

# Industrial Development under Colonialism : The Burmese Experience

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# Industrial Development under Colonialism: The Burmese Experience

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## Abstract

This paper attempts to reexamine the beginning of the Burmese industrialization experiences of the last one hundred and fifty years with the objective of gaining a wider understanding of the nature of colonial policy and its impact. Almost all of the previous studies generally gave weight to the political and economic aspects of industrialization under colonialism and placed blame on it as one of the major causes of underdevelopment. Accordingly, this paper focuses on the “level of literacy and civilization”, the “Buddhism originated life style”, “socio-cultural values” and “business and entrepreneurial ability” of the Burmese prior to and under colonialism. Moreover, some theoretical considerations are also highlighted. Finally, this paper concludes that the near century long period of colonialism kept the Burmese away from the industrial scene and sowed the seeds of discontent in Burma throughout the process of development under British rule.

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## Introduction:

Burma (recently known as Myanmar) lies in Southeast Asia and has a total area of 262,000 square miles (678,675 square kilometers). Until the middle of the 19<sup>th</sup> century, it had been widely known as a country rich in natural resources.<sup>1)</sup> The northern and the eastern regions are enclosed by a ring of mountains and, in the west and east by the sea. The British annexed Burma in the course of three Anglo-Burmese wars. The marine provinces of Burma, Arakan and Tenasserim were occupied by the British after the First Anglo-Burmese War in 1824, and the Pegu province was annexed following the Second Anglo-Burmese war in 1852. These three provinces were later combined in order to form the province of British Burma, which was known as Lower Burma and governed as a province of British colony India. Ultimately, the entire territory of Burma came under British rule after the Third Anglo-Burmese War in 1885. Following this, the entire territory of Burma became a province of British colony India until it was separated from India in 1937. During the period between 1852 and 1885 Burma was separated into two parts with the British ruling Lower Burma and Upper Burma ruled by Burmese kings.<sup>2)</sup> In early 1942, Burma was invaded by Japanese to be reoccupied by the British again in 1945. Burma finally gained her independence in January of 1948. As the impact of the Japanese invasion on industrialization was rather insignificant, this paper will focus solely on Burma under British rule.

The specific studies of industrialization and economic growth under colonialism (1824~1948) is still quite limited due to the economic and political isolation of Burma. Most of these studies have consciously given more weight to the political and economic aspects of colonialism and have generally blamed

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1) As this paper focuses on the "Industrial Development under Colonialism" and reexamines the last 150 years ago situation, the author prefers to use the name of the country as Burma and the name of the capital city as Rangoon instead of the recent name Myanmar and Yangon respectively.

2) The common geographical division of Burma was Upper Burma and Lower Burma. This was also a political division between British Burma (lower) and the remaining part of Burma (upper) ruled by the Burmese monarchy during 1852 and 1885. The dividing line running somewhat north of Prome and Toungoo, and, all of Arakan were generally considered as Lower Burma. For detail please see in U Tun Wai (1961), 31, Maung Thaw (1966), 29-32, and Andrus (1956), 3.

colonialism as one of the main causes of underdevelopment. Among the pioneer studies, Spate, O.H. (1941, 1958), Andrus, J.R. (1957), Furnivall, J.S. (1957), U Tun Wai. (1961), Aye Hlaying. (1969) and Lwin, M.M. (1976) are worthy of note. Spate's paper on "Beginning of Industrialization" placed special focus on the growth of Burmese industries under colonialism from a geographical viewpoint. The studies of Andrus, Furnivall, U Tun Wai, and Aye Hlaying focused on the economic development of Burma in general including the industrial sector. As Lwin tried to cover the industrial development of Burma for the period from the beginning of the British invasion to early 1970s, the focus on the colonial period was not given weight. Of course, this paper would not be possible without the facts and figures from the aforementioned pioneer studies.

In order to assess the industrialization under colonialism without bias, section one of this paper attempts to explain the condition of the country and the people before the colonial period, under the Burmese monarchy. The positive and negative aspects of industrialization are discussed in section two and three. Finally, section four briefly examines some theoretical issues and the prevailing Buddhism-dominated socio-cultural values as well as the business and industrial capability of the Burmese during the colonial period.

## **I. Economy and the People under the Burmese Monarchy:<sup>3)</sup>**

As mentioned above, this section will try to examine and evaluate the level of agriculture, trade, industry, civilization and the industrial and business related ability of the people before the colonial period in order to properly judge the experiences of beginning of industrialization under British rule.

### **1.1 Formation of Burma:<sup>4)</sup>**

There were about six independent kingdoms namely, Arakan, Pegu, Tavoy,

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3) The content of this section is primarily based on Andrus (1956), 11-31, Furnivall (1957), ix-xii, and U Tun Wai (1961), 1-30.

4) See U Tun Wai (1961), 1, Andrus (1956), 11, and Maung Thaw (1966), 18-30. For detailed discussion on the size of population under the Burmese monarchy, please see in U Tun Wai (1961), 3-6.

Prome, Taungoo and Ava. These independent kingdoms were first united under King Anawrahta of Pagan (1044–1077). The second unification was carried out by King Tabinshwehti in 1539. King Alaung Paya occupied Ava and Pegu in 1755, and then, Manipura, Zimme and Shan States became part of the Burmese kingdom under the King Hsinbyushin in 1764. The annexation of Arakan (1784) and Tenasserim (1793) was carried out by King Bodaw Paya (1781–1819) who ruled over the unified kingdom that is now known as Burma. Although there have been a number of estimates of the population of Burma under the Burmese monarchy, around 1800, it would be relevant to estimate that the population was about four to five million. According to Harvey (1957) and U Tun Wai (1961), ruling a thinly populated agriculture country, the kings of Burma did not look favorably upon emigration but, encouraged immigration. Probably, as a result of the mercantilist philosophy of the Burmese monarchy, they seemed to consider the “size of population as a form of wealth”.<sup>5)</sup> However, during that period the size of population was more or less stable due to the unsettled condition of the country and the frequent wars.

## 1.2 Extent of domestic trade:

In regards to the internal trade of Burma before the colonial period, Burma did not have any internal custom barriers and there was no tax levied either in fairs or in markets. Almost all of the required food items and household goods were available within the village or in close proximity. In this period, almost all of the rural households had a loom for making clothing and blacksmiths generally located in small towns nearby produced kitchenware and agriculture implements for the villages. Other required goods were obtainable at the five-day bazaars of neighboring towns which bought the things from the market centers within a radius of about 30 to 50 miles. The trade between Lower Burma and Upper

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5) From the 16<sup>th</sup> to the 18<sup>th</sup> centuries, the rulers practiced mercantilism in order to keep their military and industrial strength. The government or king was supposed to know what was best, economically speaking, for the country. Mercantilism meant “state intervention” and the state played a role in its own economy. Mercantilist thinking was based on the idea that the volume of trade was limited, and that a country could have more trade only if another country had less. The introduction of Adam Smith’s free trade and laissez-faire ideas in the early 19<sup>th</sup> century led to the end of mercantilism. For simple explanation, please see in Davies, S., Shokichi Motai, David Trevil (1998), 1-4.

Burma, especially after 1852, was also remarkable. Regarding the composition of trade, Lower Burma sold rice, salt, pickles, dried fish, and foreign commodities to Upper Burma and bought iron, brass ware, petroleum, lime, paper, lacquer ware, cotton and silk fabric, palm sugar, onion and tamarind. At this time, no currency and monetary system existed in Burma and internal trade was carried on by barter, as well as, through gold and silver bullions. The main method of transportation was waterways. But, carts drawn by oxen, and horses were also chiefly used.

### **1.3 Extent of foreign trade:**

Under the Burmese monarchy, foreign trade was based on two routes, seaborne trade and overland trade with Yunnan and China. Early trade began about 1529 with the Portuguese and then with the Dutch who came for trade and industry around the end of the 18th century. The main export items were ivory, lac, pepper, beeswax, cuth, teak, gold, silver and mineral oil. And, the major items of import were fire-arms, broadcloth, piece goods, hardware and glass. Caravans were chiefly used in the historic over-land trade routes across the mountainous frontier. The neighboring country of China was a very important over-land trade partner since the very early days. During the eighteenth century, Europeans established a number of trading center in Asia. However, due to frequent warfare and mercantilist philosophy of the Burmese monarchy, foreign trade in Burma did not grow properly until the arrival of the British. According to rough estimates, in 1800, the total value of seaborne and overland trade was about 700,000 to 1,000,000 pounds.

### **1.4 Extent of agriculture sector and techniques of production:**

Since its early days, Burma was self-sufficient to a great extent. Rice was the main staple food and grown all over the country mainly for domestic consumption. In Upper Burma, a dry zone, rice was grown through irrigation which was built by the Burmese monarchy a long time ago. Other crops such as, pulses, tobacco, maize, wheat were also grown in Upper Burma. Sugar-cane, cotton and indigo were grown in many parts of the country. Although nearly all the crops were grown in Lower Burma, rice was the major crop. Except for cotton, almost all of the agriculture products were used for domestic consumption

rather than for the market. At that time, the source of agriculture credits for bad harvest years was mostly from neighbors and relatives in the village. It is relevant to conclude that Burmese agriculture did not commercialize much prior to the colonial period.

Concerning agricultural techniques, the plough and harrow with the help of cattle and irrigated water (consisting of tanks, lakes, and canals) were chiefly used in Upper Burma due to comparatively less rainfall and poor soil conditions. Lower Burma, which did not have irrigation systems but had enough rainfall and fertile land, generally used a rude harrow rather than the plough. As a result, it is obvious that the agricultural techniques used in Upper Burma were more advanced than those used in Lower Burma.

### **1.5 Extent of timber industry and techniques of production:**

We have very limited data and information about forest and its related economic activities under the Burmese monarchy. Due to the small size of the population and the vast forest area, Burma did not develop methods of forest conservation. In respect to methods of timber extraction, elephants were chiefly used in the forest as well as at the processing sites.

The growth of the ship building industry around 1800 was mainly due to the abundance of teak forests and also as a result of the mercantilist philosophy of the Burmese monarchy. At that period, the “introduction of remitting duty for materials and equipments brought for new vessel” and “free port charges for the new ships built in Burma when they leave Burma on their first voyage” greatly encouraged the growth of this industry. Moreover, Burma had a comparative advantage over India in ship building. For example, the cost of building a ship in Burma was about two-thirds of Ganges and half of that of Bombay. The location of these industries was mainly at Rangoon, but some ships were also built at and near Prome which was about a hundred miles from Rangoon. At that time, several ships from 600 to 1000 tons were built and wrought by Burmese carpenters and blacksmith. Of course, other required materials and equipments which were not available in Burma were brought in by foreigners. Concerning the techniques and skill of Burmese shipwrights, they greatly improved especially during the period between 1750 and 1800. However, given that axes were used rather than saws in shaping and curving wood for ship building, the

Burmese method appears somewhat wasteful.

### **1.6 Extent of traditional cottage industries:**

Although we do not have reliable data as the case for other developing countries of Southeast Asia, it is certain that traditional family based cottage industries played an important role in the daily life of the people under the Burmese monarchy. The cottage industries such as salt, fish and fish preservation, rice, raw sugar, sesame oil, groundnut oil, coconut oil, cheroot, cotton ginning, spinning, and weaving made up a remarkable share of the village as well as the rural-town economy of Burma. Other resource-based industries such as the extraction of mineral oil, and other mineral products (ruby, iron, lead, tin and zinc), metal smelting and casting, wood carving, pottery and lacquer, cement, brick and paper etc. were also developed. The locations of these traditional cottage industries were spread all over the country according to the climatic and geographical conditions and, life style of the people. Although traditional methods of production were applied, the equality of products was reasonably high. Finally, it is important to point out that these cottage industries also made it possible for Burma to maintain its self-sufficiency to a great extent.

### **1.7 Extent of feudalism:**

Some of the studies provide reasonable evidence that Burma had a feudal society as in Europe, although it had both similarities and differences from that of Europe. The level of civilization since the period from King Anawrahta (A. D. 1044–1077) and as late as King Tha Lun (1637) may be compared with that of the medieval period in Europe. As in Europe there was the usual obligation of the chieftain to provide the required number of men in the time of war, and the same kind of tithes and due that had to be paid by the peasants to the overlord.<sup>6)</sup> It is very worthy to quote a paragraph from Andrus (1954), a former professor of economics at the University of Rangoon, in order to imagine the level of social and economic development of Burma before the colonial period. “The presence of rather extensive irrigation works, numerous village handicrafts, and a complicated social life, with its emphasis on co-operation, indicate that it is a

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6) See U Tun Wai (1961), 1.



mistake to regard Pre-British Burma as a primitive or uncivilized. In many respects it may be compared with the medieval period in Europe”.<sup>7)</sup>

However, Burmese feudalism was different from that of Europe and India, because feudalism as it existed in Burma was flexible in nature. Under the Burmese monarchy, there were seven social class structures based mainly on occupation, viz. (1) royal family (2) public officers (3) priests (4) merchants (5) cultivator and laborers (6) slaves and (7) outcastes. The slaves were not the same as the slave in the Europe and America. At that time, major economic activities and personal property were managed and controlled by a number of regulations and customs which based on the social unit rather than individual rights.<sup>8)</sup> Burma does not have rigid cast system as in India and in fact does not even have a system of surname and family names. One of the possible reasons for the existence of a flexible feudalism was Buddhism.

It is widely known that the growth of the agricultural sector under feudalism in many ways supported the success of the Industrial Revolution in England. But, it is difficult to judge “whether Burmese feudalism had enough capacity to support industrial development with the hands of Burmese.”

### 1.8 Extent of literacy level:

Concerning literacy condition of the people, some historical records mentioned that Burma seemed to have a high literacy rate since the period under the Burmese monarchy. Male Burmese had remarkably high rate of literacy partly due to the fact that, all boys generally had to learn from priests not only reading and writing but also the Buddhist way of living which is an Asian religion founded by Gautama Buddha. Harvey (1929) also quoted that “There is a library in almost every monastery. Burma is a kingdom governed by the pen, for not a single person can go from one village into another without a paper or writing.”<sup>9)</sup>

On the whole, in order to understand the real situation of the Burmese economy before the colonial, one should keep in mind that the policy of the Kings

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7) See Andrus (1956), 11.

8) See U Tun Wai (1961), 2, Furnivall (1957), 32.

9) This paragraph was originally from Manucci, “Storia do Mogo” and quoted by Harvey in 1927. Then, Furnivall (1957), ix, and U Tun Wai (1961), 6-7, quoted again from Harvey (1927), 351.

of Burma was very similar to the mercantilist philosophy. This policy was one of the bottlenecks for the growth of foreign trade and international relations, as well as, the diffusion of business knowledge and technology. Moreover, the frequent warfare of that period destroyed the development of regular trade routes within countries as well as with neighbors. Difficulties in the formation of markets and trade routes also hindered the specialization and division of labor, as well as, the growth of the commercial economy on the one hand and maintained the self-sufficient rural economy on the other.

## II. The Growth of Export Propelled Industries: Positive Aspects

The population of Burma increased from an estimated 4 million in 1826 to 14.6 million in 1931 and then again to 16.8 million in 1941. This estimated population of around seventeen million placed Burma fifth in the British Empire in terms of population, following India, Pakistan, the United Kingdom, and Nigeria. The population density of Burma was also the lowest among the Southeast Asian countries. For example, 45 persons per square mile of Burma was followed by Siam (Thailand) 73, Philippines 140, Malaya (Malaysia) 104 and Japan 496.<sup>10)</sup>

Burma was self sufficient to a great extent at the beginning of the period in which the British came into Burma. As mentioned earlier, people grew paddy and bean, spun and wove their cotton goods and made household goods, such as pottery, knives and furniture. Moreover, silver-smith, gold-smith, precious stones polishing, and other handicrafts such as wood curving, silk weaving, and lacquer products were also developed. Nation-wide blacksmith and wood products made it possible for Burma to produce agriculture equipment, bullock and horse carts, and boats and ships for the domestic market. All of these traditional primary oriented domestic demand based various economic activities enabled a sparsely populated Burma to be almost entirely self-sufficient.

With the coming of the British, Burma was rudely awakened from her fitful

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10) For the changes in demographics structure of Burma during colonial period, please see in Andrus (1957), 22-41.

slumber to alien-dominated modernity through the course of three Anglo-Burmese wars in 1824, 1852 and the last in 1885. First, the pace of economic growth under British rule was “changed from that of bullock cart to railways”. Second, the character of economic growth was “transformed almost without realizing, from a self-sufficient traditional bazaar economy to a lop-sided open dual economy”. All these process of transformation under colonialism had been dealt with in a number of earlier studies.<sup>11)</sup> The growth of Burmese economy under colonial period can be labeled as “export-led growth” due to the fact that, the contributed share of value of export (1.7 million rupee) in total net domestic product (5.6 million rupee) registered about 30% in 1901/02 and reached its peak of 50% in 1936/37.

This section attempts to focus solely on the process and extent of industrialization by retracing the well trodden path of economic growth under colonialism. Particularly, export propelled industries such as (a) rice industry (b) timber industry (c) mining industry and (d) auxiliary industry will be examined.

## 2.1 The growth of rice industry:

It did not take long for the British to realize the high potentiality of lower Burma as rice producing and exporting area. To produce rice profitably, the British used cheap labor particularly from India. The rise in the paddy price from 8 rupees per 100 baskets (46 pound per basket) in 1845 to 45 rupees in 1855 was the main encouraging factor for the rapid growth of both production and the export of rice. The price of paddy increased again to 95 rupees in 1885 and reached its peak of 190 rupees in 1920. Rice export from the port of Rangoon (Yangon) and Bassein increase fourfold between 1852 and 1870, from an average of 60 thousand tons per annum in the 1850s to an average of 240 thousand tons in the 1860s (Aye Hlaying, 1969).

At this juncture, it is worthy to note that the sudden growth of rice

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11) As the focus of this paper given weight to industrialization experiences of Burma under British rule, the process and extent of economic development in a broader sense under colonialism should be seen in various studies on economic development of Burma. Among the earlier studies, Furnivall (1957), Andrus, (1957), U Tun Wai (1961), Shein (1964) and Aye Hlaying (1969) are remarkable and providing multidimensional aspects of British Burma.

production and export in Burma especially after 1870 was partly because of the opening of the Suez Canal in 1869. This had a great impact on economic and political relations of Asia and the West, as well as, led to the opening of the European market for Burmese exports.

Table(1): The Growth of Output, Export, Paddy Price and Rice Mill

Year	Production (000, tons)	Export (000, tons)	Percent of Production	Price (per 100 baskets)	Rice Mill (number)
1870					20
1880					49
1885-86		1,363		8 (1845)	
1890-91		1,649		45 (1855)	
1895-96	3,619	1,748	48	50 (1865)	
1900-01	4,264	2,501	49	65 (1875)	83
1905-06	4,345	2,899	67	95 (1885)	
1910-11	4,522	3,101	69	95 (1895)	165
1915-16	6,407	3,131	49	105 (1905)	
1920-21	7,019	3,465	49	125 (1915)	353
1925-26	6,720	4,352	65	190 (1920)	543
1930-31	7,374	3,911	53	187 (1925)	613
1935-36	7,192	3,892	54	133 (1930)	647
1940-41	7,910	3,746	48	94 (1935)	683

Source: Economics Department (1960); p.22, and Lwin (1976); p. 7.

Note: Even in Burma today, baskets are still used for measuring amount of paddy. A basket of paddy is equal to 46 pounds and a basket of rice is about 75 pounds.

The expansion of rice export that led to the emergence of one of the leading export-propelled industries was the rice milling industry. The growth of the rice milling industry in turn provided a secure market for the farmers which further led to the expansion of rice growing area. For example, the total rice growing area increased from 5.8 million acres (2.5 acre per hecter) in 1890 to 6.5 million acres in 1900 and then again to 12.4 acres in 1930.<sup>12)</sup> As a result, as given in table (1), paddy production increased from 4.3 million tons in 1900/01 to 7.9 million tons in 1940/41, and export also increased from 2.5 million tons to 3.7

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12) Regarding expansion of rice growing area, please see in Furnivall, (1957), 43, Appendix II, and Maung Thaw (1966), 35.

million tons during the same period. It was also an obvious phenomenon that since around 1900 to the year 1940, Burma continuously exported more than half of its paddy production. Moreover, the share of the value of rice export in total export was about 73% in 1895. Due to the increase in export of forest products, petroleum, and other minerals products, the share of rice export declined. However, the value of rice export kept its share about nearly half of the total export (48%) in 1940.<sup>13)</sup> Therefore, it is relevant to say that the sudden growth of the commercial agriculture and rice milling industries were mainly a result of the rapid expansion of paddy/rice export.

Expounding further on the growth of rice mills, only three rice mills existed in 1867(not in the table). The method of hand pounding for taking paddy husk, suitable for processing only small quantities, was still the dominant method. However, as shown in table (1) with the growth of paddy production and export, the number of rice mills increased to 20 in 1870, 49 in 1880 and 83 by 1900-01. This number increased again to a peak of 683 in 1940/41. As the data demonstrates, the number of rice mills grew eight times within 40 years. However, it should be noted that the large increase in number of rice mills between 1911 and 1921 was partly due to the extension of the Factory Act, which reduced the lower limit of factory definition from 50 to 20 workers. In spite of this, the increase in the number of rice mills was still very significant. Although, comparable time series data for the growth of “rice mills” and “paddy export is not available, it is obvious that rice mills were one of the export propelled industries of that period.

It is also important to explain briefly the changes in technology that were taking place in the rice milling industry. Until 1872 most of the rice mills in Burma could only produce “cargo rice”, but with the gradual introduction of machinery for polishing grains, by 1880 two-fifths of the rice mills were able to produce “white rice”. This number continued to rise in subsequent years and it reached 683 in 1941. Another type of technological improvement in the rice processing industry was the boiler system; an improvement that made it possible for paddy husk to replace coal as fuel for the rice milling industries. By 1885, the

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13) For the share of value of export in total GNP and share of rice export in total value of export, please see in Aye Hlaying (1969), 38.

paddy husk was used almost universally as fuel in rice mills. According to some estimates, this improvement was able to reduce the milling costs by as much as a half.

## 2.2 The growth of timber industry:

The second type of export propelled industry was saw mills, and the growth of this type of industry was also very much a product of the rapid growth of the timber export trade and the existence of vast forest area. As in rice export, here too, the growth of export trade provided a “vent” for Burma’s timber surplus. Forest area occupied more than half of the total surface of the country and much of the forest products were mainly used for housing, religious buildings, bridges, boats and ship building before the colonial period. As in the case of the agricultural sector, the rapid growth of the forestry sector was dominated by the growth of foreign demand for teak timber. With the rise of seaborne trade timber, especially teak, European traders began to extract for export. In fact, it was their hunger for teak, which among other things, led to the Third Anglo-Burmese War in 1885. The growth of teak production, export and saw mills during the colonial period is given in table (2).

Regarding the relationship between teak production and export, although it was not as close as that of the relationship between paddy output and export, it was nevertheless significant. For example, production increased most rapidly from 24 thousand tons in 1856/60 to 290 thousand tons in 1896/1900. This figure continued to increase and remained at the level of average about 485 thousand tons for the period between 1916/20 and 1936/40. In the case of export too, teak export increased from 66 thousand tons in 1856/60 to 239 thousand tons (nearly 4 times) in 1896/1900. Although this figure tapered off following this, the quinquennium average of teak export maintained a range of between 153 and 227 thousand tons during the period from 1901 to 1940. In addition, as in the case of rice mills, roughly the same conclusion could be drawn for the growth of teak export and the number of saw mills. For example, the number of saw mills increased from 22 in 1877/78 to an average of about 46 mills for the period between 1896 and 1900. Following this, the average number of saw mills increased again to 166 in 1936/40.<sup>14)</sup>

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14) According to U Tun Wai, teak industry suffered from the impact of the great depression.

Table(2): The Growth of Teak Production, Export and Saw Mills \*

Year	Output in Burma	Total Handle in Burma <sup>1)</sup>	Total Export@	Number of Sawmills
1856-60	24	73	66	
1861-65	44	110	113	
1866-70	56	111	87	
1971-75	71	180	118	
1976-80	73	198	135	22 §
1881-85	102	241	152	
1886-90	147	254	166	
1891-95	227	286	189	
96-1900	290	360	239	46
1901-05	205	263	153	
1906-10	268	320	155	
1911-15	287	324	161	88
1916-20	938	428	168	
1921-25	530	553	195	
1926-30	469	499	215	166 §
1931-35	415	458	174	141
1936-40	454	485	227	166

Source: Aye Hlaing, (1969) Economic Development of Burma: 1870-1940, p. 22.

Notes: \* The figures for output (before milling), handled in Burma (before milling) and export (after milling) are quinquennium average in thousands tons of 50 cu. ft.

1. Includes teak imported from Karenni and Siam.

@. These figures should be multiplied by two for comparison with the output data.

§. U Turn Wai, (1961), pp.40 and 107. The first figure (22) was for the year 1877-1878, and the second figure (166) was for the year 1927-1928.

One of the obvious features in the growth of the forest industry was that not only were the Burmese firms replaced by foreign enterprises, but also the Burmese foresters were replaced by European assistants. For example, the big-five European firms viz. Bombay Burmah Trading Corporation, Ltd., Steel Brother and Co., Ltd., MacGreger and Co., Ltd., Foucar & Co., Ltd., and T.D. Findlay & Son, Ltd. accounted for 75% of teak extraction in Burma.<sup>15)</sup>

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Both the extraction of timber and the number of saw mills were declined, the latter was more so than the former. For example, the number of saw mills declined from 166 in 1927-28 to 115 in 1933-34. For detail, please see in U Tun Wai (1961), 107.

15) See in Aye Hlaying (1969), 21.

Regarding technology, the timber industry required a fairly 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. Yet it cannot be considered as a capital intensive industry in the ordinary sense. Very little mechanical power was used in the extraction of timber. As in neighboring countries, elephants were mainly used in the forest as well as in and around the mill site.

### **2.3 The growth of the mining industry:**

Another important export propelled industry was the mining industry, particularly mineral oil. It is widely known that from very early times crude oil was extracted from hand dug wells by “well eaters” (twinzas) and a considerable amount was exported. It was only after the British annexation of the entire country in 1885 that most of the oil fields were bought up by the large companies such as Burma Oil Company (BOC), Indo-Burma Petroleum Company, British Burma Petroleum Company and Nath Singh Oil Company. Machine drilling was introduced in 1888 and an oil refinery plant was built at Syriam (near capital city Rangoon) around 1900. BOC then constructed the 275 mile long steel pipe line in 1907, to pump crude oil from the oil field at Yenangyaung to the refinery plant in Syriam. This pipe line was later extended to 325 miles to reach the Singu oil field. As a result, the mining industry grew by leaps and bounds to become the second most important export industry in Burma. For example, extraction of crude oil rose sharply from a mere 2 million gallons in 1886 to 40 million gallons in 1900.<sup>16)</sup>

As given in table (3), production of crude oil was 85.3 million gallons in 1903/04 and reached to its peak of 273 million gallon by 1913/14. Since then, the level of output fluctuated around that level until the outbreak of the Second World War. From the oil refinery plant of Syriam, petroleum products such as kerosene, motor spirit and paraffin wax were exported, mainly to India. The amount of kerosene and motor spirit export ranged from 111 to 132 million gallons and from 31 to 50 million gallons respectively during the period from

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16) The rapid growth of crude oil production was due to the extension of area operation from Yenangyaung to new field in the neighborhood, such as Singu, Yenangyat, Minbu, Lanywa. Another reason was increase in number of oil companies. For detail, please see in Aye Hlaying (1969), 23.



1923/24 to 1938/39. The export of paraffin wax ranged from 24 to 50 thousand tons for the same period. Moreover, in terms of the value of export, petroleum products increased from 4 to 148 million rupees and other mineral product increased from 0.2 to 46.7 million rupees during 1900 and 1940.<sup>17)</sup>

Although comparable data for the amount of required capital investment is not available, unlike the two previous export propelled industries, the petroleum industry was truly capital intensive. It also required a considerable technological know-how. As mentioned above, apart from the drilling machines, a long steel pipe line had to be constructed. The estimated amount of capital in the petroleum industry around 1940 was about 530 million rupees and this industry also employed a large number of skilled technicians and unskilled laborers.

Table(3): The Growth of Production of Petroleum and Allied Products

Period	Production (Crude oil) (000, gals.)	Export Kerosene (000, gals)	Export of Motor Spirit (000, gals.)	Export of Paraffin Wax (000, gals.)
1898-99	21,578			
1903-04	85,329			
1908-09	173,000			
1913-14	273,000			
1918-19				
1923-24	271,400	132,260	31,270	24.2
1928-29	262,187	110,760	43,060	47.6
1933-34	249,000	122,590	48,080	49.7
1938-39	263,800	126,330	50,890	39.6

Source: University of Rangoon (1969), p.31.

Besides petroleum, other important mineral products of Burma were tin, wolfram, lead, silver and zinc. In fact, around 1911 Burma was one of the leading wolfram producing countries in the world. As in the case of petroleum, here too modern techniques such as hydraulic giant and electrically driven pump dredges were employed. As may be expected, incentive for employing these modern methods was due to increase in export demand.

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17) The growth of export trade of Burma related to rice, timber, petroleum and mineral products for the period between 1870 and 1940 can be seen in Aye Hlaying (1969), 38-39.

## 2.4 The growth of auxiliary and household industries:

The growth of export propelled industries provided a vent for the development of auxiliary industries. As can be seen in table (4), the number of export propelled industries, in particular, rice mill which increased from 81 to 673, saw mill from 46 to 166, cotton ginneries from 1 to 54, and petroleum refineries from 2 to 10 about during a 40 years period (1899~1941). The metal ore treatment industry increased from 2 in 1930 to 7 in 1941, and the metal smelting industry increased slightly during 1911 and 1941. As a result, a number of auxiliary industries that provided maintenance and repair services for export propelled industries also grew remarkably. The dominant auxiliary service industries such as dockyards, saw an increase from 1 to 9, railway and other workshops increased from 2 to 22 and general engineering services increased from 3 to 19 during 1899 and 1941. Electrical engineering also increased from 3 to 7 during the period from 1930 and 1941. It is worthy to point out that all of these export propelled and auxiliary services industries were clustered around major sea ports and the capital city Rangoon. The main reason for this pattern of concentration of industries was to save time and money in the transport of export products from hinterland.

With the coming of Europeans, Indians and Chinese immigrants, the industries producing food and household goods such as vegetable oil, wheat flour, sugar, tobacco, cotton spinning and weaving, hosiery and knitwear, matches, soap, chemicals, aluminum ware, cement and pottery, rope, rubber goods, printing etc. came to the surface in the Burmese industrial scene around 1911. The increase in job opportunities and income, the change in food culture and consumption patterns, and the increase in the foreign population were the most responsible factors for the development of domestic demand based household goods industries at the beginning of Burmese industrialization. However, these industries did not play an important role in terms of numbers or in terms of employment creation due to the mass inflow of luxury products (defined relative to 1800s Burma and the neighboring countries' living standards) such as cigarettes, boots and shoes, aluminum and assorted hard-wares. On the whole, as given in table (4), the numerical increase in various types of industries from 141 to 1,074 during 1899 and 1941 was a glaring phenomenon.

Table(4): Types and Number of Industries in Burma (1899–1941)

Industry	1899	1911	1930	1941
A. Export Propelled Industry				
1. Rice mill	81	165	589	673
2. Saw mill	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 Services Industries				
7. Dockyard	1	2	8	9
8. Railway workshop	1	1	5	12
9. Other workshops	1	3	10	10
10. Electrical engineering			3	7
11. General engineering	3	13	25	19
C. Food and Household Industries				
12. Vegetable oil mill		6	32	29
13. Flour mill	1	2	5	3
14. Sugar mill			1	5
15. Tobacco		1	1	1
16. Cotton spinning and weaving			1	1
17. Hoisery and knitwear			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. Alluminium ware			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	1,079

Source: U Aye Hlaing. (1969). 31.

### III. Negative Features:

Having stressed the positive aspects of industrialization during the colonial period, it is now time to examine some of its negative features. It is very important to verify the source and magnitude of these negative features and whether the sources lie in the type of industrialization or in colonialism. At any rate, with regard to colonialism, worldwide popular opinion has been to place the blame on it. This section endeavors to give more weight to the source and degree of negative features from the aspects of industrialization alone. However, as the nature and the types of industrialization of that period were the products of colonial policy and practice, it is difficult to consider colonial policy and industrialization separately.

Many examples can be given which provide evidence that verifies how the negative features of industrialization took place under colonialism. But, in this section, only a few negative features that are closely related to the process of industrialization under colonialism will be examined.

#### 3.1 Ownership of industries:

One of the negative features which came out from patterns of ownership was very obvious. For instance, at that time, rice mills owned by the Burmese initially enjoyed some advantages over the Europeans' big mills at the ports. However, European millers were able to convince the British government to change the freight rates of the railways in such a way as to turn the advantage in their favor. Besides, they already had all the other advantages that accrued from the monopoly position in banking and shipping. In short, the Europeans exploited every opportunity to make them more advantageous and thereby consolidate their position, whereas the Burmese had to compete against increasing odds. Table (5) can also explain one piece of the outstanding evidence of the extent of the strong monopoly power of the Europeans and Indians. For example, in 1936, foreign owned (Europeans, Indians, Chinese) rice mills employed 69.6% of the total number of rice mill workers while about 30.4% of the workers belonged to Burmese owned mills. Moreover, the average size of the European rice mill was about 519 workers while Burmese owned mills averaged only about 40 workers. As stated in previous sections, saw mills, oil

refinery plants, and trading companies were also largely owned by foreigners. If there had not been unfair competition resulting from the alien dominated ownership pattern, the Burmese might not have been shunted aside so easily from the industrial and business scene.

Table(5): Ownership of Rice Mills: 1936

Community	Mills	Percentage	No. of Workers	Percentage of Workers	Average size of mills
Europeans	36	5.43	18,668	41.3	519.0
Indians	180	27.15	9,798	21.8	54.4
Burmese	346	52.19	13,733	30.4	40.0
Chinese	101	15.23	2,929	6.5	29.0
	663	100	45,128	100	68.1

Source: Spate, O.H. (1941). 84.

Note: There is no proper data for the ownership of industries. Spate worked out from the List of Industrial Establishments (1936) which provided only the names of owners.

### 3.2 Commercial policy of colonialism:

To give another example, the commercial policy of colonialism allowed no scope for tariff protection even to prevent the decline of traditional indigenous industries. We can examine the nature of the commercial policy of colonialism and its negative features with the help of the consumer goods share in commodity composition of import during the period between 1871/75 and 1936/40, given in table (6). For example, quinquennial average data for the share of consumer goods import in the total value of import accounted for about 70% from 1871/75 and 1896/1900, except during the years 1886/90. Consumer goods imports maintained a share of well above of 60% throughout the period between 1901/05 and 1936/40.

Under the British rule, the tariff system in Burma was a part of India and it remained unchanged even after its separation from India in 1937. During the discussion period of the Indo-Burma Trade Agreement, it was frequently pointed out that Burma's trade with India represented more than half of the country's total trade, whereas India's trade with Burma amounted to only 7% of its total trade. Although an Indo-Burma Commercial Agreement was signed in 1941, it

did not come into effect until the Japanese invasion in 1942. Hence, free trade had prevailed between Burma and India almost throughout the period under colonialism.<sup>18)</sup>

The above mentioned free inflow of imported consumer goods caused declines in most of the domestic infant industries. Especially industries such as textile, pottery (earthen pot), salt, tobacco (cheroot and cigar rolling), lacquer ware, footwear, umbrella and ship building industries were practically vanished under colonialism due to foreign competition. For example, local salt production declined from 70,000 tons in 1869 to about 18,000 tons in 1885 due to a mass inflow of salt from abroad. Imported cotton piece goods, which accounted for

Table (6): Commodity Composition of Imports: 1870-1940 (million rupees)  
(Quinquennial averages)

Years	Consumption Goods	Machinery and Equipment	Other Producers' Goods	Total Imports	Consumption Goods as % of Total
1871-1875	23	6	5	34	67
1876-1880	35	9	5	49	71
1881-1885	42	10	8	60	70
1886-1890	36	12	36	84	43
1891-1895	62	14	13	89	70
1896-1900	68	15	14	97	70
1901-1905	91	18	27	136	67
1906-1910	120	20	45	185	65
1911-1915	142	22	48	212	67
1916-1920	175	37	70	282	62
1921-1925	221	41	100	362	61
1926-1930	231	32	104	367	63
1931-1935	128	18	54	200	64
1936-1940	136	21	74	231	59

Source: U Aye Hlaing. (1969). 40.

Note: Machinery and equipment includes factories, millworks, machineries, belts and parts, railway plants, rolling stocks, ship, vehicles, chassis and parts, telecommunication equipments. Consumer goods import comprised manufacture goods and considerable amount of simple and staple foodstuffs such as salt, salted and unsalted-fish, cooking oil and dried meat.

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18) Concerning the extent of tariff between Burma and Europe, please see in Andrus (1956), 186-187.

about 75% of domestic consumption, caused a serious decline in the handloom weaving cottage industries.

What was most unfortunate for colonial Burma was the one-sidedness of the commercial policy of colonialism. Encouraging liberal inflow of consumer goods destroyed the native infant industries on the one hand and the expansion of the export sector based on a few primary products failed to have any appreciable spread effect, thereby leading to a condition of an “open dual economy” on the other.

### **3.3 Type of capital investment:**

There was very little information about foreign capital. The bulk of foreign capital in Burma under colonialism was in the form of short term capital to finance industry, mining, forestry, agriculture and trade. In 1906, there were 55 registered joint stock companies with a total nominal capital of 24 million rupees. Although data for the value of capital investment was not available, the number of joint stock companies increased to 387 in 1935.<sup>19)</sup>

The only important fixed capital connected with the agriculture sector was exporting rice and establishing rice mills. The lust of foreign capital was mainly profit and quick return. Colonial government also made no attempt to introduce new techniques of cultivation, mechanization, dam and irrigation works in Burmese agriculture. As the growth of agriculture production was not based on the introduction of new cultivation methods and equipment, only simple and low value tools of hoes and plough as well as consumer goods for cultivators were imported. In other words, rapid growth of rice production and export was largely the result of the expansion of sown acreage and availability of cheap Indian migrant labor. Due to the lack of an appropriate agriculture credit system under British rule, within a few years, Indian money lenders became agriculture land owners which in turn aggravated the landless and indebtedness problems in Burmese agriculture.

Similarly, in the case of forestry, very little mechanical power was used and fixed capital was used only in saw mills. Carrying logs was mostly done by

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19) The growth of joint stock companies during 1906 and 1935 is given in table (4) of Aye Hlaying (1969), 37. Concerning the growth of foreign owned banks under the colonialism please see in Andrus (1947), 303-315.

elephants, buffaloes and bullock carts. The only exception, which is worth mentioning in regards to investment of foreign capital, was the sugar refining industry. The two sugar industries were established just before the Japanese occupation of 1942; one was British owned and the other Indian owned. These sugar industries were also protected by colonial policy in the form of an import duty of 1.75 rupees per cwt.<sup>20)</sup>

Of course, the industries which catered to domestic demand were almost totally neglected by foreign capital and the British government. No one could or should reasonably expect a colonial government to be interested in the all around industrial development of a colony. Thus, it is hardly surprising that there was no British support and foreign investment in domestic demand based industry and other economic activities which were less profitable and/or had a longer gestation period. However, these type of industries are very important for the sustainable growth of small scale industries, as well as, for the improvement of technology diffusion and the entrepreneurial ability of the people during the early stages of industrialization.

In short, the above mentioned nature and types of capital which concentrated only in the profitable and quick return areas did not lead to the formation of a social and economic infrastructure necessary for the long term industrial development of Burma.

### **3.4 Lack of national currency and banking system:**

As mentioned in section 1.2, under the Burmese monarchy, there was no currency and banking system in Burma and trade was carried on by barter as well as through gold and silver bullions. Under British rule, Burma was governed as a part of India until its separation from India in 1937, and the Indian currency, the rupee, was used directly in Burma. At that time, the British government tried to maintain the stable value of the rupee in terms of sterling. But, the value of the rupee was fixed in terms of silver while the sterling was fixed in terms of gold. The value of one rupee was equivalent to 2 shillings in 1871 and it fell to one shilling and six pence in 1926. Of course, colonial Burma also did not have an independent or separate currency and banking system of its own, and all of the

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20) The detail of two foreign owned sugar industries, please see in U Tun Wai (1961), 120.



banks were in the hands of foreigners. This situation probably also aggravated the weakening of knowledge and experience of the Burmese in relation to money, banking, and financing activities which are very important for establishing business and industrial enterprises. It is needless to say that monetary and fiscal policies in favor of business and the industrial development of Burma were lacking in the mind of the British government.

### **3.5 Cheap labor policy, job opportunity and wage:**

As discussed above, British government encouraged the Indians to work in Burma in many ways under a cheap labor policy, particularly, for the growth of paddy production and export oriented industries. In 1874 for example, the British government spent 100,000 rupees to import Indian laborers and cultivators. After passing the Labor Act of 1876, the colonial government's subsidies cost about 300,000 rupees in 1882-83, which was paid to shipping companies according to the number of Indian immigrants they carried.<sup>21)</sup>

The negative feature of this cheap labor policy is that it transformed the demographic structure of Burma into an alien dominated one. During 1881 and 1890, the average annual number of immigrants was 79,031 and that of emigrants was 53,968. These figures increased to 354,647 and 283,754 respectively in 1921-1938. Moreover, during the period immediately before the entirety of Burma came under British rule, the Indian population in Lower Burma was 246,000. Yet, the Indian population increased to over a million (1,010,000), about 8% of Burmese total population, in 1931. At that period, the Chinese population was only about 149,000.<sup>22)</sup> The alien dominated population structure was more obvious in the capital city of Rangoon. Since 1872, the Indian population of 16,000 had already taken a 20% share of the total Rangoon population. As a result of the cheap labor policy and the introduction of active measures of the British, the number of Indians (87,000) in Rangoon began to over take that of the Burmese population (73,000) in 1891. This situation continued to prevail until just prior to the Second World War. Due to the slow growth of the Burmese

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21) British Government's expenditure on subsidies for encouraging Indian immigrants, please see in Furnivall (1957), 70-73.

22) The number of annual inflow and outflow of migrants during colonial period can be seen in Sundrum (1957), 24, and Aye Hlaying (1969), 13.

population compared to the mass inflow of Indian migrants, the share of the Burmese population in comparison to the total Rangoon population (340,929) sharply declined to 40% of the entire population of Rangoon in 1931.<sup>23)</sup> This thaws a rare demographic phenomenon among the colonial countries of the 19<sup>th</sup> and early 20<sup>th</sup> century which practically kept the Burmese away from business and industrial activities that generally took place in urban areas.

Regarding the wages in Burma, as a result of the post war boom of the 1920s, the money index wage based on 1870 (100) rose to its peak of 160 in 1925. However, the paddy price index grew much faster than the money wage index and reached its peak of 271 in 1925. As a result, the deflated wage rate index (index of money wage rate as percent of the paddy price index) was about 59 in 1925.<sup>24)</sup> The negative aspect is that although a wide variety of job opportunities grew rapidly through export led growth, the Burmese natives could not enjoy an increase in wage.

Regarding the controversy related to the positive and negative features of cheap labor policy and colonial Burma, it is worthy to quote the following paragraph. According to the Modern Review Journal of Calcutta, published in October 1939, the economic growth of Burma during the colonial period was mainly because of Indian migrant laborers. Especially railways, waterway, and industries could not develop properly without the help of Indian labor. However, the Burmese Newspaper wrote a contrasting view that the free inflow of Indians laborers forced the Burmese to remain in rural agriculture and created landlessness and indebtedness problems, as well as, Myanmar-Muslim conflict.<sup>25)</sup>

### **3.6 The nature of the labor market and business environment:**

The nature of the labor market and the business climate under colonial rule can be explained from various perspectives. But, this subsection will introduce only a few remarkable features.

As stated in previous sections 3.3 and 3.5, business and industries were

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23) For the abnormal increase of foreign population in capital city Rangoon, please see in Maung Thaw (1966), 43. The proportion of indigenous and foreign population in urban areas (all the places which had a population of 5000 and over) is given in Sundrum (1957), 40.

24) For the explanation of declining real wage in Burma, please see in Aye Hlaying (1969), 56.

25) For detail about different views on cheap labor policy and Indian migrants, please see in Maung Thaw (1966), 162.

occupied by European capital and Indian labor. Of course, money lenders and bankers were also Indians and Europeans. Under this kind of business climate, it was certainly unfavorable for Burmese to raise capital as well as to start a new business. This was one of the major bottlenecks for the Burmese to take a potential relevant role in fields of trade and industry.

Labor market situation related to industry and business was also unfavorable for the Burmese for many reasons. First, one of the main causes was cheap and abundant Indian labor compared to its Burmese counterpart. As pointed out above, Indian immigrants received subsidies under the cheap labor policy of the British and this made foreign capitalists able to enjoy an unlimited supply of cheap Indian labor. Secondly, the steam age, industrial technology and business knowledge reached India before the Europeans came into Burma. The Principal of modern Business had already permeated India and people were also quite aware of the European style of business operation. Therefore, it was more troublesome for Europeans to train Burmese than it was for them to employ Indians. Thirdly, the Indian migrants whose standard of living in India was generally lower than the Burmese made it possible for them to accept lower wages in Burma. This factor also became a further advantage over Burmese. In short, the above mentioned prevailing aliens dominated labor market conditions and business environment were unfavorable for Burmese.

### **3.7 Racial distribution of occupation:**

As explained in previous sections, various types of industries and employment opportunities grew remarkably under colonialism. For example, during the period between 1870 and 1938, the number of factories increased from 62 to 1,019 and the number of industrial employees increased from 8,000 to 86,352. But, the important point here is “who could enjoy these newly available job opportunities”. The data on racial distribution of occupation provides a relevant answer. For example, according to the 1931 census, in per 1,000 employed labors, 155 Burmese, 758 Indians, 469 Chinese and 303 Europeans engaged in Industry and commerce. Moreover, around the end of 1930s, about 30.7% of all Burmese workers belonged to the businesses of industry and mining. Among the skilled workers, Burmese workers accounted for 36.6% compared with 58.4% of Indians. Regarding unskilled workers, Burmese constituted

29.7% and the share of Indian labor was about 69.5%. These figures verify that the Burmese played a very minor role in industry and commerce, and that they mostly earned their living in agriculture sector.<sup>26)</sup>

Certainly, this was one of the factors most responsible for the lack of appropriate knowledge of industry and commerce among Burmese. And, they missed the chance to learn and practice the way of operating business and industry as well as to lay the foundation for industrial and business development during a century long colonial period.

#### IV. Some Theoretical Considerations:

It is worthy to examine and evaluate some theoretical aspects of the industrialization of Burma under colonialism. Accordingly, this section attempts to highlight briefly the theoretical implication of industrial progress, although it is a skeptical one.

##### 4.1 Laissez faire policy:

The time that the British started to invade Burma during the first Anglo-Burmese war in 1824 coincided with the rapid growth of British industrial production as a result of continuous progress of the Industrial Revolution. This was also the time that British classical economists advocated a policy of free trade or free enterprise. This policy has been known as laissez faire policy.<sup>27)</sup> Practicing this free trade and enterprise policy in colonial countries made possible for British to buy industrial raw materials and primary products as well as to sell their industrial products profitably. Moreover, application of laissez-faire policy was also considered as a master key for economic growth through industrialization and foreign trade. Under this policy, taxes were collected just

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26) Concerning more about racial distribution of occupation, please see in Andrus (1957), 270-278

27) The doctrine of laissez-faire, first propounded by the Physiocrats and later developed by Adam Smith and others, is that economic activities should follow their natural course. In other words, it is also a policy of non-intervention by government in the economy, leaving all decision to the market. For detail, please see in Viner (1960) 45-69. But, most economists nowadays accept the major role of government intervention in correcting income inequalities engendered by free market.

to cover the administration expenditures. Movement of goods, money and people were also free within Burma and between Burma and other countries. Major Economic activities such as production, trade and investment, and private property were managed and controlled by numerous contracts enforced by British type laws and regulations. Style of economic governance under British rule was very different from the days of the Burmese monarchy.

The main objective of free trade, business and competition was maximization of individual and firms profits. In colonial Burma, profits were grabbed mainly by foreigners and almost flowed out to abroad rather than consumption, production and accumulation of wealth within Burma. It is needless to point out that the laissez-faire policy is simply based on economic consideration although Adam Smith tried to explain it from the point of view of “natural law”.<sup>28)</sup> In Burma, under colonial rule, business competition was far from the real sense of perfect competition and fair competition. In this juncture, it is worthy to note that the development experiences of today’s developed and developing countries advocates that free competition alone cannot accumulate the wealth of nations and promote peoples’ welfare. Moreover, “Natural Law” alone does not work properly for the improvement of human welfare and reducing poverty especially under colonial rule.

However, it was a real fact that laissez faire policy of the British definitely made it possible for Burma to achieve remarkable growth of production, as well as, export of rice, teak and mineral products. The doctrine of trade and welfare was appropriate for Europeans, Indians and Chinese but, not for the Burmese of that period. Therefore, it is clear that a remarkable expansion of GDP through the growth of foreign trade and industries under the laissez-faire policy did not lead to the long term development of industrialization and accumulation of Burmese wealth.

#### 4.2 Dependency theory:

As stated in the introductory section of this paper, after the First Anglo-Burmese War of 1824 and the Second Anglo-Burmese War of 1852, Lower Burma

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28) Regarding brief discussion on Smith’s “laissez-faire policy” and “natural law” from development economics aspect, please see in Meier, G.M. and Beldwin, R.E. (1957), 19-25.

became a province of British colony India. The entire territory of Burma became a colony of the British as well as a province of India after the Third Anglo-Burmese War of 1885. Burma was thrown open to the world economy since the beginning of British occupation. However, unfortunately, the world economy was not open for the Burmese. The advanced groups (Indians) are more integrated economically, culturally, socially and technologically with the British than the Burmese. According to “Dependency Theory”, the dependent country (periphery) is a colony and the dominant country the imperial power (center or colonial government).<sup>29)</sup> It was very unfortunate for Burma that it has two centers; Britain and India. As discussed in previous sections, Burma had to rely on the British and India economically and politically, and was exploited by these two centers in many ways throughout the colonial period. Of course, Burma and the United Kingdom still had a centre-periphery relationship after independence (1948) at least until the early 1960s.

#### **4.3 Plural economy and employment opportunities:**

If it were possible to estimate, there would be no doubt that the GNP of Burma around 1940 must have been many times that of 1885. Although the reliable national income data for Burma is not available, the estimated net domestic product increased from 575 million Rupees in 1901-02 to 1003 million Rupees in 1938-39 (Aye Hlaying, 1969, p.149). But, the living standard of the people was the same or even lower. Declining unskilled laborer wage during the colonial period can be considered as one of the evidences for this situation. For example, deflated index of wage rate (index of money wage rate as percent of index of paddy price) declined from 100 in 1870 to 56 in 1940 (Aye Hlaying, 1969, p.55). The negative feature of rapid growth of total GNP under colonialism was that a minority group had benefited at the expense of many. This minority group belonged to the foreigners comprising of Europeans (largely British), Indians and Chinese. This is the reason why Burma is said to be a plural economy. As stated above, all the leading industries such as oil refineries, rice and saw mills, mineral and forest extraction, trading, banking and agriculture

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29) For detail discussion on “Dependency Theories of Underdevelopment” please see in Meier, G.D. (1995), 107-111.

finance were in the hands of Europeans and Indians.

U Tun Wai (1961) pointed out that, the causes of the emergence of a plural society in Burma can be explained in one sentence. “It was the result of the impact of a materially advanced civilization upon a philosophical one.” Moreover, regarding the causes of emergence of foreign Asians (Indian and Chinese) in the plural structure, we can summarize it as follow.<sup>30)</sup>

(a) Firstly, Chinese were more business minded and Indians were more accustomed to the British method of industry, trade and agriculture finance than the Burmese.

(b) The second factor is the difference in language ability. The British knew more Hindustani than the Burmese language. And, as a whole, the Indians could speak better English than the Burmese people. This situation made it more convenient for the British to employ Indians instead of Burmese.

(c) Thirdly, the Burmese who made their living on fertile land under favorable geographic and climatic conditions had a relaxed way of living which probably did not place much encouragement on hard work and engaging in modern economic activities. Comparatively, lifestyle of the Chinese and Indians was more economic oriented than Burmese, as they had migrated into Burma for employment and mainly economic reasons.

(d) The fourth factor is related to colonial education. The British educational system in Burma was not designed to prepare the Burmese to take an active role in the economic life of the country. At this juncture, it is worthy to quote a paragraph from U Tun Wai (1961) “... in intention as in effect, they were nothing but factories for the mass production of cheap clerks ... After a hundred years of British rule and more than a hundred years after the birth of Darwin there was no facilities for the study of Biology, and Ricardo had been dead a hundred years before Burmese had a chance to study economics.”<sup>31)</sup>

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30) For more about the causes of emergence of plural society in Burma, please see in U Tun Wai. (1961), 96-98.

31) The author quoted from U Tun Wai (1961), 97, and U Tun Wai quoted from Furnivall (1931), *An Introduction to the Economy of Burma, Rangoon, p, xy*. This would be the earlier work of Furnivell during his stay in Burma and later published as a book form in 1957. In Burma, the very first university, Rangoon University, was established in 1920. Biology was introduced into the curriculum of the Rangoon University in 1923. The subjects such as Economics, Geography and Geology were introduced soon after.

In short, colonial education consciously made Burmese to depend on main center (British) as well as sub-center (India). The differences in ethnic culture and life style, language ability, and the prevailing geography and climatic conditions paved the way for emergence of alien dominated plural society. Certainly, this kind of ethnic and institutional environments pushed the Burmese out of the fields of business and industry.

#### **4.4 Lewis' unlimited supply of labor and Rostow's preconditions for take-off:**

The colonization of Burmese agriculture with an objective of profit maximization transformed the rural economy from self-sufficient to a commercial agriculture and then it led again to the remarkable growth of production and export, especially rice. Due to the mass inflow of Indian migrants into the agriculture sector, Burmese disguised unemployed rural labors could not fully enjoy the growth of agriculture employment and rural wage. Unlimited supply of labor from India kept the rural wage at the Indian subsistence level which is lower than that of the Burmese subsistence wage. Therefore, as pointed out in section 3-5, the real wage of Burma did not increase. The cheap labor from India made it possible for capitalists to maintain the wage at the subsistence level longer both in the traditional sector (agriculture) and the modern sector (industry). Moreover, as a result of unshared growth, the people from the agriculture sector did not benefit much and the growth of the agriculture sector was not linked with the long term growth of industrial sector. In other words, the growth of Burmese agriculture which was mainly based on expansion of paddy sown area rather than productivity did not even have enough capacity for providing surplus labor for the modern sector as considered in Lewis' "Two Sector Model of Economic Growth".<sup>32)</sup> At this juncture, it is important to bear in mind that "the process of labor migration was from India to the modern sector of Burma" and "not much from the Burmese traditional agriculture sector." Therefore, Burma did not experience labor migration between the low productivity (low wage) traditional rural sector (agriculture) and the high productivity (high wage)

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32) For the simple diagrammatic explanation of Lewis Labor-surplus Model, please see in Ingham, B. (1995), 109-115.



modern urban sector (industry) during the long and remarkable growth of industry and foreign trade.

Besides, according to Rostow's "Stages of Economic Growth", it is relevant to judge that the Burmese economy during the colonial period was at the stage of "Preconditions for Take off", a transitional stage between "Traditional Society" and the "Take-off Stage". Unfortunately, Burma's preconditions for take-off stage did not develop fully particularly due to the lack of "entrepreneurs and rich Burmese ethnics" as well as "low savings and investment rates among Burmese". In short, the successful growth of industry, agriculture and the primary export trade for a sufficient length of time failed in establishing an appropriate foundation for the stage of "precondition for take-off" during colonial period.<sup>33)</sup>

#### 4.5 Vent for surplus theory:

Since the beginning of the British invasion in 1824, the opening up of Burma to the rest of the world made Burma specialize in production of low value added primary products for the Indian, British and Western markets. As characterized by the vent-for-surplus model of trade popularized by Burmese development economist of 1960s, H. Myint, sudden growth of international trade under British rule acted as a "VENT" for Burma's primary product surplus potential.<sup>34)</sup> As in other Southeast Asian countries, Burma's export products originated both from capital intensive industries and from the industries employing traditional labor intensive technique. It is needless to point out that the latter was clearly more dominant. The growth of export trade acted as a vent for surplus rice, timber and petroleum and then also acted again as an "engine of growth" for export-propelled industries, auxiliary industries and household goods industries in colonial Burma. Yet, unfortunately, the benefits from the vent for surplus process did not contribute to the growth of welfare and income of the Burmese.

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33) For detail explanation on "Precondition for Take-off Stage", please see in Rostow (1995), 4-35.

34) "Vent for Surplus" is one of the explanations for the growth of international trade. Adam Smith asserted that trade arises because the domestic market is too small to purchase all the output of the economy and so trade is necessary. Then it had been applied to the study of economic development by Burmese economist Myint in the 1950s. For detail, please see in Myint (1958) and Myint (1971), 124-139.

#### 4.6 Buddhism and the spirit of capitalism:<sup>35)</sup>

Buddhist economics is the study of how to attain given ends with minimum means. While the materialist is mainly interested in goods, the Buddhist is mainly interested in “liberation from self-repeatable birth and death of human life” and favors a moderate way of doing business and achieving results, avoiding extremes. Buddhists consider self-repeated birth and death as “vicious circle of human life”. Ordinary Burmese believed strongly in the existence of self-repeated birth and death or self repeated existence of lives after death. Moreover, a majority of Burmese Buddhists, which accounted for about 80% of total population, seriously kept in mind the importance of both lives: “life before death (present life)” and “lives after death (next existences or future state of existences)”.

Buddhism is not concerned with the maximization of production or employment or income or consumption. The principle of Buddhism is “The Middle Way” of living or the “middle way of conducting social, religious and economic activities” and therefore is in no way antagonistic to physical well-being. This kind of philosophy and way of living may not be relevant enough to law of demand and supply, and profit maximization principles. Economists measure the ‘standard of living’ by the amount of income or consumption and also generally consider that a man who consumes more is ‘better off’ than a man who consumes less. A Buddhist economist would consider this approach excessively irrational; since consumption is merely a means to human well-being, the aim should be to obtain the maximum well-being with minimum consumption. This type of way of living becomes practical among Burmese because, the core of the Buddhist way of living is two-fold: “Be Patient” and “Be Content”. Moreover, almsgiving and religious donations are also strongly encouraged in the daily Buddhist way of life. For example, even in today’s Burma, money income from good harvests, good business, gratuity, lump sum pensions, bonuses, lottery winnings etc. are devoted to religious purposes such as inviting over monks, friends and relatives as well as building pagodas and monasteries. Economists might consider these kinds of spending as unproductive expenses.

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35) The content of this subsection bases on Spate (1951), 14, Schumacher (1993), 46-49, and, Lwin and Sakuno (2004), 75-105.

According to Buda's teaching, almsgiving and religious donation can pave the way for happy, healthy and wealthy living for the present life and the lives after death. Moreover, the middle way of doing business or the middle way of earning a living is the master key for achieving happy, wealthy and healthy lives without them conflicting with each other. This deep rooted Buddhism originated mentality of the Burmese has been discouraging unconsciously or consciously "the business competition as well as accumulation of wealth with an objective of maximization of selfish consumption, production and profit." It would have also taken time to cultivate the spirit of capitalism in Burma during the colonial period. Therefore, it would be appropriate to draw the skeptical conclusion that a "deep-rooted Buddhist way of thinking and life style" encouraged the Burmese to keep distance themselves from the modern way of operating a business and industry under British rule.

## **Conclusion:**

The main task of this section is to provide concluding remarks in order to obtain a clear and concrete understanding of the Burmese industrialization experiences under colonialism by making a final verification of important points:

(1) whether the existing basic ability of Burmese before the colonial period was appropriate enough to adapt, learn and conduct the modern way of operating business and industry under British rule (2) whether the positive and negative features are the result of "colonialism" or the "type of industrialization" and the "deep-rooted socio-cultural values and ability of Burmese", and (3) whether the Burmese had opportunities to undertake basic education and training for doing business and industry during the colonial period.

### ***Before the colonial period:***

The level of development of the Burmese economy and the people under the Burmese monarchy should be judged from the aspects of potential for further industrial progress under colonialism:

(1) As discussed in previous subsection 1-7, existing social, economic and administrative structure under the Burmese monarchy gives the impression that the stage of political and socio-economic development of Burma was a semi-feudal society of self-sufficient bazaar economy, but, the author does not have enough

capacity and information to judge whether Burmese feudalism would develop properly paving the way towards modern business and industrial society if Burma was not invaded by the British or was not exploited by Europeans and Asians.

(2) Previous sections already provided many evidences which advocate that the Burmese already had inherited ability and expertise in production of food grains, clothes, agriculture equipments, furniture, kitchen ware, bullock cart and boat and ship, extraction of timber and minerals products. Therefore, it is relevant to judge that the level of civilization and the basic knowledge and ability of people related to business trade and industry would be definitely moderate. It is also expected that despite the prevailing social structure and peoples' life style, socio-cultural values were not favorable enough for the modern economic sector, if there had not been frequent wars and a mercantilist philosophy of the kings, there was potential for the development of business, trade and manufacturing activities.

In short, it is relevant to make the concluding remark that adaptability and the learning ability of the peoples under the Burmese monarchy were good enough for the further development of business and industry.

***During the colonial period:***

The experiences of Burmese industrialization and the peoples' ability during the colonial period should be judged from the aspects of "positive and negative features" whether these features are based on "colonial policy and practice" or "type of industrialization" or "capability of Burmese".

(1) With the coming of the British, Burma was rudely awakened from her fitful slumber to alien-dominated modernity. First, the character of economic growth comprising positive and negative features was "transformed almost without realizing, from a self-sufficient traditional bazaar economy to a lop-sided open dual economy" and the second was "bullock cart to railways". The negative aspect is that forced integration of the Burmese Economy into the Indian, European and the world economies made Burma almost "entirely an aliens dominated producer of raw materials and semi-finished products".

(2) The most remarkable positive feature of colonialism was the growth of production and export of rice, timber and mineral products which also brought business and industrial boom through laissez-faire policy and vent for surplus process. But, it did not lead to the improvement of county's saving and capital

accumulation as well as the cultivation of Burmese educated middle class and technicians in order to lay the foundation for sustainable growth of industrialization and the real wealth of the nation.

(3) Due to the cheap labor policy of the colonial government, “Burma failed to experience the change in socio-economic structure of the economy through the process of labor migration between the traditional rural agriculture sector and the modern industrial sector”.

(4) The commercial policy of colonialism allowed no scope for tariff protection even to prevent the decline of traditional indigenous industries. As a result, almost all of the important domestic infant industries practically vanished under colonialism. Burma then became an import dependent open dual economy. Moreover, the commercial policy of colonialism destroyed the inherited entrepreneurial ability of the Burmese in spite of cultivating it during a century long colonial period.

(5) The subsection of dependency theory explained that it was very unfortunate for Burma because it had two centers; British and India. The emergence of an alien-dominated plural society comprising of Europeans and Asians also brought unfavorable labor and capital markets, as well as, an unfavorable business environment for Burmese. This socio-economic environment forced the Burmese to make their living in the traditional rural sector.

(6) The commercial and cheap labor policy of colonialism on the one hand made it possible for foreign investors, especially Europeans and Indians, to grab an unfair share of gains from trade and industry, and which on the other choked off the native infant industries and small scale business enterprises.

(7) The influence of the Buddhist monastic school made it possible for Burma to obtain a moderate literacy rate before and during the colonial period. But, as pointed out in subsection 4.3, the educational system of the British government was not appropriate enough. Moreover, the training and skill improvement programs were also rarely provided.

(8) Providing macro-economic and political environments which encourage the cultivation of entrepreneurs and technological diffusion, and maintaining fair competition is necessary for achieving sustainable industrial growth. But, this was completely lacking under colonialism. As discussed in section III of negative features, there was no intention for establishing a separate currency and fiscal

policy as well as long term industrial and agriculture development policies under British rule.

(9) It is somewhat true to advocate that “the Buddhist way of thinking and life style” as well as “the less business minded nature of Burmese ethnic” encouraged the Burmese to distance themselves from the urban modern sector during the colonial period. But, this factor would not be a major cause for the growth of the alien-dominated industrial structure in colonial Burma.

On the whole, it is understandable that the administration of the country and economy would be in the hands of British under the colonial rule. Moreover, it is also acceptable that in the case of petroleum and mining industries Burmese-owned enterprises would fail in the competition against the British and foreign owned enterprises which used modern techniques and methods of management. However, the fact that the Burmese should be at the bottom of the ladder of economic hierarchy in their own country is beyond comprehension. Accordingly, the British government should have provided appropriate education and training for the Burmese in order to work in the modern business, trade and industrial activities like the Indians. Among the negative features, the most glaring feature is the absence of the Burmese in the manipulation of their economy although they already acquired the adaptability and learning ability prior to colonial period. It is also clear that these negatives features were the results of “colonialism” rather than the “type of industrialization and capability of Burmese”.

Therefore, it is relevant to make a final conclusion that above mentioned unreliable “labor and capital markets” and “macro-economic and institutional environments” consciously designed and operated by the British sowed the seeds of discontent in Burma throughout the colonial period. As a result, “the alien-dominated industry, banking and trade sectors” and “the lop-sided open dual economy” could not contribute to the Burmese economy in order to achieve well-footed strength for paving the way towards “precondition for take-off stage” during a century long colonial period.

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