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# Export-Led Growth in Latin America: 1870–1930

ROBERTO CORTÉS CONDE

In 1949 Raúl Prebisch, an Argentine economist, published a study for the United Nations' Economic Commission for Latin America (ECLA), in which he attributed the failure to reach sustained economic growth in Latin America to the international division of labour. Based on research carried out by ECLA on the terms of trade between manufactures and primary goods, he concluded that – contrary to expectations – they moved against primary products. If prices decline as productivity increases (in competitive markets), industrial goods, where the technological improvements had been more significant, should have declined in price more than agricultural goods. The empirical results of the study showed the opposite.[1] If the Latin American countries therefore wanted to benefit from technological progress, they should move towards industrialisation. Almost at the same time, based on the same empirical study, Hans Singer not only argued that the gains from trade had not been distributed equally, but also that foreign investments in the export sector were not part of the domestic economy, but represented an enclave belonging to the countries of the centre which received its benefits.[2] Singer advanced an argument that became popular later on; he noted the existence in the underdeveloped countries of a dual economy with two sectors each with different productivity and segmented markets: a modern sector linked to the central countries and a traditional sector linked to the rest of the economy. Also, from the critics of the classical theory of trade, another argument was put forward: the different income elasticities of demand for manufactures and agricultural goods (Engels' law) suggested that expenditure on agricultural goods would decline in relative terms as incomes rose, hurting the terms of trade for primary products.[3] All these arguments led to the conclusion that Latin American countries could not expect very much from the future evolution of international trade.

[1] United Nations, *Economic Survey of Latin America, 1949*, Secretariat of Economic Commission for Latin America (Raúl Prebisch) (New York, 1951).

[2] H. Singer, 'The Distribution of Gains Between Investing and Borrowing Countries', *American Economic Review*, *Papers and Proceedings*, vol. XL (May 1950), pp. 473–85.

[3] R. Nurkse, *Patterns of Trade and Development* (Oxford, 1961).

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Table 1. *Exports of Mexico, Chile and Argentina, 1870–1900*

| Year | Mexico 1900 = 100 | Chile $ gold m. | Argentina $ gold m. |
|---|---|---|---|
| 1870 | NA | 68.4 | 30 |
| 1877 | 51.2 | 69.4 | 45 |
| 1887 | 65.9 | 125.7 | 84 |
| 1900 | 100.0 | 167.7 | 155 |

Instead, they had to look to their own domestic markets. Industrialisation oriented to the internal protected market was the obvious way. This was, however, very different from the view contemporaries held at the beginning of this century.

There was impressive growth in some Latin American countries before the First World War. Chile, Mexico, Argentina and Brazil seemed to have left behind decades of anarchy and economic backwardness to begin a process of remarkable growth. The exploitation of untapped natural resources, which those countries had in abundance, had produced a sudden and impressive increase in their wealth. Lacking domestic or neighbouring markets (due to the same backwardness), the exploitation of those resources was conditioned by the lowering of maritime freight rates from their very high levels in the mid-nineteenth century. The dramatic decline of ocean freight rates in the second half of the century (especially for bulky goods) allowed the products of the Western hemisphere to reach North Atlantic markets. The same decline of freight rates and a favourable institutional framework allowed the free movement not only of goods, but also of capital and labour.

The new countries of the Western hemisphere, despite their wealth of resources, lacked capital (especially to build land transportation networks) and labour. Those countries found a market for goods and a supply of factors (capital and labour) in the old continent. To a large extent, part of the capital was forward savings on future export earnings that assumed the form of huge debts to be paid later on with the increased income left by the rise of trade. In this way, Mexico, Brazil and Argentina built their railway systems, allowing them to end economic isolation of the fragmented and narrow markets (see Table 1).[4]

Although contemporaries considered the advantage of exploiting abundant natural resources to be self-evident, it was also true that the whole process was not always smooth. The exploitation of natural

[4] R. Cortés Conde, 'The Growth of the Export Economies, Latin America in the Second Half of the XIX Century', in J. Tulchin, *Problems in Latin American History, The Modern Period* (New York, 1973), pp. 158–9.

resources produced a sudden increase of wealth. After a certain point, it produced a climate of bonanza which attracted more capital and labour. When capital and labour began to yield diminishing returns (or natural resources were exhausted) or demand had changed, the boom was followed by a bust.

When the expansion was halted, everybody questioned what had happened with the income created during the boom. To what extent had it been saved or contributed to the formation of capital? Had it been totally dissipated in luxury consumption or remitted abroad by foreign factors of production?

These economies suffered from wide fluctuations which the producers did not control. These fluctuations were linked to supply (availability and return of natural resources) and changing conditions in international markets (sugar, nitrates). Moreover, while the markets fluctuated sharply in price, supply for technical reasons required longer periods for adjustment (e.g. coffee and cattle-raising).

It is also necessary to remember that the 1870–95 period was one of declining international prices (particularly for agricultural goods). This was due to a large extent to supply at lower prices from countries of recent settlement. The effect of declining prices was offset by the higher returns from new lands, but this put strong pressure on the need for efficiency gains which in some periods severely hurt marginal producers in the new countries.

At the beginning of the twentieth century there were rising prices in international markets which brought an impressive rate of capital accumulation in some of those countries and at the same time produced an overexpansion (marginal lands at lower prices were intramarginal at higher ones). This had negative effects when it was necessary to adjust supply to changing prices. The extensive growth continued until the eve of World War I. The Balkan crisis was a warning, but then conditions during war years demanded large supplies of certain commodities (e.g. military raw materials such as copper, nitrates and food) which maintained production at high levels. The end of the war created additional demand that led to an unprecedented increase in supply. Once reconstruction was under way, market conditions began to change and the European supply of goods and the replacement of some products (sugar beet instead of sugar cane, artificial nitrates instead of natural ones) negatively affected markets for primary products. Chile, Cuba, Brazil and Argentina in the 1920s suffered a crisis as a result of these changes.

It was not only the problematic adjustment to new market conditions after the troublesome war years that led to a new equilibrium. There were also changes in policies in favour of autarky that produced long-standing consequences. The autarkic policies followed by European countries and the United States, under the pretext of securing supplies of basic goods in case of war, ended an era in which markets were relatively free and competitive. For a decade it was thought that this was just a short-term problem and that normal market conditions would soon be restored. Furthermore, the commercial problems of the 1920s were eased by the rise in international capital flows (with U.S. capital in particular replacing British sources of funds).

The 1930s crisis and the depression that followed sustained these pessimistic views. The fall of income and employment in the industrialised countries was reflected in a fall in their demand for primary products and a catastrophic fall in prices and world trade. Even when the economic recovery of trade (e.g. wheat, coffee) was sooner than expected, the long duration of the depression confirmed the idea that the 'belle époque' of world trade had finished and every country had to follow the protectionist policies of the big powers looking to their domestic markets as the main determinant of aggregate demand. Keynes provided theoretical grounds for this belief with his argument that there was structural disequilibrium in the labour market which was extended to the theory of international trade.

For those who wrote in the first years after the Second World War, the experience of the 1920s and 1930s was so close that it encouraged pessimistic theories of trade, far away from the mainstream of economics (e.g. Prebisch).[5] Their concerns over trends in world trade were accompanied by a serious preoccupation with the possibilities of massive unemployment in the postwar years, once the conditions of the belligerent nations had been normalised and they reinitiated their manufactured exports to Latin America. Based on that interpretation they recommended policies leading to the promotion, through strong protectionist measures and subsidies, of a process of industrialisation oriented to the internal market. Their interpretation was strongly biased by the need to find historical examples to defend those policies. Searching for favourable arguments, they turned to the schemes provided by the German historical school at the end of the nineteenth century. The German historical school had also been influential in some South American countries. In Chile and Argentina Francisco Encina and Alejandro Bunge, an historian and economist respectively, who had both strongly influenced Aníbal Pinto and Raúl Prebisch, had started their professional careers in an intellectual climate dominated by Friedrich List. Singer and Furtado recently

[5] R. Prebisch, 'Five Stages in My Thinking on Development', in Gerald M. Meier and Dudley Seers, *Pioneers in Development* (New York, 1984).

acknowledged the same influence, which was also recognised in the case of W. W. Rostow.[6]

Supported by the authority of such authors, protectionist policies were recommended to help 'infant industries' and to maintain the level of employment. These writers also defended active intervention by the state in the economy to reorient local savings to the protected sector. It was believed that good rulers advised by wise economists equipped with the latest macroeconomic tools, would overcome market failures to avoid repeating past mistakes (based on excessive confidence in market forces and international trade), thus guaranteeing a process of autonomous self-sustained growth. Yet what were the characteristics of export-led growth which made such growth ephemeral? What was the main characteristic of those economies in the late nineteenth century and what was the effect that the rise in exports had on the economy as a whole?

The distinctive feature of these economies from the demand-side was the lack of domestic or neighbouring markets for the production of goods based on natural resources. This was the reason for their dependence on foreign markets. On the supply-side there was an abundance of natural resources, but an almost total lack of capital and – in some cases – even of labour. The fall in ocean freights allowed the products of those countries to reach North Atlantic markets and at the same time permitted the inflow of capital and labour from the countries where those markets were located.

The markets for goods as well as the markets for factors were in foreign countries. To what extent, therefore, was the control of demand and the remittance of profits and wages in the hands of foreign interests? The extreme case was that of an enclave,[7] in which there was no increase in domestic demand, nor an increase in saving that could contribute to capital accumulation.[8] Other explanations focused on the distortions that led to monoculture (higher returns in the agricultural sector attracted investments and made the structure of supply simpler whereas increasing income widened the demand (Furtado). Some others emphasised the vulnerability to external fluctuations (Ferrer,[9] Pinto) and the impossibility of carrying out compensatory anticyclical policies when aggregate demand was mainly determined by foreign factors (Ferrer).

A new school, the 'dependentistas', subsequently made a slight change

[6] W. Rostow, *The Stages of Economic Growth: A Non-Communist Manifesto* (Cambridge, 1960).

[7] J. Levin, *Export Economies. Their Pattern of Development in Historical Perspective* (Cambridge, 1960).

[8] A. Pinto, S. C., *Chile, un caso de desarrollo frustrado* (Santiago, 1962); C. Furtado, *The Economic Growth of Brazil* (Berkeley and Los Angeles, 1965).

[9] A. Ferrer, *The Argentine Economy* (Berkeley and Los Angeles, 1965).

in the basic argument of the literature on economic development of the 1950s and 1960s. They accepted the importance of export earnings for the formation of national markets and capital accumulation in the developing (periphery) countries, but they noted that the level of capital accumulation was dependent upon foreign demand and the level of capital accumulation in advanced (centre) countries. The neomarxians, on the other hand, argued that the lack of capital accumulation in the periphery was a necessary result of the capital accumulation in the centre which extracted a surplus from the primary-producing countries. Underdevelopment in the Third World was a counterpart of the development of the First World (Gunder Frank).[10]

From the other side, even in the 1950s there were strong warnings against interpretations and recommendations that might lead to inward-looking policies with a strong anti-export bias. Haberler formulated a serious criticism of the terms of trade argument, insisting that there existed just one standard economy theory stressing the benefits of international trade.[11] There also appeared in the 1960s two books which from different perspectives rebutted the basic conceptions of the critics of trade. One was by Carlos Díaz-Alejandro on Argentina. The other was by Warren Dean, discussing Furtado's main argument on the effect of coffee exports on the Brazilian economy. Further on, different studies, to some extent following the interpretation of the staple theory for Canada and the United States (Innis, Wilkins),[12] argued that in certain cases export had a positive effect on the rest of the economy.[13] In the following section we explore these different approaches in specific case studies.

### *Argentina*

The traditional explanation of the process of export-led growth in Argentina from 1880 to 1930 is found in a classic book by Aldo Ferrer.[14] With a slight variation, Ferrer followed the scheme used by Furtado in his study of the Brazilian economy in agreement with the *Cepalista* interpretation on the limits of a model of growth based on trade.

Ferrer says that after 1860 Argentina reached a new stage of growth due to (a) the growth and integration of the world economy and (b) the

[10] André Gunder Frank, *Capitalism and Underdevelopment in Latin America, Historical Studies of Chile and Brazil* (New York, 1967).

[11] G. Haberler, 'Terms of Trade and Economic Development', in H. S. Ellis (ed.), *Economic Development for Latin America* (New York, 1960), pp. 275–303.

[12] H. A. Innis, *Essays in Canadian Economic History* (Toronto, 1957). M. Watkins, 'A Staple Theory of Economic Growth', *Canadian Journal of Economic and Political Science*, May, 1963.

[13] R. Cortés Conde and S. Hunt (eds.), *The Latin American Economies, Growth and the Export Sector 1880–1930* (New York, 1985).

[14] A. Ferrer, *The Argentine Economy* (Berkeley and Los Angeles, 1967).

expansion of the frontier in the pampean region. The industrial expansion in Europe needed new markets overseas producing an international division of labour: the European (central) countries would specialise in the production of manufactures and the less developed countries (from the periphery) would produce food and raw materials. Ferrer emphasised the extreme vulnerability of the export-oriented economy (where one of the key components of demand was not consumption – also a function of income – but external demand which was exogenous). This affected the level of income and investments, but it depended on the business cycle of the central countries. He agrees that the response to external demand was conditioned by each country's factor endowments. When population was abundant and wages lower, dual economies emerged with a modern export sector linked to the centre and a domestic sector with lower productivity linked to the rest of the country. In the case of countries with empty lands and a small population, the effect of exports on the economy was different. To some extent that was the case of Argentina.

The determinants of Argentina's economic growth had been the rise of world demand for food and the availability of land. To exploit these natural resources, capital (mainly railways) and labour arrived from Europe. However, other factors prevented the expansion that was initiated in the export sector from being translated into sustained growth.

The first was the concentration of land. When the agricultural expansion began, huge amounts of public land had already been given over to private ownership. The wealth of the country was concentrated in a few hands, the need for further investments in these large estates was minimal. Given the extraordinary profits obtained by monopolistic landowners, there were no incentives to invest in other sectors. Under these conditions the agricultural surpluses were not accumulated and instead were spent on luxury consumption (a rentier economy instead of a capitalistic one). In the second place, a large proportion of land was worked by tenants who did not invest in its improvement, because they did not receive any share of its increase in value. Both factors were major obstacles for further agricultural growth capable of feeding a rising population working outside the rural sector.

Another factor was the dependence on foreign markets conditioned by changes in income and tastes that in some circumstances could produce extreme fluctuations. When external demand fell domestic income and employment also fell, but with a multiplier effect. The domestic market was not a substitute for exports, and imports that entered into the country as a result of the rise of exports were cheaper than domestic production hampering the rise of domestic manufactures. This scheme continued until 1929 when the world crisis produced a tremendous fall in international trade, a drop in demand for foodstuffs and a catastrophic fall in their prices. It also halted the flow of capital from the central countries. Faced with the need to save foreign exchange to comply with payments on the external debt and to stop the outflow of foreign exchange, Argentina left the gold standard. As a by-product of this decision the money supply was no longer linked to the amount of reserves in the Caja de Conversión. The government no longer had to contract the money supply when reserves were falling. Moreover, it was possible to expand credits. The fall of exports was offset, to a large extent, by an expansionist policy increasing government spending and money supply. The result was an increase in monetary income and consumption. But the rise of nominal income was not reflected as before in higher levels of imports because the government (in need of foreign exchange) restricted the purchases through exchange control. It also created a two-track exchange system, with a lower rate for exports and a higher one for imports, producing a transfer of income from the agricultural to the industrial sector. Ever since – Ferrer said – there has been a change: the traditional dynamic factor of growth (exports) has been replaced by manufactures oriented to the domestic market and substituting for imports.

For many years, this has been the standard interpretation of the period of agricultural expansion and its virtual collapse due to the crisis of 1930 that opened up the way for industrialisation. In reference to the pre-1930 period the main point made by Díaz-Alejandro is that, given the factor endowments of the Argentine, specialisation in agriculture was correct. The opportunity cost of obtaining capital and manufactured goods through agricultural exports was lower than the alternatives. He said:

> Pre-1930 growth can be said to have been 'export led' not because exports and their associated capital inflows provided growing aggregate demand (in a Keynesian fashion) but because, more fundamentally, exports and capital inflows led to an allocation of resources far more efficient than the one which would have resulted from autarkic policies. In particular the domestic cost of capital goods, which would have been astronomical under autarky, say in 1880, was reduced to a low level by exports of commodities produced by a generous use of an input – land – whose economic value under autarky would have been very small.[15]

Earlier he had pointed out: 'Pre-1930 Argentine experience fits the broad outline of the staple theory of trade and growth'.[16] With such arguments, Díaz-Alejandro stood among those who argued for the benefits of international trade.

What was known as the staple theory[17] came initially from the study of the economic growth of Canada based on the exploitation of its natural

[15] C. Díaz-Alejandro, *Essays on the Economic History of the Argentine Republic* (New Haven, 1970), p. 11. [16] *Ibid.*, p. 9. [17] See note 12.

resources. Differing from other interpretations that followed the German Historical school, which were biased against a model of growth based on primary production,[18] the Canadian economic historians since Innis had argued that a country with vast natural resources should exploit them; if those products could not find outlets in domestic markets, they had to look for markets abroad. This school insisted on the fact that growth through exports had produced beneficial effects on the rest of the economy. It allowed the formation of markets (demand linkages), the establishment of residential industries (North)[19] and under certain conditions (e.g. a favourable distribution of income determined by the nature of the production function) the development of new activities, industries among them. From the 1970s new studies appeared in which empirically or theoretically some of the main arguments of the critics of trade were refuted.

Ezequiel Gallo in 1970[20] denied that industrial growth in Argentina began in the early 1930s. He sustained that since the late nineteenth century important industrial enterprises had appeared. Besides, industrial interests did not clash with agricultural exporters but, on the contrary, industries came as a result of agricultural expansion. Vicente Vázquez Presedo and Eduardo Míguez from different viewpoints also presented a more favourable interpretation of the period.[21]

Roberto Cortés Conde, in a book published in 1974, wrote:

> One of the sometimes neglected aspects of this period is that expansion was not restricted merely to the external sector. For a series of reasons such as the rise in population which in Argentina was translated into a rise in national income and the establishment of a transportation network, there emerged a national market, a market previously fragmented in great measure not only by provincial barriers and custom laws, but also by enormous transportation cost. The presence of that market determined the appearances of industries destined to supply it, and the presence of raw materials close to the place of manufacture led to the emergence of other industries geared to input sources... the structure of production and exports were diversified. From a set of only two, hides and wool, it became a much more diversified spectrum with the addition of grain (chiefly corn, wheat and flax) and later, meat production.[22]

[18] See Rostow, *Stages of Economic Growth.*

[19] D. North, 'Location Theory and Regional Economic Growth', *Journal of Political Economy*, vol. 62 (1955).

[20] E. Gallo, 'Agrarian Expansion and Industrial Development in Argentina, 1880–1930', in Raymond Carr (ed.), *Latin American Affairs* (Oxford, 1970).

[21] V. Vázquez Presedo, *El caso argentino* (Buenos Aires, 1971). E. Míguez, *Las tierras de los ingleses en la Argentina 1870–1914* (Buenos Aires, 1985).

[22] R. Cortés Conde, *The First Stages of Modernization in Spanish America* (New York, 1974), pp. 148–52.

On the same issues several years later he wrote:

This growth which changed Argentina was based on the exploitation of staples: agricultural and cattle products which found an outlet in international markets. However, it was not limited to this. Because agriculture and meat production were more labor intensive they had more linkages... The more intensive use of labor also permitted a better distribution of income and an increase in demand. Equally it provided an added incentive for investments in other activities within the domestic market.[23]

The new research that has appeared since the 1970s has contributed to a more balanced view of the period of export-led growth. Although those authors noted the problems that affected the economy in that period, they have not rejected the importance of trade in the pre-1930 growth of Argentina.

*Brazil*

The Brazilian case is very different from the other Latin American countries. Brazil did not suffer a severe shock as a result of independence. While many of the former Spanish colonies passed through decades of war with enormous waste of resources, Brazil during the nineteenth century experienced an orderly transition from Portuguese colony to Empire first and later Republic.

From the early years of settlement, Brazil underwent different economic cycles – from the cycles of 'pau brazil', the sugar in the North-East, mining in Minas Gerais, cattle-raising in the South, to the nineteenth-century cycles of coffee[24] in the states of Rio de Janeiro and São Paulo. But as in other Latin American countries, the development of Brazil was conditioned by its impressive geography. Its wide opening to the Atlantic Ocean gives Brazil numerous havens where early settlements were established which had the opportunity to communicate through maritime navigation. The vast hinterland was reached only by criminals, adventurers or scouts (*bandeirantes*, frontiersmen). When new sources of mineral wealth were discovered, as in Minas Gerais, the settlement of the interior began. The growth of the mining regions in the interior changed Brazil's regional structure. Migrants went to the cattle-raising areas in the south to supply the mining centres with food, and an important interregional trade took place which linked the isolated areas and widened the market. The high mining profits explained the migration of people to the interior when the cost of land transportation was still very high.

[23] R. Cortés Conde, 'The Export Economy of Argentina 1880–1920', in Roberto Cortés Conde and Shane Hunt (eds.), *The Latin American Economies* (New York, 1985), pp. 354–5.

[24] C. Prado Jr., *The Colonial Background of Modern Brazil* (California, 1967); C. Furtado, *The Economic Growth of Brazil.*

As in other countries, however, the coming of railways was necessary to establish a regular trade of goods and factors of production. There was a dramatic change when, in the second half of the nineteenth century, ocean freight rates fell by half.[25] The decline in transportation costs and the technological improvements that allowed the shipment of bulk goods produced an enormous increase in navigation throughout the South Atlantic.[26]

On the other hand, while traditional export products (sugar and cotton) during the first half of the nineteenth century were stagnant, a new staple (coffee) rose in the second half. Coffee, which had been known since the seventeenth century when it was cultivated for domestic consumption, grew in response to the rise in prices after the collapse of the production of coffee in Haiti following the French Revolution. Initially, cultivation of coffee began in the areas close to Rio de Janeiro, the ports and the supply of manpower. The rising prices of the first half of the nineteenth century were then followed by a decline between 1840 and 1862.[27]

In the beginning, labour was obtained from surplus slaves in the declining mining centres. Brazil also received a massive amount of European labour (part of the phenomenon of European migration in the late nineteenth century). In addition, the recession in Argentina after the 1890 (Baring) crisis diverted a strong flow of Italian migration to Brazil. Around the 1880s the main supplier of coffee in the world, Ceylon, suffered from the spread of disease on the coffee plantations. It led (given the conditions of the markets) to rising prices that produced a remarkable expansion of coffee cultivation in Brazil. This time the new areas were in the state of São Paulo, with production moving to the interior and opening the way for, or following, the construction of the railways. Coffee exports grew from a mere 480,000 bags in 1830 to 3,827,000 in 1870/1 and 14,760,000 in 1901. As a result of the coffee boom between 1870 and 1920 exports grew 1.6% per capita by year, while GDP grew at 2.5 % per capita by year.[28]

On the supply side, expansion was limited by the availability of production factors (land, labour and capital). While the supply was almost infinitely elastic (to a large extent it depended on the availability of land), the expansion continued. Besides, with the construction of railways new fertile lands were constantly being added. The fall in transportation costs and the increase in trade with Europe (which allowed ships that carried

[25] D. North, 'Ocean Freight Rates', *Journal of Economic History*, vol. 18 (1958).
[26] W. Dean, 'The Brazilian Economy, 1870–1914', in Leslie Bethell (ed.), *Cambridge History of Latin America*, vol. v (Cambridge, 1986), p. 363.
[27] Furtado, *The Economic Growth of Brazil.*
[28] W. Dean, 'The Brazilian Economy 1870–1930'.

goods from the old continent to return with passengers) gave Brazil up to the First World War an elastic supply of manpower. In those circumstances, responding to price incentives, there was a significant increase in cultivation. Brazil was practically a monopolist in world markets and its supply finally exceeded demand (basically from the United States). Adjustment to demand was difficult because coffee plants lasted for many years and, once the decision to plant a tree was taken, there existed a fixed supply.

When in 1893 international prices declined as a result of that imbalance, Brazil in order to offset the decline devalued its domestic money. As wages lagged behind, the rate of profits in domestic money was maintained. Under these conditions new lands were incorporated when international prices were falling. Thus, instead of restricting coffee cultivation, the new policy aggravated the disequilibrium. Around the end of the century, for fiscal reasons, monetary policy again changed and the milreis was revalued – a decision that harmed exporters. To avoid that damage the 'Taubate agreement' was reached, through which the states, and later on the federal government, purchased the coffee surpluses. This led to the accumulation of stocks and the operation was financed by external loans that would be paid for with an additional tax on exports.

As we have already mentioned, Brazil had almost a monopoly in the supply of coffee. Once Brazil withdrew part of its production (purchased by the government) from exports, prices rose. This sent in the 1920s a wrong signal to the planters who responded by adding new lands which at former prices had been marginal. Stocks increased, aggravating the situation in international markets. As Furtado said: 'The defense mechanism of the coffee economy might, in the ultimate analysis, be viewed as a process of postponing the solution to a problem which tended to become more and more serious.'[29] This accumulation of stocks was aggravated in world markets because at higher prices new producers appeared which at former prices had not been competitive. Colombian coffee in particular began to compete with Brazil in international markets (such as the U.S.A.).

The structural disequilibrium of the coffee market, aggravated by the effects of the 1929 crisis, produced a dramatic fall in prices. The convertibility system (gold standard) was abandoned as in other countries in the world. Furtado explained that the Brazilian reaction to the external shock that harmed exports was an expansionary monetary policy. The government financed the purchases of the coffee stocks, expanding the money supply through credit. This prevented the fall in external demand being reflected in a fall in income and employment. Through the exchange

[29] Furtado, *The Economic Growth of Brazil*, p. 197.

policy (devaluation of the milreis), the increase in domestic income was not transmitted into an increase in the demand for imports which paved the way for the emergence of manufactures to substitute for previous imports. It was the external shock that started the process of industrialisation through import substitution. Exports were no longer the dynamic factor in the economy, as they were replaced by industrial production oriented to the domestic markets. This brief outline of the Furtado hypothesis on the emergence of industries due to the external shock was defended and criticised by many authors during the following decades.

Yet why did industries not grow at the time of coffee expansion? According to Furtado, the high profits from coffee were an obstacle for investment in other sectors. The export boom produced a paradox. On one side, supply was concentrated in one product (coffee), while due to the increase in income, demand was diversified and supplied by imports. The growth of demand did not have positive effects on domestic production, but on imports. Under these conditions income was determined by external demand and fluctuated following foreign market conditions. Domestic demand did not have any influence on the determination of income. Only an external shock would alter those conditions. The government focused on maintaining the earnings of the export sector (the source for imports and fiscal revenues) and adopted anticyclical policies.

At the end of the 1960s, in a very important work, Warren Dean denied the Furtado thesis that there was no industrial growth at the time of coffee expansion. Dean pointed out that there was no opposition between coffee expansion and industrial growth. On the contrary, the early industrialisation in São Paulo started as a consequence of coffee expansion.[30] Industrial expansion was possible at the end of the century due to the widening of the domestic markets caused by the increase in income generated by export earnings, the payment of monetary wages and the construction of railways that allowed domestic production to reach distant markets. Besides, the availability of foreign exchange produced by export earnings made possible the importation of capital goods. Thus, export earnings that increased income and promoted railways were the principal factors in the growth of São Paulo industries.

Discussing Furtado's hypothesis, Carlos Pelaez[31] denied that in the 1930s anticyclical Keynesian policies were applied, leading to an expansion of credit that maintained the level of income and employment. He argued that the purchase of coffee was financed by taxes (which undermined the expansionary effect) and that, at the beginning, financing by the Banco de

[30] W. Dean, *The Industrialization of São Paulo 1880–1945* (Austin, 1969).
[31] Carlos Pelaez, *Historia da Industrialização Brasileira* (Rio de Janeiro, 1972), pp. 23–32.

Brasil was made through deposits and not by the creation of money. In his view the growth of industries was not a result of an external shock that crippled the export of coffee, but instead predated the 1930 crisis. Besides, protectionist coffee policies caused price distortions that were negative for the efficient allocation of resources. More recently Albert Fishlow went back to the causes of industrialisation[32] and its relation with the coffee expansion. Fishlow argued that there was an important upsurge of industrialisation due to policies followed during the depression, but he recognised that in the late 1890s exchange rate policies (rather than protection) helped the start of the process of industrialisation in the textile industries. Cardoso de Mello and Tavares[33] insisted instead that there was no basic conflict at the end of the century between coffee planters and industrial entrepreneurs, that the early accumulation of industrial capital resulted from the surplus of the coffee sector and that the growth of industries was a consequence of the generation of surpluses in coffee.

Although recent work has been devoted more to the discussion of the process of industrialisation (Pelaez, Versiani, Suzigan),[34] it seems that the idea that the period of expansion of coffee exports made no favourable impact on the Brazilian economy can no longer be sustained.

*Mexico*

The Mexican economy experienced a severe decline in the nineteenth century. The wars of Independence, the civil wars and the continuous political conflicts aggravated the serious problems that already affected the economy. Mexico, where the fabulous silver mines were found in the sixteenth century, has a difficult geography. The populated central plateau, where the urban centre and the mines were located, is far away from the Atlantic coast. To reach the plateau it was necessary to travel through hard and sometimes inaccessible roads, crossing difficult mountains. The northern regions of the country were deserted or almost deserted. It was not, however, only the problems of the environment. The political conflicts that followed Independence also produced a serious crisis in the central state and the rise of caudillos and military leaders resulted in semi-permanent warfare. Those factors aggravated the isolation of the regions and the fragmentation of markets. Coatsworth has estimated that income per capita declined continuously from 1830 to some

[32] A. Fishlow, 'Origins and Consequences of Import Substitution in Brazil', in L. Di Marco (ed.), *International Economics and Development* (New York, 1972).

[33] J. Cardoso de Mello and M. da Conceição Tavares, 'The Capitalist Export Economy of Brazil, 1884–1930', in Cortés Conde and Hunt (eds.), *The Latin American Economies.*

[34] F. R. Versiani, *Industrial Investment in an 'Export' Economy, The Brazilian Experience Before 1914* (London, 1979); W. Suzigan, 'Investment in the Manufacturing Industry in Brazil, 1869–1939', PhD diss., Univ. of London, 1984; C. Pelaez, *Indústria Brasileira* (Brasília, 1986).

time after 1860,[35] and that the recovery only began with the Restored Republic (República Restaurada) although in fact it was not until the Porfiriato (1896–1910) that the level of income of the colonial period was again reached. There were other problems as well. The legal system inherited from Spain remained as a major obstacle to the free flow of goods and factors of production. Taxes on internal trade (*alcabalas*) were a heavy burden for the movement of goods between states. The huge amount of land owned by the Church and the Indian *ejidos* contributed to keep land and labour off the market. The liberal Constitution of 1857 was the first step in establishing a system more favourable for the formation and widening of the market and for the mobility of factors of production. The *desamortización* of Church lands and the reform of the *ejidos* allowed large amounts of land and labour to enter the market. The suppression of *alcabalas* was a precondition for the creation of an integrated national goods market. The new laws guaranteed property rights – a precondition for the inflow of foreign capital. This investment went primarily into railways, and tracks soon ran across the vast and difficult Mexican territory – first from the East Coast to the West and, later on, from the Central Plateau to the northern border, overcoming (with the suppression of *alcabalas*) centuries of isolation and segmented markets determined by geography and the political system.

Once those obstacles were overcome, the Mexican economy began to grow. Coatsworth estimated for the period 1877–1910 a per capita growth of 2.3% a year, which was extremely rapid by world standards, so fast indeed that per capita income more than doubled in 33 years.[36] This was due primarily to the big increase in non-traditional exports: industrial minerals (copper, zinc and lead) and agricultural products (henequen and sugar). These changes in exports produced a change in the relative importance of regions. While the former traditional mining and urban areas in the central plateau were declining, the new mines in the Northern border areas rose in importance, and subsistence agriculture (the *ejido*) and the large haciendas were replaced by commercial agriculture for exports.

In his classic work on the influence of the railways on the economic development of Mexico, John Coatsworth claims that the railway network led the economy to look for outlets in the external markets.[37] Years before, in another classical study on the Mexican economy under the Porfiriato, Fernando Rosenzweig[38] had pointed out that the railways were

[35] J. Coatsworth, 'Obstacles to Economic Growth in Nineteenth Century Mexico', *American Historical Review*, vol. 83, no. 1 (1978), p. 82.

[36] *Ibid.*, p. 81.

[37] John Coatsworth, *Growth Against Development: the Economic Impact of Railways in Porfirian Mexico* (Illinois, 1980).

[38] F. Rosenzweig, 'El desarrollo económico de México de 1877 a 1911', *El Trimestre Económico*, vol. 32, no. 3 [127] (Mexico, July–Sept. 1965).

the main factor in the country's economic development. His argument was taken up by Cortés Conde,[39] who maintained that railways had had positive effects on the location of industries, far away from the main centres of consumption or production, permitting the widening of markets, changes in the regional balance and the diversification of production.

Most recently Stephen Haber stated that from 1868 onwards, the obstacles that had maintained the Mexican economy in a state of backwardness began to disappear. It has been estimated that two billion dollars of foreign capital had been invested by 1910, the railways being the main sector,[40] and the fall in the cost of transportation benefited the economy as a whole through the expansion of commercial goods to supply the new markets that could now be reached.[41] He added that there was strong growth in the agricultural as well as in the industrial sector. On the other hand, he pointed out that the constraints on industrial development during the *porfiriato* came from the internal structure of the enterprises. Haber also claimed that those industries could eventually have reached a mature stage and adjusted to technological change, but the Mexican revolution produced a political climate that discouraged investment and held back industrial growth that would otherwise have continued under the conditions opened by the expansion of exports.[42]

## *Conclusions*

A review of the literature on these different national cases does not allow us to reach definitive conclusions on the advantages or disadvantages of the Latin American experience of growth through trade. The extreme, oversimplified idea that this growth did not produce any benefit for the domestic economy, but only for the metropolitan countries with which it traded, nowadays seems totally discredited. Moreover, the authors mentioned underline some positive effects: the widening of the market, the construction of the infrastructure of production and the imports of capital goods for new domestic industries. On the other hand, it is impossible to disregard some serious problems associated with export-led growth, e.g. wide fluctuations in price resulting from changing patterns of demand or supply. Even more important, resources began to decline or were affected by diminishing returns. How to replace those resources and adjust the economy to the changing conditions of supply when the early

[39] R. Cortés Conde, *The First Stages of Modernization of Spanish America* (New York, 1974), p. 83.

[40] S. Haber, 'La economía mexicana, 1830–1940: obstáculos a la industrialización (II)', *Revista de Historia Económica*, vol. 8, no. 2 (1990), pp. 335–62.

[41] *Ibid.*, p. 340.

[42] S. Haber, *Industry and Underdevelopment, The Industrialization of Mexico* (Stanford, 1989).

favourable relation between resources and population had been modified were some of the most urgent problems.

Even though those problems were not overcome, it now seems that the alternatives chosen – inward-oriented growth, protectionism with total disregard for the availability of resources – have not been any more successful solutions for these economies.