UNIT 2 I. RESOURCE ENDOWMENT AND THE IMPACT ON SOCIAL AND ECONOMIC FORMATIONS

Structure

2.1 INTRODUCTION

The major objective of this unit is to familiarise the readers with the broad pattern of resource endowment, their development and exploitation; and also to analyse importantly, their impact on economic and social formations in the process of historical development of select Latin American countries—Argentina, Brazil and Chile. It is important to keep in mind that for the period 1850-1930, Latin American economic development has been much discussed and explored in terms of the continent's resource exploitation and its effects on the economy and society.

Endowed with a variety of resources, the patterns of economic development in these countries have been conditioned by factors such as size, location, resource use and historical legacies. Importantly, however, these countries show remarkable complementarities of potential resources within their geographical boundaries. Complementarity of potential resources has two major implications: First, it is reflected in the development of the external sector; second, this helps to achieve the integration of national economy. Thus, over the years, these countries acquired sizeable capacity to produce a wide range of raw materials and foodstuffs mainly for exports.

As far as the role of foreign capital is concerned, some have argued that for foreign investors—especially British and Americans, these countries provided immense opportunities either directly in resource development or indirectly in infrastructure such as railways, roads and ports, which could facilitate resource development. However opponents of foreign capital contradict the positive effects by arguing that this 'enclave economy' development model failed to affect the entire economy—rather it touched the fringe of the economy. More so, the impact of resource development in these countries was also limited on account of inhibitive social, institutional and physical environmental factors.

In the light of above, this unit will make an assessment of resource endowment and its impact on social and economic formations in the context of three important countries. These will be: i) Argentine *pampas* and its social and economic impact; ii) Cycles of 'booms and busts' in Brazil; and iii) Importance of minerals in Chile.

2.2 *PAMPAS* AND ITS ECONOMIC AND SOCIAL IMPACT: ARGENTINA

Argentine *pampas* along with south-eastern Brazil have been heralded as the late 19th Century 'success stories' in terms of their economic development. What constitute *pampas*? What are characteristic features of *pampas*? What caused the 'success story' of *pampas* and their declining importance in the subsequent period? Most importantly, what has been the economic and social impact of *pampas* on Argentina? These questions merit some consideration in this part of the present unit.

Argentina belongs to a group of temperate countries in which 19th Century expansion was accompanied by European immigration, massive investment in agricultural and infrastructure projects and export oriented production of hides, meat, wool, wheat, maize, linseed etc. The contribution of *pampas* towards generating 'export success stories' is well-acknowledged even today.

2.2.1 Argentine *Pampas*: Meaning and Characteristic Features

By way of geographical definition, Pampas comprise five provinces of Argentina—Buenos Aires, *La Pampa*, Cardoba, Santa Fe and Entre Rios. Endowed with rich agriculture resources, *pampas* account for 90 per cent of the improved land in Argentina. The area boasts of high quality cattle; excellent soil and proximity to national markets and export outlets. Significantly, *pampas* have had no use of fertilisers for the cultivation of traditional crops as the soil contained the necessary nutrients to retain the fertility.

What led to the economic success of *pampas* in Argentina? By the middle of the 19th Century, potentiality of the *pampas* to be the 'food basket' for Western Europe began to emerge. Argentine centralised political system provided a congenial environment within which this potential could be realised. Between 1850s and 1880s, *pampas* land witnessed complete transformation and it had decisive impact on the Argentine economy.

Factors responsible for this transformation included political stability after the overthrow of dictator Rosas in 1852; access to expanding markets of Western Europe; the elimination of the nomadic Indian hunters to the South-West; the introduction of agricultural and pastoral techniques such as windmills, machinery and barbed wire fences; influx of capital from British investors; the immigration of Italian labour; the spread of railway network in the region and speedy trans-oceanic transport with refrigerated facilities to bridge the time gap between producers and consumers.

2.2.2 Characteristic Features of *Pampas*

Rosas, dictator-governor of Buenos Aires (1829-53) gifted many large land farms to his political supporters and successive governments also made large land sales of the *pampas*, mostly to existing large landowners at low prices, to finance railway construction projects.

In *pampas*, two courses of settlement were followed. In the first place, limited arable colonisation began in 1840, where pastoral farming had been developed. Second, with the 'Conquest of the Desert' (1879-83) war, the area of *pampas* was doubled. With the liquidation of Indians, the whole of the *pampas* became available for occupation and improvement, and by the end of the 19th Century, the wave of immigrant settlement had engulfed it all.

Immigrant farmers from Italy and Spain came to operate the tenant grain farms. However North European colonisation broke the standard pattern of large ranches with a network of small farms with mixed arable, dairy and other products. Except in Santa Fe (a province of Argentina) where small owner-operator farms were in practice, generally a pattern of a few large landowners and many small tenant farmers was the norm in the rest of the country.

Foreign technology improved steamships and refrigeration to the point where *pampas* meat could be shipped frozen to Europe, and mass textile industry created a demand for large quantities of wool.

To improve both meat and wool, supplies of pedigree stocks of Lincoln sheep were introduced from England in the 1850s and even later, good breeds of cattle were incorporated into herds in *pampas*.

To protect the new breeds, fencing to protect stock and crops, the rotation of crops to include new feed crops for fattening cattle, better control of breeding and pasture rotation were adopted.

2.2.3 Economic and Social Impact

a) Economic Impact

From an almost purely pastoral landscape in 1840s, the *pampas* acquired pre-eminence to be one of the world's leading producers of cereals in the second half of the 19th and early 20th centuries. Wheat was the leading crop from the beginning of colonisation and occupied 25 per cent to 50 per cent of the cultivated land. It was initially grown to replace imports from USA, Chile and Australia. But by 1875, Argentina emerged the net exporter of wheat. By 1893, exports of wheat touched a million ton, which by 1904 rarely fell below 2 million tons per annum. Meanwhile domestic consumption per head almost doubled during 1880s. Most of the flourmills were located in *pampas* and Brazil was the main market for Argentine flour. Thus wheat, maize and linseed dominated the pattern of Argentine agricultural production and by 1914, around 60 per cent of cultivated land was used for these crops alone.

Exploitation of the potential of the Pampas—emerging from an external demand for its agricultural products, with low cost of production, immigrant labour and financed largely by foreign capital—produced so much wealth in Argentina that the country ranked among the top 10 countries in per capita income from late 19th Century till the onset of the Great Depression in 1929. The period 1852-1930, in fact, marked the integration of both Argentina and Uruguay with the world economy.

British capital played a major role in land improvement, railways and port construction, and urban development. Available data suggest that in 1857, British investment was under £3 million; the same rose to £ 175 million in 1890 and exceeded £ 290 million by 1910. Foreign investment was mainly in infrastructure development (75 per cent), followed by trade, finance, banking, merchandising services and processing industries (20 per cent) and agriculture (5 per cent). Calculated indirectly around 8-9 per cent of the total foreign investment was directed solely towards the agriculture and its related activities.

Until the 1880s, the railways served to link the *pampas* land with the principal ports and its export economy was built up, whereas other regions remained at a near-subsistence level. During 1890s, Argentine rail network expanded largely in *pampas*, Mesopotamia, Northwest and Patagonia at a rapid stride. The effects of railways included the conversion of towns into commercial centres for wine, sugar and tobacco. Much of the railway system was in foreign hands. For example, the British in 1900 operated and administered 15 per cent of the railway companies, with 77 per cent of the national track and indirectly controlled, through renting or financial supervision, part of the remaining companies.

Economic development in Argentina (1853-1930) did not only evolve around meat and cereals for world market, but also pushed the production of certain other commodities such as sugar, cotton and wine after the First World War. More so, the industrial growth was mostly geared to the processing of local agriculture produce to satisfy domestic demand. Mostly these activities were organised and run by small-scale industrial units. Tariff protection was widely prevalent for these units. Indications are that by 1913, about 71 per cent of goods consumed in Argentina were manufactured within the country. Of these, 91 per cent of foodstuffs; 85 per cent of the clothing and 86 per cent of the printed material were locally produced; but only 38 per cent of chemicals, 33 per cent of metallurgical products and 23 per cent of the cloth consumed was of national origin. This suggests that Argentina has already reached a reasonable level of industrial development, thanks to its development of *pampas* based on export-oriented production of commodities.

b) Social Impact

Traditionally immigration has been necessary for the expansion of the Argentine economy. Accompanying the first phase of European arrivals (1870-1930) was the large expansion of the agriculture sector oriented towards international market. It was Argentine constitution of 1853 that encouraged European migration to increase the size of labour force since Latin American life expectancy was very low around that period. Available data show that between 1870 and 1914, over 3.4 million immigrants arrived in Argentina—quite a significant number in a country inhabited by 8 million in 1915. Further, a second wave of 1.3 million arrived between the inter-war years. *Pampas* alone attracted more than 50 per cent of the European immigrants and these five provinces were the most populated in the whole country.

In the phase of new export economy, Argentina witnessed considerable demographic transformation. During 1855-1914, the *pampas* witnessed phenomenal growth in population rising from 316 thousand in 1850 to 4.54 million by 1930. While Greater Buenos Aires share rose from 8 per cent in 1850 to 26 per cent in 1930, the population of Santa Fe went up to 11 per cent from 4 per cent during the same period. However, the share of Northwest, Cuyo, Cordoba and Mesopotamia in total population fell considerably in the above period.

The share of urban population in total population increased from 28.6 per cent to 52.7 per cent during 1869-1914. Expansion of Greater Buenos Aires along with prolific growth of Rosario (by ten times almost) was responsible for this massive shift of population from rural areas to urban centres. Immigrants' annual net inflow constituted between 2 and 3 percent of the existing population of Argentina during the decades 1881-90 and 1901-10. *Pampas* attracted more than 50 per cent of European immigrants; these immigrants had a natural preference to remain in towns. A relatively higher proportion of these foreign immigrants were working as tenants in rural areas, whereas in urban areas, over two-thirds of all industrial and commercial enterprises were foreign-owned and half of their personnel were immigrants. Urban concentration of immigrants, it is suggested, was due to diminishing opportunities for landownership after 1890.

In the overall framework of dependent outward-oriented development, there were, of course, few exceptional cases where development was autonomous because social structures were more amenable, more democratic and also centres of power were very far away to challenge such development. As mentioned earlier, Santa Fe's example in Argentina shows the alternative path of development. Analysts suggest that a denser population, the marketing of farm goods and some processing to generate a kind of development distinguished from that of the humid *pampas* in general. Such exceptional cases have been reported in Medellin (Colombia), Sao Paulo (Brazil) and Monterrey (Mexico).

In more or less similar way, landowner-tenant relationship in Argentina was akin to what we have been familiar with *zamindari* system in India during the British regime. Tenancy contracts in Argentine depended on the type of crops, rents in kind; produce to be sold through landlord or agent. These were more stipulated conditions imposed on the tenant than a partnership between the two. Further, the tenancy right was for a short period i.e., short-term tenant farming. Once the land was settled and improved, the tenant was evicted and was supposed to move, improve new piece of land or shift to urban centres. Thus ownership pattern did not change from that of colonial days and consequently, there was lack of incentive to adapt and change according to overseas market conditions. The occupation of humid Pampas was an exercise, which involved no cultural change and little technological innovations—certainly none of local origin.

Has the spread of the new export economy (1853-1930) brought conflict with **native Indians**? Informed opinion indicates that in the Southern Pampas and Patagonia, where native population numbered two hundred thousand, spread over a huge territory, was pushed back to the Southwest forest areas in the so-called 'Conquest of the Desert' war of 1879-83. Before any cultural contact or assimilation could take place, they were exterminated.

2.2.4 Why Pampas lost their glory?

Argentine export economy grew its strength from the development and exploitation of Pampas during 1853-1930. Despite the fact, there were new products and areas of production; the development structure was not largely dissimilar to that of colonial times. While production in colonial times was of a dual nature, feeding local and overseas markets, it continued to be so in the period, 1853-1930. Though slavery was banned, serfdom of various kinds expanded through the large estates at the expense of surviving Indian communities. The new trading partners – Great Britain and USA acted directly but not differently from Spain and Portuguese, to exploit the resources of the continent.

Since the 1930s, agricultural production failed to keep pace with the dual demand of satisfying rising domestic consumption and earning substantial foreign exchange. The decline in agricultural exports resulted from the failure of Pampas to increase their productivity and rising proportion of production destined for the urban people. Given the initial large land resources in Pampas, practice of extensive cultivation was wide spread in that area. However, the demand for agricultural products continued to rise and required more settlement and cultivation of land resources. Nonetheless, settlement of new areas was a costly proposition and hence there remained sluggish pace of land settlement resulting into stagnated agricultural output as well as in exports.

Over the years, the Pampas land faced the problem of soil erosion-a result of over-exploitation of the land resources. No effort to raise the productivity of land was contemplated. Although Pampas land distribution was highly skewed i.e., 8 per cent of the owners held 80 per cent of the farm land, the size of small holdings was economically unviable. The latter constituted 27 per cent of Pampas farms and supported 17 per cent of its labour force. Low level of productivity of both land and labour contributed their dwindling share in the total output.

2.2.5 Great Depression and its Effects

With the spread of Great Depression in 1930s, overseas markets for Pampas products declined; industrial countries raised tariff barriers to protect their own agriculture and growth of Argentine exports-facilitated by the technologies of freezing and chilling and the mechanised production of cereals, came to an abrupt end. The flow of immigrants also dried up with poor prospects of job and income.

This set the tone for inward-looking development strategy; nationalism under Peron became development ideology and with massive support from urban population, local manufacturing was thus encouraged to expand manufacturing based on industrial raw material from the interior.

2.3 CYCLES OF ‘BOOMS AND BUSTS’: BRAZIL

Brazil, unlike Spanish colonies, remained a Portuguese colony till it attained its independence in 1822. However its early development was a prototype of other colonies in Latin America, based primarily on the production and export of one primary commodity at a given period of time. Until the 20th Century therefore, Brazil’s economic history was characterised by a series of economic cycles during which the country occupied the leading position in world production of brazil wood, sugar, gold diamonds, rubber, cocoa and coffee. Nonetheless, the boom period in case of each individual commodity varied considerably and ultimately lost its primacy (except coffee).

2.3.1 Characteristic Features of Economic Cycles

The approximate time periods during which the 'king products' dominated the Brazilian economy are as follows: brazil wood cycle—1500 to 1550; sugarcane cycle—1550 to 1700; gold cycle—1700 to 1775; rubber and coffee cycle—1850 to 1930.

Each economic cycle had its own areas of origin, growth and decay, and had different ramifications with regard to the economy as a whole. For instance, brazil wood came from a relatively narrow strip of land along the coastline. With the depletion of the product in accessible areas, interest in the trade of brazil wood waned. Sugar plantation grew and flourished in the Northeast of Brazil, until the Dutch found it economical and less expensive to develop sugar industry in the Caribbean region. In the wake of gold cycle, *Serra do Espinhaco* in Minas Gerais became the centre of economic activity, leading to the development of cattle ranching in the peripheral areas of *Sertao* and south of Sao Paulo. It was necessary because of the growing demand for food, i.e., beef and beasts of burden. Coffee production was mostly concentrated in the states of Rio de Janeiro, Sao Paulo and later in Parana. The growth of coffee sector, in its wake, contributed to large-scale foreign immigration, development of railways, and stimulated urbanisation and promoted domestic market that favoured the growth of indigenous industry.

Each economic cycle developed in isolation and remained unrelated to the other and also, prospered during different time periods, as stated earlier. More so, the cycle of limited period/duration, such as gold and rubber, left behind vacuum, causing stagnation and economic recession in the Brazilian economy.

The prosperous period of each cycle was heavily dependent on the peak export of the product. As and when the periods of decline in exports approached, the boom was nearly over. In the third quarter of the 17th Century, international prices of sugar fell to half their former level, thus causing a decline in real income. The decline in gold production at the end of 18th Century gave rise to a search for new exports. Cotton came to occupy a pre-eminent position just at the beginning of 19th Century. Together with the United States, Brazil was for a while the principal cotton exporter to England, but it rapidly lost its position to USA. Also, at the same time a recovery in sugarcane was noticed, yet Brazil's sugar suffered strong competition from Cuba. It was at this moment that coffee plantation gained ground and occupied a spectacular position in Brazilian economic history for the next century to come. However, at the beginning of the 20th Century, there was an important growth in the exportation of rubber from the Amazon region for a short period, but later the British moved this industry to other regions of the world, especially to Southeast Asian countries and particularly, Malaysia.

Summing up the periods of economic cycles in Brazil, we can say that in Brazil's long history of ever changing production cycles, none ever assumed the character of a broad based development drive. The cycles created economic islands in the various regions of the country, which were isolated from each other and which prospered during different time periods. The result was a dispersed colonisation, an expansion based on the export of raw materials, and little national economic integration.

2.3.2 Impact on Economic and Social Formation

a) Economic Impact

Brazil witnessed development of 'Enclave Economy' as a result of outward expansion. Each 'economic cycle' in Brazil originated in its own style and had limited linkage effects with the rest of the economy. Although brazil wood initiated the process of development, it was sugar cycle, which really began to transform the economic and social environment of Brazil in the next 150 years. Factors responsible for sugar boom were i) high overseas demand for sugar; ii) imported slave labour from West Africa for plantation; iii) development of infrastructure facilities by Dutch to ship sugar from Brazil to European markets; iv) creation of demand for beasts of burden and development of ranching. Despite those favourable factors, sugar boom in Northeast of Brazil lost its position when the Dutch developed competitive sugar plantation estates in Caribbean with cheap labour and low cost transportation to European markets. Further, in the third quarter of the 17th Century, sugar price fell sharply and caused a decline in real income of the Brazilians.

Similarly, the mining centres of gold and diamond *Serra do Espinhaco* in Minas Gerais became the centres of economic activity in the days of gold rush. Both sugar and mining created a demand for beasts of burden and the population required food-beef-so that on the peripheries of the sugar and gold economy, cattle ranching was developed in two regions the *Sertao* and south of Sao Paulo. Ranching was in support of the sugar industry but it also produced a valuable by-product in hides.

Thus, the demise of sugar cycle and the short-lived gold rush of the 18th Century had a limited impact on the Brazilian economic development. Similarly cotton economy of Northeast languished in the face of competition from southern US cotton producers. Tobacco, leather, rice and cocoa were minor products whose markets did not afford great possibilities of expansion. Therefore in the late 19th Century and the beginning of the 20th Century, it was the coffee cycle which dominated the economic scene till 1930. Except for coffee cycle which sowed the seeds of industrialisation in Sao Paulo under adverse international economic environment, no other product had a similar wide ranging impact on the Brazilian economy. Even the coffee economy could not have widespread effect on the whole of Brazil and its effects were limited to the Sao Paulo and Rio de Janeiro areas.

Commodity exporters faced invariably *adverse terms of trade*. Fluctuating prices of commodities have had deleterious impact on the Brazilian economy and its population in its process of development. Starting from decline in sugar prices to crash in coffee prices during the 'Great Depression' in 1929-34, the economy suffered because the investible resources in the bust periods were almost negligible. The boom period of each cycle indulged in excessive consumption but invested little in diversified activities to sustain the economic life in slump.

Predominance of foreign capital through the issue of bonds in world capital markets constituted an important source of funds for Brazilian development ever since its independence. As early as 1824, when sterling bonds were first sold, Brazil bought them at an average discount of about 10per cent; the actual proceeds from the bonds varied between 80 and 90 per cent of then par value after accounting for commissions and brokerage. The bulk of the loans went into productive investment such as construction of railroads, port facilities, sanitation and waterworks and other facilities for urban development. With the marginal productivity of these projects not exceeding the real cost of borrowing substantially the external debt of Brazil rapidly accumulated from less than $200 million in 1880 to nearly $1.3 billion in 1930. High debt service obligations were met out of rising export proceeds especially from the coffee sector.

Although cycles of 'booms and busts' varied in terms of their duration, and impact, these created acute problem of regional imbalances, giving rise to massive migration, for instance, of labour and capital from Northeast to state of Sao Paulo around the coffee boom. By way of measuring inequality in income and assets, the gap has been increasingly widening between the poor Northeast and rich Sao Paulo. The latter, with an average income per head many times that of former, had a well-developed and thriving industrial sector that would be comparable with the highly developed regions of the world. Brazil, thus, presents an extreme case of inequality of income among its population and this has worsened over the years.

b) Social Effect

In its sugar cycle, it was the imported West African slave labour responsible for plantation of sugarcane crop. The gold rush of the 18th Century attracted immigrants from Portugal, led to the growth of Rio and extended Portuguese influence and settlement into the interior of the country. In the late nineteenth and early twentieth centuries the Europeans, mostly Germans and Italians, migrated in large number to southeast Brazil to engage them in agricultural activities. Their participation in coffee plantation economy of Sao Paulo was also invaluable. Further, the large requirement of labour in coffee plantation was also met through internal migration of labour and capital from Northeast of Brazil to Sao Paulo area.

Thus Brazil became a melting pot of several races in its process of economic development. Importantly, males of all races outnumbered females. Nonetheless, the high growth rate of population (mainly by immigration) had its economic impact in each economic cycle. For instance, inspite of the rise in sugar production, the massive increase in population meant decline in per capita income. Second, in mining centres, food became expensive in the face of increasing pressure of population.

This pattern of development in Brazil resulted in environmental degradation. In the gold cycle period the mining centres in Minas Gerais witnessed increasing requirement of timber and charcoal by the excessive rush of population. This turned the hills of central Minas Gerais barren. No doubt, in Brazil where land was the sole production factor abundantly available, this resource was used extensively unmindful of maintaining its fertility. The case of Northeast is a single pointer. The drought-stricken Northeast of Brazil has lost not only the plentiful timber and forest resources but also the poor and intermittent rains have caused ecological disaster of unprecedented magnitude in this region.

2.4 IMPORTANCE OF MINERALS: CHILE

2.4.1 Era of Copper and Gold Mining

Historically speaking, exploitation of minerals in Chile goes back to the colonial period. For instance in the 17th Century, copper mining in the province of Coquimbo in Chile, gold mining in the 18th Century in Norte Chico dominated the economic and social life of Chileans. Mining operations, in turn, brought variety of economic activities—agriculture and livestock raising to supply the mining centres with food, growing of forage and fodder to feed the mules; transportation of timber to supply the smelters with fuel.

While gold production had reached its peak at the time of Chilean independence in 1818, silver and copper emerged the significant mineral resources in Chile subsequently. For instance, between 1811 and 1870 (although at intervals and in different parts of the country) silver extraction and production went up multi-fold. It did lead not only to the increase in population in silver producing areas but also provided the stimulus to agricultural operations to feed the growing population. The Chilean silver production rose continuously until the 1850s, declined somewhat during 1860s but reached its peak in the decade 1880s with an annual average output of 157,000 kg.

Somewhat similar had been the story of copper mining and production in Chile during the 19th Century. However copper was more important as a source of national income and the history of copper mining in Chile is not only older than that of silver but also more continuous. Chile experienced two quite distinctive phases of copper mining in the nineteenth and early twentieth centuries. In the first phase (1820s to 1870s) copper production increased rapidly in Norte Chico area and its exports in 1860, for instance, amounted to more than half of Chile's total exports. By 1860s, Chile's share of world production rose to 44per cent from 30per cent in the previous two decades. However with competition from USA and Spain and also faced with outmoded technology, the Chilean share of world production fell to 16per cent in 1880s and further down to 6per cent in 1890s. By this time, copper was further overshadowed by nitrate production in the Chilean economy. The second phase of copper exploitation in Chile was closely associated with the revolution in copper technology that USA experienced in the first two decades of the 20th Century. The two phases of copper mining in Chile are distinct not only in terms of mineral extraction but also in their different impact as the Chilean landscape; however what links them together is the critical dependence of the Chilean economy during each phase on the production and export of copper.

2.4.2 Nitrate Industry: Boom and Slump Periods

The most important development of mineral resources was that of Chilean nitrate. The existence of nitrate resources and its low operational cost with low cost of transportation to the coast from Atacama Desert were favourable factors for rapid exploitation of this mineral.

The nitrate industry witnessed rapid growth from the 1880s, after having experienced depression years in the late 1870s. Chile's seizure of the nitrate provinces from Peru and its subsequent decision to return the industry to private ownership was a decisive moment in the history of the nitrate industry. This step marked the entry of British capital in a major way in the Chilean nitrate industry. Five major areas of nitrate field exploitation were developed in the boom period of nitrate industry since 1880s. In the heydays of nitrate boom, 70per cent of the Tarapaca province nitrate industry was in British hands.

2.4.3 Impact on Economic and Social Formation

a) Economic Impact

The most significant development of mineral recoveries in Chile was that of natural nitrate between

1880 and 1925. Even before 1880, when the political problems among Chile, Bolivia and Peru had been surmounting, the Chilean labour and capital played a major role in the exploitation of the nitrate deposits. Comparative advantage of exploitation lay in low operational cost of mines as well as low cost transportation to the coast for onward shipping to the consumption centres in Europe. After the settlement of political problem in the above three countries in 1880, the rapid expansion of the nitrate industry took place and large parts of the Atacama desert region of Chile built a transport infrastructure unmatched in the world's arid regions. No doubt, the foreign enterprises from USA and Britain provided the much needed capital and technology for the development of this industry.

Railways construction received the top priority either by nitrates companies or some independent companies looking for profitable investment opportunities generated by the nitrate companies. The system was designed to provide the shortest and lowest cost route from the preliminary processing centres of nitrate to the ports. Without the incentive of nitrate development in the desert, the railway network would not have penetrated into the central valley of the country and further down to the south.

Apart from the transport linkages effect, there were few other local multiplier effects emerging out of the Chilean nitrate development and exploitation. For instance, the Chilean government was able to collect revenue from the nitrate companies and utilised the same to pursue development projects elsewhere in the country. The government revenue from export taxes on nitrate as a proportion of its total revenue rose from a paltry 5.5 per cent in 1880 to 66 per cent in 1895, declined to 56.6 per cent in 1905, stagnated around 50 per cent between 1910 and 1920 but fell sharply to 37 per cent in 1925. Further, the state financed Chilean Development Corporation was engaged in oil fields exploration and development and investment in manufacturing industry. Nitrate industry also stimulated trans-Andean trade in cattle and agriculture commodities in the region.

On the negative side however, as the history of nitrate industry shows the boom was followed by slump with considerable frequency. Since the nitrate was mainly export-oriented industry and the major markets for this commodity were Western Europe and USA, the determining factor was the demand in these markets for nitrate. However, world consumption of nitrate did not keep pace, rather was falling short with Chile's productive capacity. Over-supply witnessed a period of falling prices, which led the producers to enter into an agreement to restrict their output under the circumstances. This led to a reduction in the government revenue from export taxes; workers were rendered jobless; shippers also suffered and its 'spread effect' caused misery to the other interested sections in the nitrate trade.

Second, due to the disruptions in the supply of nitrate to its one of the biggest market i.e., Germany in the first world war period, the German scientists developed synthetic nitrate and the process was followed by other West European countries. This led to a decline in the share of Chilean nitrate production from 90 per cent to about 24 per cent during 1913-29. The great depression of 1929-33 further hit the Chilean nitrate industry. Large number of mines was closed; millions of workers were rendered unemployed and 'nitrate age' in Chile ended abruptly.

b) Social Effect

The rapid stride in the nitrate industry from the 1880 had a significant effect on the Chilean economy and society. First, the industry encouraged immigration from other parts of Chile and stimulated the growth of ports and construction of railway tracks to carry the nitrate from the field to the ports. Also pipelines for water were laid down to supply water for both the coastal and island centres. Second, the industry led to the doubling of population of Tarapaca (one particular town in Chile) between 1885 and 1895. Third, port towns really enjoyed boom period, having spread cultural activities in these towns.

Some of the commentators view the development of mineral resources in Chile more favourable to American and British interests than for the Chileans themselves. During 1960s and 1970s, for instance, the Chilean governments proceeded first to the 'Chileanisation' of the copper industry (under president Eduardo Frei) stakeholders and ultimately culminated in the military takeover of the Chilean government.

Contrary to the above view, some argue that without foreign financed development, the whole of the northern part of the country would have remained unused, unpopulated. For Chile, given its resource position it would have been a difficult and costly proposition to maintain contact with this area and thwart any attempt of its neighbours to grab this territory. Economic exploitation of the resources by foreign enterprises kept intact the Chilean territory and also provided the means to defend the same.

In sum and substance, as a result of the changing market structure or technological breakthrough and shifting of activity from one region to another—the process of development moved from agriculture development and grain production in Central Chile to the mining of nitrate and then copper in the north.

2.5 SUMMARY

Unarguably, Latin America has been endowed with plentiful resources. As it emerged as the leading producer of raw materials and grains, Argentina and the Pampas were incorporated in the world capitalist system during 1853-1930. Subsequently, it lost its glory as its factor productivity was subject to diminishing return; export surplus declined in the wake of growing home consumption and it also faced adverse world market conditions. Similarly successive economic cycles in Brazil faced both short term boom and long term doom scenario without any linkage effect to the rest of the economy. The Chilean nitrate industry in the second half of the 19th Century and the early 20th Century provided the agriculture development of Western Europe but for the disruption of supplies in war and depression years witnessed the growth of synthetic fertiliser and other sources of supply. Thus, exigencies of two wars and the period of Great Depression questioned the very efficacy of outward-oriented development model based on commodity exports from these three countries. The model has very little impact on economic and social formation in these countries, except for a very limited period of time.

2.6 EXERCISES

1. Discuss the rise and fall of *pampas* as 'food basket' for the European countries during 1853-1930.

2. Why did 'Economic Cycles' in Brazil have a limited impact on its economy and society?

3. Minerals constituted the life-line of the Chilean economic development during 19th Century. Elucidate this statement.