy District, 1897-98*, pp: 9-10; and see also B.O. Binns, *Agricultural Economy in Burma*, p. 72.

to hire the labourers on seasonal basis, and usually different labourers were hired for different operations such as ploughing, transplanting, reaping and threshing. It was possible to hire labourers on seasonal basis partly because the regular monsoon made it possible to divide the agricultural operations into a number of distinct stages that could be operated by different groups and partly because of the availability of seasonal labour from Upper Burma and India. It was cheaper because the employers did not have to feed the labourers throughout the season, and the seasonal labourers could accept lower wages because they worked in other places after the agricultural work. For instance, the Indian labourers came into Burma some time before the harvest to work in the fields and after that they worked in the rice mills and took up other urban employment. After 1890 this method of hiring agricultural labourers on seasonal basis was increasingly used and by the turn of the century it became the standard method.¹¹ The result was a reduction in the average earnings¹² of the agricultural labourers in Lower Burma and a large number of them were left "without work, wages or maintenance for the greater part of the year."¹³ Thus for their subsistence during the season they had to borrow at ruinous rates of interest resulting in further reduction in their net earnings, which became so low that they eked out by odd work, not to speak of being able to save in order to alleviate themselves to the status of tenant cultivators.¹⁴ But the possibilities of finding odd work were also "very limited"¹⁵ so that by 1930 most of them were living from hand to mouth.¹⁶

If the position of agricultural labourers deteriorated with economic growth, the conditions of most of their employers were not better. We have described how the semi-empty space of the Irrawaddy Delta was "colonised" by small peasant settlers who were found to be generally solvent in 1880.¹⁷ Then the rapid agricultural expansion made it necessary for them to borrow money to expand their own area as quickly as possible so that they would not be left behind in the scramble for land which had taken place after 1880. Although there were cases in which the farmers began with borrowed money and had accumulated wealth and properties, the majority of the new settlers, who borrowed money to expand their area of cultivation, found it difficult to pay the interest, leave

11. *RSO for the Hanthawaddy District*, 1907-10, pp: 7-8.

12. Furnivall estimated that by 1930 the average earnings of agricultural labourers had fallen by 20% as compared with the level in 1870. See J.R. Andrus, *op.cit.*, p: 73.

13. J.S. Furnivall, *Colonial Policy and Practice*, p: 91.

14. *RSO, Insein District*, 1933-35, p: 5.

15. B.O. Binns, *op. cit.*, p: 73.

16. *RSO, Hanthawaddy District* 1930-33, p: 25.

17. *RSO, Hanthawaddy District*, 1879-80, p: 10.

alone capital. And the debt swelled from year to year and when the land was brought to its full productivity, they found themselves heavily burdened with accumulated debts so that there was nothing to do but to surrender the land to the money lenders. Again, although there were cases of extravagance and abuse of credit, the general causes were high interest rate on the one hand, and a high degree of risk, inspite of regularity of monsoon, of agricultural undertaking on the other hand. The cultivators were constantly faced with thousand and one vissitudes such as "the risks of drought, floods, pests, illness, bad prices and a thousand and one other things".¹⁸ And there were practically no facilities for insurance against these risks.¹⁹ Their meagre resources would not enable them to withstand even a temporary misfortune and if any misfortune should happen to a cultivator the difficulties would accumulate very rapidly. Firstly, there was the heavy interest charges which were calculated on compound interest basis and therefore his debt would accumulate rapidly. Secondly, if he failed to repay the loans he would have to surrender his land to the money lender and if he wanted to remain in agriculture he would have to hire the land at high rent.²⁰ Therefore, his net income from a given area of cultivation would be smaller than before. To maintain the previous level of money income it would be necessary for him to work a larger area, which required a larger amount of working capital and therefore of loans. Since he had become a landless cultivator he might have to borrow under more adverse terms than before. Also he might perhaps become a sub-tenant because he could not rent land directly from the landowners, paying a higher rent than before. In such circumstances, after subtracting rent, debt charges and costs of cultivation, the balance would be "insufficient to provide the tenant and his family until the next harvest with a bare subsistence."²¹ There was thus continual encroachment into his share of the produce. As an example of the "pitiable state" of the tenants the Land and Agriculture Committee of 1938 quoted the balance sheet of a tenant from the Settlement Report of the Insein District. The balance sheet is reproduced below and it can be seen that the share of money lenders and the land owner was 50% of the gross value of the produce, whereas his own share was only 16%.

18. *RBBC*, p: 58.

19. The only insurance facility available to the cultivators was the cattle insurance co-operatives which were introduced in 1910. However, its coverage was extremely limited; even in its hey-day of development in 1918 there were only about 6500 members out of a total of 4.6 million workers with agriculture as the principal occupation.

20. In areas where customary rent prevailed, the rent was 10% of the gross produce. But in most districts of Lower Burma customary rent was never in use. Usually the rents were fixed in terms of paddy or cash, which averaged 30% of the gross produce. Then with the increasing number of landless cultivators rents increased continuously and in 1930 a rent of 40% of gross produce was fairly common.

21. *RLAC, Part I, Tenancy*, p: 10.

TABLE No. 14

Balance Sheet of a Tenant Cultivator in the Insein District 1933-35

	Rs.	%
Gross value of produce of 33 acres at 41 baskets per acre, at a price of Rs. 110 per 100 baskets	1488	100
Deduct		
(i) Cost of cultivation paid in kind at Rs. 14.48 per acre. ...	478	32
(ii) Advance from landlord of Rs. 150 with interest at 2% per mensem for eight months	174	12
(iii) Repayment of "Sabape"* loan	55	4
(iv) Rent at Rs. 15.51 per acre	512	34
(v) Seed grain set aside for next season 3/4 at a basket per acre ...	27	2
Total	1246	84
Balance	242	16

* "Sabape" loan is an unsecured loan in cash repayable in produce.

The family which was taken as an example consisted of six persons and, therefore, per capita net income was Rs. 40 which was about 56% of the per capita net domestic product for the year 1936-37. But what was more significant was the fact that the balance, which represents the total value of produce left in his hands for his own needs, would not be sufficient to cover even the "cost of feeding" his family and that was estimated at Rs. 318.²² By 1930s this was the sort of "pitiable state" in which a large number of farmers had found themselves, resulting in widespread indebtedness and increasing alienation of land to the non-cultivating owners. Thus Furnivall found it difficult to resist the conclusion that "over Lower Burma as a whole a great mass of the people were steadily growing poorer" and that "despite the rising price of paddy, the people were earning less money."²³ Economic growth in the agricultural sector in Lower Burma is a good example of impoverishing growth for the indigenous population. Thus the open-door policy of attracting cheap labourers from the immense reservoir of India depressed the wages of unskilled labourers, reduced the incomes of the agricultural labourers and kept the productivity and income of the agriculturists low because cheap labour supply made the method of cultivation more labour-intensive and had discouraged "the

22. *Ibid*, p: 12. Binns also has computed balance sheets of cultivators, both of owner-cultivators and tenants, for a few districts, using the data of latest settlement reports of the pre-war days. In eight out of nine balance sheets of the tenants of the districts in the paddy area of Lower Burma the balance (i.e. the share accrued to the tenants) was in deficit. The balance of the remaining balance sheet was only 1.8% of the value of gross output. B.O. Binns, *op.cit.*, Appendix J.

23. J. S. Furnivall, *op.cit.*, p: 103.

introduction of machinery."²⁴ However, Myint has argued that prevalence of labour-intensive method of cultivation in the underdeveloped countries cannot be explained by low level of wages alone, because even if these are low, labour efficiency is lower still and therefore labour is expensive.²⁵ But the question is not whether labour in terms of efficiency unit is more expensive or not as compared with labour in the more developed countries; the relevant consideration is the relative costs of labour and capital to the agriculturists in the underdeveloped countries. It may be that the interest rates on agricultural credit was so high that even the inefficient labour remained relatively cheap. We will therefore turn to consider the trends of interest rates in Burma.

3. Capital and Interest

We have mentioned above that the Western capital flowed into Burma to finance trade and processing industry, to exploit the forestry and mineral resources, whereas agricultural credit was mainly supplied by the Chettians, who borrowed from the banks during the busy season to augment their own resources. In other words, the Chettians were the main suppliers of credit at the retail level to the numerous small borrowers spread over a fairly wide area in the unorganised money market, where the cost of operation for a Western bank would have been so high that it would not be profitable. Consequently, there was no tendency for the Western banks to enter²⁶ this retail business in agricultural credit.²⁷ Of necessity, the retail price of credit was higher than that of the wholesale price, and therefore different levels of interest rates continued to exist side by side in the organised and unorganised money markets.²⁸ In Burma the unorganised money market

24. Furnivall even went to the extent of suggesting that low wages was the main cause of the economic difficulties in Burma, because "they hinder economic progress and destroy welfare. They destroy welfare because they leave the labourer no margin for maintaining his family at home, and thereby contribute in no small measure to the disorganization of social life; hinder economic progress because they are too low for physical efficiency and discourage the introduction of machinery." *Ibid.*, p: 352.

25. H. Myint, "The Gains from International Trade and the Backward Countries," *Review of Economic Studies*, Vol. XXII (2), p: 136.

26. It has also been alleged that the main reason why the Western banks did not provide credit to the agriculturists as well as the local traders and entrepreneurs was the fact that their managers and agents were mostly Europeans, who did not have "social and political contacts with the people of their localities", and that there was also racial discrimination in their operation. *RBBC*, p: 40.

27. The only exception to this general statement was the Dawsons Bank Ltd., which was started as an agricultural loan company in the Pyapon District. But in 1928, only about 35 to 40% of its advances were given as crop loans (*RBBC*, p: 41), and its "position was similar to the one occupied by the Chettians in the Burmese economy", meaning that it also borrowed from the exchange banks during the busy season to supplement its resources and that its interest rates at 9 to 21% were as high as those of Chettians at 9 to 24% per annum. U Tun Wai, *op.cit.*, pp: 81 and 148.

28. For a comprehensive enumeration of factors responsible for the difference in the interest rates in the two markets, see U Tun Wai, "Interest Rates Outside the Organised Money Markets of Underdeveloped Countries", *I.M.F. Staff Papers*, (November, 1957), pp: 107-113.

was mainly concerned with the agricultural credit and financing of that part of trade which the Western banks did not deal with. Furthermore, agricultural credit in Burma, at least in the early stage, was commonly provided on the security of land in the form of land mortgage and, because very often it resulted in the foreclosure and transfer of land to the money lenders, agricultural credit was closely associated with land investment. We will therefore consider both the trends of interest rates on agricultural loans and the rate of returns on land investment.

Active investment in land by the non-agriculturists began at about the same time as scramble for land by the agriculturists and by the speculators beginning from 1880. Furnivall thinks that "most land in the rice tract has been held by absentee money lenders since its first reclamation."²⁹ The investors came from all social classes such as government officials, clerks, lawyers, doctors, school teachers, shopkeepers, traders, brokers etc. To some of them, such as rice traders and brokers, the ownership of land, to a large extent, was part of their trade because they bought land to control the supplies of paddy. But to others they bought land because, with continually rising paddy price, it was the most secure and profitable investment opened to them in those days. In fact, after the turn of the century the continued expansion of occupied area in Lower Burma was said to be prompted mainly by the non-cultivating landowners, and therefore between 1905 and 1940, increase in the area owned by non-cultivating owners was about the same as increase in the total occupied area. Table No. 15 shows the trends of land ownership between 1905 and 1940.

TABLE No. 15
Land Ownership: Area Owned by Cultivating and Non-Cultivating
Owners in Lower Burma, 1905-1940
(Area: 000 acres)

Quinquennium ending in the year	Total Occupied Area	Area owned by		Area owned by Absentee owners as % of area owned by non- cultivating owners
		Cultivating Owners	Non-cultivating Owners	
1905	7450	6059	1391	64
1910	8530	6665	1865	67
1915	9261	7266	1995	67
1920	9561	7262	2299	74
1925	10069	7393	2676	75
1930	10654	7524	3130	75
1935	10866	6127	4739	81
1940	11265	5915	5350	82

Source: *Reports on Land Revenue Administration of Burma.*

29. See J. S. Furnivall, *op.cit.*, p: 87. His contention was based on the fact that the money-lenders, to whom land was mortgaged, appeared in the revenue records as mortgagees rather than the owners until they foreclose the land. Thus he suggested that the sudden increase in the number of non-cultivating-owners in 1930s was statistical rather than actual.

Land boom in Lower Burma may be compared with railways boom in England and it drew the savings of almost all social classes. Competition for land by the non-agriculturists was as keen, if not more as the competition among the landless cultivators to rent land from the non-cultivating land-owners, with the result that the rise in land value outstripped that of rent, leading to a secular decline of the returns on land investment. This is shown in Table No. 16.

TABLE No. 16

Trend of Returns on Investment in Agricultural Land

Year	Average value per acre in Rs.		Rent as per cent of sale value
	of sale value	of rent	
1889-90	13.68	5.39	39.4
1890-95	17.32	6.88	39.7
1900-01	24.53	7.74	31.6
1905-06	42.39	9.87	23.3
1910-11	46.53	11.75	25.3
1915-16	61.50	12.29	20.0
1920-21	67.69	19.55	28.9

Source: *Reports on Land Revenue Administration, Burma.*

Similarly, interest rates on agricultural loans, the bulk of which was short-term loans, declined continually during the period. In the early 1880s, when the Chettians began to lend on any considerable scale, the usual rates of interest were 4 to 5% per mensem or 48 to 60% per annum.³⁰ At that time an interest rate of 36% per annum was referred to as a low rate.³¹ But by the turn of the century, 36% became the usual rate and it was used by the settlement officers as the line of demarcation between high and low interest rates for the analysis of the interest rates that the cultivators had to pay. In 1901 the Settlement Officer of the Tharrawaddy District noted that "the rate of interest appears to have fallen since settlement (in 1881-84). Over by far larger part of the area money can be borrowed on mortgage at less than 36%, whereas at settlement 50% appears to have been the prevailing rate, even on gold security."³² Similarly, in Bassein District loans borrowed at interest rate of 36% or less accounted for 38 per cent of total loans in 1899 and by 1912, it rose to 95%.³³ Then by 1928 the usual range of interest rates was Rs. 2 to Rs. 2.5 per mensem or 24 to 30% per annum.³⁴ For loans of amounts from

30. See *RSO in the Hanthawaddy District, 1879-80*, p. 11, and *RSO in the Bassein and Myaungmya Districts, 1883-84*, p. 7.

31. *RSO in the Bassein and Henzada Districts, 1884-85*, p. 8.

32. *RSO, Tharrawaddy District, 1900-1901*, p. 7.

33. *RSO, Bassein District, 1912-14*, p. 16.

34. *RBBC*, p. 79.

Rs. 100 to Rs. 500 the rates of interest were lower still, the range being between 18 to 24%. Thus the average rate of interest on agricultural loans with satisfactory security declined over the period of this study.

However, it may be mentioned that even after a decline of about 50% in the level of interest rates between 1880s and 1920s the Burma Provincial Banking Enquiry Committee of 1929-30 noted that the then "ordinary rates of Burma were the exceptionally high rates of India."³⁵ Moreover, these "ordinary" rates, which were charged on secured loans, were at the lower end of the range of interest rates in Burma. For unsecured loans the interest rates were much higher. For example, the Banking Enquiry Committee gave the average rate of interest on loans lent on personal security, which are known as (*sabape*) loans, at 144% per annum.³⁶ But according to U Tun Wai the interest rates on such loans were between 200 and 300% and in some extreme cases these were as high as more than 1000% per annum.³⁷ But what was more important was the fact that as time went on borrowing on personal security became the main form because "the vast majority of the cultivators (72 per cent) were without land to offer as security."³⁸ As early as 1910 borrowing on personal security was found to be the dominant form in Insein District.³⁹ In other words, the secular decline in the interest rates on secured loans, which may be taken as a rough indication of the trend of the pure interest rates, was offset by increased risk premium so that the costs of borrowing for the majority of the farmers remained extremely high even towards the end of the period of this study.

The decline in the interest rates of secured agricultural loans was accompanied by decline in the interest rates for non-agricultural credit of the unorganised money market, in which the borrowers were the local brokers, traders and millers who did not have access to the Western banks. In this market the main suppliers of credit were again the Chettiars, whose interest rates averaged 12% per annum at the beginning of the century. It declined to about 9% by 1920 and then to 7.5% by 1930.⁴⁰ Thus interest rates on secured loans in the unorganised money market decline over the period of this study. We have shown above that the returns on land investment had also undergone a secular decline.

But the condition in the organised money market was different; the exchange banks mainly served the large European firms, some of which also had "access to the London

35. *Ibid.*, p: 63.

36. *Ibid.*, p: 80.

37. In the cases of extremely high interest rates it is not meaningful to calculate them on annual basis because money was borrowed only for a short period of about one month only and no borrower could possibly pay such interest rate for longer term loans. U Tun Wai, *Burma's Currency and Credit*, p: 96.

38. *RSO, Insein District*, 1933-35, p: 6.

39. *RSO, Insein District*, 1910-12, p: 24.

40. U Tun Wai, *op.cit.*, p: 15.

money market."⁴¹ It was not only in matter of borrowing, but also in connection with the use of its surpluses that the foreign enclave was closely integrated with money markets in England and in India; an excellent example of the case of greater mobility of capital between the foreign enclave and their mother country than between the former and the native sector of the country.⁴² And most of these large European firms were either in a monopolistic position or oligopolists, which were able to maintain their profits at a high level. For example, the Bombay Burmah Trading Corporation was able to pay dividends averaging 20% for a few decades beginning from 1880,⁴³ the dividends of the Burmah Oil Company on ordinary stock averaged 22% between 1928 and 1938,⁴⁴ and the dividends of the Steel Brothers averaged 30% during 1920s.⁴⁵ The few large European rice exporters combined from time to time in order to strengthen their position *vis-a-vis* the paddy cultivators and other rice exporters. The usual method was that they combined to follow a common price policy in the purchase of paddy. The first rice ring was formed in 1882 and the last one was the notorious Bullenger Pool of 1921, composing of the Steel Brothers, Bullock Brothers, Ellerman's Arakan Rice and Trading Company and Anglo-Burma Rice Company. Their success in the manipulation of paddy price in their favour was shown by the fact that between 1890 and 1940, with the exception of a few years, the ratios between the Unit Value Index of Rice Exports and the Index Number of Paddy Price were greater than one.⁴⁶ Another indication was the growing export surpluses, both in absolute and relative terms, which has been noted in Part I.

4. Three Economic Systems Clash in Burma⁴⁷

Thus during the process of economic expansion, incomes of the monopolistic foreign enterprises were maintained at high levels, whereas the returns on land investment and interest rates on secured loans in the unorganised money market declined, wages remained at subsistence level and towards the later part of the period of this study these fell below the subsistence level.⁴⁸ When the condition of agriculturists deteriorated, the Burmese people, who had been concentrating on agricul-

41. *RBBC*, p. 129.

42. Cf., J. H. Williams, "The Theory of International Trade Reconsidered," *Economic Journal*, (June, 1929) and H. Singer, "The Distribution of Gains between Investing and Borrowing Countries", *American Economic Review* (May, 1950).

43. R. H. Macaulay, *op.cit.*

44. G. E. Harvey, *op.cit.*, p. 61.

45. J. R. Andrus, *op.cit.*, p. 186.

46. See Appendix B, Table II below.

47. J. R. Andrus, "Three Economic Systems Clash in Burma", *Review of Economic Studies*, Vol. III, (1935-36), pp. 140-146.

48. With certain modifications, the trends of factor incomes we have described above fit in very well in the Ricardian model of a growing economy. The factor with inelastic supply in our case was not land, the supply of which was increasing until the last decade of the study, but the monopolistic foreign enterprises. Therefore, monopoly rent remained at a high level, with wages fluctuating about the subsistence level and the returns on land investment and interest rates in unorganised money market, which may be regarded as profits, declining over the period.

tural production, tried to reverse their role of specialisation. But they were faced with almost insurmountable difficulties in their attempts to move into non-agricultural occupations, which had been dominated by foreigners. Foreigners' domination of non-agricultural sectors came about for two distinct but related reasons. Firstly, the opening-up of the country led to the replacement of indigenous enterprises by foreign enterprises in several fields. For example, before 1890 the European timber firms bought logs from the wealthy Burmese and Karen contractors. Then they learned to dispense with the contractors and after 1890 timber industry was dominated by five big European firms. Similarly, the growth of the European oil companies in Rangoon drove the Burmese refineries in Promé out of business. The numerous Burmese cutch traders almost disappeared when the cutch trade was monopolised by the Bombay Burmah Trading Corporation. Cotton trade was monopolised by foreigners through the ginneries in Myingyan. In the transportation of paddy in the deltaic area, before 1880 the trade was largely in the hands of boatmen, who were largely Burmans and by 1890 it passed almost entirely into the hands of steamship companies. And foreign imports caused decline in several important local industries. Thus Furnivall observed that during the decades of 1880 and 1890, there was "rapid economic development of Burma, but not of Burmans,"⁴⁹ for whom rapid economic expansion had actually narrowed the fields of economic opportunities.

Secondly, almost all these Western enterprises were based mainly on unmarried Indian labourers, and, to a certain extent, Chinese labourers. For example, the Irrawaddy Flotilla Company employed only Indians on their vessels and Indians displaced Burmans in stevedoring work in foreign trade by 1890. Even as late as 1931 about 89% of the unskilled and semi-skilled workers in Rangoon, where most of the large European firms were situated, were Indians. In the petroleum refineries more than 90% of the workers were Indians. This was usually explained by the fact that during the period of rapid agricultural expansion Burmans did not care to work in these jobs, which demanded a higher degree of discipline than agricultural occupations, and sometimes involved relatively low wages. Therefore, during the process of rapid agricultural expansion there took place "two definite and distinct tendencies. The first was a slow but continuous transfer of a portion of indigenous population from the towns to the available uncultivated area of the province. The second was a complementary invasion of towns by the members of the alien races."⁵⁰ Thus there emerged the most significant feature of the economic development of Burma *viz.*, occupational specialisation along racial lines. Table No. 17 shows the occupational distribution of workers in Burma according to races in 1921.

It may be mentioned that information on occupation and race was available for the first time in the 1921 Census because prior to that Census population was classified only on the basis of religion and caste, which were important factors in the case of India but

49. J. S. Furnivall, *A Study of the Social and Economic History of Burma, Part V*, (unpublished mimeograph.) pp: 40-42.

50. *CIB, 1921, Part I - Report*, p: 24.

such classification was devoid of any meaning in Burma. However, the occupational distribution of workers in 1921 was not different to any significant extent from that of the past few decades although there was some increase in the participation of the indigenous races in industry and commerce. Therefore, the occupational specialisation along racial lines can clearly be seen in Table No. 17.

TABLE No. 17
Occupation and Race in Burma, 1921

Races	Distribution of workers per 1000 workers of each racial group in				
	Agriculture Proper	Industry and Commerce	Professions and Liberal Arts	Public Service	All Occupations
Indigenous Races	623	155	24	7	1000
Indians born in Burma	603	219	16	13	1000
Indians born outside Burma	155	487	11	51	1000
Chinese	44	469	10	5	1000
European and Allied races	2	303	172	298	1000

Sources: *CIB, 1921, Part II - Imperial Tables, Table XX, Part I.*

It may also be mentioned that the large proportion of Burma-born Indians engaged in "Agriculture Proper" was mainly due to the peculiar characteristics of these people in Akyab District, where most of the Indians were not only permanent residents but also agriculturists. Therefore, if the population of Akyab District is excluded from the calculation, the proportion would have fallen considerably. But data is not available for the purpose of such calculation for the year 1921. This fact was noted in the Report of 1931 Census and there it was shown that when the population of Akyab District was excluded from calculation the proportion of Burma-born Indians engaged in "Cultivation" fell from 63% to 43% in 1931.⁵¹ Finally, it may be mentioned that the relatively large proportion of indigenous races engaged in Industry and Commerce gives an exaggerated impression of their role in these sectors. Numerically they were large because of the numerous small traders and workers in small scale industries. As a matter of fact, large scale trading and overseas trade fell very largely into the hands of foreigners. In particular, in the case of import trades "Burmans had no share in them in any of their several stages, except to some extent in the retailing of imports."⁵² Similarly, in large rice mills, saw mills and factories most of the employees were foreigners.⁵³

51. *CIB, 1931, Part I - Report*, p. 133.

52. Government of Burma, *Interim Report of the Riot Inquiry Committee Report*, (Rangoon, 1939), p. 20.

53. J. Baxter, *Report on Indian Immigration*, (Rangoon, 1941), pp. 68-72.

TABLE No. 18

Burmans in Some Government Departments in 1900, 1920 and 1940

T = Total number of officers.						
B = Number of Burmese officers.						
	1900		1920		1940	
	T	B	T	B	T	B
1. Public Works Department:						
(a) Superintending Engineer and above	7	nil	10	nil	13	2
(b) Executive and Assistant Engineer	57	1	82	5	105	22
2. Post and Telegraph Department:						
(a) Post Master and above	30	5	37	5	33	10
(b) Assistant Telegraph Engineer and above	21	nil	26	nil	29	nil
3. Medical Department:						
(a) Civil Surgeon and above	34	nil	42	1	51	7
(b) Assistant Surgeon	19	4	54	4	99	30

Sources: *Burma Civil List* for 1900, 1920 and 1940.

Foreigners' domination was found not only in the private industrial and commercial enterprises, but also in several Government Departments. The most notorious ones in this respect were the Public Works Department, the Medical Department and the Audit Department. Table No. 18 shows the extent of Burmese participation in some of these Departments. It was not only in the higher grades of services but also in the lower ranks that there was the predominance of foreigners in these Departments. For example, members of the staff of hospitals, from the medical officers down to the ward servants, were almost exclusively alien until 1920. Contractors working for the Public Works Department were almost exclusively Indians who employed Indian coolies. For this state of affairs the usual explanation was that Burmans were not suitable in these types of work partly because they were less efficient in work involving heavy manual labour and partly because they were less susceptible to control and discipline. Against this sort of explanation Furnivall had pointed out that before the influx of Indian labourers, Burmese labourers worked at the ports and that they were employed in building embankments along the bank of the Irrawaddy River.⁵⁴ He contended that the above belief was created after the construction of the first railway lines for which the famine victims from Bengal were imported and after the completion of the construction, the operation was dominated by

54. J. S. Furnivall, *op.cit.*, Part IV, p: 14. Similarly, in 1940 the General Manager of the Burmah Oil Company stated that although Burmans were less efficient than Oriyas, a South Indian race, at earth work, they were not inferior to Indians who came from the United Provinces or Chittagong. Baxter also has mentioned the evidence given by large employers of labour saying that it was not true to say that Burmese labourers were not manageable. J. Baxter, *op.cit.*, pp: 83-87.

Indians. This belief was proved to be not true in the case of Upper Burma, where Burmese labourers had always formed a considerable proportion of non-agricultural labour force. For example, in 1921 about 80% of the oilfield workers were born in Burma whereas in the petroleum refineries of Lower Burma more than 90% of the unskilled workers were Indians. Similarly, in the cotton mills of Upper Burma Burmese labourers predominated. Even in the case of casual labourers and sweepers, the two occupations monopolised by Indians in Lower Burma, Burmans survived the competition of Indians in Upper Burma.

Another kind of explanation suggests that the language barrier had prevented the employment of Burmans in most of these Departments. It is true the Indian doctors would prefer to work with Indian subordinates and menials and some of the European officials, who spoke Hindustani but not Burmese, likewise may prefer to work with Indians. But, as Furnivall had pointed out, it is not true to say that Burmese could not be trained and employed in these jobs because of the language problem. For example, Burmans without any knowledge of English or Hindustani could be trained as veterinary assistants but not as medical assistants, as revenue surveyors but not as topographical surveyors. The truth was that those Departments which were directly controlled from India were usually dominated by Indians, resulting in the exclusion of Burmans, both in the private sector and public employments, from most occupations appertaining to the modern world.⁵⁵

When the agricultural sector was expanding rapidly the various races were, by and large, complementary or even necessary to make it possible for the economy to expand at such a high rate that had taken place in Burma. The indigenous people tilled the land with the finance largely of the Chettiars and assisted in a certain way by the seasonal Indian labourers. Their produce, as well as the commodities they needed, were processed, transported and distributed for them by foreigners. The economy was expanding so fast that there was room for everybody. But this harmony of interests of the different races came to an end with the deteriorating condition in agriculture as a result of increasing rural indebtedness, aggravated by the large increase in the indigenous population of young age group beginning from 1920,⁵⁶ exhaustion of readily available land for expansion, world-wide depression of 1930s, growth of nationalism and changing political situation. Had agriculture remained prosperous and as a relatively attractive occupation with land still available for expansion, these young men might have followed the profession of their parents and taken up cultivation. But, as it was, most of them were "forced to look for

55. Unfortunately this has far-reaching consequences on the economic development of Burma. It is because, as Myint has pointed out, the fundamental problem of the underdeveloped countries "is not merely that of low or unequal distribution of final incomes but also that of unequal participation in the process of economic development." H. Myint, "An Interpretation of Economic Backwardness", *Oxford Economic Papers*, (June, 1954), p. 140.

56. This large increase in the indigenous population of age group from 15 to 30 years was due to the particular age structure of the population. This possibility was foreseen by the superintendent of the 1921 Census. See *CIB, 1921, Part I - Report*, p. 136 and H. Bernadelli, "Population Waves", *Journal of the Burma Research Society*, (April, 1941).

openings in the industrial labour market,"⁵⁷ and offered themselves for "types of work and wages that would not have attracted them in earlier decades."⁵⁸ However, because of little development of industries new employment opportunities were extremely limited.⁵⁹ Whatever openings there were they found it extremely difficult to compete with the Indians who had the very important advantage of having their countrymen being in positions to help them.

Moreover, there were allegations that foreigners had deliberately obstructed the entry of Burmese entrepreneurs and Burmese labourers into industrial and commercial fields.⁶⁰ For example, it was often alleged that the Indian traders systematically combined among themselves to oust Burmese traders and that foreign banks practised discrimination against Burmese entrepreneurs.⁶¹ We have mentioned the formation of the Bullenger Pool in 1921 by five large European rice millers and exporters. It was alleged that the Pool had used various means to compete out small rice millers, most of whom were Burmese,⁶² from rice trade.⁶³ Whether such allegations have any foundation or not the fact remained that the conflict of interests of different races was brought to the fore during the last two decades of the period of this study, that the role of Burmese people in other sectors than agriculture, though increasing

57. *Ibid.*, pp: 2-4.

58. J. Baxter, *op.cit.*, p: 107.

59. It may be argued that even if the industrial sector was expanding the employers might draw on the human reservoir of India for additional labour supply partly because Indian labourers were relatively cheaper than Burmese labourers and partly because the latter were not suitable for industrial employment. We have shown above that the second reason was not true. Regarding the first reason, cheap labourers might continue to be recruited from India if the open-door policy continued to prevail. But it is doubtful whether the Government could continue to stick to this policy after the communal riots of 1930s.

60. Cf., Hagen's hypothesis that the limited participation of the Burmese people in the economic life of Burma was due to their psychological reactions, which he calls "retreatism", against alien rule. See H. Hagen, *On the Theory of Social Change*, (M.I.T., 1962), pp: 484-492.

61. U Kyaw Min, *Preliminary Report on New Industries for Burma*, (Rangoon, 1947), p: 23 and *RBBC*, p: 40.

62. Wealthy Burmese were not slow in responding to the opportunity of investment in rice milling industry. As early as 1880 there were two rice mills owned by Burmese. But the number of Burmese-owned rice mills increased rapidly only after the First World War, during which many Burmese rice traders had accumulated wealth. It rose from 57 in 1911 to 224 in 1921. However, most of these mills were small ones, employing in 1936 an average of 38 employees as compared with that of more than 400 workers in the large European rice mills.

63. The alleged methods used by the Pool to this end were (a) the manipulation of prices of paddy and rice, (b) the abuse of their power of control over shipping lines, and (c) use of their influence over Burma Railways to revise the freight rates in favour of paddy and against rice in order to deprive the small rice millers of their locational advantage of being in the rice producing area whereas the large European rice mills were at the ports. Government of Burma, *Interim Report of Inquiry Committee on Rice and Paddy Trade*, 1929, especially Chapter II and the Minutes of Dissent of Tharawaddy U Pu.

gradually,⁶⁴ remained extremely limited,⁶⁵ and that the process of structural adjustment to the changing economic condition, was very much related to the occupational specialisation along racial lines that had taken place before. Thus the economic problem of adjustment became a serious social and racial problem, reflected in a series of social disturbances in the form of communal riots during the last decade of the period of this study.⁶⁶

5. Summary

Thus the last decade of British Rule in Burma itself provided a picture of contrasts to the effects of economic growth induced by expansion of external trade. The leading sector of the economy was then in a depressed condition, pervaded with serious economic difficulties. Its stagnant condition was reflected in the virtual cessation of the growth of paddy acreage beginning from 1930; the volume of Indian immigration dwindled to a low level with the decline in the economic activities. Burmans themselves tried to move out of the stagnant agricultural sector and the economy itself was beginning to move in the direction of the next stage of development of an export economy through the development of a few "residential" industries, producing consumer's goods for the local market. However, the progress of the last two mentioned tendencies was extremely slow. In spite of the increasing participation, which has been noted above, of Burmans in the non-agricultural activities they remained, by and large, outside the sphere of modern industry and trade till the end of the period of this study. Even in the oldest industries of rice and saw milling, the Burmese-owned mills were small ones and the external trade and wholesale trade were largely in the hands of foreigners.

64. We have already noted the increase in the number of Burmese-owned rice mills. Table No. 18 shows increase in the numbers of Burmese officers in the Government Departments, which had long been dominated by foreigners. Even in Burma Railways the number of Burmese workers increased from 2500 in 1921 to 4700 in 1931. Between 1934 and 1939 the number of Burmese workers in the industrial establishments in Burma increased by 14 thousands (32%) as compared with an increase of 11 thousands (10%) of Indian industrial workers. In 1940 the General Managers of the Burmah Oil Company and the Steel Brothers reported that the Burman was steadily replacing the Indian over a wide range of occupations. J. Baxter, *op.cit.*, pp: 64 and 86.

65. We have noted the fact that the Burmese-owned rice mills were largely small ones, and that most of the Burmese rice mill labourers were employed in these small mills whereas in the large European-owned rice mills Indian labourers remained the dominant group. This was also true with other industries and trade. Burmese workers were mainly engaged or employed in small scale domestic industries and retail trading. The wholesale trade and foreign trade were almost exclusively in the hands of foreigners. Thus in Rangoon, where most of the large industrial and commercial enterprises were situated, even in 1931, 89% of the unskilled and semi-skilled workers and 70% of traders and shop-assistants were Indians. Thus Burmans were still in the periphery of modern industry and commerce in Burma.

66. The Riot Inquiry Committee of 1938 believed that one of the fundamental causes of the racial riots was economic in nature and therefore it hurriedly submitted an interim report, in which the Committee devoted two of its six chapters on the examination of the economic factors. It also made the same emphasis in its final report. See the *Interim Report* and the *Final Report of the Riot Inquiry Committee*, (Rangoon, 1939).

Similarly, the progress of industrialisation was extremely slow. It has been noted in Part I above that as late as 1931 the industrial labour force, excluding the rice and saw mill labourers, was only 0.6% of the total number of workers. One of the most important contributory factors to this slow progress in industrial development in Burma was the trend in income distribution in favour of "income remitting foreign factors", particularly the European firms, most of which were both exporters and importers. Under conditions of free trade and a high mobility of capital between the foreign enclave and its mother countries, there was neither necessity nor incentive to invest in the manufacturing industries in Burma. Consequently, there was very little split-over of the gains from agricultural expansion in Burma.

This tended to make the situation of capital shortage in the native sector to persist. This tendency combined with the policy of open-door to the large reservoir of cheap labour in India had preserved the labour-intensive method in agricultural production. The constant technology and the diminishing returns produced a declining trend in the incomes of the agriculturists and their labourers, who also had to face constant competition for a larger share of the produce of the land from the money lenders and traders. The result was a cumulative deterioration in the position of the agriculturists. The situation came to a head with the unfortunate coincidence of the exhaustion of land that could readily be brought under cultivation, a large increase in the young labour force and the onset of economic depression transmitted from abroad. The subsequent attempt of Burmans to move out of the stagnant and depressed agriculture was made difficult by the occupational specialisation along the racial line and the little development of industries. Thus social disorganisation followed.

This outcome was all the more tragic because it was foreseen by the local administrators from the very beginning of the opening up of the country. However, complete faith in *laissez faire*, free trade and open door policies entertained by the remote authorities, who had the power to make final decisions, had prevented, with the exception of a few pieces of legislation enacted during the last few years of this period, any determined action on the part of the "local" Government to hold the tide of social disintegration in Burma. At the same time, it was devoid of any positive policy to develop the economic overhead facilities and human resources in an adequate way to provide the basic foundations that were necessary for progressive development and a sustained economic growth. Thus at the end of a fairly long period of economic growth, Burma remained an underdeveloped economy.

**Note on the Sources and Method of National Income Estimates for
Burma, 1901-1938**

1. There were a few national income estimates for Burma for some of the years of the period of this study. Most of these estimates were by-products of the estimates for British India, of which Burma was then a province. However, it was not until the estimate of Shah and Khambata that separate figures for Burma were given.¹ Shah and Khambata, whose estimate included only material production, gave the estimated national income of Burma for the year 1921-22 at Rs. 479² millions, which were believed to be "incorrect" by the Capitation and Thathameda Taxes Enquiry Committee of 1926-27.³ Using the method of Shah and Khambata, the Committee made an estimate of national income of Burma for the year 1925-26 and it believed that the national income of Burma for that year "cannot fall below Rs. 1,200,000,000 and is probably much above the figure."⁴ An estimate with a more elaborate method of calculation was given by Rao for the year 1931-52.⁵ His method of calculation was a mixture of the Output method and the Income method. For some sectors he used the former and for some others he used the latter. Finally, we may mention the estimate made by Miss Ady for the year 1938-39, using more or less the same method as that of Rao and in some cases, such as incomes of the workers, whose incomes were not assessed to Income-tax and who were engaged in Trade, Transport, Professions, Domestic Service and the imputed incomes from houses, were directly taken from Rao without making any adjustment.⁶ The main reason for following a similar procedure was, of course, the paucity of information for the purpose.

2. We propose to construct a series of national income estimates for the period from 1902 to 1938, at five yearly intervals. For the same reason as given by Miss Ady, we propose to follow not only the procedure of Rao, but also to make use of his estimates of sectoral incomes as the basis for computing those incomes for which information is not available. In other words, we will make direct estimates of those incomes for which there is information, but for those incomes, for which information is not available, we will make indirect estimates on the basis of Rao's figures. The former includes four main classes of

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1. For example, the estimates of the national income of British India made by Atkinson covered Lower Burma, but for which no separate estimates were given. See F. J. Atkinson, "A Stational Review of the Income and Wealth of British India," *Journal of Royal Statistical Society*, (June, 1902).
 2. K. T. Shah and K. J. Khambata, *Wealth and Taxable Capacity of India*, (Bombay, 1924).
 3. Government of Burma, *Report of the Capitation and Thathameda Taxes Enquiry Committee*, 1926-27, (Rangoon, 1949), p: 5.
 4. *Ibid*, Appendix IV, pp: 39-40. See also p: 63 below.
 5. V.K.R.V. Rao, *National Income of British India*, 1931-32, (London, 1940), Appendix K, pp: 228-223.
 6. P. Ady, *National Income of Burma Before and After the War (1938-39 and 1946-47)*, unpublished mimeograph.

incomes viz., (a) the value of agricultural output, (b) the value of forest produce, (c) the value of minerals and (d) income assessed to Income-tax. In Rao's estimate these four classes of income accounted for about 72% of the national income of Burma for the year 1931-32. Therefore we will refer to these as the major group of incomes, whereas the remaining incomes will be referred to as the minor group. The latter includes (a) the value of livestock, (b) income from fishing and hunting and (c) other incomes which were not assessed to Income-tax. Table I shows the value of output or income of the four major classes of incomes.

TABLE I

**Value of Output of Agriculture, Forest Produce, Minerals and Income
Assessed to Income-tax,
(Rs. 000)**

<i>Year</i>	<i>Agriculture</i>	<i>Forest Produce</i>	<i>Minerals</i>	<i>Income assessed to Income-tax</i>
1901-02	307,805	27,369	3,125	51,841
1906-07	349,631	29,821	9,700	45,294
1911-12	446,970	36,530	14,550	67,101
1916-17	564,974	42,940	63,278	66,945
1921-22	625,397	75,430	109,603	106,955
1926-27	854,723	88,350	140,332	160,692
1931-32	418,509	46,908	77,757	179,643
1936-37	473,931	64,325	95,271	125,538
1938-39	400,844	48,371	96,176	129,663

Sources: *Season and Crop Reports of Burma, Certain Statistics Relating to the Forest Department in Burma*, (Rangoon, 1948), *Statistical Abstracts for British India*, and *Reports on the Administration of the Income-tax Act in Burma*.

3. Next we make indirect estimates of other incomes for which information is not available. In order to do so we make two assumptions: viz., (a) that each class of income of the minor group was related to one or more classes of the major group, and (b) that these relationships remained constant between 1902 and 1938. The second assumption implies that there was no significant change in the method of production, processing, transportation and marketing of the staple products of the country during the period. This is not an unreasonable assumption to make. Furthermore, for the simple reason of availability of data, we use Rao's data for the year 1931-32 to show the relationship between these different incomes. Table II shows the distribution of the various classes of incomes according to his estimate, and the assumed relationship between them. There are some small differences in figures for 1931-32 from those given in Table I, because some revisions have been made of Rao's figures to get a comparable series for other years.

TABLE II
Distribution of Incomes according to Rao's Estimate of National
Income of Burma for 1931-32

<i>Income Class</i>	<i>Income Rs. (000)</i>	<i>Assumed Related Sectors</i>
A : Agriculture	431,698	
B : Forest Produce	35,900	
C : Minerals	62,797	
D : Incomes assessed to Income-Tax	182,000	
E : Livestock	68,543	A
F : Fishing and Hunting	11,200	A
G : Income not assessed to Income-Tax of workers engaged in		
(i) Industry	80,137	D
(ii) Service of State	19,000	D
(iii) Trade	103,131	A + D
(iv) Professions and Liberal Arts	21,693	D
(v) Transport	32,064	A + B + C + D
(vi) Domestic Service	4,483	D
(vii) Income from House Property	45,396	B + C + D
*Total ... 1,098,042		

Source: V.K.R.V. Rao, *National Income of British India, 1931-32, Appendix K.*

*We do not subtract the export surplus with India to get the net domestic product.

In the third column of Table II we show the assumed relationship between the income classes of minor group and those of the major group. For example, "A" in the third column in row E indicates that the value of livestock is assumed to be related to that of the agricultural output. Likewise, A + D in row G (iii) indicate that the incomes of workers engaged in trade, whose incomes were not assessed to Income-tax, were related to the value of agricultural output as well as income assessed to Income-tax; that is to say, incomes of small traders and shop-assistants were assumed to vary directly with the value of agricultural output and the income of larger traders, who formed the majority of income earners of class D.

4. We then divide all classes of incomes into four basic categories in accordance with the assumed relationship we have mentioned above. For example, we have assumed that income of the class G (iii) i.e. income of small traders and shop-assistants, is related to the incomes of classes A and D of the major group. Since the incomes of classes A and D are in the ratio of 70.3 to 29.7, we divide the income of class G (iii) i.e. Rs. 103,131 thousands, in this ratio into two parts and attribute them respectively to the classes A and D. In this way, we have divided the incomes of the minor group into four categories. The results are shown in Table III.

Having allocated the total income into four categories, the relationship between the incomes so attributed and the incomes of the corresponding four main classes (A,B,C and D) is derived in Table IV.

TABLE III
Incomes of Basic Sectors : 1931-32
(Rs. 000)

Class	Income Category				Total
	"P"	"Q"	"R"	"S"	
A	431,698				431,698
B		35,900			35,900
C			62,797		62,797
D				182,000	182,000
E	68,543				68,543
F	11,200				11,200
G (i)				80,137	80,137
G (ii)				19,000	19,000
G (iii)	72,501			30,630	103,131
G (iv)				21,693	21,693
G (v)	19,418	1,629	2,815	8,202	32,964
G (vi)				4,483	4,483
G (vii)		5,851	10,110	29,435	45,396
Total	603,360	43,380	75,722	375,580	1098,042

TABLE IV
Relationship between the Incomes of Four Categories and
Four Main Classes

Income of Four Main Classes	Income of Categories	Multiplying Factor
(In thousands of Rs.)		
A = 431,698	P = 603,360	1.40
B = 35,900	Q = 43,380	1.21
C = 62,797	R = 75,722	1.21
D = 182,000	S = 375,580	2.06

5. The incomes of four main classes A,B,C and D are given for a number of years in the period 1901-1938 in Table I. To each of these figures we apply the corresponding multiplying factors derived above to estimate the income attributable to the four basic

sectors into which we propose to divide the economy. These sectors are (a) Agriculture, (b) Forestry, (c) Mining and (d) Other Industries and Services (O.I.S.). Incomes attributable to the second and the third sectors are defined to be the same as the incomes of classes B and C respectively. But income attributable to the Agricultural Sector is defined to include the incomes of classes A, E and F. The fourth sector is defined to cover all other classes of incomes, some of which are related to agricultural production, and others to forestry, to mining and to income assessed to Income-tax.

Therefore, when we apply multiplying factor 1.40 to the income of class A, the result will be an estimated income, which includes not only the income of the agricultural sector, but also that portion of income of the fourth sector related to agricultural production. For example, for the year 1901-02, when we apply the multiplying factor 1.40 to the income of class A (i.e. Rs. 307,805 thousands), we get Rs. 430,927 thousands, which is taken as the estimated total income of classes A, E, F and parts of G (iii) and G (v). But the incomes of the first three classes constitute the income of the Agricultural sector, whereas the incomes of G (iii) and G (v) belong to the fourth sector (O.I.S.). In 1931-32, the incomes of classes A, E and F and those of G (iii) and G (v), as given in the second column of Table III, are in the ratio of 84.8 to 15.2. We therefore divide the Rs. 430,927 into two parts in the above-mentioned ratio; the first part was Rs. 365,426 thousands, which is taken as the estimated income of the Agricultural Sector and the other part, Rs. 65,501 is taken as a part of the income of the fourth sector (O.I.S.). Alternatively, we may divide the multiplying factor 1.40 into two parts in the ratio of 84.8 and 15.2, giving new multiplying factors of 1.1872 and 0.2128 which will be applied to the income of class A to get the incomes of the Agricultural Sector and that part of the income of the fourth sector related to agricultural production. Similarly, when we multiply the income of class B with 0.21, we get that part of the income of the fourth sector related to forestry. And to estimate that portion of the income of the fourth sector related to mining industry, we multiply the income of class C by 0.21 and for the remaining portion of the income of the fourth sector, we multiply the income assessed to Income-tax with 2.06. The sum of all these Sectoral incomes is equal to net domestic product. The results are shown in Table V and the percentage distribution of sectoral incomes is shown in Table VI.

6. Next we compute the net domestic product at constant prices of 1901-02 by deflating the sectoral income with suitable sectoral price indices. The income of the Agricultural Sector has been deflated by the average price of paddy because paddy constituted as much as 80% of total agricultural output by value. Incomes of the Forestry Sector have been deflated by the Unit Value Index of timber exports. To deflate the incomes of the Mining Sector, we have used the weighted average of the Unit Value Indices of exports of mineral oils, metals and ores. Finally, we use the weighted average of the Unit Value indices of exports and imports in deflating the incomes of the Sector of Other Industries and Services; this is done because a large part of the incomes of this sector was earned in connection with trade, external as well as internal trade. The results are shown in Table VII.

TABLE V
Net Domestic Product of Burma, 1901-1938
(At Current Prices)
(Rs. 000)

Year	Agriculture a	Forestry b	Mining c	Other Industries and Services				Total O.I.S.	Net Domestic Product
				0.2128 times Class A	0.21 times Class B	0.21 times Class C	2.26 times Class D		
1901-02	365,426	27,369	3,125	65,501	5,747	656	106,792	178,696	574,616
1906-07	415,082	29,821	9,700	74,401	6,262	2,037	93,307	176,007	630,610
1911-12	530,643	36,530	14,550	95,115	7,671	3,056	138,228	244,070	825,793
1916-17	670,737	42,940	63,278	120,226	9,017	13,290	137,907	280,440	1,057,395
1921-22	742,471	75,430	109,603	133,084	15,840	23,017	220,327	392,268	1,319,772
1926-27	1,014,727	88,350	140,332	181,885	18,556	29,470	331,026	560,937	1,804,346
1931-32	496,853	46,908	77,757	89,059	9,851	16,329	370,056	485,295	1,106,813
1936-37	562,651	64,325	95,271	100,853	13,508	20,007	258,608	392,976	1,115,223
1938-39	475,882	48,371	96,176	85,300	10,158	20,197	267,106	382,761	1,003,190

Explanations: a. 1.1872 times the incomes of Category A of Table I.
b. Same as the incomes of Category B of Table I.
c. Same as the income of Category C of Table I.

TABLE VI
Net Domestic Product of Burma, 1901-1938

(At Constant Prices)
(Rs. 000)

SECTORS

<i>Year</i>	<i>Agriculture</i>	<i>Forestry</i>	<i>Mining</i>	<i>Other Industries and Services</i>	<i>Net Domestic Product</i>
1901-02	365,425	27,369	3,125	178,696	574,616
1906-07	324,282	24,245	8,661	144,266	501,456
1911-12	365,960	29,699	15,316	165,978	576,953
1916-17	528,139	29,411	64,569	194,750	816,868
1921-22	371,234	38,682	93,678	233,493	737,087
1926-27	453,003	41,479	114,091	280,469	889,042
1931-32	598,618	24,179	74,766	341,757	1,039,320
1936-37	562,651	38,289	79,736	354,032	1,033,708
1938-39	480,688	28,454	86,645	341,751	937,538

TABLE VII
Sectoral Distribution of Net Domestic Product of Burma, 1901-1938

(Percentages)

SECTORS

<i>Year</i>	<i>Agriculture</i>	<i>Forestry</i>	<i>Mining</i>	<i>Other Industries and Services</i>
1901-02	63.6	4.8	0.5	31.1
1906-07	64.7	4.8	1.7	28.8
1911-12	63.4	5.1	2.7	28.8
1916-17	64.6	3.6	7.8	24.0
1921-22	50.4	5.2	12.7	31.7
1926-27	51.0	4.7	12.8	31.5
1931-32	57.6	2.3	7.2	32.9
1936-37	54.4	3.7	7.6	34.3
1938-39	51.3	3.0	9.2	36.5

APPENDIX B

TABLE I

Unit Value Indices of Exports and Imports, and Terms of Trade (External) of Burma, 1870-1940

(1890-1892 = 100)

<i>Year</i>	<i>Unit Value Indices of</i>		<i>Terms of Trade *</i> <i>(External)</i>
	<i>Exports</i>	<i>Imports</i>	
1870-71	68	118	68
1880-81	91	125	73
1890-91	96	99	97
1891-92	106	99	107
1892-93	114	101	113
1893-94	105	99	106
1894-95	101	93	109
1895-96	101	92	110
1896-97	111	91	122
1897-98	113	87	130
1898-99	107	84	127
1899-1900	106	85	125
1900-01	106	91	116
1901-02	102	88	116
1902-03	104	85	122
1903-04	114	87	131
1904-05	107	90	119
1905-06	116	93	125
1906-07	127	95	134
1907-08	141	97	145
1908-09	141	98	144
1909-10	132	97	136
1910-11	135	101	134
1911-12	148	102	145
1912-13	155	103	150
1913-14	139	105	132
1914-15	142	105	135

TABLE I (Continued)

**Unit Value Indices of Exports and Imports, and Terms of Trade
(External) of Burma, 1870-1940**

(1890 - 1822 = 100)

<i>Year</i>	<i>Unit Value Indices of Exports</i>	<i>Imports</i>	<i>Terms of Trade* (External)</i>
1915-16	149	108	130
1916-17	146	128	114
1917-18	136	154	88
1918-19	147	201	73
1919-20	208	203	102
1920-21	221	225	98
1921-22	230	193	119
1922-23	226	192	118
1923-24	205	182	113
1924-25	221	178	124
1925-26	213	169	126
1926-27	217	158	137
1927-28	209	148	141
1928-29	199	146	136
1929-30	181	141	132
1930-31	181	122	148
1931-32	152	104	146
1932-33	113	99	114
1933-34	106	94	120
1934-35	97	93	104
1935-36	98	94	104
1936-37	115	93	124
1937-38	117	98	119
1938-39	112	100	112
1939-40	119	100	119

Sources : M. Shein, *The Role of Transport and Foreign Trade in the Economic Development of Burma, 1885-1914, and the annual Statements of Seaborne Trade and Navigation of Burma.*

* Terms of Trade (External) = Unit Value Index of Exports divided by the Unit Value Index of Imports and therefore an increase in the value of the terms of trade indicates an improvement and *vice versa*.

TABLE II
Internal Terms of Trade of Burma, and Ratios of Rice Export
Prices to Paddy Prices, 1890-1940

(1890-92 = 100)

Year	Index Number of Paddy Price ^a	Unit Value Index of		Terms of Trade	Internal Ratio of Rice Export Price to Paddy Price
		Consumer's Goods Imports ^b	Rice Exports ^c		
1890-91	87	100	96	87	1.10
1891-92	123	99	108	124	0.88
1892-93	83	102	117	81	1.41
1893-94	75	100	105	75	1.40
1894-95	100	92	101	109	1.01
1895-96	93	88	100	106	1.07
1896-97	111	87	111	128	1.00
1897-98	97	82	112	118	1.15
1898-99	98	80	104	123	1.06
1899-1900	97	79	103	123	1.06
1900-01	91	85	102	107	1.12
1901-02	85	83	97	102	1.14
1902-03	107	81	100	132	0.93
1903-04	94	83	111	113	1.18
1904-05	101	86	102	117	1.01
1905-06	107	90	111	119	1.04
1906-07	124	92	124	135	1.00
1907-08	138	94	141	147	1.02
1908-09	105	92	144	114	1.37
1909-10	100	94	129	106	1.29
1910-11	126	98	130	129	1.03
1911-12	158	99	148	160	0.94
1912-13	137	98	156	140	1.14
1913-14	132	100	136	132	1.03
1914-15	103	102	135	101	1.31
1915-16	111	103	132	108	1.19
1916-17	118	120	142	98	1.20
1917-18	102	132	127	77	1.25
1918-19	131	181	138	72	1.05
1919-20	189	226	210	84	1.11

TABLE II (Continued)
Internal Terms of Trade and Ratio of Rice Export Prices to Paddy Prices,
1890-1940.

(1890-92 = 100)

Year	Index Number of Paddy Price ^a	Unit Value Index of		Terms of Trade	Internal Ratio of Rice Export Price to Paddy Price
		Consumer's Goods Imports ^b	Rice Exports ^c		
1920-21	160	229	132	74	1.41
1921-22	195	192	142	102	1.22
1922-23	187	181	127	103	1.22
1923-24	202	184	138	110	1.01
1924-25	187	182	210	103	1.23
1925-26	195	168	225	116	1.08
1926-27	191	153	238	125	1.14
1927-28	178	147	228	121	1.16
1928-29	167	161	204	104	1.16
1929-30	145	135	230	107	1.23
1930-31	82	115	210	71	2.17
1931-32	105	98	218	107	1.41
1932-33	69	90	207	77	1.48
1933-34	57	84	193	68	1.82
1934-35	86	84	178	102	0.95
1935-36	92	86	178	107	0.91
1936-37	99	88	148	113	1.05
1937-38	89	94	102	95	1.17
1938-39	94	92	104	102	1.05
1939-40	120	92	82	130	0.93

Sources : *RSOs in the Henzada District, 1899-1900, in the Hanthawaddy District, 1907-10 and 1930-33, in the Insein District, 1913-14 and 1933-35, in the Myaungmya District, 1933-35, Season and Crop Reports, M. Shein, op.cit. and the annual Statements of Seaborne Trade and Navigation of Burma.*

a Index number of wholesale harvest price of paddy at Rangoon.

b Consumer's Goods Imports included in the index are (i) foodstuffs, (ii) vegetable oil, (iii) sessamum, (iv) salt, (v) soap, (vi) cotton yarns, (vii) grey, white and coloured cotton piece goods, (viii) silk and (ix) woollen piece goods.

c Terms of Trade (Internal) = Index Number of Paddy Price divided by the Unit Value Index of Consumer's Goods Imports. An increase in the value of Trade indicates an improvement in favour of the farmers.