AN ANALYSIS OF THE PATTERNS OF ARGENTINE ECONOMIC DEVELOPMENT

Robert John Beckman

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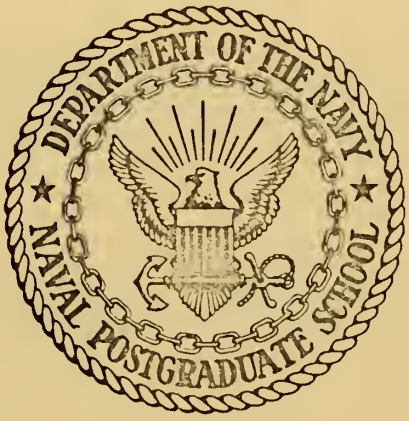

THESIS

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by

Robert John Beckman

Thesis Advisor: F. C. Horton

June 1972

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An Analysis of the Patterns of Argentine Economic Development

by

Robert John Beckman
Ensign, United States Navy
B.S., United States Naval Academy, 1971

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ABSTRACT

This paper analyzes the pattern of Argentine economic development from the mid-nineteenth century until the present day. Initially, an overview of the Argentine developmental experience is given, emphasizing the three general phases of Argentine economic development - 1) agricultural export dominance, 2) industrialization through import substitution, and 3) the present state of cyclical economic crises and domestic instability. Secondly, the phases of development are examined from an economic viewpoint to determine their cumulative effects upon the Argentine economic structure. Finally, a model of Argentine "self-sufficiency" based on input-output analysis is presented as a point of departure for future developmental planning.

The results of the analysis point out the basic problems behind the present-day Argentine developmental structure and demonstrate the interactions of the various phases in their contribution to the existing cyclical instability. The model demonstrates a logical method for future sectoral analysis.

TABLE OF CONTENTS

I. INTRODUCTION

> To the student of economic development, whether from the standpoint of theory or policy, the experience of Argentina offers an interesting object lesson . . . the case of Argentina presents a striking contrast between the ambitious scale on which development programs have been formulated and the singular lack of foresight with which the basic problems of the economy have been approached by the State.[1]

The intent of this paper is to examine the course of Argentine development, from both a historical and theoretical point of view, and analyze the roots and stages of the Argentine developmental problem. Chapter II presents an overview of Argentina, beginning with a brief description of its physical attributes and then going on to a discussion of the interactions of economic and human forces and policies and their bearing on the developmental path of Argentina from the 19th century to the present.

Chapter III examines the theoretical aspects of the developmental pattern and analyzes the effects of the various industrial policies brought about by import substitution on the Argentine economy. Beginning with a basic analysis of trade theory, policies regarding protection, exports, and industrialization are discussed.

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[1]Raul Prebisch, "The Structural Crisis in Argentina and Its Prospects of Solution," in Economic Growth, ed. Eastin Nelson, (Austin: University of Texas Press, 1960), 104.

Chapter IV uses the techniques of input-ouput analysis to determine the structure of the Argentine economy if it were to attain a state of self-sufficiency. The analysis focuses on the sectoral strengths and weaknesses of the Argentine economy, thereby providing a starting point for developmental progress.

This paper is not meant to cure all of the problems of Argentina's economic development with one simple solution. The problems of economic development in any country are much too complex to be solved in such a manner. Argentina is not an ideal nation with ideally economic problems. Therefore, this paper attempts to examine a total picture of the Argentine national development pattern since the mid-nineteenth century and analyze some of the problems encountered. Following this, a point of departure for future developmental analysis is discussed--not as a total solution, but as one means of analyzing the economic structure of the Argentine economy.

II. AN OVERVIEW OF ARGENTINA

A. GENERAL CHARACTERISTICS

1. Physical

Argentina, with an area of approximately 2,776,656 Km.^{2} (over one million square miles), covers about one sixth of the South American continent.[2] As shown in the maps in Appendix A, Argentina is a land of geographical contrasts. Of the total land area of Argentina, about 300,000 km.^{2} (over ten percent) are arable, another 1,113,000 km.^{2} permanent meadows and pastures, about 994,000 km.^{2} forest land, and 353,000 km.^{2} useless mountain wasteland.[3]

The area below the Colorado River is known as Patagonia, covering about one-fourth of the national area but containing less than three percent of the population. Used mainly for large sheep ranches, there are some small coal and petroleum deposits which are undeveloped due to poor transport facilities and their distance from the population centers.[4]

The Andean Northwest region covers another one-fourth of the national area, with its Piedmont area second in importance

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[2] Argentina, (Inter-American Development Bank, 1969), 99.

[3] J. P. Cole, Latin America: An Economic and Social Geography, (London: Butterworth and Co., 1965), 382.

[4] Ben G. Burnett and Kenneth F. Johnson, Political Forces in Latin America: Dimensions of the Quest for Stabil[illegible], (Belmont: Wadsworth Publishing Co., Inc., 1968), 39[illegible].

to the pampas region in importance. The Piedmont produces wine and contains small coal and petroleum deposits. Outside of the Piedmont, the Northwest region consists of Andean foothills and plateaus containing dry, clay-filled, sandy basins and volcanic debris--all considered to be unproductive.

The Northeast region contains tropical lowland plains called the Gran Chaco, and fertile prairie soil in the Mesopotamian area between the Uruguay and Parana Rivers. The Gran Chaco is sparsely settled, having many of the characteristics of a tropical rain forest. A few tea plantations are located there cultivating the popular yerba mate tea. Also, the hardwood quebracho is commercially important as a source for tanning extracts, railroad ties, and high-grade charcoal. The Mesopotamian area contains layers of topsoil twenty feet thick which are flooded during the rainy season. This area will become more important as the marginal cultivation value of the Pampas lands declines and new areas are developed to replace the over-cultivated soil.

The remaining and most important region of Argentina is the Pampas region, a fertile plain extending from the capital city of Buenos Aires in a rough semi-circle with a 500-mile radius. The southern sector is devoted to high-grade cattle raising, the western sector to the growth of wheat and alfalfa,

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[5] Frederick P. Munson, et. al., Area Handbook for Argentina, (Washington: U.S. Government Printing Office, 1969), 13-14.

[6] Ibid., 14-15.

and the northeastern sector nearest Buenos Aires to supplying the capital city with fruits, vegetables, and dairy products. The Pampas contains 88 percent of the cultivated land and 70 percent of the beef cattle raised in the nation. Comprising almost one-third of the national area, the Pampas contains about three-fourths of the population and about 90 percent of the national industrial product.[7]

2. Population

The population of Argentina, estimated at about 24,352,000 in 1970,[8] has more of the characteristics of a Western European nation than one from Latin America. Almost completely "white" due to the Spanish colonial killing of the natives, any remaining Indians or mestizos were almost completely absorbed by the millions of European immigrants who came over during the late 19th and early 20th centuries.

Argentina's population growth rate of about 1.6 percent between 1960 and 1970 is one of the lowest in the world.[9] This may be due to a decline in the nation's birth rate from 22.5 to 22.3 births per thousand from 1961 to 1967,[10] and improving health conditions which lowered the infant mortality

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[7] Ben G. Burnett and Kenneth F. Johnson, op. cit., 394.

[8] Argentina, op. cit.

[9] Ibid.

[10] America En Cifras 1970: Situacion Demografics, (Washington: Organization of American States, 1970), 118.

rate from 59.1 deaths per thousand births in 1961 to 58.3 in 1967,[11] thus allowing the expected life span of an Argentine born in 1967 to be 66.3 years.[12]

Educationally, Argentina's population had a literacy rate of 91.5 percent in 1960,[13] with over two-thirds of the population of school-aged children attending primary school and one-fifth attending secondary school.[14] The average Argentine receives 3.9 years of formal schooling as compared to 2.2 years for all of Latin America.[15]

The occupational distribution of the population is reflected by its rural-urban dwelling concentration. In 1960 72.6 percent of the population lived in an urban location, while 27.4 percent were located rurally.[16] Of the 52.9 percent of the economically-active population (7,599,000 persons) over ten years of age in 1960,[17] about 30 percent were engaged in agricultural occupations, with the others engaged in industrial, commercial, or service occupations, as shown in Table I. This urbanized locational structure has led to

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[11] America En Cifras 1970: Situacion Demografica, op. cit., 174.

[12] Argentina, op. cit., 99.

[13] Ibid.

[14] Ben G. Burnett and Kenneth F. Johnson, op. cit., 395.

[15] Ibid., 395-396.

[16] Tenencia de la Tierra y Reforma Agraria en America Latina, (Washington: Organization of American States, 1971), 348.

[17] America En Cifras 1970, op. cit., 90.

TABLE I.

Argentine Occupational Distribution

	Occupational Branch	Number of Workers (1960)
1.	Agriculture, Forestry, Hunting and Fishing	1,460,500
2.	Mining	43,300
3.	Manufacturing Industries	1,915,700
4.	Construction	423,300
5.	Electricity, Gas and Water	87,400
6.	Commerce and Finance	904,300
7.	Transportation, Storage, and Communications	477,200
8.	Services	1,519,100
9.	Miscellaneous Activities	768,300
	Total Active Population	7,599,100

[18] Tenencia de la Tierra y Reforma Agraria en Americ Latina, op. cit., 349.

the growth of an established, active middle class, as shown below in Table II.

TABLE II[19]

Argentine Class Structure

Class	Composition	% of Class	% of Society
Upper	Large landowners	0.3%	
	Owners of large industries	0.1%	
	Owners of large commercial and service enterprises	0.1%	
	Upper-level administrators	0.2%	0.7%
Upper Middle	Middle-sized landowners	1.0%	
	Owners of middle-sized industry	0.9%	
	Owners of middle-sized service and commercial enterprises	1.4%	
	Lower-level administrators	1.9%	
	The liberal professions (lawyers, doctors, etc.)	1.2%	6.4%
Lower Middle	Small landowners	7.4%	
	Owners of small industry	2.3%	
	Owners of small commercial and service enterprises	4.8%	
	Employees in industry, commerce, services, and government	15.0%	
	Pensioners	2.4%	31.9%
Lower	Agricultural workers	16.0%	
	Industrial workers	21.9%	
	Workers in commercial and service enterprises	19.5%	
	Unclassified workers	2.5%	59.9%
	Unclassified	1.1%	1.1%
		100%	100%

The existence of such a middle class, amounting to approximately 38 percent of the Argentine social structure,

[19]Ben G. Burnett and Harry F. Johnson, op. cit., 396.

again lends to the overall appearance of the Argentine structure resembling a fairly stable, European nation rather than the under-developed, unstable nation that it is.

B. ARGENTINE DEVELOPMENT FROM THE 19TH CENTURY TO 1929

1. The 19th Century Developmental Environment

Argentina, as shown in the preceding section, is a country with untapped resources, vast agricultural potential, room for its population to expand, a controlled rate of population growth, and a fairly literate and socially dispersed citizenry which is adapted to urbanization and industrialization. Why Argentina has continued to remain a stagnant, underdeveloped nation trapped in cycles of economic and political instability can be attributed to the 19th century roots of initial Argentine development.

During the 19th century a pattern of growth through trade developed between the industrialising center nations of Europe and the peripheral, primary commodity supplying nations such as Argentina. As stated by Nurkse:

> The focal center of economic expansion was initially Great Britain . . . The industrial revolution happened to originate on a small island with a limited range of natural resources at a time when synthetic materials were yet unknown. In these circumstances, economic expansion was transmitted to less developed areas by a steep and steady increase in Britain's demand for primary commodities which those areas were well suited to produce. Local factors of production overseas . . . were thus largely absorbed by the expansion of profitable primary production for export . . . This pattern of "growth through trade"

> affected particularly the new countries . . . in the world's temporate latitudes: Canada, Argentina, Australia, Uruguay, South Africa, New Zealand.[20]

Thus, the 19th century international economic situation saw primary goods being supplied from the new, less-developed areas to the older, increasingly industrialized areas. However, the export expansion alone did not determine which of the lesser developed countries would prosper from the new demand:

> . . . Growth where it occurred was mainly the consequence of favorable internal factors, and external demand represented an added stimulus which varied in importance from country to country and period to period.[21]

Latin American nations thus entered the 19th century trade arena during the 1840's, exporting products according to both internal factors and external demand stimulus. They tended to be classified in three groups according to their internal commodities available for export:

> . . . The primary exporters involved in this process tended to fall into three groups: a) countries exporting temporate agricultural commodities; b) countries exporting tropical agricultural commodities; and c) countries exporting mineral products. In each case, foreign trade helped to establish a distinctive economic structure . . .[22]

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[20] Ragnar Nurkse, Patterns of Trade and Development, (Oxford: Basil Blackwell, 1962), 14-15.

[21] L. B. Kravis, "Trade as a Handmaiden of Growth: Similarities Between the Nineteenth and the Twentieth Centuries," in The Economic Journal, LXXX, (December 1970), 850.

[22] Celso Furtado, Economic Development of Latin America, (Cambridge: University Press, 1970), 32.

Argentina and Uruguay essentially comprised the temperate agricultural commodity exporters, basing their production on the extensive use of land so as to compete directly with the home use of land in the industrializing nations and gaining fairly high profits initially as the developed nations transferred their agricultural technology to the peripheral suppliers. The volume of agricultural production necessitated the creation of transportation systems within the supplying nations, orienting their domestic markets toward the major ports of shipment (i.e., the Buenos Aires area).[23] Thus, by their competitive, direct interaction with the European industrial nations, the temperate producers were able to achieve a very high rate of growth during the 19th and early 20th centuries.

2. The Argentine Experience

Argentina came to prominence in the international market after the fall of the dictator Juan Manuel de Rosas in 1852 and the enactment of the Constitution of 1853. The development of the Argentine Pampas region began with the construction of the first Argentine railway, the Ferrocarril del Oeste, in 1857--financed wholly by Argentine capital and operated by Argentines.[24] The further development of the railroad system and the refrigerator ships from Europe were chiefly

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[23] Celso Furtado, op. cit., 32-33.

[24] Tomas Roberto Fillol, Social Factors in Economic Development; The Argentine Case, (Cambridge: The MIT Press, 1961), 40-43.

responsible for the vast development of the Argentine interior which followed during the remainder of the century. As stated by Ferrer:

> Argentina's participation in an expanding world market during the second half of the nineteenth century was based on the growth of its agricultural and livestock exports. This enabled the country to increase its payments to the rest of the world, both for imports of goods and services and for meeting external debt commitments . . . the expansion of exports was possible for two main reasons. First, due to the increasing integration of the world economy, world demand for agricultural and livestock products from the temperate zones soared. Second, large tracts of fertile land were available in the Pampa that were either untouched or only partially exploited.[25]

Between 1857 and 1914 Argentina received a total of 3,300,000 immigrants from Europe, 90 percent of which settled in the Pampas region. This growth in population, while by no means fully settling the region, contributed to a considerable increase in export output during the period.[26] However, this massive influx of immigrants also laid the foundations for the constant political instability which has plagued Argentine development to the present day. Such a velocity of growth caused social transformation to occur in an unguided, spontaneous manner. Most of the immigrants came from countries in southern Europe where political participation was generally unheard of, thus they lacked knowledge and desire for a cohesive political system. The existing Argentine

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[25]Aldo Ferrer, The Argentine Economy, (Berkeley: University of California Press, 1967), 91.

[26]Ibid., 89.

elite began to detest the immigrants and further block them from political participation.[27]

Due to the ownership of existing Pampas land by a handful of the Argentine elite, the influx of immigrants tended to create rapid urbanization without industrial development in the urban centers. The lack of available land tended to hold back rural development, as less than 25 percent of the immigrants went into farming activities. By 1914, although 42.7 percent of the population was foreign born, less than ten percent of the immigrants were property owners.[28] This concentration of land ownership created a social elite which emphasized not the creation of an integrated society, but allowed each individual to stress his own life-style with little governmental or national allegiance - the roots of the political instability still prevalent today.[29]

During this period, foreign investment in Argentina reached ten billion dollars in present-day purchasing power, which amounted to 8.5 percent of all foreign investment carried out by the industrializing nations from 1860 to 1913, 33 percent of all foreign investment in Latin America, and 42 percent of Great Britain's investments in Latin America.[30]

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[27]Manwoo Lee, "Argentine Political Instability," in Journal of Inter-American Studies, XI, (October 1969), 561.

[28]Aldo Ferrer, op. cit., 98.

[29]Manwoo Lee, op. cit., 561.

[30]Aldo Ferrer, op. cit., 89.

With the high dependence on agricultural exports and the foreign investment injected into Argentina, the elite power structure pursued free trade policies which inhibited the growth of domestic industry needed to integrate the economy. Exports during this period amounted to between 50 and 70 percent of the agricultural and livestock output of the Pampas region, the volume of which at any one time depended on the foreign demand for the products which in turn depended on the level of production in the industrialized countries. Thus, Argentine exports and the internal economy rose and fell with the phases of the business cycles in Europe.[31] Such domestic conditions resulted often in high rates of inflation, which the power structure endorsed as a means for increased export earnings.[32]

Thus, excessive dependence on foreign exchange was introduced from the beginning of Argentine development. Exports and foreign investment were the two keys to the primary stage of development, which made domestic employment, balance of payments, and public finance extremely vulnerable to international market conditions. Wages, rents, profits, and interest depended directly on the export level. With high export earnings, both agricultural income and employment rose to meet increased demand. The increased agricultural income helped to increase the employment and earnings in the

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[31] Aldo Ferrer, op. cit., 102-103.

[32] Tomas Roberto Fillol, op. cit., 43.

non-agricultural sector through a multiplier effect, depending on the propensity of the rural demand for imported goods over domestic goods. Conversely, when export earnings dropped, the entire economy experienced a contraction of demand leading to unemployment in all sectors.[33]

Balance of payments equilibrium also depended on export levels, with imports generally increasing as export demand increased. Whenever a payments deficit occurred, foreign investment was generally sufficient to make up the gap during this period. However, the balance of payments equilibrium was extremely tenuous during this period, foretelling of conditions to come.[34]

In the area of public finance, the government resorted on a large scale to foreign loans, through the issue of bonds on the international capital market, with external debt two to four times the current fiscal revenues and interest commitments fixed in terms of gold which had to be met regardless of the Argentine fiscal situation. When exports revenues were high, the debt interest amounted to about 20 percent of government revenues, but when exports slumped, the interest reached 60 percent or more of the government revenue intake.[35] Thus, the public financial structure was also extremely dependent on the international market conditions and often held

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[33] Aldo Ferrer, op. cit., 105-106.

[34] Ibid., 108.

[35] Ibid., 109.

together by sharp curtailment of public expenditures, such as armed forces' and public employees' salaries. However, as in the balance of payments structure, adjustment mechanisms via increased export earnings alleviated the situation before a serious crisis point.[36]

Therefore, the foundations of political instability and foreign exchange dependence were created during the primary export period of Argentine development, extending from the 1850's through the 1920's until the depression period of the 1930's. Agricultural export dependence created a power elite which disaffected the immigrant population and discouraged the development of domestic industry and a balanced economy.

C. THE DEPRESSION PERIOD AND THE PERON ERA

1. The Impact of the Depression

The impact of the 1929 world-wide economic crisis assumed catastrophic proportions in Latin America as a whole because of its extreme dependence on external trade. Argentina was hit relatively less severely than the others due to the low income elasticity of demand of the industrial countries for temperate-zone agricultural products. Also, these products were fairly elastic in supply, due to their seasonal nature and the ability to cut back on production from one year to another. Argentina was actually able to improve its terms of trade through a reduction in exports and aid its balance of

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[36] Aldo Ferrer, op. cit., 109.

payments as a result of a reduced capacity to import.[37]

Internally, the Depression caused a structural shift in the Argentine economy:

> . . . The dominance of the agricultural sector was shaken by the three main features of the depression--stoppage of capital movement, falling commodity prices, and a shrinkage of international trade volume. As part of its defense of the Argentine economy, the conservative government of the thirties undertook policies which thrust the agricultural sector into a coalition with the small industrial sector.[38]

This abrupt shift in emphasis with regard to industry was a natural occurrence. Before 1930 the agricultural sector stood to lose from increased domestic demand for its products due to unsatisfied external demand. After 1930, however, the foreign demand was drastically reduced and agriculture stood to gain from increased internal demand. Thus, the government acted in a manner foreshadowing the eventual policies of import substitution: expansionary fiscal policy, investment in the industrial infrastructure, tariff increases, currency devaluations, negative terms of trade movements for agricultural products internally, and exchange discrimination against imports.[39]

Between 1935 and 1946, when Peron took office, the number of manufacturing establishments increased by 60 percent,

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[37] Celso Furtado, op. cit., 40-41.

[38] Gilbert W. Merkx, "Sectoral Clashes and Political Change: The Argentine Experience," in Latin American Research Review, IV, (Fall 1969), 89.

[39] Ibid., 90.

and the number of industrial workers and employees increased by 83 percent. By 1946 the industrial labor force made up 17 percent of the economically active population.[40]

2. The Peron Era

During the Second World War and immediately thereafter, Argentina accumulated a substantial level of foreign exchange reserves. The rise of Juan Peron to power during 1945 and 1946 was based on the resurgence of prosperity during the war years as well as the strength and hopes of the new industrial sector:

> Peron's regime was based on heroic feats in a society characterized by lack of community, injudicious political actions, a propensity for generating intransigence, lack of confidence and trust, and disputed authorities. . . . Peron's authority rested on his appeal to equality, which involved the participation of the masses . . .[41]

As a manifestation of the above political tactics, the Peron government dedicated itself to the economic development of Argentina through industrialization, a complete reversal of past traditions. The Five Point Plan of October 21, 1946, was a heroic act calling for the following governmental actions: 1) government holdings of foreign currency were to be used to retire the foreign debt or purchase foreign holdings; 2) foreign investments in the infrastructure (especially in transportation and power) were nationalized through purchase; 3) state-owned corporations were established to replace foreign

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[40]Gilbert W. Merkx, op. cit., 90.

[41]Manwoo Lee, op. cit., 564-565.

holdings or to stimulate new operations; 4) control of credit, foreign trade, and exchange was greatly expanded; and 5) such economic tools were used to actively foster import substitution by the industrial sector.[42]

The above policy, while politically popular with the industrial sector, was not well thought-out:

> The policy of import-substituting industrialization during 1943-55 was not an integrated and thought-out plan. Rather, it seemed to proceed from one improvisation to another, reacting to short-run economic and political pressures. At the end of the war . . . the main preoccupation was defending those industries which had arisen during the previous years, regardless of efficiency.[43]

The Peron government's loans to industry expanded three times as rapidly as those to agriculture between 1946 and 1948, while further assistance was given through a system of extreme protection. High tariffs coupled with a system of quotas and a grossly over-valued peso combined to subsidize industry, stagnate agricultural exports, and discourage any possible industrial exports. Peron's policies severely suppressed agricultural output, so that investment in agriculture was reduced to a point even below that of the 1930's.[44] Table I in Appendix B shows the agricultural decline through the bias developed in the internal terms of trade against rural goods.

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[42] Gilbert W. Merkx, op. cit., 92-93.

[43] Carlos F. Diaz-Alejandro, "An Interpretation of Argentine Economic Growth Since 1930, Part II," in Journal of Development Studies, III, (January 1967), 158.

[44] Gilbert W. Merkx, op. cit., 94-95.

The suppression of the agricultural export sector made short-run political sense in that it pleased Peron's supporters, the industrial sector. However, it soon led to a severe foreign exchange crisis in 1949. With the contraction of agricultural investment, the export income of Argentina was gradually reduced to where it could no longer cover the intensive importation of intermediate goods needed for the industrial development program. With the occurrence of a severe drought in 1949, a sharp contraction in agricultural export earnings occurred and industrial progress was brought to a halt. Machinery and equipment for the construction of new plant capacity could neither be manufactured nor bought.[45]

Peron was caught between internal export stagnation and external foreign exchange constraints. Having promoted industry at the expense of agriculture, the industrialization process brought increased wages to laborers enabling them to consume potential export products, such as beef. Peron could not lower the industrial wages for obvious political reasons, and substitution programs to induce the populace to eat chicken or fish in place of beef failed. If he extended increased funds to the agricultural sector at the expense of industry in order to improve export performance, Peron risked alienating his political support. An invitation to foreign investors to invest in Argentina would have violated the nationalist aura of his regime, as would the negotiation of foreign loans.

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[45] Carlos F. Diaz-Alejandro, op. cit., 158-159.

Thus, the Peron government was caught by the sectoral coalition which brought it to power.[46]

Nevertheless, the Peron government experimented with all of the above methods. In 1949, import restrictions were tried; in 1950, a $150 million loan was negotiated with the United States; in 1951, an austerity program was attempted with a sharp drop in the real wages of labor brought about; in 1952, following another severe foreign exchange crisis, the peso was devalued and agricultural support increased. 1953 and 1954 brought a fairly strong recovery, but as industrial production increased, the foreign exchange bottleneck appeared to check all further progress and a recession had begun by 1955.[47] Tables II and IV in Appendix B show the balance of payments and export earnings cycles during the Peron government period.

During this period Argentina was also hit with severe inflationary problems:

> Inflation has been a problem of major importance since the late 1940's. During the early years of the Peron administration, the government kept such tendencies in check by subsidizing major food products and important nationally produced raw materials. . . . the ample foreign exchange resources made it possible to import large quantities of goods, which also served to keep price increases in check.
>
> However, by 1949, Argentina's foreign exchange reserves had been largely exhausted. . . . prices began to rise rapidly. The upshot of the inflation during the latter years of the Peron administration was a fall in the real wages

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[46] Gilbert W. Merkx, op. cit., 98-99.

[47] Ibid., 99-100.

of Argentine workers. . . . By the time Peron was overthrown, in 1955, . . . the real wage tended to be even less than that in 1943.[48]

Thus, beset by political disaffection and economic instability, the Peron government was overthrown by a military coup in 1955 and a provisional government set up. Politically, this was almost inevitable due to the Peronist style of government:

> Peron's success, if any, remained largely psychological rather than substantial. He stimulated the excitable masses but failed to organize and structure them. His government was a highly personal one lacking a true revolutionary faith for transforming the nation. Peron's decisions and policies were not guided by political realities but by fantasies and emotions . . . Though Peron elevated the status of the masses . . . he divided the nation into two irreconcilable camps: Peronist and anti-Peronist. Neither was strong enough to destroy the other, nor humble enough to live with the other. This situation literally ruined the country.[49]

The economic legacy of the Peron regime is summed up as follows:

> . . . The 'corporate state' mentality of the Peron regime had resulted in an economy with a very low capacity to transform, where producers and consumers expected the government to shield them from any undesirable trends which could arise from the market. More and more the price mechanism became a tool to redistribute income rather than to allocate resources. . . . The system of protection which had been used to stimulate most branches of manufacturing not only contributed to create quasi-monopolistic positions in the domestic market, but it also

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[48] Robert J. Alexander, An Introduction to Argentina, (New York: Frederick A. Praeger Publishers, 1969), 78-79.

[49] Manwoo Lee, op. cit., 566.

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drastically increased, but to no avail. Inflation and foreign exchange problems continued to mount during the period.[51]

President Arturo Frondizi emerged to take control in 1958 and immediately embarked on a program of domestic austerity, agricultural balance, and foreign loans to help ease the economic crises. Argentina received U. S. $48.5 million from the World Bank for highway development and U. S. $100 million credit from the U. S. Export-Import Bank and energy resource development.[52] Unfortunately, Frondizi was unable to prevent another foreign exchange crisis which led to another industrial development bottleneck in 1962. Politically disliked by both Peronistas and anti-Peronistas, Frondizi's regime was unable to maintain an effective mechanism of command, the insubordination and the multiplication of rebellious factions led to his downfall by military coup in 1962.[53]

2. The Illía Regime

President Arturo Illía inherited power in 1963 during an upturn in the Argentine economic cycle, with bumper grain crops and newly-opened trade with the Communist-bloc nations giving the balance of payments a slight surplus. Industrialization increased, soon creating a foreign exchange deficit due to

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[51]Robert J. Alexander, op. cit., 80.

[52]Martin H. Sable, A Guide to Latin American Studies, Volume I, (Los Angeles: Latin American Center, 1967), 21.

[53]Manwoo Lee, op. cit., 569.

the necessity to import intermediate goods for the industrial program. Illía was deposed by the military which once supported him in June of 1966.[54]

3. The Ongañia Regime

General Juan Carlos Ongañia succeeded Illía in 1967, after a six month junta rule, and attempted a program of price stabilization through the freezing of credit, prices, wages, and the limitation of government expenditures. Met by considerable union resistance, the government program prevailed and succeeded in achieving some retardation of the inflation rate by the end of 1967.[55] However, the Ongania regime, like those before it, ran into the same cycle of "stop-go" development brought about by a shortage of foreign exchange. While industrial exports to other Latin American countries increased from U.S. $60 million in 1966 to U.S. $209 million in 1969, the overall balance of payments situation swung from a surplus of U. S. $250 million in 1966 to a deficit of U.S. $266 million by 1969. From 1969 through the first three quarters of 1970, agricultural production grew due to increased internal demand and favorable prices, but the growth soon turned into a cost-of-living increase as internal market demand exceeded the 5.9 percent agricultural increase.[56] Ongañia was replaced in 1971.

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[54]Frederick P. Munson, op. cit., 254.

[55]Robert J. Alexander, op. cit., 82.

[56]Argentina, op. cit., 101-102.

4. The Lanusse Regime

Alejandro Lanusse, the present incumbent president of Argentina, succeeded General Ongañia in the summer of 1971. Stepping into an unstable political and economic situation, his finance ministers have been trying to arrange for a U. S. $1 billion loan from various North American and European sources to pay off Argentina's external debts. In order to get the loan, the Lanusse government must take steps to limit the high rate of internal inflation which plagued the country in 1971. At the end of 1971, Lanusse took some action in that direction by limiting wage increases for 1972 to 25 percent, an increase well below the projected possible inflation rate of 45 percent. This action immediately set off a wave of strikes by pro-Peronist forces who want the old leader to return to power from his exile in Spain.[57]

Lanusse is in a precarious position. His electoral platform is based on promises to maintain the real value of wages while promoting a faster rate of economic growth. With private domestic investment at a standstill, public investment and deficit financing seem to be the only answers. Since effective exchange controls have proven unworkable in the past, such policies may create a foreign exchange crisis through increased demand for imported goods.[58]

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[57] "Argentina: 1000 million dollar question," in Latin America, VI, (January 7, 1972), 4-5.

[58] "Argentina: pay up, pay up and play the game," in Latin America, VI, (January 28, 1972), 30.

Prognostications for the immediate future of the Lanusse regime hinge upon his ability to control the inflation rate, balance the foreign exchange deficit, and keep his political backing from both the Peron backers and the armed forces. He has stated to his armed forces leaders that he feels it is impossible to implement a program of monetary stabilization and that a system of exchange control would not be introduced for fear of upsetting the international financiers from which the loan is being sought. On the positive side, the Fiat Corporation has promised to invest $90 million in Argentina over the next four years in automobile production, and Citroen and Olivetti have followed suit.[59]

Politically, Lanusse seems to have reached some sort of agreement with the Peronist movement, who were counselled by Peron himself to avoid fresh confrontations with the government over wage controls. This holds out the possibility of some inflation control, the procurement of the needed loans, and appeasement of armed forces elements.[60]

Thus, the Lanusse regime is caught up in the political-economic cycle of instability which has plagued Argentina for the past thirty years. Whether it will be more successful than its predecessors remains to be seen, but the odds are against it.

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[59] "Argentina: all the king's men," Latin America, VI, (February 11, 1972), 42.

[60] "Argentina: convergent lines," Latin America, VI, (March 24, 1972), 95.

E. SUMMARY

The economic development of Argentina has, since its nineteenth century beginnings, been dominated by and dependent upon its external relations with the rest of the world. This dependence initially took the form of primary temperate zone agricultural exports to the industrializing nations of Europe from about 1857 to 1929, during which patterns of political instability and agricultural dominance were formed. Economic policies, both internal and external, were determined by the international marketplace and the current export prices.

With the coming of the depression during the 1930's, the contraction of external demand for agricultural products forced the agricultural power structure to actively foster domestic industrialization, which it had previously suppressed in order to maintain maximum export revenues. With the coming to power of Juan Peron in 1946, an active policy of industrialization through import substitution was followed, and the industrial sector became the political power force determining national policy. Emphasis on industrialization led to agricultural stagnation and a shortage of foreign exchange needed to import intermediate goods necessary for the industrialization process. This, plus a protection policy which forced industry to use only high-priced domestic materials caused inflationary price rises which were followed by wage increases in a never-ending cycle which aggravated the foreign exchange balance further. Thus, industrial development was always out short by the foreign exchange bottleneck in a never-ending series of "stop-go" cycles.

The ruinous economic cycles have continued through five political regimes since Peron's ouster in 1955. Both military and civilian, every new president up through the present time has had to cope with the "stop-go" syndrome, losing power whenever curative actions either became too harsh for the vested labor-industrial interests or too non-progressive for the armed forces. The present administration faces the same set of economic and political constraints, with no apparent major changes in sight.

III. AN ECONOMIC VIEW OF ARGENTINE DEVELOPMENT

A. INDUSTRIALIZATION AND IMPORT SUBSTITUTION

1. Background

As described in the previous chapter, the economic developmental path of Argentina has been highly dependent on and determined by its external trade relations. These have served both as agents for national growth during the initial phase of Argentine development and as developmental constraints during the latter phases. The initial phase of Argentine development was characterized by the policies of trade through comparative advantage. During the 19th and early 20th century development period, Argentina specialized in the export of agricultural products to Europe in return for non-agricultural consumer and capital goods. Each participant was able to expand domestic consumption beyond domestic production capacity levels through trade and specialize in the production of those commodities in which they had a comparative advantage.[61]

The world-wide Depression of the 1930's upset the international market system and reversed the policies of Argentina toward comparative advantage and domestic industry. With the curtailment of foreign demand for their exports, the agricultural elite of Argentina and the government began to

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[61] See Appendix C for a discussion of comparative advantage and equilibrium analysis.

encourage industrial development as a substitute market for their agricultural commodities. This transition is described in a more general form below:

> Development led and financed by primary exports is the traditional colonial strategy and one followed by many noncolonial countries blessed with rich natural resources.. . . the primary exporters have relatively high imports . . . Industry is typically lower than normal and primary production significantly higher . . . Sound development by this route eventually requires a country to become less dependent on primary exports and shift towards a more balanced production and trade structure . . . A smooth transition is fairly exceptional, however, since most countries delay the needed structural change until demand for their primary export declines.[62]

Industrialization is held by some to be of paramount concern to the development of the peripheral nations, as stated in the following:

> . . . As the spread of technical progress into the periphery--limited originally to exports of primary commodities and related activities-- is advancing more and more into other sectors, it brings with it the need for industrialization.
>
> Indeed, industrialization is an inescapable part of the process of change accompanying a gradual improvement in per capita income . . . Industry and technical advance in primary production are thus complementary aspects of the same process. And in this process, industry plays a dynamic role, not only in inducing technical progress in primary and other activities, but in the new attitudes fostered by industrial development.[63]

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[62] Hollis B. Chenery, "Growth and Structural Change," in Finance and Development, VIII, (September 1971), 22.

[63] Raul Prebisch, "Import Substitution as an Investment Criterion," in International Economics and Business: Selected Readings, ed. Walter Krause and F. John Mathis, (Boston: Houghton Mifflin Company, 1968), 412-413.

2. The Process of Import Substitution

Initially, industrialization occurs in the primary-commodity exporting nations through the evolution of a nucleus of industries producing non-durable consumer goods such as textiles, leather goods, and processed foods in response to increased domestic demand for such goods resulting from increased domestic disposable income from an expansion in export sales. Thus, domestic industries are initially tied to the export sector and can gain some degree of autonomy only by the establishment of sufficient domestic demand to make possible profitable domestic supply at a price no higher than the foreign supply price plus transport costs. This process of replacing foreign goods with domestic goods is known as import substitution.[64]

Ideally, import substitution should follow these guidelines: 1) promote, from the start, domestic production of consumer goods, intermediate products, and capital goods in which the country can develop a realistic comparative advantage; 2) lower protective tariff barriers so as not to discriminate against capital, intermediate, or consumer goods; 3) ensure that the traditional export sector is not discriminated against by the industrial sector; and 4) determine the size and the timing of the import substitution strategy on the basis of planning and a long-term industrialization

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[64]Celso Furtado, op. cit., 83-84.

program that relates the balance of payments position to the requirements for overall economic growth.[65]

Realistically, the import substitution process rarely conforms to the above strategic guidelines. Implemented with an array of protective quotas, credit and fiscal maneuvers, and state-controlled corporations and development banks, import substitution has been adopted throughout the past thirty years as a response to war, depression, balance-of-payments difficulties, a response to domestic market growth due to export expansion, and official governmental development policies.[66]

The process is characterized by tightly separated stages of manufacture, starting with the manufacture of finished consumer goods which were previously imported, and then moving on through backward linkage effects to the manufacture of intermediate goods and machinery. Contrary to the industrialization process of the presently developed nations, the import substitution process is almost wholly a matter of imitation and importation of tried and tested industrialization methods, consequently bringing in complex technology to the developing nation without the sustained technological experimentation and training in innovation which are

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[65] Jose A. Datas-Pañero, "Import Substitution," in Finance and Development, VIII, (September 1971), 35.

[66] Albert O. Hirschman, "The Political Economy of Import-Substituting Industrialization in Latin America," in The Quarterly Journal of Economics, LXXXII, (February 1968), 5.

characteristic of the developed nations.[67] Therefore, from the very beginning the import substitution process tends to set a weak foundation of imitation without innovative experience for the new industries.

The stages of manufacture are characterized by kinked output curves for the industries involved--rising rapidly when foreign imports of consumer goods are being replaced by domestic production, and then flattening out as further increases in domestic demand become based on the growth of domestic income rather than straight substitution. Industrial profits tend to follow this same pattern, thus import-substituting industries tend to move rapidly from initial high rates of profit and growth to a point of maturity after which profits and industrial investment are reduced and remain fairly constant.[68]

This initial rapid-growth, high-profit period often leads to unwarranted optimism among policy makers and industrialists in the developing nation, which in turn may lead to poorly planned actions:

> . . .Nevertheless, it is probably legitimate to speak of a particularly "easy" phase of import substitution when the manufacturing process is entirely based on imported materials and machinery while importation of the article is firmly and effectively shut out by controls. Under such conditions, the early experience of the new manufacturers is most likely to be most gratifying. It is this phase of import substitution that gives rise to the often noted ex-

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[67] Albert O. Hirschman, op. cit., 6-7.

[68] David Felix, "Monetarists, Structuralists, and Import-Substituting Industrialization," in Inflation and Growth in Latin America, W. Baer and I. Kerstenetzky, ed., (Homewood: Richard D. Irwin, Inc., 1964), 384.

> uberance and boom atmosphere during which demand is easily overestimated . . . the "exuberant" phase of import substitution was accompanied by flambuoyant public policies which badly overestimated the tolerance of the economy . . .[69]

Once the initial stage has passed and the consumer-goods substitution phase has been succeeded by a predominantly capital and intermediate goods phase, three forces tend to close in on the workability of the process according to the United Nations Economic Commission for Latin America studies:

> . . .The import mix shifts predominantly to one of fuels, industrial materials, essential foodstuffs, and capital goods required by the industrial sector. The capital intensity of import-substituting projects rises, resulting in a rising import content of investment and causing the level of investment to be more severely constrained by the capacity to import. The projects tend to require increasingly large markets in order to reach minimum efficient scale, so that the ability of import substitution to induce investment is progressively weakened by the thin domestic markets of even the larger Latin American countries.[70]

Thus, the process of import substitution seems to be characterized by two sharply contrasting phases--an initial "easy" phase of rapid consumer good replacement growth and profits followed by a secondary "steady-state" phase of intermediate and capital goods replacement with slow growth, capital import dependence, and impending foreign exchange shortages due to neglect of traditional export sectors. This

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[69]Albert O. Hirschman, op. cit., 11-12.

[70]David Felix, "The Dilemma of Import Substitution--Argentina," in Development Policy: Theory and Practice, Gustav F. Papanek, ed., (Cambridge: Harvard University Press, 1968), 60-61.

has occurred in the case of the "stop-go" cycles which have plagued the Argentine economy since the end of their "easy" phase during the late 1940's.

B. THE LEGACY OF IMPORT-SUBSTITUTION INDUSTRIALIZATION

1. The Domestic Industrial Sector

Import substitution has encouraged the development of industrial sectors within developing nations, but not without initial difficulties:

> In the past two decades, many developing countries have made investments in new industries and the infrastructure needed to support them. Often started in an environment that was socially, culturally, and economically unaccustomed to manufacturing activity, these industries have, at least in the initial phase, been unable to compete with industry in the developed countries. . . . High manufacturing costs put the developing countries at a disadvantage in competing with more developed countries and in getting the most goods produced for their investment.[71]

Thus, as in the Argentine case, social and cultural factors may inhibit industrial activity through the lack of experience with manufacturing processes. With these, the economic costs encountered by any industry initially attempting to enter an established market are experienced. These include start-up costs, beyond initial fixed construction costs, production costs due to the demand conditions of both the domestic and international markets, and poorly planned

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[71] Barend A. deVries, "High Cost of Industry in Developing Countries--Causes and Remedies," in Finance and Development, VI, (December 1969), 43.

governmental interference with the industrial structures. Start-up costs are incurred after the construction of the plant during the "learning" phase of production. Costs are involved in the training of workers and managers, the start-up of operations and getting production volume up to capacity, adapting imitative processes to local conditions, and the development of supply and distribution channels. Often in excess of fixed plant costs, the start-up costs generally require special financing arrangements.[72]

After the initial start-up phase, the plant's level of production may affect operating costs in either of two ways - the plant may be too small to utilize economies of scale benefits in its production process, or domestic demand for its products may be less than an efficient level of production output. If it is too small, costs are imposed through inefficient production techniques and loss of revenues from foregone sales due to the lack of plant capacity. If domestic demand for its products is insufficient to meet an efficient level of output, in the absence of export markets costs are imposed in the form of unused capital equipment and plant capacity, as well as unsold inventory levels.[73] Thus, the plant management is placed in the difficult position of designing a plant with enough capacity for efficient production, but not so much as

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[72] Barend A. deVries, op. cit., 44.

[73] Ibid.

to far overshoot domestic demand levels for their products.

Governmental interferences can create industrial costs through alterations of efficient industrial structure and production input procurement. Structural stress on autarky--across-the-board promotion of vertically integrated industries with no thought to comparative advantage or the effects of the simultaneous start-up of final, intermediate, and capital goods industries--leads to the development of inefficient and high cost industries given the small markets, limited capital, and lack of skilled manpower. Policies of heavy protection to initial industries tend to confine the domestic producers to the home market, thereby inhibiting the exploitation of economies of scale. Governmental promotion of many firms to increase competition compounds the structural problems within an industry by creating a market of too many small, inefficient firms unable to utilize economies of scale or existing capacity due to the lack of market demand.[74]

Finally, governmental policies often require each producer to use domestically produced inputs in a certain percentage of their ouput, thereby forcing industry to use often-inferior, expensive domestic inputs in place of cheaper, better quality imports without having undertaken sufficient investigation of industrial cost structures.[75]

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[74]Werner Baer, "Import Substitution and Industrialization in Latin America: Experiences and Interpretations," in Latin American Research Review, VII, (Spring 1972), 102-103.

[75]Barend A. deVries, op. cit., 45-46.

Therefore, the initial build-up of industrial capacity brought about by the process of import substitution has contributed to the developmental problems of the implementing countries both because of economic production handicaps faced by almost all new industries as well as short-sighted, poorly implemented governmental policies which impede the development of efficient industrial structure and input procurement.

This is evidenced in the Argentine automobile and heavy electrical equipment manufacturing industries, where basic materials considered standard stock in most developed countries must be purchased in small batches through special orders to domestic suppliers. Further, the lack of uniformity in semi-finished goods such as forgings and castings creates special problems in milling and machining parts to required specifications. As a result, the Argentine automotive industry's factory costs vary from 60 to 130 percent higher than those in the United States. Similarly, prices in the heavy electrical equipment industry are driven up by the excessive diversification, unused capacity, and import controls promoted by governmental interference.[76]

2. Protection Effects

As a complementary policy to the establishment of an industrial sector through import substitution, the governments of the implementing nations generally develop extensive protection policies designed to shelter the new domestic industry

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[76]Werner Baer, op. cit., 104-105.

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production-possibilities curve is based on positive externalities gained during their learning stage--benefits from "learning by doing"--optimal government action should be to subsidize this learning process, for the following reason: 1) subsidies avoid the consumption costs placed on society by higher prices of imported goods due to tariff taxes or supply restriction from quotas; 2) subsidies avoid the production costs of protection due to misallocation of resources occurring from a domestic industrial monopoly in import-competing goods; 3) subsidies allow the government to ensure that any positive externalities gained by industry during its learning phase are shared freely among all producers for their mutual benefit; and 4) from a welfare economics standpoint, a policy which directly corrects the distortion in question is preferred to one which corrects one distortion through the creation of another.[78]

The case against protection and for subsidies may be graphically presented, as in Figure 6 on the following page. The diagram depicts the demand and supply conditions of a good which is obtainable at price P_f through importation, and is produced domestically subject to a distortion (i.e., the learning costs of new industry) which makes the domestic cost of production and the supply curve S"-S" of domestically produced goods higher than the undistorted supply curve S-S by a proportion d of the undistorted conditions. It is assumed that

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[78]Syed Nawab Haider Naqvi, op. cit., 141-142.

The Effects of Tariffs vs. Subsidies

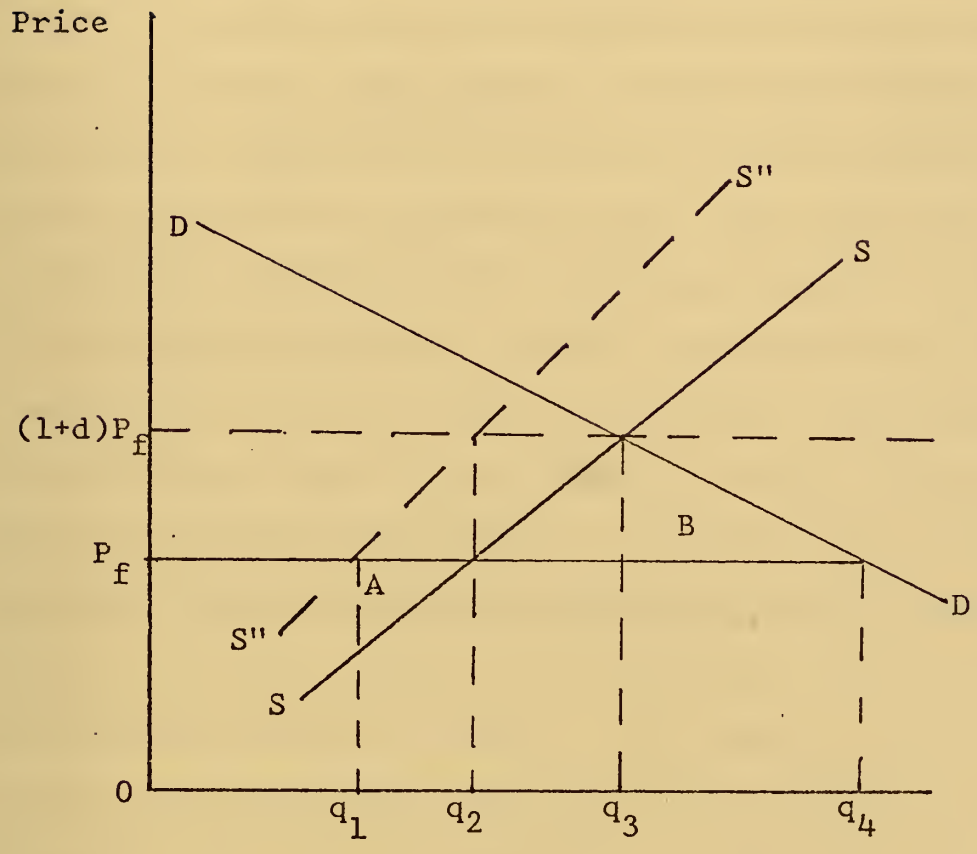

Figure 1.[79]

[79]Harry G. Johnson, "Tariffs and Economic Development: Some Theoretical Issues," in Economics of Trade and Development, James D. Theberge, ed., (New York: John Wiley & Sons, Inc., 1968), 356.

there is only one distortion in the economy.[80]

Under free trade conditions and in the absence of governmental intervention the economy produces Oq_1 and imports q_1q_4 amounts of the good. It could replace q_1q_2 of imports by additional domestic production, thereby saving real costs equal to the area A, which represents the reduction of real income below the attainable maximum due to distortion. In order to achieve this result, the government should give a subsidy on production at the rate of d, the proportional excess of domestic production costs over the social cost of production. If instead the government levies a tariff on imports at the rate of d, it will obtain the cost saving represented by A, but will also restrict total consumption due to the higher price of the product, $(1+d)P_f$ or the original free trade price multiplied by the tariff rate. This will entail a loss of consumer surplus equal to the area B. The loss of consumer surplus will be greater than the cost saving of increased domestic output if the demand curve is fairly elastic and the supply curve is fairly inelastic (area A smaller than area B), and vice versa.[81] In any case, the imposition of a tariff imposes some degree of consumption cost and price distortion. Policies which are encouraged by the import substitution process may be better employed for government

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[80] Harry G. Johnson, op. cit., 357.

[81] Ibid.

subsidization of the initial learning period of infant industries. Unfortunately, too many developing countries apply indiscriminate policies of protection as much for political convenience as for economic gain. Argentine protection regulations, listed in Appendix D, are typically selective in nature, allowing only goods necessary for the economic improvement of the country in without a surcharge or quota. Also, they require that all governmental agencies, government-owned enterprises, and all parties involved in government contracts, public works, or services purchase domestic materials if their price is "reasonable" (i.e., not higher than foreign goods after all surcharges, shipping costs, taxes, and interest charges are added on to the base import price).[82]

3. Export Sector Neglect

The effect on the traditional export sector of import substitution and industrialization generally has been detrimental, as stated below:

> Policies employed to stimulate industries have often been prejudicial to the functioning of the more traditional agricultural sector. The allocation of investment resources (credit) to new industries has often meant that a few resources were avilable to increase agricultural efficiency. Overvalued exchange rates, which favored industries by providing cheap imported inputs, hurt agriculture by making its goods less competitive on the international market and/or by making it less profitable to export agricultural products. Finally, the combination of higher industrial prices caused by protection

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[82] A Statement of the Laws of Argentina in Matters Affecting Business, (Washington: Pan American Union, 1963), 36-41.

> and by price control of agricultural goods, turned the internal terms of trade against agriculture. . . . Argentina is probably the outstanding example of import substitution occurring to the detriment of agriculture and agricultural exports.[83]

The importance of exports to the economy of a developing nation is described below by the Pearson Commission on International Development:

> The importance of exports for the development of the poorer countries can hardly be overestimated. They are by far the most important source of foreign exchange. In recent years they have been nearly four times as large as the flow of aid and private investment . . . Clearly, the willingness of a country to adopt policies aimed at stimulating exports is a key indication of how seriously it seeks self-sustained growth.[84]

Within the framework of import substitution and industrialization, the expansion of exports provides the foreign exchange resources to pay for the intermediate and capital commodities imports necessary for industrial development, as well as payments on foreign debts incurred by the industrial sector.[85] Thus, to neglect the export sector is to foreshadow the curtailment of industrial development, as has occurred repeatedly in Argentina.

The export position of a nation with respect to the international market is dependent on its export community mix

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[83]Werner Baer, op. cit., 105.

[84]Commission on International Development, Partners in Development, (New York: Praeger Publishers, 1969), 71, 81.

[85]Barend A. deVries, The Export Experience of Developing Countries, (Baltimore: The Johns Hopkins Press, 1967), 6

and its share relative to the world market. Basically, exports may be divided into two classes of export commodities: 1) major commodities, characterized by well-organized markets dominated by a few suppliers; and 2) minor commodities, characterized by their miscellaneous mixture of agricultural, mineral, and manufactured commodities with many market participants.[86] A nation's export position with respect to commodity mix, therefore, is generally dependent on the performance of the above two export classes relative to each other. A fifteen year study has brought out four factors about their relative performance: 1) countries which had small market shares at the beginning of the study tended to show a better performance in major commodities throughout the period; 2) countries with stable price structures experienced more growth of minor exports than those with inflationary problems; 3) performance in both major and minor commodities appeared positively related to favorable growth in agricultural production; and 4) countries with relatively rapid increases in manufacturing production tended to achieve better minor export performance.[87] (See Appendix E for expanded export performance figures, Table I)

National export position with respect to market share is directly related to the elasticity of export supply with reference to domestic demand for the exported commodity, and

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[86] Barend A. deVries, "The Export Performance of Developing Countries," in Finance and Development, V, (March 1968), 3-4.

[87] Ibid.

inversely related to the country's share in the world market for that commodity.[88] Therefore, countries with the best export performance are characterized by a combination of small shares in the major commodity markets, emphasis on agricultural production, light rather than heavy and integrated industrialization, and domestic policies favoring price stability.[89] Argentina is classified among the few countries which have large domestic markets and exports diversified to the point at which they have no dominant shares of the world commodity markets. Ideally, any country in this position should have several options for economic development policies--their small trade positions enhance their export opportunities, and their relatively large domestic markets widening the range of industrial products in which they can develop a competitive advantage.[90]

Unfortunately, the export performance of Argentina during the last two decades has not been up to potential. The neglect of the agricultural sector during the drive for industrialization along with increasing domestic consumption of key agricultural export commodities have tended to keep exports of those commodities from increasing at a substantial rate, as shown in Appendix E, Table II.

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[88] See Appendix F for a further discussion of the elasticities.

[89] Barend A. deVries, "The Export Performance of Developing Countries," op. cit., 7.

[90] Ibid.

4. The Foreign Exchange Constraint

The foreign exchange difficulties experienced by Argentina and other developing countries may be described as below:

> The major external constraint may be summed up as the availability of foreign exchange. Foreign exchange is a crucial resource in development planning. All developing countries are forced to rely on imported raw materials and spare parts without which their own resources cannot be pressed into service. The developing countries face problems both in increasing their earnings of foreign exchange and in the increasing claims on available foreign exchange of rising debt payments and other essential commitments.[91]

The foreign exchange constraint cycle has been analyzed by Professor Meier. This analysis, using Figure 2 on the next page, is as follows. In the figure, Y equals national income, X equals exports, M equals imports, I equals investment, and S equals savings. The export function X is represented as autonomous with respect to national income, as it is assumed that the country's quantity of imports is too small to have an effect on the income of foreign countries to which the country exports. M, I, and S are considered to be dependent on Y. The intersection of I+X = S+M denotes the equilibrium level of income OY_0 with a balanced foreign exchange account at Q. If the country embarks on a development program which

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[91] Commission on International Development, op. cit., 69.

The Foreign Exchange Constraint

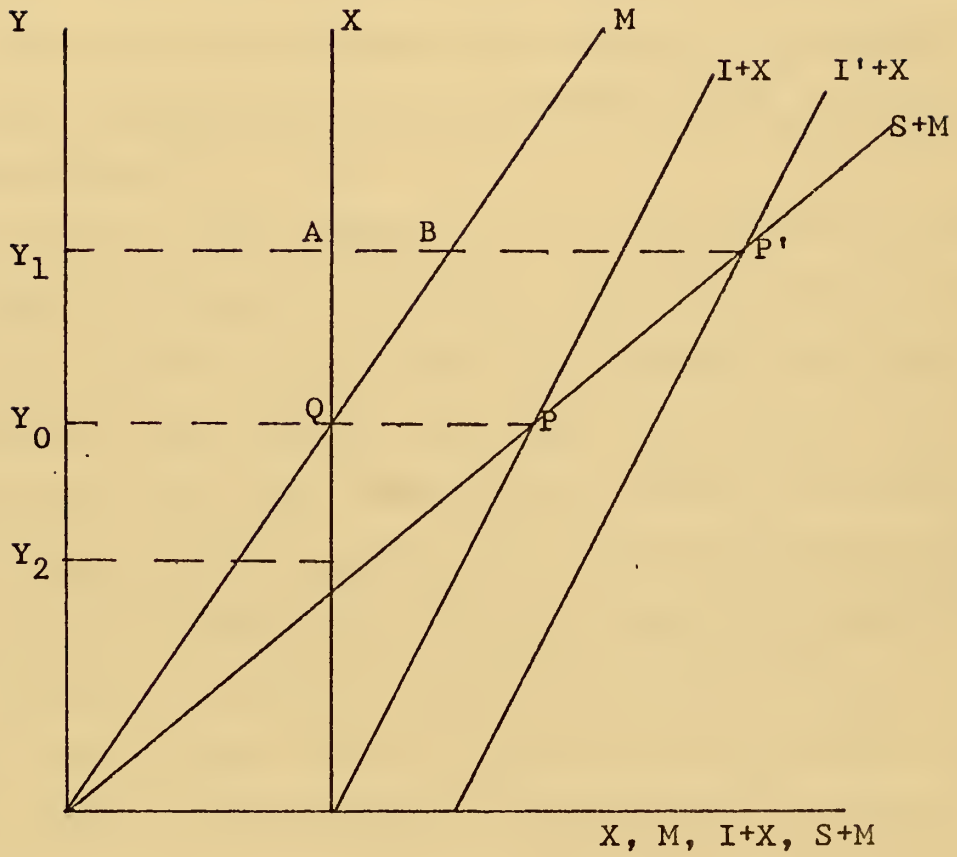

Figure 2.[92]

[92]Gerald M. Meier, op. cit., 73.

increases the level of investment from I to I', the I+X curve shifts to I'+X and national income rises to OY_1 (the "go" part of the Argentine cycle). However, there also appears a balance of payments deficit of A-B, thereby providing a constraint to further development and initiating the "stop" part of the cycle. This constraint occurs whenever imports exceed exports, thus even if development had begun at the surplus point of OY_2, the economy could only expand to OY_0 before being constrained.[93]

If exports were expanded and the X curve were to shift over and ease the balance of payments situation, the rise in exports would tend to lag the rise in investment, thus the I+X curve would move more rapidly than the X curve alone. The more investment which goes to non-export sectors, the more inelastic is the supply of exports, and the more domestic consumption of export commodities rises as income increases.[94]

The cycle of periodic Argentine foreign exchange shortages (the "stop-go" cycle) has been a manifestation of the above analysis for the past 23 years. Each new period of industrial expansion is marked by a heavy propensity to import needed materials at a demand elasticity for imported goods of about three. Thus, increases in the Argentine national income are three times as likely to be spent on imported goods as average income, with little hope that changes

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[93] Gerald M. Meier, op. cit., 72-74.

[94] Ibid.

in relative prices through devaluation or quantitative restrictions can reduce the level of imports substantially in the short run.[95]

The increase in imports puts pressure on the balance of payments and foreign exchange situation. With the export sector being predominantly agricultural with a slow rate of growth (Appendix E, Table II), foreign exchange surplus, if any, soon disappears and the government is forced to devalue its currency, with the following results:

> One of the main reasons that exchange-policy management has proven so difficult in practice is that . . . Argentina exports mostly domestic wage goods: principally meat, grains, fresh fruit, textile fibers, and leather. Its imports, however, are chiefly raw materials, intermediate products, and capital goods . . . most of which are essential for maintaining or expanding the level of economic activity. Exchange rate adjustments, therefore, have an immediate impact on the general cost of living. Such adjustments generate pressure from the country's strongly organized labor unions for wage increases, and these increases, together with the rise in other costs, quickly tend to be passed on in the form of higher prices by the strongly cartelized producers.[96]

Thus, increased importation and industrial growth bring higher wages which decrease export capacity; all of which create a foreign exchange deficit which brings about devaluation which creates a recession and inflation, and so on through each "stop-go" economic cycle. Tables III through VI in

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[95]Carlos F. Diaz-Alejandro, Essays on the Argentine Economy, (New Haven: Economic Growth Center, 1967), 17.

[96]Richard D. Mallon, "Exchange Policy--Argentina," in Development Policy Theory and Practice, ed. Gustav F. Papanak, (Cambridge: Harvard University Press, 1968), 176.

Appendix E show the patterns of change in the exchange rate of the Argentine peso with respect to the U. S. dollar; the movement of real and nominal industrial wage rates; variations in the consumer price index; and a comparison of the percentage changes in the gross domestic product and the cost of living from year to year. The above statistics trace the effects of the "stop-go" foreign exchange cycle phenomenon as it has occurred during the past decade under conditions of fixed world-wide exchange rate policies.

C. SUMMARY

Throughout this chapter, the developmental pattern of Argentina has been discussed with respect to the economic relationships behind some of the policies employed. During its initial, export-dependent phase, the theory of comparative advantage combined with equilibrium analysis may be employed to describe and analyze movements of the specialized international market structure characteristic of that period. Both the primary good exporting nations such as Argentina and the industrializing nations of Europe were able to gain in welfare from the specialization of production and trade according to their comparative advantage.

With the coming of the world-wide Depression of the 1930's, the specialized international structure collapsed, and Argentina began a program of domestic industrialization through import substitution. Characterized by the replacement of imported goods with domestic ones, several structural changes

occurred in the Argentine economy, including rapid industrialization at the expense of the traditional export sector and excessive governmental interference in the market structure and procurement policies of the new industries.

The cumulative result of the export neglect, industrialization, and interference has been a continual pattern of "stop-go" cycles characterized by industrial growth and import increases which create foreign exchange crises, devaluation, and domestic price inflation. Due to the economic and political instability created by these cycles, any governmental policies implemented generally result in either a new wave of recession and inflation, or a change in government. Thus, due to the original short-sighted, haphazard implementation of the industrialization process, solutions are almost impossible.

IV. A MODEL OF ARGENTINE SELF-SUFFICIENCY

A. THEORETICAL FRAMEWORK

1. Background

As discussed in the preceding chapters, the eventual goal of Argentine economic development, in the absence of freely floating rates of exchange, is a state of domestic self-sufficiency, where the majority of inputs needed in the production sector of the economy will be supplied by domestic sources rather than imports, and where those inputs which cannot be replaced by domestic sources will be paid for by a sufficient amount of domestic export products so as to avoid a foreign exchange deficit. As shown, the actual state of the Argentine economy is far from a self-sufficient state, but the construction of a hypothetical model depicting the production structure that Argentina would have to maintain at such a level is instructive in several ways. According to Dr. Leontief, who originally constructed such a model for Israel, the model shows how far a nation falls short of being a self-sufficient industrial economy, in which sectors it is weakest, and in what sectors it can push its development "most fruitfully."[97]

Therefore, a model of hypothetical Argentine self-sufficiency may serve as a starting point for the reconstruction

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[97] Wassily Leontief, Input-Output Economics, (New York: Oxford University Press, 1966), 53.

of a path of development from the cyclical instability experienced at present.

2. Input-Output Analysis

The data which enables the construction of a self-sufficiency model is derived from input-output analysis techniques and a national input-output table for Argentina. Basically, input-output analysis groups the intersectoral transactions of an economy with regard to production, consumption, transportation, and distribution in a tabular matrix as shown in Figure 3 on the following page. The horizontal rows of the matrix (x_i) show how the output of each sector of the economy is distributed among the other sectors (i.e., 20 units of agricultural output are used in manufacturing), while the vertical columns (x_j) show how each sector obtains its needed inputs from the other sectors (i.e., agriculture needs 14 units of manufacturing sector inputs).[98]

The typical row of an input-output table may be represented as below:

$$x_i = (x_{ij_1} + x_{ij_2}) + D_i \qquad (1)$$

x_i equals the gross sectoral output of sector i; D_i equals the final demand for the product of sector i; and x_{ij_1} and x_{ij_2} represent the intermediate uses of the output of sector i in sectors j_1 and j_2 respectively.[99]

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[98] Wassily Leontief, op.cit., 15.

[99] Chiou-shuang Yan, Introduction to Input-Ouput Economics, (New York: Holt, Rinehart, and Winston, 1969), 15-16.

Figure 3.

Hypothetical Input-Ouput Table[100]
(in physical units)

Output	Input: Sector 1 Agriculture	Input: Sector 2 Manufacturers	Final demand	Total output
Sector 1 Agriculture	25	20	55	100
Sector 2 Manufacturers	14	6	30	50
Household Services	80	180	40	300

Figure 4.

Technical Input/Output Coefficients[101]

	Sector 1 Agriculture	Sector 2 Manufactures
Sector 1 Agriculture	0.25	0.40
Sector 2 Manufactures	0.14	0.12
Household Services	0.80	3.60

[100] Wassily Leontief, op. cit., 43.

[101] Ibid.

Each column of the input-output matrix represents the input structure of a sector, as below:

$$x_j = \begin{matrix} x_{i_1 j} \\ x_{i_2 j} \\ x_{i_3 j} \end{matrix} \qquad (2)$$

x_j equals the total input structure of sector j while $x_{i_1 j}$, $x_{i_2 j}$, and $x_{i_3 j}$ equal the inputs from sectors i_1, i_2, and i_3 to sector j.[102]

The matrix of technical input-output coefficients, as shown in Figure 4, displays the ratio between each input to a sector and the total output of that sector. If a_{ij} equals the technical coefficient, indicating the amount of product i needed to produce one unit of product j, then:[103]

$$a_{ij} = \frac{x_{ij}}{x_j} \qquad (3)$$

3. The Argentine Input-Output Tables

Argentina has been computing input-output tables of its economy since 1946, with the one used in this study based on the year 1960. Aggregated to 28 sectors from an original 200 sectors, the 1960 table is basically an updated version of a 1953 table compiled by the Central Bank of Argentina.[104]

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[102] Chiou-shuang Yan, op. cit., 16.

[103] Ibid.

[104] Actualizacion de la Matriz de Insumo-Producto del Año 1953 al Año 1960, (Buenos Aires: Secretaria del Consejo Nacional de Desarrollo, 1968), 22.

The table of input coefficients used was likewise computed from an updated version of the 1953 input-output table (See Appendix G). The method used by the Argentine National Development Council to transform the entries from 1953 to 1960 terms was basically to multiply the monetary input coefficients of 1953 by the ratio of the price indices of 1960 to 1953 for each sector. This method assumes that the input coefficients for 1953 and 1960 in real terms remained equal, as shown below:

$$a_{ij}^{60} = a_{ij}^{53} \frac{I_{pi}^{60/53}}{I_{pj}^{60/53}} \qquad (4)$$

$$\bar{a}_{ij}^{60} = \bar{a}_{ij}^{53} \qquad (5)$$

a_{ij} equals the input coefficient in monetary terms, $\bar{a}_{ij}$ equals the input coefficient in real terms, and I_{pi} and I_{pj} equal the price indices for goods i and j respectively.[105]

B. THE MODEL OF ARGENTINE SELF-SUFFICIENCY

1. Input Coefficient Stability Over Time

For the purposes of this model, the input-coefficient matrix for 1960 has been assumed to be applicable in 1972 for the following reasons: 1) a more recent input-output table for the Argentine economy was not available; 2) as shown in Table III on the following page, the percentage distribution of the sectoral share of the gross domestic product has been

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[105] Actualizacion de la Matriz . . ., op. cit., 30-31.

TABLE III.

Sectoral Percentage Distribution of Gross Domestic Product[106]

Sector	1964	1965	1966	1967	1968	1969
Agriculture, Hunting and Fishing	20.0	17.5	15.5	15.5	14.4	14.5
Exploitation of Mines and Quarries	1.2	1.3	1.7	1.8	1.8	1.8
Manufacturing Industries	31.5	33.8	32.6	31.2	31.0	30.7
Construction	3.8	4.0	4.5	5.2	5.6	6.2
Electricity, Gas, Water, and Sanitation	1.7	2.0	2.4	2.8	3.0	2.9
Transportation, Storage, and Communications	8.1	7.9	9.0	9.3	9.8	9.6
Commerce	13.6	13.9	13.3	12.8	13.3	13.8
Banks and Insurance	4.1	3.8	3.8	3.9	4.5	4.5
Housing	4.1	3.8	3.8	3.9	4.5	4.5
Public Administration and Defense	9.0	9.7	10.9	10.9	10.0	9.6
Services	7.0	6.4	6.2	6.5	6.6	6.4

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[106] America En Cifras 1970: Situacion Economica: 4. Balanza de Pagos, op. cit., 54.

fairly constant, with no sector gaining or losing a significant share of the Argentine gross domestic product (i.e., over 6%); 3) a study by the Norwegian Central Bureau of Statistics on the stability of input coefficients concludes that a movement from less to more aggregation tends to reduce the standard deviation about an average coefficient over time.[107] Thus, the lack of current data plus the stabilizing effects of the lack of sectoral percentage fluctuations and aggregation allow the use of the 1960 input coefficients in a 1972 context.

2. Calculation of Revised Sectoral Final Demand

In order to make the level of self-sufficiency more realistic in terms of actual Argentine GNP growth from 1960 to 1972, the final demand quantities as calculated per sector in the 1960 input-output table (see Appendix G, Table I) were revised in the following manner: 1) the percentage change in GNP growth rate for Argentina from 1961 to 1969 (adjusted to a base of 1963 = 100 to allow for yearly price level changes) was calculated on a yearly basis and a simple average taken, equalling 3 percent per year; 2) this calculation was compared to another similar calculation based on different data sources and found to be compatible;[108] 3) using the following formula

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[107] Per Sevaldson, "The Stability of Input-Ouput Coefficients," International Conference on Input-Output Techniques, Vol. 1., ed. A. P. Carter and A. Brody, (North-Holland, 1970) 207-237.

[108] Original data from America En Cifras 1970: Balanza de Pagos, op. cit., 32. Check data from Merka, op. cit., 107

based on that for the calculation of compound interest:

$$F = D(1 + g)^n, \qquad (6)$$

where F equals revised final demand, D equals original sectoral final demand, g equals the average yearly growth rate of 3 percent (assumed to apply uniformly to each sector), and n equals the 13 year period from 1960 to 1972, each revised final sectoral demand figure was calculated, as listed in Table IV on the following page.[109]

3. The Self-Sufficiency Model for Demand Structure

Using the revised final demand figures for each sector and the 1960 input-coefficient matrix as shown in Table II, Appendix G, the final demand structure for self-sufficiency was calculated, as shown in Figure 5. Based on Leontief's original format, the horizontal axis measures total sectoral output in units of Argentine pesos, while the vertical axis measures the percentage of self-sufficiency attained by each sector. The level of desired self-sufficiency (100% level in Figure 5) is assumed to be the 1972 level of domestic demand, with all sectoral blocks scaled to the same height. Imports are subtracted from the 100% level as a percentage of total sectoral demand (as determined from the sectoral input coefficient for imports). Exports are added to the total sectoral self-sufficiency level as a percentage of surplus demand, as determined from the ratio of exports to total demand output based on the 1960 input-output table and

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[109] The 3% compound interest coefficient 1.4685 was used as taken from the 1971 CRC Standard Mathematics Tables.

TABLE IV.

Revised Final Sectoral Demand
(1,000,000 pesos)

Sector	Total Demand	Sector	Total Demand
1)	191,000	15)	25,526
2)	151,731	16)	38,171
3)	8,893	17)	43,840
4)	10,291	18)	104,533
5)	125,604	19)	37,764
6)	235,606	20)	109,487
7)	155,118	21)	64,083
8)	22,114	22)	69,131
9)	153,606	23)	31,231
10)	86,352	24)	4,705
11)	38,286	25)	129,014
12)	28,784	26)	296,110
13)	28,119	27)	158,848
14)	103,048	28)	224,741

Figure 5.

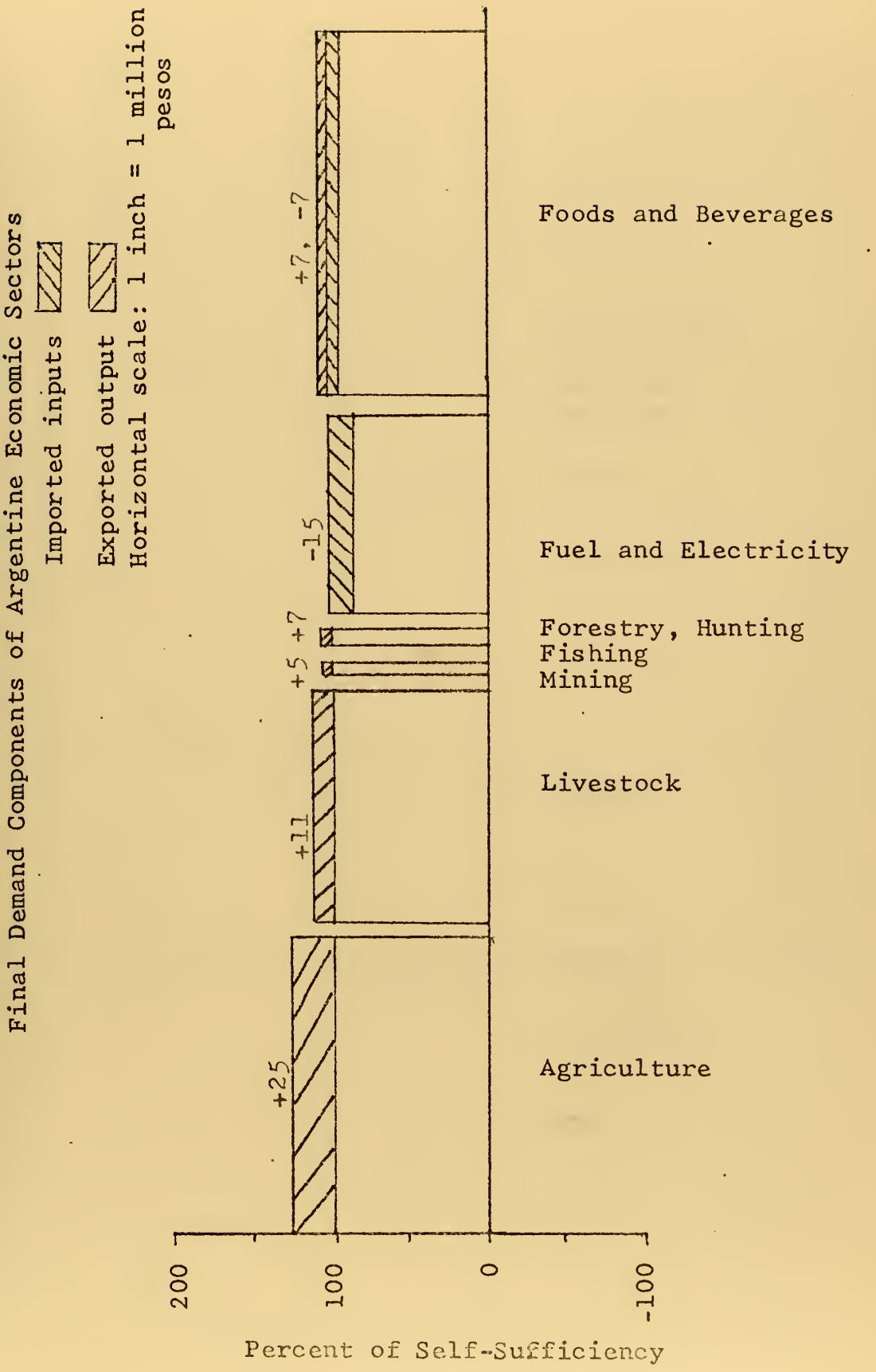

Final Demand Components of Argentine Economic Sectors
Imported inputs
Exported output
Horizontal scale: 1 inch = 1 million pesos
+7, -7
Foods and Beverages
-15
Fuel and Electricity
+5 +7
Forestry, Hunting
Fishing
Mining
+11
Livestock
+25
Agriculture
200
100
0
-100
Percent of Self-Sufficiency

Figure 5. (continued)

Final Demand Components of Argentine Economic Sectors

Imported inputs ▨ Exported output ▧ Horiz. scale: 1 in. = 1 mil. pesos

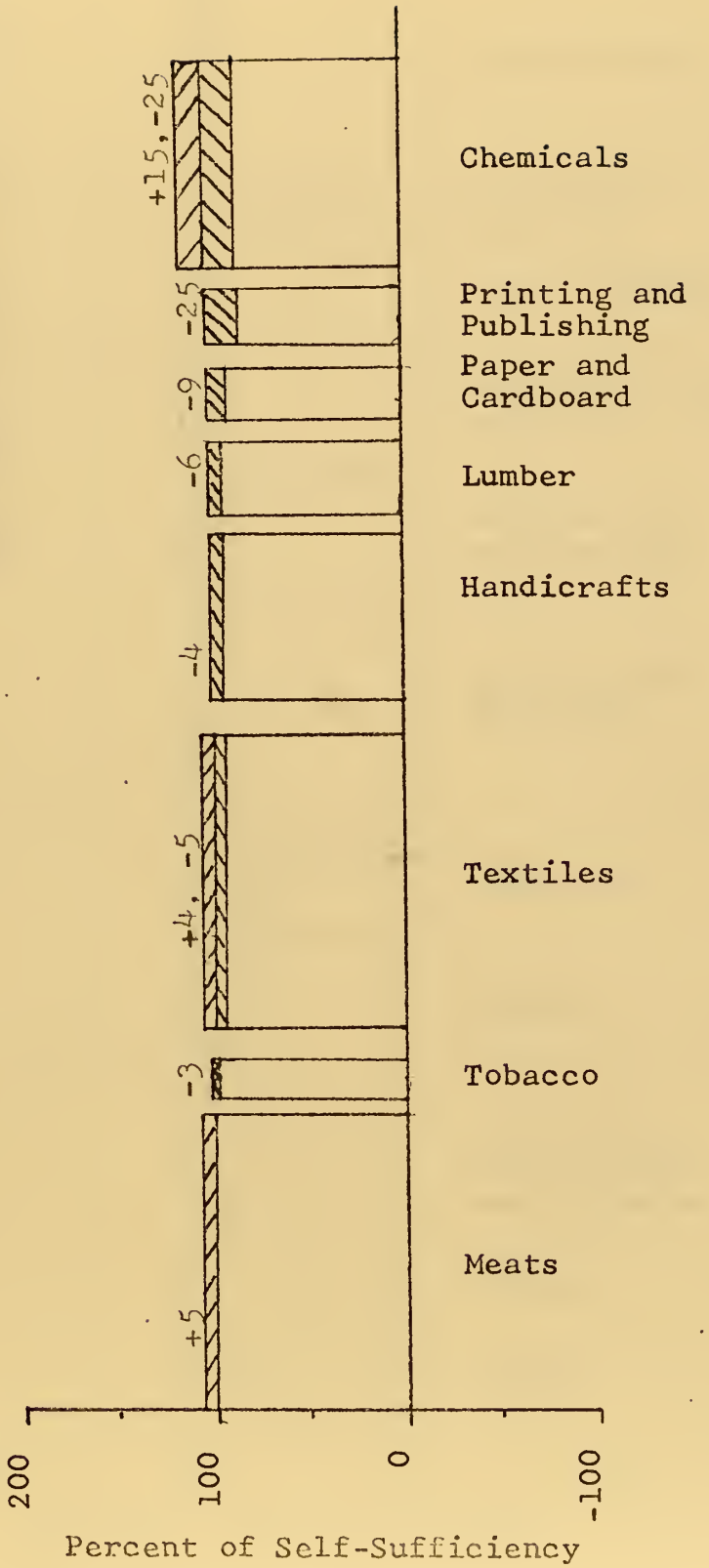


Figure 5. (Continued)

Final Demand Components of Argentine Economic Sectors

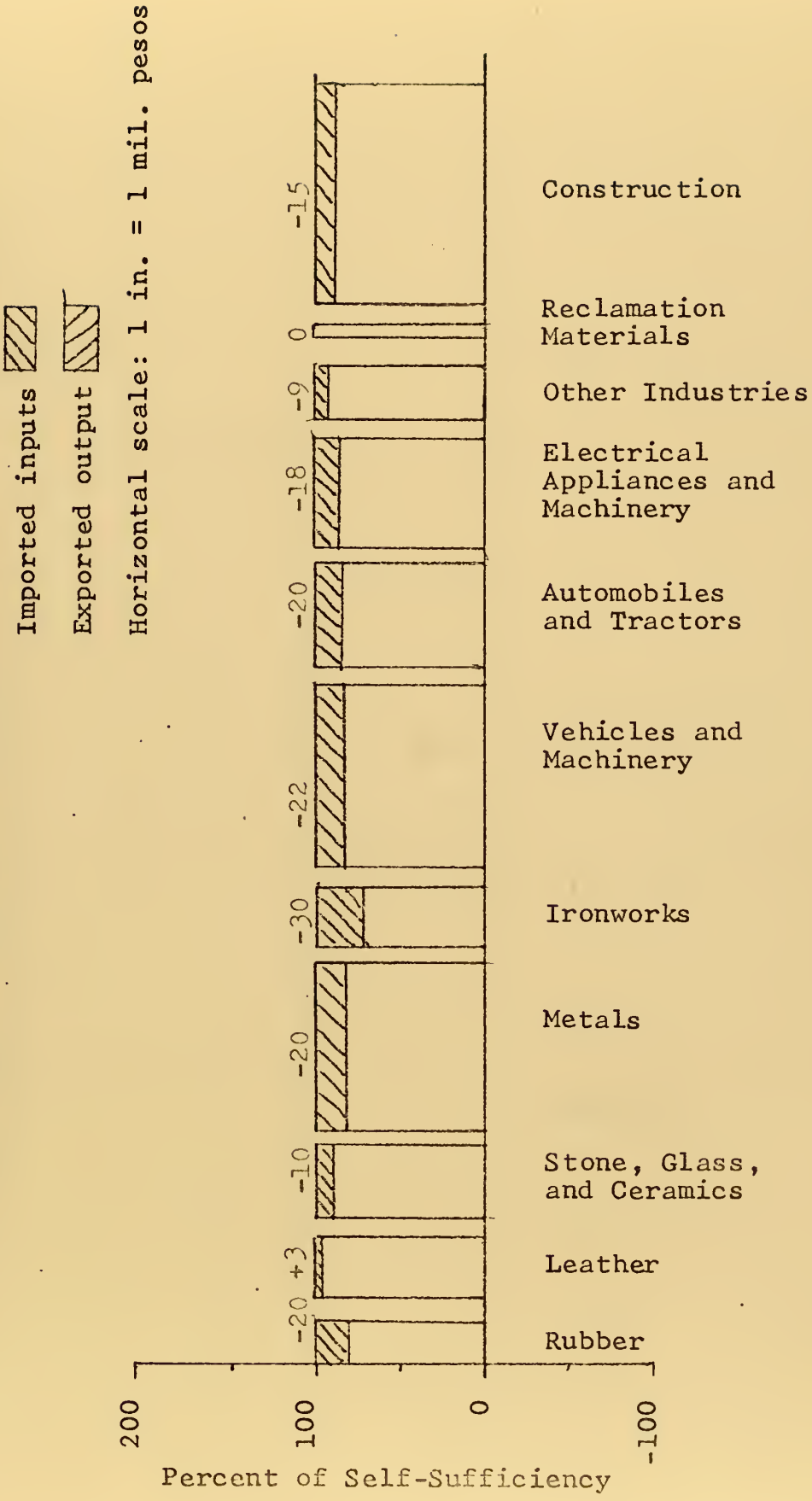
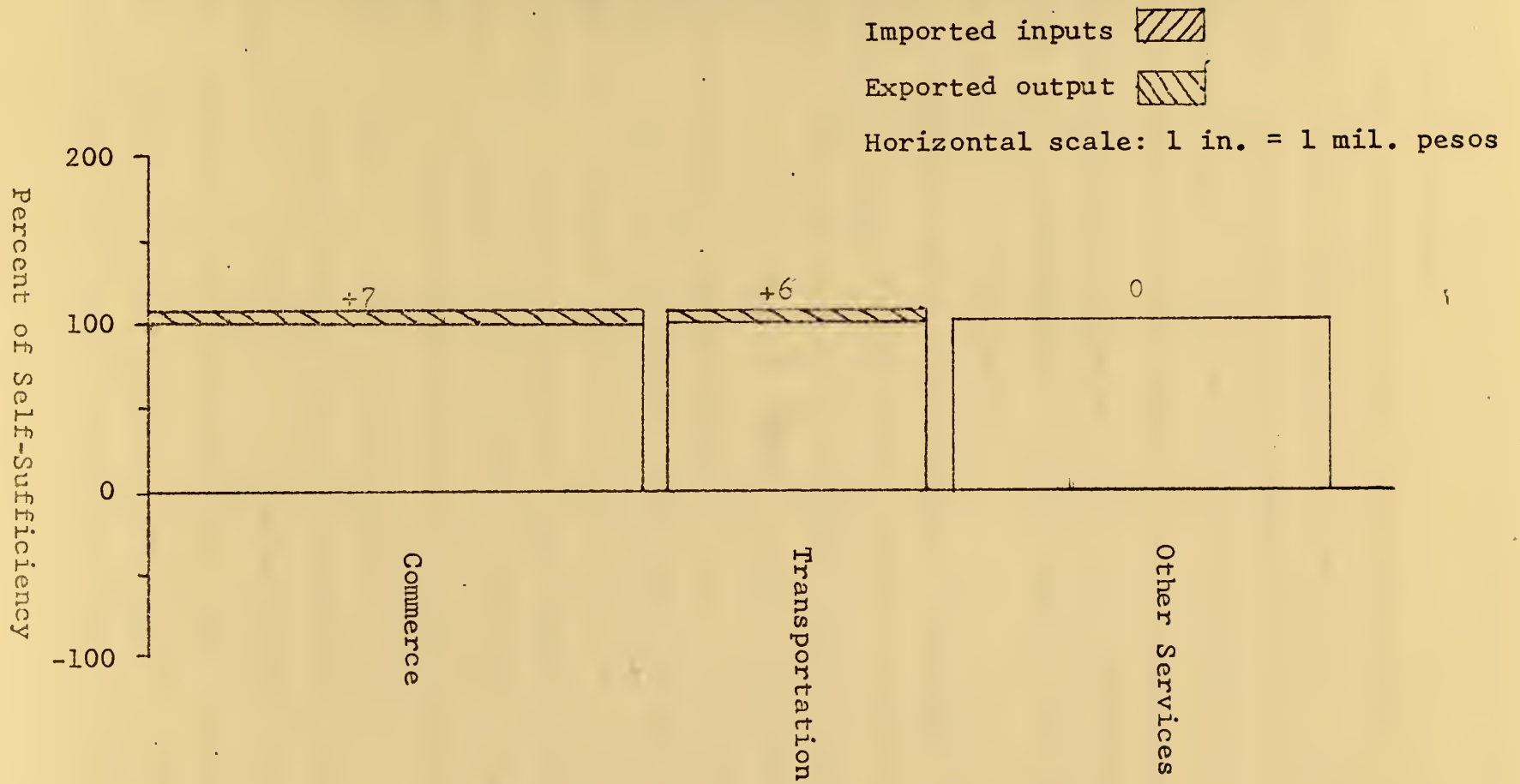


Figure 5. (Continued)

Final Demand Components of Argentine Economic Sectors



the assumption that yearly sectoral exports also grew at a rate of three percent.

The usefulness of such a structural format may be seen from both a static and comparative standpoint. Statically, the model format allows one to observe the relative shares of total output held by each sector of the economy; the foreign exchange position of each sector (i.e., the export-import balance); the import dependence and export performance of each sector; and the percentage of final domestic and export demand supplied by each sector.

Comparatively, the structure of the model allows predictions of changes in direct and indirect outputs and inputs required from each sector for a given change in exports, imports, or total domestic demand. Using the input-coefficient matrix, changes in direct demand for any sector may be broken down into the indirect demand from other sectors needed to supply the increased level of demand from the original sector. For example, using the Argentine 1960 input-coefficient matrix, the indirect input demands generated by the direct additional demand of 1000 pesos on the first eight sectors are shown in Table V on the following page.

The summation of all of the direct and indirect demands generated by any level of final demand on each sector determines the size of the sector modules within the model structure. Thus, the self-sufficiency model may be adapted to simulate the effects of the various changes of demand emphasis

Sectoral Effects of $1000 of Additional Demand

TABLE V.

Sectors of Origin of National goods, Imported goods, and Factors of Production	Sectors of Demand Origin							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Agriculture	29.50	176.38	3.60	-	-	246.59	.80	66.95
2. Livestock	-	-	-	-	-	72.61	541.51	-
3. Forestry, Hunting, Fishing	-	-	44.11	3.82	-	2.02	-	-
4. Mining	-	-	-	-	-	.58	.98	.01
5. Fuel and Electricity	18.23	5.40	43.07	24.78	80.67	21.28	5.15	2.39
6. Foods and Beverages	-	18.53	.63	-	-	140.77	1.91	1.28
7. Meats	-	-	-	-	-	5.32	20.03	-
8. Tobacco	-	-	-	-	-	-	-	52.27
9. Textiles	1.00	-	3.85	.66	-	.43	1.74	-
10. Handicrafts	24.32	.98	-	5.93	-	5.34	-	-
11. Lumber	4.20	.93	43.58	2.28	7.24	9.61	2.54	.27
12. Paper and Cardboard	.22	.11	.20	.20	6.27	8.18	1.22	31.35

Sectoral Effects (continued)

Sectors of Origin of National goods, Imported goods, and Factors of Production	Sectors of Demand Origin (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
13. Printing and Publishing	-	-	.87	.34	1.92	3.75	.23	2.11
14. Chemicals	6.75	14.32	4.73	13.66	12.53	14.55	2.07	6.63
15. Rubber	.80	.64	13.42	3.00	5.65	.51	.07	.13
16. Leather	.22	.25	-	-	3.53	-	-	-
17. Stone, Glass, and Ceramics	.51	.53	-	.97	1.37	9.39	.02	.07
18. Metals	1.42	2.81	4.00	4.29	14.40	6.54	.25	1.44
19. Ironworks	-	-	-	-	-	1.51	2.62	.48
20. Vehicles and Machinery	2.17	1.39	3.70	9.57	16.26	4.23	.31	.86
21. Automobiles and Tractors	-	-	-	-	-	-	-	-
22. Electrical Appliances and Machinery	-	.08	.13	4.31	30.94	.65	.05	.16
23. Other Industries	-	-	1.49	.06	.08	.56	.03	.06

Sectoral Effects (continued)

Sectors of Origin of National goods, Imported goods, and Factors of Production	Sectors of Demand Origin							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
24. Reclamation Materials	-	-	-	-	-	-	-	-
25. Construction	-	-	-	-	-	-	-	-
26. Commerce	162.50	87.24	79.38	13.67	27.72	115.67	142.07	77.27
27. Transportation	60.00	71.72	253.11	404.95	24.96	61.53	45.80	46.70
28. Other Services	20.26	28.74	18.68	9.16	3.54	13.58	9.77	6.81
29. Imported Goods	2.19	-	-	.86	157.78	19.70	.91	11.83
30. Gross Value-Added by Factors of Production	665.66	689.95	481.16	497.50	605.15	235.09	219.90	690.92
TOTAL FINAL DEMAND	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00

by showing the changes in the static relationships for changes in demand conditions. The direct and indirect effects of import substitution in any one sector on all of the other sector may be observed.

Thus, while limited by the accuracy and structure of the basic input-output tables used and the lack of recent data, the self-sufficiency model outlined above definitely demonstrates its usefulness as a tool in any program of developmental planning or reorganization. The static and dynamic effects of industrialization, protection, and other developmental problems may be projected and evaluated on a sectoral basis, thereby reducing some of the vagueness and uncertainty inherent in developmental planning.

V. CONCLUSIONS

The economic development of Argentina has, since the mid-nineteenth century, followed a pattern composed of three phases. The initial phase lasted from the 1850's through 1929, when Argentine development was characterized by a dependence on its agricultural exports to industrial Europe following the dictates of comparative advantage. Politically controlled by the elite class of agricultural landowners, most economic policies of the government encouraged export growth in return for imports of consumer and capital goods. Such policies, while contributing to the development of the interior and increasing the population through immigration, precluded domestic industrial development. Similarly, the land tenure system blocked immigrants from land ownership, thus urbanization occurred without an industrial base or social system from which to develop a stable urban populace. The extreme external dependence of the first phase led to foreign exchange difficulties in the presence of a system of fixed world-wide exchange rates. Thus, the stability of the domestic economy of Argentina became dependent upon the stability of the European business cycle and the international market.

The world-wide depression of the 1930's introduced the second phase of Argentine economic development--industrialization through import substitution. This phase lasted through World War II until the middle of the Peron regime in the arly

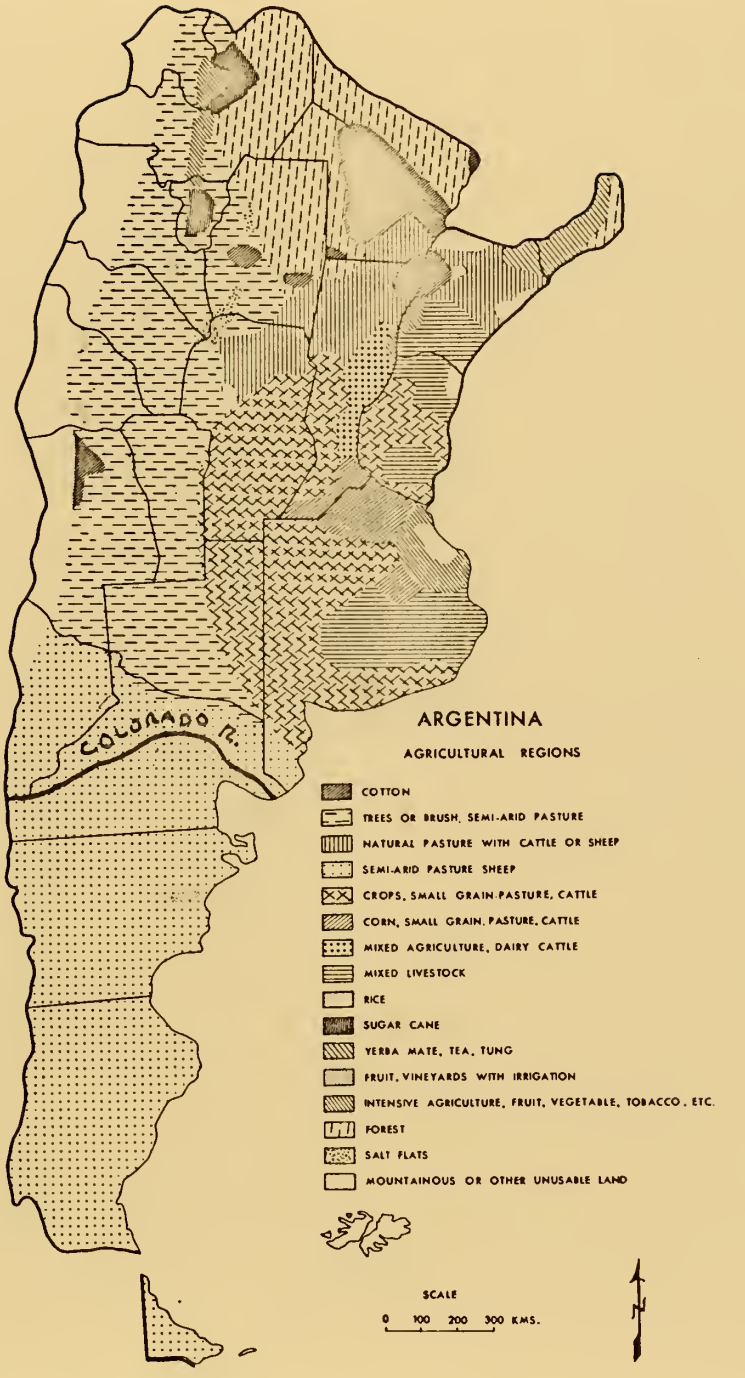
1950's. Brought about by the drop in external demand for Argentine exports, the industrialization phase removed the emphasis from agricultural export growth to domestic industrial growth, almost to the point of complete agricultural stagnation. Domestic industry was established in an atmosphere of governmental protection and controls, thus promoting inefficient industrial resource allocation. This inefficiency became evident when the extreme dependence of the industries on imports of intermediate and capital goods forced a shortage of foreign exchange due to the inability of the agricultural export sector to keep pace with the industrial imports. Industrial growth halted, domestic inflation and labor unrest occurred, and a recession resulted until the foreign exchange problems were settled. Thus, while the second phase helped to industrialize Argentina, it also introduced the characterisitc "stop-go" growth cycle brought about by export stagnation and industrial import dependence.

The third phase, still in evidence today, began with the advent of the above "stop-go" cycles in the early 1950's. Political pressures from both labor and the military have called for domestic stability, economic growth, and general properity. Such pressures, in combination with the slow recovery of the Argentine export sector and the import dependence of the industrial sector have defeated most attempts of the government to effectively control the cyclical economic problems. Thus, the third phase may be considered the result of the previous phases--domestic dependence on the external sector, export weakness, and inefficient industrial structure.

In my opinion, it will take much time and effort for Argentina to resolve its economic problems. The present situation is the cumulative result of economic and political policies enacted over a period of many years in a complex pattern of vested interests, idealistic goals, and economic rationale. Such complexities are not easily solved and must be approached from a logical, factual, and rational perspective. A model such as that described in Chapter IV provides a solid platform from which to begin. Once the strengths and weaknesses of each economic sector have been determined, then positive actions in both the political and economic spheres of the nation may be taken in a planned, coordinated manner. Given an idea of the national repercussions which might result from actions in a single economic sector, governmental leaders may move in a more cautious manner, taking into account both the short and the long run effects of seemingly expedient actions.

Argentina today is not hopelessly entangled in developmental stagnation. Its population growth rate is controlled, its education level is above the Latin American average, its middle class is well established, and much of its interior is not yet developed. With a determined national effort, Argentina can free itself of its cyclical crises and attain relative domestic stability and national growth. However, the effort will demand time, coordination, and cooperation from all sections of society under an economically sound developmental plan.

APPENDIX A



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[110]Maps taken from Inventario de la Informacion Basica Para la Programacion del Desarrollo Agricola en La America Latina, (Washington: Organization of American States, 19[illegible] 25, 27.


JUJUY
SALTA
FORMOSA
TUCUMAN
CHACO
CATAMARCA
SANTIAGO DEL ESTERO
MISIONES
CORRIENTES
LA RIOJA
SANTA FE
SAN JUAN
CORDOBA
ENTRE RIOS
SAN LUIS
MENDOZA
BUENOS AIRES
LA PAMPA
NEUQUEN
COLORADO R.
RIO NEGRO
CHUBUT
SANTA CRUZ
TIERRA DEL FUEGO
ARGENTINA
CLIMATIC REGIONS
HUMID
SEMI-ARID
ARID
SEMI-ARID AND HUMID (PAMPAS)
SCALE
0 50 100 200 300 KMS

APPENDIX B

Internal and External Terms of Trade and the Index of Discrimination Between Rural and Nonrural Goods (1935-1939 = 100) [111]

Period	Internal Terms of Trade (A)	External Terms of Trade (B)	Index of Discrimination (A/B)
1925-29	132	111	119
1930-34	87	79	110
1940-44	62	89	70
1945-46	74	120	62
1947-49	80	169	47
1950-52	68	124	55
1953-55	68	114	60
1956-58	78	93	84
1959-61	85	91	93
1962-64	93	89	104

Table I.

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[111] Gilbert W. Merkx, op. cit., 94.

Table II.

Argentina: Balance of Payments (1945-1957)[112]
(Millions of dollars)

Year	Exports and Other Income	Imports and Other Expenses	Balance
1945	779	458	321
1946	1190	598	592
1947	1629	971	575
1948	1422	1067	355
1949	1026	900	126
1950	1168	813	355
1951	1184	1239	- 55
1952	693	936	-243
1953	1119	604	515
1954	1050	817	233
1955	948	1013	- 65
1956	974	908	66
1957	1005	1025	- 20

Table III.

Argentina: Foreign Trade Exchange Rate[113]
(Weighted Average of Pesos to the Dollar)

Year	Exports	Imports
1951	5.7	7.1
1952	6.5	7.1
1953	6.5	7.1
1954	6.6	7.3
1955	7.9	7.6
1956	19.2	16.2
1957	22.3	23.6

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[112] United Nations Economic Commission for Latin America, Economic Survey of Latin America, (New York: United Nations, 1957), 105.

[113] Ibid., 118.

APPENDIX C

An Expansion of Comparative Advantage Analysis

As noted in Chapter III, the economic development pattern of Argentina during its initial phase from the 1850's to 1929 followed the principles of comparative advantage. The principle of comparative advantage may be illustrated as follows. Assume two countries, A and B, each capable of producing two commodities, X and M domestically. As shown in Figure 6 on the following page, country A is better suited to produce commodity X due to its factor endowments, and country B is better suited to produce commodity M. This is shown by their respective production-possibilities curves--P_a-P_a for country A and P_b-P_b for country B. Given equal demand conditions in each country, the community indifference curves for each country are assumed to be equal. Thus, due to the difference in factor endowments, each nation has a comparative advantage in one commodity with regard to the other, and both countries may benefit from trade.[114]

Realizing that they have a comparative advantage due to their differing commodity price ratios (the slope of N-N' for A and R-R' for B), each nation moves along its production-possibilities curve in the direction of more specializaation in

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[114] Mordechai E. Kreinin, International Economics, (New York: Harcourt Brace Jovanovich, Inc., 1971), 212-214.

The Effects of Trade on Each Country

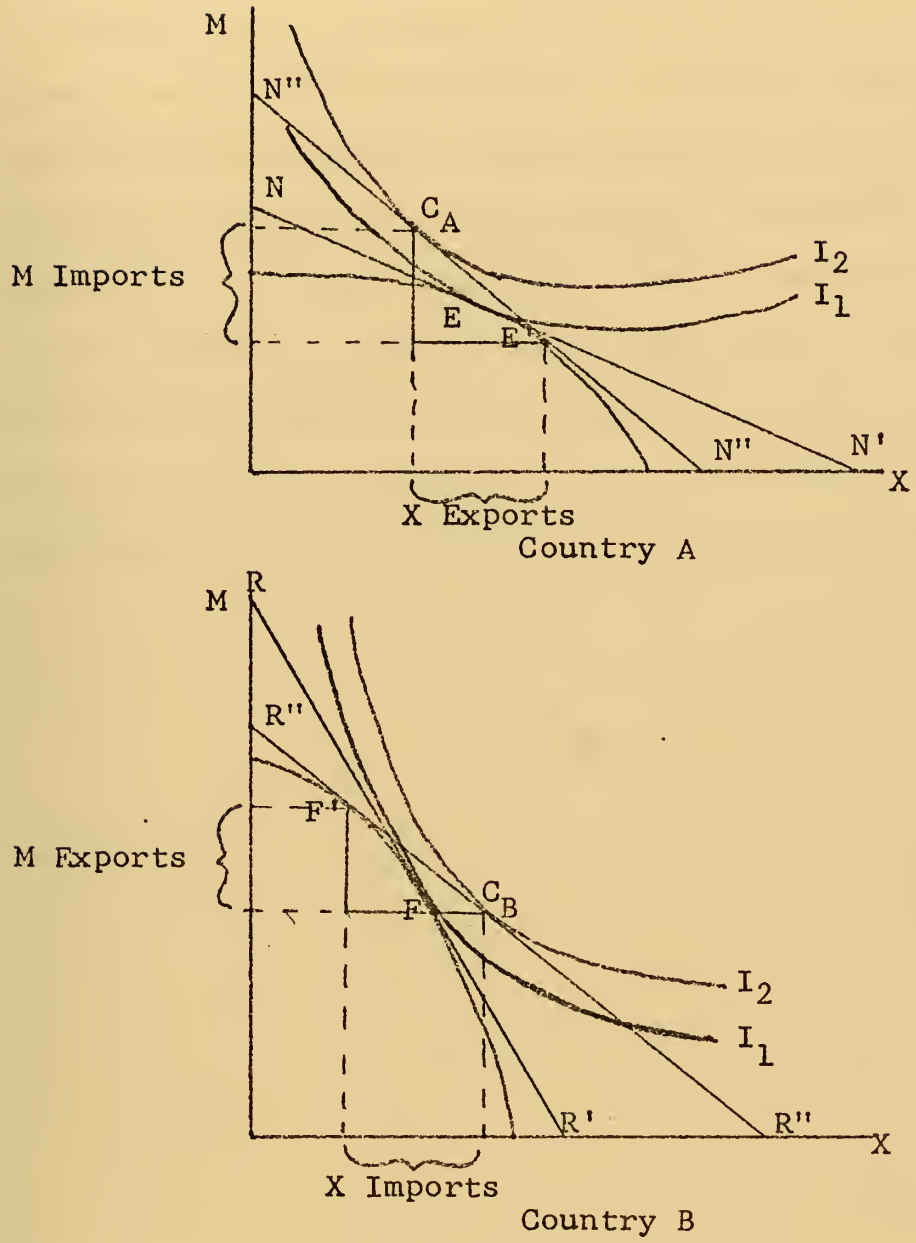

Figure 6.

the advantageous commodity (A from E to E' and B from F to F'). Post-trade equilibrium finds each nation consuming at a higher level of consumer utility (from I_1 to I_2 in each case), each importing whatever the other exports as shown by the braces in Figure 6. Thus, A produces at point E' and consumes at point C_A, while country B consumes at C_B and produces at F'. Trade, therefore, has allowed each nation to expand beyond its domestic pre-trade point of equilibrium and enabled the community to consume at a higher level of satisfaction while specializing in the production of that commodity offering the greatest degree of comparative advantage.

APPENDIX D.

Excerpts from Argentine Protection Laws[115]

1. Legislation and General Provisions

The general provisions relating to the promotion of Argentine industry are contained in . . . which authorizes the executive branch to grant special benefits and privileges to new industries installed in the country or to those already installed that undertake expansion programs.

2. Industrial Development by Sectors and Regions

The sectors of industry to be promoted throughout the country are the following: steel, the petrochemical industry, cellulose, building materials, and mining industries.

The sectors to be promoted in certain zones . . . are those which make use of raw materials originating in those zones and which contribute to the increase in exports of domestic manufactured products or which replace intermediary products.

3. Free Entry of Equipment

Decrees . . . regulate the entry of machinery intended to re-equip Argentine industry. The first decree provides for the entry, exempt from exchange surcharges . . . if the project meets the following requirements: a) that it will mean a greater utilization of domestic raw materials or semi-processed articles; . . . b) that it should benefit the balance of trade by replacing imports or developing new exports; c) that it will benefit the foreign exchange balance . . .

4. Preference for Argentine Products

. . . the national government and government -owned enterprises must purchase domestic materials if the price is reasonable . . . The cost of materials and products of domestic origin will be considered reasonable if it is not higher than the cost of foreign articles which . . . include the following elements: a) the C.I.F. value at an Argentine port; b) the current exchange surcharge; c) the taxes, excises, customs, duties, etc. that would be paid by an importer without

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[115] A Statement of the Laws Affecting Argentina, op. cit., 35-41.

privileges; d) the interest, commissions, and financing charges that a purchaser would pay if payment on time had been offered . . .; e) the income tax imposed on interest remitted abroad if chargeable to the purchaser.

5. Imports

Imports are free of import and exchange licensing . . . all imports except those from member countries of LAFTA are subject to a special tax of 5 percent . . . For import purposes, commodities are grouped in lists by the Central Bank according to their essentiality in local production. Surcharges of 20%, 40%, 80%, 100%, 150% and 200% are established . . . independently of the corresponding customs duties paid . . .

APPENDIX E

Table I

Argentina: Export-Import Performance[116]

Year	Exports	Imports	Difference
1956	943.8	1127.6	-183.8
1957	974.8	1310.4	-335.6
1958	993.9	1232.6	-238.7
1959	1009.0	993.0	16.0
1960	1079.2	1249.3	-170.1
1961	964.1	1460.4	-496.3
1962	1216.0	1356.5	-140.5
1963	1365.1	980.7	384.4
1964	1410.4	1077.2	333.2
1965	1493.4	1198.6	294.9
1966	1593.2	1124.3	468.9
1967	14641.5	1095.5	369.0
1968	1367.9	1169.2	198.7
1969	1611.0	1556.0	55.0

(In millions of $ U. S.)

Table II.

Argentina: Output of Principal Agricultural Commodities, 1960/61 and 1966/67-1968/69[117]

Commodity	1960-61	1966-67	1967-68	1968-69
Wheat	4200.0	6247.0	7320.0	5740.0
Maize	4850.0	8510.0	6560.0	6860.0
Linseed	562.0	577.0	385.0	570.0
Oats	843.0	540.0	690.0	490.0
Alfalfa	6453.0	6214.0	5404.0	6165.0
Sugar Cane	9650.0	8576.0	9500.0	9800.0
Wine Grapes	2082.9	3485.9	2455.8	2013.8
Beef Cattle	2145.1	2522.0	2545.8	2835.0

(Thousands of Tons)

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[116] America En Cifras, 1970: Situacion Economica: 3. Commercio, Transportes, Comunicaciones, y Turismo, (Washington: Organization of American States, 1970), 12.

[117] ECLA, Economic Survey of Latin America, (New York: United Nations, 1969), 106.

Table III.

Argentine Exchange Rates[118]
(Pesos / U. S. $1.00)

Year	Rate of Exchange
1963	132.50
1964	150.90
1965	188.50
1966	247.30
1967	350.00
1968	350.00
1969	350.00
1970	400.00

Table IV.

Argentina: Movement of Industrial Wages[119]
(1960 = 100)

Year	Basic Statutory Wages		Real Wages	
	Skilled Worker	Unskilled Worker	Skilled Worker	Unskilled Worker
1960	100.0	100.0	100.0	100.0
1961	126.3	124.1	111.1	109.1
1962	158.2	155.1	110.2	108.1
1963	197.7	194.1	109.4	107.4
1964	256.1	256.1	116.0	116.0
1965	343.6	348.2	121.1	122.7
1966	460.2	464.3	122.9	124.0
1967	598.9	602.0	123.8	124.5
1968	668.6	672.1	118.9	119.6
1969	732.7	739.1	121.2	122.2

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[118] America En Cifras 1970: Situacion Economica: 4. Balanzas de Pagos, Producto, e Ingreso Nacional, (Washington: Organization of American States, 1970), 216.

[119] ECLA, Economic Survey of Latin America, 1969, op. cit. 109.

Table V.[120]

Argentine Consumer Price Index
(1963 = 100)

Year	Index
1960	55.3
1961	62.8
1962	80.4
1963	100.0
1964	122.1
1965	157.1
1966	207.1
1967	267.6
1968	311.0
1969	334.6

Table VI.[121]

Argentina: Rates of Growth and Inflation
(Annual Percentage Changes)

Year	Gross Domestic Product	Cost of Living
1956	1.7%	13.4%
1957	5.5%	24.7%
1958	7.2%	31.6%
1959	-5.8%	113.7%
1960	8.0%	27.3%
1961	7.0%	13.5%
1962	-1.8%	28.1%
1963	-3.6%	24.1%
1964	8.1%	22.1%
1965	7.8%	28.6%
1966	-1.0%	32.3%

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[120] America En Cifras 1970: Situacion Economica: 5. Precios, Salarios, Consumo y Otros Aspectos Economicos, (Washington: Organization of American States, 1970), 45.

[121] Gilbert W. Merkx, op. cit., 107.

APPENDIX F

An Expansion of Export Supply Elasticity

As stated in Chapter III, national export position with respect to market share is directly related to the elasticity of export supply with respect to domestic demand for the exported commodity, and inversely related to the country's share in the world market for the export commodity. Initially, the volume of exports may be defined as the difference between the quantity of the commodity supplied domestically and the quantity demanded domestically. If Q_x equals the export supply, Q_s euqals the domestic supply of the exported commodity, and Q_d equals the domestic demand for the export commodity, then:

$$Q_x = Q_s - Q_d \qquad (6)$$

The definition of the elasticity of demand for the export commodity equals the price of the commodity divided by the quantity of the commodity multiplied by the change in quantity of the commodity divided by the change in price of the commodity. This may be represented as follows:

$$E_x = \frac{P_x}{Q_x} \cdot \frac{dQ_x}{dP_x} \qquad (7)$$

E_x equals the demand elasticity for the export commodity, and P_x equals the price of the commodity.[122]

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[122] James M. Henderson and Richard E. Quandt, Microeconomic Theory, (New York: McGraw-Hill, Inc., 1971), 27.

From the above definition of elasticity, the export supply elasticity of the commodity may be derived as follows[123]

$$E_x^s = \frac{P_x}{Q_x} \cdot \frac{\Delta Q_x}{\Delta P_x} = \frac{P_x}{Q_x} \cdot \frac{\Delta(Q_s - Q_d)}{\Delta P_x} = \frac{P_x}{Q_x} \cdot \frac{\Delta Q_s}{\Delta P_x} - \frac{P_x}{Q_x} \cdot \frac{\Delta Q_d}{\Delta P_x} \quad (8)$$

Multiplying and dividing the first term by Q_s and the second term by Q_d, the export supply elasticity is transformed as follows:

$$E_x^s = \frac{\frac{P_x}{Q_s} \cdot \frac{\Delta Q_s}{\Delta P_x} \cdot Q_s}{Q_x} - \frac{\frac{P_x}{Q_d} \cdot \frac{\Delta Q_d}{\Delta P_x} \cdot Q_d}{Q_x} = \frac{e_s \cdot Q_s}{Q_x} - \frac{e_d \cdot Q_d}{Q_x} \quad (9)$$

Once the supply of the export commodity is determined, its share of the world market is inversely proportional to the world elasticity of demand for the commodity. If W equals the world demand for a given product and C equals the amount of the commodity exported by one country. If N_x equals the world demand elasticity for the exports of a particular country, then:[124]

$$N_x = \frac{-P_x}{W-C} \cdot \frac{\Delta(W-C)}{\Delta P_x} = -\left[\frac{P_x}{W-C}\right] \cdot \frac{\Delta W}{\Delta P_x} - \frac{P_x}{W-C} - \left[\frac{\Delta C}{\Delta P_x}\right] \quad (10)$$

Multiplying and dividing the first term by W and the second term by C:

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[123] Analysis of the export supply elasticity taken from Kreinin, op. cit., 354.

[124] Analysis of the world export elasticity taken from Kreinin, op. cit., 354.

$$N_x = \frac{W(-{}^{P}x/W)\ (\Delta W/\Delta P_x)}{W-C} + \frac{C({}^{P}x/C)\ (\Delta C/\Delta {}^{P}x)}{W-C} \qquad (11)$$

$$= \frac{W}{W-C} \cdot N_w + \frac{C}{W-C} \cdot e_c \qquad (12)$$

Thus, the world's elasticity of demand for the exports of a country is equal to the ratio of the total world demand for the commodity to the export supply of that commodity from the country multiplied by the total world elasticity of demand for that commodity (N_w) plus the ratio of the exports of that commodity from all other suppliers to the export supply of the commodity from the country in question multiplied by the elasticity of export supply from the rest of the world (e_c). This implies that even if the total demand for a certain commodity is inelastic, the demand for one nation's exports of that commodity may be highly elastic if it has only a small share of the total market.

APPENDIX G

Translation of Sectors Represented in the Matrix of Technical Input Coefficients

Title of Table I: Matrix of Intersectoral Transactions of National Goods and Imports

Title of Table II: Matrix of Technical Coefficients of Inputs of National Goods and Imports

Sectors Represented:

1. Agriculture
2. Livestock
3. Forestry, Hunting, Fishing
4. Mining
5. Fuel and Electricity
6. Foods and Beverages
7. Meats
8. Tobacco
9. Textiles
10. Handicrafts
11. Lumber
12. Paper and Cardboard
13. Printing and Publishing
14. Chemicals
15. Rubber
16. Leather
17. Stone, Glass, and Ceramics
18. Metals
19. Ironworks
20. Vehicles and Machinery
21. Automobiles and Tractors
22. Electrical Appliances and Machinery
23. Other Industries
24. Reclamation
25. Construction
26. Commerce
27. Transportation

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[125] Input-Output tables taken from Actualization de la Matriz de Insumo-Producto, op. cit., 178, 180.

28. Other Services

II. Imported Goods

III. Factors of Production: Gross Value Added at Market Prices

IV. Total Gross production and Final Demand

TABLE I.

MATRIZ DE TRANSACCIONES INTERSECTORIALES DE BIENES NACIONALES E IMPORTADOS
A PRECIOS DE USUARIO - AÑO 1960 (en millones de m$n)

A - DEMANDA INDUCIDA

Sectores de origen de bienes nacionales, bienes importados y factores de producción	1 Agricultura	5 Combustibles y electricidad	6 Alimentos y bebidas	7 Carnes	8 Tabaco	9 Textiles	10 Confecciones	11 Madera	12 Papel y cartón	13 Imprenta y publicaciones	14 Productos químicos	15 Caucho	16 Cuero	17 Piedras, vidrio y cerámica	18 Metales	19 Siderurgia
I Sectores de Origen de Bienes Nacionales																
1 agricultura	3841.6	-	39 6[illegible]	[illegible]	1.137.2	3791.5	2.8	27.8	106.4	-	1200.3	-	1.6	48.4	4.8	-
2 ganadería	-	-	11.637.2	57442.[illegible]	-	2850.3	0.8	2.7	0.8	-	67.1	0.3	11.4	-	-	-
3 silvicultura, caza y pesca	-	-	[illegible]	-	-	71.1	3.9	1161.7	78.5	-	413.0	64.1	206.0	2.4	-	-
4 minería	-	-	9.2	103.4	0.1	3.7	1.6	1.8	69.0	0.6	1161.0	8.1	39.9	1.239.7	927.3	1.[illegible]4
5 combustibles y electr.	2,188.0	6.893.[illegible]	3.41[illegible]	644.[illegible]	38.0	1817.0	250.7	307.0	657.0	262.8	4471.3	430.9	283.0	1.627.8	1.620.3	1.9?0.0
6 alimentos y bebidas	-	-	25.54[illegible]	202.0	18.2	49.4	-	25.1	454.6	-	1506.2	-	301.1	11.3	-	-
7 carnes	-	-	862.3	2113.6	-	21.0	-	-	-	-	2182.2	-	3863.3	73.7	-	-
8 tabaco	-	-	-	-	786.3	-	-	-	-	-	-	-	-	-	-	-
9 textiles	130.1	-	68.1	184.0	-	22918.2	14277.6	149.9	81.4	68.4	92.6	1427.4	366.0	28.2	138.9	2.2
10 confecciones	3188.8	-	864.2	-	-	179.6	4404.7	17.8	-	-	130.2	24.8	70.1	2.360.0	2.9	-
11 madera	946.6	418.1	1.636.8	267.9	4.1	36.8	80.8	1844.6	41.5	25.7	286.1	18.2	44.4	147.8	390.5	6.9
12 papel y cartón	88.9	938.7	1 311.4	128.2	671.7	302.8	208.1	33.6	4261.7	1608.4	1669.0	170.0	170.1	464.1	176.9	41.1
13 imprenta y publicaciones	-	144.[illegible]	907.[illegible]	24.4	31.8	158.9	178.4	42.2	653.3	199.7	[illegible]	47.0	21.7	87.8	406.1	6.8
14 productos químicos	877.7	1.070.9	2.[illegible]	218.6	99.8	4479.1	142.1	278.8	1024.3	308.8	10465.6	478.0	606.0	349.7	752.3	201.9
15 caucho	103.9	468.8	82.4	[illegible]	2.0	28.9	36.7	24.1	11.7	13.7	76.9	1064.0	111.9	16.4	104.0	74.0
16 cuero	88.8	301.8	-	0.1	-	81.7	693.2	168.3	17.[illegible]	23.9	57.9	133.6	5985.0	2.3	89.3	3.2
17 piedras, vidrio y cerámica	88.0	118.3	1.502.7	2.3	1.1	14.7	10.8	144.3	7.1	14.8	1262.9	14.4	28.8	2.883.7	197.5	163.0
18 metales	183.8	1.230.[illegible]	1.047.9	26.[illegible]	21.6	14.8	174.8	640.3	79.0	70.9	934.9	124.4	233.7	80.2	11368.4	2.161.9
19 siderurgia	-	-	261.3	270.7	7.2	121.7	21.8	109.3	39.6	47.3	269.8	28.7	83.8	161.8	10228.9	-
20 vehículos y maquinarias	282.8	1.389.0	677	33.1	13.0	145.8	127.8	208.7	38.0	17.6	366.7	28.2	120.4	110.8	1.507.9	677.8
21 automotores y tractores	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 maquinaria y ap. electr.	-	2 843.6	10.4	8.8	2.4	32.4	22.9	44.8	8.8	18.9	65.8	4.9	22.3	20.7	955.0	50.4
23 otras industrias	-	6.7	[illegible]	2.8	0.8	180.3	235.7	86.5	87.8	12.2	632.1	45.9	178.9	36.0	722.7	53.8
24 materiales de recuperación	-	-	-	-	-	30.1	18.1	52.8	878.3	-	-	41.9	-	284.7	1.512.6	894.6
25 construcciones	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 comercio	11.111.8	2.368.4	18.83[illegible].6	14992.0	1182.8	18841.0	11169.0	22367	3410.1	4025.8	9712.1	8863.6	5320.8	3.098.6	8.489.4	848.4
27 transporte	7.794.0	8.13[illegible].7	9.881.4	4832.5	702.8	3602.0	2138.6	1411.7	789.9	809.4	3607.8	998.9	744.8	2.180.6	3.687.9	1.468.6
28 otros servicios	8.6310	3027	2.177.3	1030.8	102.8	1420.3	716.4	478.8	182.2	317.2	1843.8	188.4	222.6	705.7	1.414.9	848.9
Sub-total de Bienes Nacionales	63.1868	20.287.2	119439.0	821[illegible]	6471.9	68 863.3	40383.4	13277.9	12806.4	7938.8	41186.8	8039.6	16859.7	17.974.9	40.094.8	8.7?0.7
II Bienes Importados a Precios de Usuario	2944	13.481.2	3.157.8	9[illegible].6	177.9	2.750.8	2366.1	1809.9	1360.7	2762.8	8821.0	3618.8	98.8	1.356.8	11.[illegible]96.8	7.[illegible].0
Sub total de Bienes Nacionales e Importados	43.441.2	33.738.4	122.59[illegible].8	8231.2	4649.8	71.804.1	43749.8	14787.8	14167.3	10691.3	50008.5	11695.1	16958.2	19.330.7	54.481.4	16.148.7
III Factores de la Producción Valor Agregado Bruto a Precios de Mercado	64.490.8	51.706.9	37676.7	21[illegible]	10.[illegible]4	33190.7	14693.8	11.157.6	6414.4	6438.1	21[illegible]1	8670.4	1278.8	10.493.1	16.630.[illegible]	9.[illegible]81.8
IV TOTAL Producción Bruta y Demanda Final a Precios de Usuario	129.9[illegible]	85 445.[illegible]	16[illegible]	[illegible]	[illegible]	[illegible]	[illegible]3.0	26045.4	39.581.7	16129.4	70201.[illegible]	17.365.8	25366.8	29.823.7	71.111.7	25.[illegible]90.5

Sectores de origen de bienes nacionales, bienes importados y factores de producción	20 Vehículos y maquinarias	21 Automotores y tractores	22 Maquinaria y aparatos electr.	23 Otras industrias	24 Materiales de recuperación	25 Construcciones	26 Comercio	27 Transporte	28 Otros servicios	Total demanda inducida	B-DEMANDA AUTONOMA: Consumo personal	Consumo del gobierno	Inversión bruta fija	Variación de existencias	Discrepancia estadística	Exportaciones	Total demanda final	Demanda total (A+B)
I Sectores de Origen de Bienes Nacionales																		
1 agricultura	-	-	-	842.8	-	669.0	18.3	-	-	69.04[illegible].6	17.662.4	1.040.6	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2 ganadería	-	-	-	6.4	-	-	-	-	-	71.817.2	1[illegible].328.5	193.7	-	6664.[illegible]	747.1	118.8	31101.6	103 1[illegible]
3 silvicultura, caza y pesca	-	-	-	27.1	-	851.1	-	58.9	93.[illegible]	5.740.8	963.0	-	-	-3.5[illegible]	-644.3	330.3	[illegible]	[illegible]
4 minería	1.4	-	1.6	108.7	-	4.383.8	5.0	78.3	86.0	9.[illegible]74.9	-	21.8	-	-2264.2	-409.5	276.3	-2374.4	[illegible]
5 combustibles y electr.	-2[illegible]31.6	447.4	1.842.4	1.016.0	-	1.[illegible]07.7	4.733.8	20.519.5	3.678.5	62.[illegible]17.4	17.731.9	4.308.9	-	1.[illegible]18.2	-	[illegible]	[illegible]	[illegible]
6 alimentos y bebidas	-	-	-	125.6	-	-	-	692.9	-	28.064.9	28.612.9	2.1[illegible]9.1	-	4.8[illegible]6.4	-7848.7	9.018	[illegible]	[illegible]
7 carnes	-	-	-	5.0	-	-	-	-	-	6 713.5	65.604.2	1.115.1	-	-	[illegible]	2316.4	[illegible]	[illegible]
8 tabaco	-	-	-	-	-	-	-	-	-	786.3	14.210.9	-	-	-352.7	34.6	70.3	14257.3	15044.[illegible]
9 textiles	134.7	217.1	128.3	301.5	-	-	299.0	365.3	193.[illegible]	28.621.5	41.877.6	995.7	457.6	8871.[illegible]	-6714.[illegible]	3703.4	[illegible]	[illegible]
10 confecciones	23.0	-	19.3	[illegible]	-	-	-	[illegible]	103.0	12.069.1	40.488.4	1.048.2	187.9	857.[illegible]	-632.2	20.7	44683.[illegible]	56743.0
11 madera	616.4	-	862.7	164.8	-	2.389.3	480.0	92.3	847.1	13.155.6	7.756.3	648.4	1.914.2	1308.2	1157.4	5.[illegible]	12890.0	26045.4
12 papel y cartón	71.9	248.6	88.[illegible]	183.0	-	9.8	[illegible].015.0	914.6	621.7	35.721.1	1.673.3	931.9	-	2164.3	-9234	18.5	[illegible]	[illegible]
13 imprenta y publicaciones	311.3	80.5	335.8	92.9	-	-	2.137.0	633.0	1.409.0	5.75[illegible].7	7.754.2	1.653.[illegible]	-	1250	-872.0	53.7	10.376.2	[illegible]
14 productos químicos	813.0	1.376.8	474.5	2.453.1	-	962.3	178.0	579.8	1.581.0	31.582.5	35.531.6	1.476.1	-	3832.6	-4536.8	8032.4	[illegible]	[illegible]
15 caucho	482.8	2.632.8	597.0	65.7	-	87.1	128.0	1.584.6	122.4	12.165.6	8.137.2	367.8	-	830.7	-1849.1	3.6	5164.9	17.365.[illegible]
16 cuero	166.3	31.1	170.8	182.1	-	-	142.0	41.2	11.3	8.381.3	[illegible]783.9	107.7	408.0	149.8	526.1	149.[illegible]	17.625.3	[illegible]
17 piedras, vidrio y cerámica	184.2	102.1	188.9	136.7	-	12.166.2	130.0	141.3	594.5	19.949.0	-718.3	311.8	206.7	1766.1	2849.5	2.3	9874.7	[illegible]
18 metales	3.8[illegible]7.1	-	6.249.1	562.3	-	9.521.9	286.0	402.3	402.5	[illegible]1677.2	[illegible]593.1	1.676.3	6.313.1	8081.5	-123.6	892.3	[illegible]	71.111.7
19 siderurgia	5.400.3	8.491.1	1.044.1	158.0	-	3.095.3	-	-	-	[illegible]	-	-	-	-	-4198.6	-	-4198.4	25 [illegible]
20 vehículos y maquinarias	7.[illegible]79.1	1.179.5	4.270.1	141.9	-	1.987.9	[illegible]	23.141.8	421.3	56.965.0	9866.8	1.231.0	28.938.8	4255.2	-7150.7	83.8	37316.8	[illegible]
21 automotores y tractores	-	-	-	-	-	-	-	-	-	-	7.394.3	-	36.199.9	-	-0.4	0.4	43.593.[illegible]	43.593.9
22 maquinaria y ap. electr.	525.3	2.220.8	1.108.8	84.5	-	2.70[illegible].1	135.0	220.8	285.4	11.399.8	23.892.3	848.8	12.830.3	748.8	-1977.6	89.4	[illegible]	[illegible]
23 otras industrias	903.2	-	251.8	823.9	-	86.6	714.0	174.5	880.5	4.710.8	14.312.0	251.8	1.608.0	201.3	1186.2	74.8	16.53[illegible]	21.2[illegible]
24 materiales de recuperación	58.6	-	37.2	1.0	-	-	-	-	-	3.198.0	-	-	-	-398.9	398.7	0.8	[illegible]	[illegible]
25 construcciones	-	-	-	-	-	-	-	-	-	-	-	-	57765.0	134.4	-134.4	-	57765.0	57765.0
26 comercio	4.932.8	8.000.0	7.818.2	2.297.9	-	-	-	-	-	154042.7	-	-	-	-	-2456.9	49662.8	47293.3	[illegible]
27 transporte	1.769.8	999.9	2.174.4	180.9	-	-	3.194.0	2201.1	948.2	70542.9	24873.5	1029.9	-	-	4891.8	6623.0	37217.3	[illegible]
28 otros servicios	2.160.4	776.1	1.221.1	406.6	-	960.3	14.695.0	4826.3	8117.6	62088.8	102407.9	363.9	471.9	-	-5739.2	88.0	[illegible]	[illegible]
Sub-total de Bienes Nacionales	30.999.0	23.867.4	27.785.6	10.376.8	-	41.150.9	29.485.6	54742.0	20807.8	839253.0	610000.1	26574.1	177091.8	46768.6	-27107.6	145667.3	[illegible]	[illegible]
II Bienes Importados a Precios de Usuario	11.976.1	5.901.4	7.010.9	1.837.9	-	5.027.1	-	127.3	197.8	94278.0	9653.6	1887.6	49452.[illegible]	19418.6	-	-	80560.0	[illegible]
Sub total de Bienes Nacionales e Importados	[illegible]	30.768.8	34.796.5	12.212.5	-	46.178.0	29.41[illegible].6	54869.3	21005.4	933531.0	619653.7	[illegible]	226543.8	66182.0	-27107.6	145667.3	[illegible]	[illegible]
III Factores de la Producción Valor Agregado Bruto a Precios de Mercado	31.506.5	12.828.1	12.232.1	9.033.9	3.201.6	41.587.0	71.900.4	51190.9	131879.9	886713.3	-	64924.1	-	-	-	-	64924.1	[illegible]
IV TOTAL Producción Bruta y Demanda Final a Precios de Usuario	74.481.8	43.593.9	47028.6	21246.4	3.201.6	87.765.0	[illegible]	[illegible]	[illegible]	1820244.3	619653.7	93358.0	226543.8	66182.0	-27107.6	145667.3	[illegible]	[illegible]

MATRIZ DE COEFICIENTES TECNICOS DE INSUMOS DE BIENES NACIONALES E IMPORTADOS

AÑO 1960

(por millón de m$n de producción sectorial)

TABLE II.

SECTORES DE ORIGEN DE BIENES NACIONALES BIENES IMPORTADOS Y FACTORES DE PRODUCCION	1 Agricultura	2 Ganadería	3 Silvicultura caza y pesca	4 Minería	5 Combustibles y electricidad	6 Alimentos y bebidas	7 Carnes	8 Tabaco	9 Textiles	10 Confecciones	11 Madera	12 Papel y cartón	13 Imprenta y publicaciones	14 Productos químicos
I Sectores de origen de los Bienes Nacionales														
1 agricultura	49546	176082	3603	-	-	248806	804	66949	36288	44	1056	54	-	17238
2 ganadería	-	-	-	-	-	72807	541512	-	34408	14	109	1	-	957
3 silvicultura, caza y pesca	-	-	44110	[illegible]	-	4220	-	-	880	66	121192	[illegible]	-	6090
4 minería	-	-	-	-	-	883	982	9	38	27	58	[illegible]	[illegible]	16162
5 combustibles y electricidad	18226	8473	42064	147830	80873	21174	5156	2393	17388	3927	15243	4379	13743	36253
6 alimentos y bebidas	-	18530	618	-	-	140776	1914	1276	473	-	964	[illegible]	-	21487
7 carnes	-	-	-	-	-	6319	20030	-	209	-	-	-	-	31129
8 tabaco	-	-	-	-	-	-	-	82264	-	-	-	-	-	-
9 textiles	1001	-	3881	697	-	428	1764	-	316692	309410	5755	[illegible]	3676	1121
10 confecciones	24317	983	-	4438	-	5362	-	-	1721	75880	672	-	-	1097
11 madera	4199	929	43881	2288	7236	8606	8830	273	343	1378	128408	[illegible]	[illegible]	4081
12 papel y cartón	222	109	496	200	6270	8184	1216	31384	2948	3881	1290	[illegible]	[illegible]	[illegible]
13 imprenta y publicaciones	-	-	876	343	1616	3747	231	2114	1521	2988	1020	[illegible]	[illegible]	[illegible]
14 productos químicos	4785	14315	4747	13468	12833	14551	8072	6634	42826	2416	10704	[illegible]	17545	[illegible]
15 caucho	800	638	1410	3000	5847	516	88	113	257	808	925	567	716	1077
16 cuero	222	249	-	-	3828	-	1	-	762	11801	6347	894	1243	[illegible]
17 piedras, vidrio y cerámica	608	827	-	567	1348	5394	82	73	141	180	5540	[illegible]	74	[illegible]
18 metales	1815	2811	3890	[illegible]	[illegible]	[illegible]	284	1838	136	2972	24884	[illegible]	3706	[illegible]
19 siderurgia	-	-	-	-	-	1564	2822	479	1168	344	4197	[illegible]	2184	944
20 vehículos y maquinarias	2172	1391	3702	9370	16264	[illegible]	314	984	1370	2176	[illegible]	[illegible]	4889	[illegible]
21 automotores y tractores	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 maquinaria y ap. electr.	-	87	132	4314	30937	663	49	164	310	[illegible]	[illegible]	[illegible]	1493	934
23 otras industrias	-	-	1687	87	70	588	27	53	[illegible]	4013	4284	2917	638	7593
24 materiales de recuperación	-	-	-	-	-	-	-	-	[illegible]	274	1016	[illegible]	-	-
25 construcciones	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 comercio	163469	87235	79378	13870	27718	116872	142073	77274	161166	227982	[illegible]	174147	210637	[illegible]
27 transporte	88988	71724	253106	404986	24460	61527	48796	48702	34471	36372	[illegible]	[illegible]	44312	[illegible]
28 otros servicios	20264	28741	18675	9156	3843	13685	9767	9813	[illegible]	12195	16083	[illegible]	16582	[illegible]
Sub-total de Bienes Nacionales	332149	410081	618840	601843	537078	745206	779191	277261	659916	695970	[illegible]	[illegible]	415105	[illegible]
II Bienes importados a Precios de Usuario	2169	4	-	867	167776	19702	906	11095	[illegible]	48790	41811	6897	[illegible]	128446
Sub-total Bienes Nacionales e importados	[illegible]	410085	618840	602500	[illegible]	[illegible]	780097	288076	686241	744760	171609	[illegible]	[illegible]	[illegible]
Factores de la Producción: Valor Agregado Bruto a Precios de Mercado	[illegible]	[illegible]	381160	397200	[illegible]	[illegible]	219903	[illegible]	314759	255240	[illegible]	27701	[illegible]	[illegible]
Valor de la Producción Bruta y Remesas [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SECTORES DE ORIGEN DE BIENES NACIONALES BIENES IMPORTADOS Y FACTORES DE PRODUCCION	15 Caucho	16 Cuero	17 Piedras vidrio y cerámica	18 Metales	19 Siderurgia	20 Vehículos y maquinarias	21 Automotores y tractores	22 Maquinaria y ap. electr.	23 Otras industrias	24 Materiales de recuperación	25 Construcciones	26 Comercio	27 Transporte	28 Otros servicios
I Sectores de origen de los Bienes Nacionales														
1 agricultura	-	02	1516	67	-	-	-	-	11628	-	3901	868	-	-
2 ganadería	17	439	-	-	-	-	-	-	207	-	-	-	-	-
3 silvicultura, caza y pesca	3891	6000	80	-	-	-	-	-	1276	-	4097	-	344	614
4 minería	121	1637	78098	13040	4764	19	-	38	6116	-	49949	29	363	536
5 combustibles y electricidad	24814	10128	38101	22786	74682	49942	10263	28418	47820	-	13761	[illegible]	104890	[illegible]
6 alimentos y bebidas	-	11844	379	-	-	-	-	-	15328	-	-	-	8418	-
7 carnes	-	133374	1471	-	-	-	-	-	311	-	-	-	-	-
8 tabaco	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 textiles	82197	14868	78	1926	1253	1808	7292	2877	14161	-	-	1469	3381	1346
10 confecciones	1434	2700	[illegible]	39	-	309	-	410	1856	-	-	-	3939	874
11 madera	1048	1710	4934	6461	2216	8276	-	11985	17154	-	27226	2284	884	5541
12 papel y cartón	9790	6551	15561	[illegible]	1600	984	6585	1876	7872	-	109	10003	8848	4084
13 imprenta y publicaciones	[illegible]	436	1938	3894	7211	4180	1158	3136	4375	-	-	10808	5888	11832
14 productos químicos	27411	23418	11728	10879	7054	8230	31559	17090	116870	-	10368	884	5383	10074
15 caucho	[illegible]	4309	560	1662	[illegible]	9479	80094	12894	4034	-	992	1132	61880	801
16 cuero	[illegible]	[illegible]	77	1264	125	2233	713	3828	8891	-	-	708	381	128
17 piedras, vidrio y cerámica	829	1098	90321	2277	6345	1473	2342	4010	8434	-	130822	846	[illegible]	[illegible]
18 metales	7164	[illegible]	4019	187492	84152	51517	-	132879	17082	-	109490	1420	2798	3524
19 siderurgia	1460	[illegible]	8446	145246	-	[illegible]	194778	22201	7437	-	35288	-	-	-
20 vehículos y maquinarias	1644	4837	3708	21200	22980	97731	27067	90798	6479	-	[illegible]	2934	40123	2734
21 automotores y tractores	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 maquinaria y ap. electr.	782	869	194	13430	1982	7003	[illegible]	23213	1365	-	31826	470	4043	1887
23 otras industrias	2843	6770	1207	3132	2094	6734	-	5394	38778	-	759	1088	2540	3792
24 materiales de recuperación	2340	-	4546	21271	23137	746	-	791	47	-	[illegible]	-	-	-
25 construcciones	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 comercio	[illegible]	208498	100798	77184	[illegible]	62193	114646	161946	101154	-	-	-	-	-
27 transporte	57390	[illegible]	73115	81861	87068	[illegible]	22937	44238	[illegible]	-	-	16854	[illegible]	4202
28 otros servicios	10670	8572	[illegible]	19893	22184	28737	17800	25985	19434	-	10942	[illegible]	[illegible]	53098
Sub-total de Bienes Nacionales	[illegible]	715903	[illegible]	608016	[illegible]	416197	847494	540823	[illegible]	-	471154	[illegible]	508888	[illegible]
II Bienes importados a Precios de Usuario	[illegible]	[illegible]	45161	140123	[illegible]	140793	168311	149077	[illegible]	-	[illegible]	-	1178	1242
Sub-total Bienes Nacionales e importados	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]
Factores de la Producción: Valor Agregado Bruto a Precios de Mercado	[illegible]	280000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	425197	1000000	[illegible]	[illegible]	[illegible]	[illegible]
Valor de la Producción Bruta y Remesas [illegible]	1000000	1000000	1000000	1000000	1000000	1000000	1000000	[illegible]	1000000	1000000	[illegible]	1000000	1000000	1000000

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13. ABSTRACT

This paper analyzes the pattern of Argentine economic development from the mid-nineteenth century until the present day. Initially, an overview of the Argentine developmental experience is given, emphasizing the three general phases of Argentine economic development - 1) agricultural export dominance, 2) industrialization through import substitution, and 3) the present state of cyclical economic crises and domestic instability. Secondly, the phases of development are examined from an economic viewpoint to determine their cumulative effects upon the Argentine economic structure. Finally, a model of Argentine "self-sufficiency" based on input-output analysis is presented as a point of departure for future developmental planning.

The results of the analysis point out the basic problems behind the present-day Argentine developmental structure and demonstrate the interactions of the various phases in their contribution to the existing cyclical instability. The model demonstrates a logical method for future sectoral analysis.

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