II.

DEPENDENT GROWTH AND MULTINATIONAL FIRMS IN BRAZIL

*WILLIAM G. TYLER**

1. Introduction

The theory of dependence presents one of the most original and interesting contributions to the analysis of development in recent years. The controversy generated by dependency theory is reminiscent of, and related to, that brought about with the Prebisch theses in the fifties and early sixties. The basic tenets of dependency theory have been widely accepted, perhaps as an article of faith, by many social scientists from Third World, particularly Latin American, countries.[1] In the developed countries economists have largely ignored dependency theories[2], but political scientists and sociologists have demonstrated some profes-

* University of Florida.

1 Some representative writings would include: Oswaldo Sunkel, "Capitalismo transnacional y desintegración nacional en la América Latina", *Trimestre Económico*, no. 150, April-June 1971, pp. 5716—628; Aníbal Pinto, "Notas sobre desarrollo, subdesarrollo y dependencia", *Trimestre Económico*, no. 154, April-June 1972, pp. 243—265; Fernando Henrique Cardoso & Enzo Faletto, *Dependencia y desarrollo en América Latina*, México D.F., Siglo XXI Editores, 1969; Theotonio dos Santos, "The Structure of Dependence", *American Economic Review*, vol. 60, no. 2, May 1970, pp. 231—236.

2 Two notable exceptions are Thomas E. Weisskopf, "Capitalism, Underdevelopment, and the Future of the Poor Countries", *The Review of Radical Political Economics*, Vol. 4, No. 1, Spring 1972, pp. 1—35 and Robert Le Roy West, "Economic Dependence and Policy in Developing Countries" in, C. Fred Bergsten and William G. Tyler, eds., *Leading Issues in International Economic Policy: Essays in Honor of George N. Halm*, Lexington, Massachusetts, D. C. Heath, 1973, pp. 157—184. With a couple of exceptions (including dos Santos, *op. cit.*) there has been little attention devoted to dependency theory in the major economics journals.

doi:https://doi.org/10.16993/ibero.281

sional interest,[3] perhaps a reflection of their greater awareness and professional interest in events and developments in the developing countries.

Like the earlier Prebisch theses, the theory of dependence stems from abstractions of the perceived Latin American experience and catalogues obstacles to development as arising from the relations of the Third World countries with the industrialized nations. In fact, in many ways dependency theory can be considered a lineal descendent of the Prebisch-ECLA doctrines of the 1950's, while at the same time being heavily influenced by Marxian economics and theory. Unlike the Prebisch theses, dependency theory transcends economics to provide a general explanation of underdevelopment, thus appealing to a larger constituency of social scientists but diluting the economic foundations of the theory.

The main tenets of dependency theory relate to the interrelationships between the developed and less developed countries. Such pressing development problems as stagnation, unemployment, income inequality, and regional disequilibria are all viewed as directly conditioned by the developing countries' position vis-á-vis the developed and capitalist world. The interactions between developed and less developed result in the dominance by the former and the underdevelopment of the latter. The condition of underdevelopment reinforces a constellation of political and economic ties thought to be inimical to growth and development.

To critically evaluate or "test" any theory one must address oneself to the central questions posed by the theory and its underlying assumptions. To deny the importance of the questions raised or to argue that others are more interesting is an inadequate approach. While there are perhaps as many dependency theories as dependency theorists, dependency theory, as indicated above, does possess some common features. The purpose of this paper is to examine the experience of one country — Brazil — in terms of three important postulates or predictions derived from dependency theory. These postulates are the contentions: (1) that crisis in the developed countries facilitates and strengthens development in the underdeveloped or dependent countries; (2) that growth and development in the dependent countries are rendered impossible by virtue of their dependency relationships; and (3) that foreign firm activities are unambiguously prejudicial to national development. We shall examine Brazil's changing dependency relationships, especially as they have evolved in the period following the 1964 military take-

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[3] See, for example, Susanne Bodenheimer, "Dependency and Imperialism: The Roots of Latin American Underdevelopment" in K. Fann and D. Hodges, eds., *Readings in U.S. Imperialism*, Boston, Porter Sargent, 1971 and James D. Cockcroft, André Gunder Frank, and Dale L. Johnson, *Dependence and Underdevelopment: Latin America's Political Economy*, Garden City, New York, Anchor Books, 1972. Three recent special issues of scholarly journals devoted to dependency are the *Journal of Inter-American Studies and World Affairs*, Vol. 15, No. 1, February 1973; *Social and Economic Studies*, Vol. 22, No. 1, March 1973; and *Latin American Perspectives*, Vol. 1, No. 1, Spring 1974.

over. Brazil serves as a good case study for an empirical examination of dependency theory because of its economic size and importance, the relatively advanced stage of its industrialization, its role as a forerunner and pioneer in development policies adopted by other countries, and the readily apparent foreign economic presence in its economy.

2. Capitalist Crisis and Adverse Shocks in Dependent Country Development

Since dependency theory argues that the dependency relationship of the less developed vis-á-vis the developed countries results in their underdevelopment and prevents their development, it logically follows that during periods of crisis in the world capitalist system the dependency ties are weakened and growth is rendered possible for the underdeveloped countries.[4] Accordingly, Frank contends that Latin American countries have registered their most impressive economic gains during periods of economic crisis for the developed countries — notably during the two world wars and the Great Depression.[5] In a sense, this is the same argument extended by other observers of Latin American industrialization but with a different interpretation of causality.[6]

A test of this particular postulate of dependency theory involves two separate parts. First, it is necessary to examine economic performance of individual underdeveloped countries to determine whether in fact growth and development in these countries did proceed at more rapid rates under international economic crisis conditions than otherwise. Second, if this proves to be the case, a more detailed analysis as to the causes and mechanics of the relative growth must be undertaken. If, on the other hand, higher rates of growth are not observed, the hypothesis that dependency weakening crisis in the capitalist center countries permits development and growth of the dependent areas can be rejected without further analysis.

In applying this test to Brazilian data, we first look at Brazil's industrialization and growth. Until very recently, the conventional wisdom interpretation of Brazilian industrialization has been that World War I, the Great Depression, and World War II — contrary to providing great economic difficulties — were

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4 For a statement of this argument see André Gunder Frank, "The Development of Underdevelopment" in Cockcroft et al., *op. cit.*

5 *Ibid*, p. 10.

6 See Celso Furtado, *The Economic Growth of Brazil: A Survey from Colonial to Modern Times*, Berkeley, University of California Press, 1965 and Alexandre Kafka, "The Theoretical Interpretation of Latin American Development", in Howard S. Ellis, ed., *Economic Development for Latin America*, New York, St. Martin's Press, 1963.

actually conducive to rapid industrial growth.[7] As such, this historical interpretation is consistent with dependency theory. In recent years, however, in addition to increasing revisionist interpretations,[8] data have become available to analyze the accuracy of the conventional wisdom and dependency interpretations.[9] Table I summarizes recently available information on rates of growth in Brazilian manufacturing and GNP for the last half century. As seen, during World War I, the Great Depression, and World War II economic growth was *less* than during preceding periods. Consequently it appears that, rather than being stimulated, Brazilian growth was retarded under the conditions of world economic crisis — especially during the two world wars.[10] Since for the dependency thesis postulate to be correct it is necessary that growth be greater with international capitalist crisis, an examination of the Brazilian data provides evidence for its rejection.

3. Growth in a Dependent Economy

A major tenet of dependency theory is that as dependency grows, development and growth are stifled, through the exploitative extension of the system of underdevelopment in the periphery. While there has been some intellectual backpedaling on this issue by dependency theorists familiar with Brazil, the contention that growth and increased dependence are inconsistent is still fundamental to most dependency theory. Economic growth of any significance or over any meaningful period of time is held to be impossible without political change of a progressive nature and a redistribution of income and wealth. Accepting for the moment the contention that dependency in Brazil has grown over the last 10—15 years, dependency theory would predict a consequent reduction in economic growth. Such, however, is not the case.

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7 This interpretation is that generally associated with Furtado, *ibid.*

8 See, for example, Carlos Manuel Peláez, *Historia da Industrialização Brasileira* Rio de Janeiro, APEC Editôra, 1972 and Warren Dean, *The Industrialization of São Paulo, 1880—1945,* Austin, University of Texas Press, 1969.

9 Annibal Villanova Villela and Wilson Suzigan, *Política do Governo e Crescimento da Economia Brasileira, 1889—1945,* Rio de Janeiro, IPEA/INPES, 1973. This volume reports the results of a massive research effort undertaken at the Fundação Getúlio Vargas to provide a quantitative examination of the period 1889—1945. Villela, Suzigan and their collaborators have developed detailed data time series for most of the period, which in turn provide a more complete picture of Brazilian industrialization and growth than previously available.

10 This conclusion is more evident from a more detailed and disaggregated study of these and other (namely investment) data. See Villela and Suzigan, *op. cit.* pp. 84—87. It should also be noted, however, that the Great Depression had only a minor immediate economic impact on Brazil and was of relatively short duration.

Table I

ANNUAL AVERAGE COMPOUNDED RATES OF MANUFACTURING PRODUCTION AND GNP GROWTH, SELECTED PERIODS

Period	Manufacturing Output Annual Average Growth Rate (%)	GNP[a] Annual Average Growth Rate (%)
1911—1913	3.5	n.a.
1913—1918	2.4	n.a.
1919—1929	1.6	3.9[b]
1929—1932	1.3	.5
1932—1939	11.8	5.7
1939—1945	5.4	3.2
1945—1962	8.0	6.9[c]
1962—1967	2.9	3.4
1967—1973	12.9	10.1
1932—1973	8.9	6.2[d]

Notes: [a] The 1947—73 periods list GDP growth.
[b] GNP growth rate refers to the period 1920—1929.
[c] GNP growth rate refers to the period 1947—1962.
[d] Author's estimates for GNP were made for 1946 and 1947.

Source: Calculations are based on data published in: Annibal Villanova Villela and Wilson Suzigan, *Política do Governo e Crescimento da Economia Brasileira, 1889—1945,* Rio de Janeiro, IPEA/INPES, 1973, pp. 432—436; Gustaf F. Loeb, *Industrialization and Balanced Growth: With Special Reference to Brazil,* Groningen, J. B. Wolters, 1957, p. 90; and *Conjuntura Econômica,* various issues.

The reduction of growth, predicted by dependency theory, has not occured. In fact, as can be seen in Table I, the Brazilian economy has enjoyed dramatic growth in recent years. For the period 1968—74 the growth of GDP averaged over 10 percent annually, with growth in the industrial sector spurring the rest of the economy.[11]

To be sure, the observed economic growth in Brazil has been very uneven. Without question Brazil's most pressing socio-economic problems are the underutilization of labor and the concommitant unequal distribution of income. To a very large extent these problems have been aggravated by the strategy of

[11] For discussions of the causes and nature of recent economic growth in Brazil see Stefan H. Robock, *Brazil: A Study in Development Progress,* Lexington, Massachusetts, D. C. Heath, 1975 and William G. Tyler, *Manufactured Export Expansion and Industrialization in Brazil,* Tübingen, J. C. B. Mohr, 1976.

industrialization pursued by the government, as evidenced by its industrial and other economic policies.

Reflecting the unevenness of Brazilian economic growth has been the observed increase in the degree of inequality in the distribution of income. The availability of the 1970 Demographic Census data has led to a spate of studies[12] of the distribution of income and particularly how the income distribution has changed as compared to the earlier comparable 1960 census year. These studies all demonstrate an increase in distributional inequality between 1960 and 1970. It should be noted, however, that the notion of income distribution is a *relative* concept. The poorest 20 or 40 percent of Brazilian househoulds did not experience a fall in their *absolute* real incomes but rather a decline in their share of total income. In other words, the income gains from Brazil's remarkable economic growth were concentrated in the hands of the relatively well-to-do.

If indeed sustained economic growth and increased dependency are inconsistent, as most dependency theorists would argue, how can the Brazilian experience be reconciled with this particular aspect of dependency theory. The answer is that it cannot be. Brazil's impressive growth record can not be denied or even dismissed lightly. On the other hand, one might be tempted to argue that dependence has lessened since 1964. This too seems on the surface to be incorrect.

There are several strains of evidence suggesting increased dependence. First, the authoritarian and repressive form of military government which has ruled Brazil since 1964 does not appear to be the type of government associated with the reduction of dependence in a capitalist international economic order. Second, the Brazilian external debt has grown dramatically, and such growth *ceteris paribus* suggests increased dependence, especially if continued capital inflows are necessary to meet amortization and servicing requirements. Third, throughout the post-war period the share of consumer goods imports in total imports has fallen, while the relative share of raw materials, such as petroleum and other important intermediate goods, and capital goods has increased. Consequently, Brazil's economy is now more dependent on its imports, and its sensitivity to changes in export earnings has increased. Fourth, the economy has become more open since 1964, as reflected in the increased ratio of exports to GDP. The fifth strain of evidence suggesting increased dependence of the Brazilian economy since 1964 concerns the expanded participation of foreign firms in the Brazilian industrial economy and the related increased reliance on foreign technology in the

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[12] These studies include: Albert Fishlow, "Brazilian Size Distribution of Income", *American Economic Review*, Vol. 62, May 1971, Papers and Proceedings, pp. 391—402; Rudolfo Hoffman and João Carlos Duarte, "A Distribuição da Renda no Brasil", *Revista de Administração de Empresas*, Vol. 12, No. 2, June 1972, pp. 46—66; and Carlos Geraldo Langoni, "Distribuição da Renda e o Desenvolvimento Econômico do Brasil", *Estudos Econômicos*, Vol. 2, No. 5, Dec. 1972, pp. 5—88.

process of industrial growth. The remainder of this paper will discuss this increased dependence and the role of multinational firms in the Brazilian economy.

4. Foreign Participation in the Brazilian Economy

Most dependency theory holds that foreign investment and foreign firm activities in developing countries are unambiguously detrimental to national growth and development. The Brazilian experience with foreign investment, in my view, presents no such clear case. In fact, on the contrary, the net effect of foreign participation may be to stimulate economic growth.

One of the major characteristics of post-war Brazilian economic growth has been direct foreign investment and the growth of the foreign presence in the national economy. This growth has accelerated in the boom period since 1967. While there is evidence of considerable foreign direct investment in the very early twentieth century,[13] such foreign participation seems to have become stabilized until after World War II. During the post-war period, however, the foreign presence has grown substantially, especially in the manufacturing sector. In the make-up of overall post-war Brazilian industrialization strategy, if indeed it consciously existed, the foreign firm was to exercise an important role. With the relative debility of domestic private manufacturing enterprise rapid industrial expansion came to rely upon foreign enterprise for capital, technology, and entrepreneurship. Inviting foreign firms in and providing a hospitable and profitable environment provided a way around the perceived gap between immediate domestic capabilities and the requirements of rapid industrialization, especially in those non-traditional industries where investments were large and lumpy and technical requirements great. To be sure, however, the extensive participation of foreign firms in Brazilian industrial growth has meant that foreign capital has exercised considerable influence in shaping the structure and composition of Brazil's manufacturing sector.

One of the major lures of the Brazilian economy was that of a highly protected and profitable domestic market. If the industrial development strategy of the 1950's and early 1960's had been more outward looking in nature rather than essentially autarkic, it is doubtful that Brazil would have attracted as much foreign investment as it did. Once foreign enterprise is established domestically it can be induced to export. However, barring any distinct natural advantages associated with particular factor endowments or circumstances, the attraction of

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[13] See Eric N. Baklanoff, "External Factors in the Economic Development of Brazil's Heartland: The Center-South, 1850—1930", Eric N. Baklanoff, ed., *The Shaping of Modern Brazil,* Baton Rouge, Louisiana State University Press, 1969, p. 26.

foreign capital to engage in export activity from the outset is much more problematic than that of a profitable domestic market. The infant industry argument applies in the attraction of foreign investment as well as in the economic justification for initial protection.

In addition to the prospect of a protected market, a number of incentives were provided during the 1950's for foreign firms to establish and expand manufacturing operations in Brazil.[14] These measures and the generally hospitable attitude of the Brazilian government towards foreign business have been successful in attracting multinational manufacturing corporations. Once established in Brazil these firms have prospered, resulting in substantial increases in the foreign economic presence and raising political questions of dependence and control. That the foreign participation in the economy is large and has grown can be demonstrated in a number of ways. First, from an examination of the direct foreign investment flows in the balance of payments accounts, it is evident that foreign investment has increased considerably in the post-war era.[15] From an average of about US $ 51 million for the period 1947—50 direct foreign investments plus reinvestments grew to $ 605 million in 1972. In contrast, for the entire 1930—1945 period such flows for manufacturing totaled only $ 58 million,[16] indicative of the relatively small foreign participation in Brazil's industrial expansion during that period. Rapid increases in the direct investment inflows were observed during the late 1950's, coinciding with the large automotive investments, and during the post-1968 economic boom.

A second way of gauging the size of foreign investment in Brazil is through an examination of existing data on accumulated foreign investment stocks. Foreign capital coming into Brazil is required by law to be registered with the Central Bank, as are reinvestments of earnings by foreign firms. Totaling up the registered foreign capital in Brazil as of the end of 1972, it was estimated to have a value of US $ 3,400 million.[17] At first glance this amount appears rather small. It was equal to only about 6.6 percent of GDP in 1972, and, assuming an

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14 For a good description of these incentives and the response of American firms to them see Lincoln Gordon and Engelbert L. Grommers, *United States Manufacturing Investment in Brazil. The Impact of Brazilian Government Policies, 1946—1960*, Cambridge, Massachusetts, Graduate School of Business Administration, Harvard University, 1962.

15 *Boletin do Banco Central*, Vol. 9, No. 5 (Maio 1973).

16 Alvaro A. C. Pignaton, "Capital Estrangeiro e Expansão Industrial no Brasil", Textos para Discussão No. 10, Departamento de Economia, Universidade de Brasília, Sept. 1973, p. 26. Pignaton's interesting study provides a wealth of otherwise relatively inaccessible statistical materials, notably Central Bank data on foreign investments.

17 *Boletin do Banco Central, op. cit.* Of this amount the largest portion was from the United States (37.4 percent). Other large investors were firms from West Germany (10.9 percent), Canada (9 percent), United Kingdom (8.3 percent), Switzerland (7.5 percent), and Japan (5.7 percent).

average capital output ratio of about two, represented only about 3.3 percent of total capital in Brazil. Yet this initial picture is highly misleading. First, owing to inadequate accounting procedures the $ 3,400 million figure is a substantial underestimate of foreign capital in Brazil. Based on information from the *Visão* micro data file described below, I estimate that in 1971 the total investment controlled by foreign interests amounted to about US $ 20 billion. Second, the measured foreign capital is concentrated in the most dynamic sectors of the economy. A full 82 percent of the $ 3,400 million was invested in manufacturing, with the greatest amounts being registered in the chemicals, transport equipment, electrical machinery and metallurgy industries. These industries have been among the fastest growing. Third, and similarly, the amounts of registered foreign capital have grown rather rapidly. At the end of 1969 the comparable figure for the amount of registered foreign capital in Brazil was only US $ 1,710 million.[18] Even discounting dollar inflation, the increase has been dramatic.

To avoid using the problematic Central Bank data, direct estimates of foreign firm participation can be made from individual firm data assembled and published by *Visão*.[19] For 1971 the *Visão* survey covered 1,953 firms in mining and manufacturing, providing information on assets, profits, sales, and other characteristics. While not exhaustive, it is felt that this survey of firms covers the great majority of the Brazilian manufacturing sector. Of the 1,953 firms sales data were reported for only 1,068, but these sales accounted about 60 percent of total estimated 1971 manufacturing output.[20] To examine the importance of the foreign firms' participation, the firms covered in the *Visão* survey were individually identified as government, foreign controlled, or domestically owned.[21] Respective shares of total assets and sales were made according to manufacturing industry and sub-industry groupings. The results of these calculations for 1971 are presented in Table II. Looking first at the assets shares, we see that in

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18 Frederick Z. Jaspersen, "Foreign Investment in Brazil", mimeographed paper written for AID, Rio de Janeiro, 1970.

19 "Quem é Quem na Economia Brasileira", *Visão*, Edição Especial, Vol. 41, No. 4, August 28, 1972, pp. 163—580. The basic data source for the *Visão* survey is corporate reports.

20 The estimates of 1971 manufacturing production were made by projecting the 1970 DEICOM survey estimates forward to 1971 with IPEA real manufacturing product indices with price adjustments made on the basis of the wholesale industrial price index. An additional adjustment was also made for the incomplete nature of the DEICOM survey.

21 Government firm identification was made on the basis of a listing of public enterprises contained in "Atividade Empresarial dos Govêrnos Federal e Estaduais", *Conjuntura Econômica*, Vol. 27, No. 6, June 1973, pp. 66—98. Foreign firm identification was made on the basis of an exhaustive and highly valuable study of foreign enterprise by Jean Bernet. See his *Guia Interinvest*, Rio de Janeiro, Interinvest Editôra, 1973. This useful volume contains not only a listing and description of all foreign firms doing business in Brazil but also provides something of a guide to international corporate interconnections.

manufacturing government firms controlled 18.5 percent, foreign firms 34.4 percent, and domestic firms 47.1 percent of total assets. For the total, government firms were important in mining, iron and steel, petrochemicals, and petroleum refinery and distribution. Foreign firms had a share in the assets of nearly all manufacturing activities. The greatest concentrations of foreign enterprise were to be found in tobacco (98 percent), machinery (68 percent), rubber (67 percent), electrical equipment (65 percent), pharmaceutical products (61 percent), and transportation equipment (57 percent). It is felt that the foreign share of the total for manufacturing has grown in recent years.[22]

Calculations as to the shares of total sales entail a narrower coverage than the asset shares owing to the non-reporting of sales information by some firms. Nevertheless, the coverage is broad enough to provide a certain degree of accuracy. As shown in Table II foreign firms accounted for a full 45 percent of total manufacturing sales in 1971, while government and domestically owned private firms contributed 11 and 44 percent of total sales, respectively. The higher sales share for foreign firms in relation to their assets share suggests a more efficient use of industrial assets by foreign firms than by other firms. But by and large the sales shares coincide rather closely with the assets shares. A basis of comparison of the foreign market share over time is provided by the estimates available in a similar study by Samuel Morley and Gordon Smith for 1965.[23] Working back from profit data in the 1965 *Visão* survey, Morley and Smith estimated the foreign firm market share for the total Brazilian manufacturing sector to be 33.5 percent. If this 1965 market share measure and our 1971 estimate are at all reasonably comparable,[24] it is clear that the foreign participation in

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22 Jaspersen, *op. cit.*, provide similar estimates for 1969. His estimate of the foreign share of manufacturing assets was 41.6 percent, but I feel that this estimate was too high. He considered only the largest firms in each sector, counting down until 60 percent of the assets covered in the *Visão* survey were included. By excluding the smaller firms, which tend to be domestically owned, an overestimate of the foreign share of assets is obtained. Also, it should be noted that the *Visão* survey sample has grown, thereby including more domestically owned firms. Jaspersen's overestimation of the foreign share of assets does not, however, detract from the value of a competent and comprehensive study.

23 Samuel A. Morley and Gordon W. Smith, "Import Substitution and Foreign Investment in Brazil", *Oxford Economic Papers*, Vol. 23, No. 1, March 1971, pp. 120—135.

24 While the estimating procedure used by Morley and Smith is not entirely clear from their exposition, it is apparent that their 1965 sample of firms was far more limited than the 1971 survey. For example, in their sample they evidently had included 24 firms in the transport equipment industry and 22 companies in chemicals; in the 1971 survey the respective figures are 103 and 175 firms. Since the foreign firms tend to be larger, it may be that Morley and Smith have overestimated the foreign firms market share in 1965. If so, the observed increase in the foreign participation in Brazilian manufacturing between 1965 and 1971 becomes all the more dramatic.

Brazilian manufacturing grew substantially between 1965 and 1971. The increase in the market share of foreign firms indicates that they have contributed more to total manufacturing output growth than is indicated by their 1971 market share. Given the observed foreign market share increase and output growth, it is estimated foreign firms accounted for about 60 percent of the increase in manufacturing production between 1965 and 1971.

The growth of the foreign firms' participation in the Brazilian manufacturing sector can be seen as a reflection of two separate factors. First, foreign firms have increased their shares in most of those individual industries in which they have originally invested. For example, between 1965 and 1971 the foreign firm market share increased from 24 percent to 40 percent for nonmetallic minerals, from 45 over 65 percent for machinery and electrical equipment, and from 31 to 54 percent for chemicals.[25] Additional foreign direct investment, high profitability, and high reinvested earnings all have contributed to the relative growth of foreign firms within individual industries.

A second factor accounting for the increase in the foreign firms market share is the fact that foreign firms are most concentrated in those industries that have been experiencing the greatest growth. Spearman rank tests over 21 manufacturing industries, the results of which are shown in Table III, demonstrate that foreign firm participation has been positively associated with output growth. Also significant and positive were the association between foreign market shares and (a) worker productivity growth and (b) import substitution during the post-war import substituting industrialization period, as measured between 1949 and 1964. This suggests that foreign firms have been generally more successful than domestically owned firms in increasing productivity and taking advantage of the inducements and incentives provided to manufacturing during the 1949—1964 period. That foreign firms are more concentrated in the more capital and skill intensive industries is also shown in Table III. Profit rates also showed a positive Spearman rank correlation coefficient with foreign market share, but the relation was not statistically significant at the 5 percent level. In all of the interrelationships shown in Table III, nothing can be said about the direction or, for that matter, the existence of causality.

Counterbalancing the large foreign firm participation in the Brazilian economy has been the activist role pursued by the Brazilian government. In the manufacturing sector in 1971 government firms accounted for over 11 percent of total sales. While such a figure in itself constitutes a relatively insignificant market share (as does the asset share at 18.5 percent), it must be noted that direct governmental productivity activity is concentrated in only two key, high forward linkage sectors — steel, and chemicals. The high degree of economic dependence

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25 The 1965 market share estimates are from Morley and Smith, *op. cit.*

Table II

GOVERNMENT, FOREIGN, AND DOMESTIC FIRM PARTICIPATION IN BRAZILIAN MANUFACTURING, 1971

Industry	Percentage share of industry			Percentage share of industry sales[a]			Total number of firms in survey					
							government firms		foreign firms		domestic firms	
	government firms	foreign firms	domestic firms	government firms	foreign firms	domestic firms	number	percent of total	number	percent of total	number	percent of total
Mining	50.9	28.2	21.0	61.6	23.1	15.3	1	1.7	21	35.0	38	63.3
Non-metallic mineral manufactures	—	33.3	66.7	—	40.4	59.6	—	—	28	23.9	89	76.1
Metallurgy	38.6	24.1	37.3	28.1	27.3	44.6	5	2.1	56	23.2	180	74.7
Machinery	—	68.4	31.6	—	64.2[b]	35.8[b]	—	—	56	46.7	64	53.3
Electrical and communications equipment	—	64.9	35.1	—	68.1	31.9	—	—	33	39.3	51	60.7
Transportation equipment	—	57.3	42.7	—	64.8	35.2	—	—	40	38.8	63	61.2
Lumber and wood	—	17.3	82.7	—	18.3	81.7	—	—	8	13.3	52	86.7
Furniture	—	3.6	96.4	—	5.6	94.4	—	—	1	6.3	15	93.8
Paper	—	28.3	71.7	—	25.2	74.8	—	—	11	15.5	60	84.5
Rubber	—	67.0	33.0	—	75.0[b]	25.0[b]	—	—	4	19.0	17	81.0
Leather	—	16.6	83.4	—	20.0[b]	80.0[b]	—	—	1	4.8	20	95.2
Chemicals	52.2	30.0	17.8	26.7	54.0	19.3	3	1.7	68	38.9	104	59.4
Pharmaceutical products	—	60.5	39.5	—	66.5	33.5	—	—	19	48.7	20	51.3
Perfumery	—	51.1	48.9	—	50.0[b]	50.0[b]	—	—	4	26.7	11	73.3
Plastics	—	48.7	51.3	—	48.8	51.2	—	—	13	35.1	24	64.9
Textiles	—	28.5	71.5	—	29.3	70.7	—	—	38	15.4	208	84.9
Apparel	—	32.9	67.1	—	52.5	47.5	—	—	7	11.5	54	88.5
Food	—	14.6	85.4	—	20.1[b]	79.9[b]	—	—	22	7.1	289	92.9

Beverages	—	9.8	90.2	—	21.2	78.8	—	—	7	14.0	43	86.0
Tobacco	—	97.7	2.3	—	97.6	2.4	—	—	5	71.4	2	28.5
Printing and publishing	—	1.3	98.7	—	1.6[c]	98.4[c]	—	—	2	3.7	52	96.2
Miscellaneous manufactures	—	39.5	60.5	—	43.4	56.6	—	—	12	27.3	32	72.7
Total manufacturing without mining	18.5	34.4	47.1	11.3	45.1	43.6	8	4	435	23.0	1,450	76.6
Total manufacturing and mining	20.2	34.1	45.7	12.7	44.5	42.8	9	5	456	23.3	1,488	76.2

[a] The number of firms included in the calculation of percentage shares is smaller than that used for estimating asset shares. Sales information was not available for some firms.

[b] Sales figures for some of the more important firms were not included in the survey information. However, they were crudely estimated by the author from asset and profit data.

[c] Sales figures for the two relatively small foreign firms were estimated from asset and profit data.

Source: Author's calculations based upon information contained in *Visão,* Vol. 41, 1972, No. 4. — Banas, *Brasil Industrial 1973,* São Paulo. — *Conjuntura Econômica,* various issues. — Jean Bernet, *Guia Interinvest,* Rio de Janeiro, Interinvest Editôra, 1973.

Table III

SPEARMAN RANK COEFFICIENTS (r_s) BETWEEN 1971 FOREIGN MARKET SHARES AND INDUSTRIAL GROWTH CHARACTERISTICS, 21 MANUFACTURING INDUSTRIES

	Foreign Firm Share of Total Industry Sales (r_s)
Output Growth (1949—59)	.527*
Worker Productivity Growth (1949—59)	.644*
Import Substitution's Contribution to Output Growth (1949—64)	.529*
Value Added per Employee (1969)	.678*
Total Direct and Indirect University Trained Labor per Unit of Output	.385*
Profit Rate, expressed as a Ratio of Total Assets	.328

Notes:
* indicates statistical significance at the 5 percent level.

Source: author's calculations.

of other producing industries on the steel and chemical industries implies a certain amount of governmental leverage. In addition, the market share of government firms has grown markedly. It has been estimated that in 1956 only 3.9 percent of income in the industrial sector originated in government firms.[26] By 1965 the government firm market share of manufacturing totaled 6.1 percent[27] and then grew to our estimated 11.3 percent in 1971. Comparing the twenty largest firms in Brazil over recent years, in 1967 ten of these firms were government firms, accounting for 65 percent of the top twenty firm total assets.[28] By 1971, however, sixteen of the largest twenty firms were public enterprises, which in turn accounted for 86 percent of the total assets involved.

Outside of the manufacturing sector, direct public production in mining, where the government firm market share was 62 percent in 1971, has already been noted. Of the largest 10 public utilities enterprises, government firms

26 See Annibal Villela, "As Empresas do Govêrno Federal e sua Importância na Economia Nacional", *Revista Brasileira de Economia,* Vol. 16, No. 1, March 1962.

27 Morley and Smith, *op. cit.*, p. 128.

28 See Tyler, *op. cit.*, p. 322. Data are from *Visão* sources.

accounted for 87 percent of the combined assets.[29] The large increase of electric power generation has been sparked almost entirely by public enterprise.[30] The banking sector is also dominated by public enterprises. In addition to many special purpose government banks (e.g. the National Development Bank [BNDE], the National Housing Bank [BNH], and the regional development banks), government banking is also important in the commercial banking sphere. It has been estimated that in 1971 government banks accounted for 55 percent of total commercial bank deposits and 58 percent of all commercial bank loans.[31] Moreover, governmental financial institutions were responsible for more than 60 percent of all financial system loans to the private sector.[32] Such a magnitude of governmental activity in banking provides a high degree of governmental control in the entire economy.

Ultimately the question of foreign firm participation in the domestic economy is one of control. To what extent does the existence and operation of multinational firms in Brazil provide problems of policy effectiveness and control for the Brazilian authorities? Short-run destabilizing effects may well exist with respect to exchange and monetary policy. Capital flight is always a potentiality, but it should be remembered that government policy is capable of response. In a sense, the foreign capital presence constitutes a hostage in the hands of the Brazilian government both with respect to economic policy and political ends. Moreover, the thought that foreign firms are strong enough and sufficiently united to dictate amenable economic policy to an administratively capable, competent, and strong government is naive. Foreign firms have interests similar to those of nationally owned private sector firms, and they respond in much the same manner to policy measures. The extent to which business as a whole is capable of influencing economic policy is another question, outside the scope of this study.[33] Certainly the argument that foreign firms exercise undue influence in LDC policy formulations is mitigated in the case of a powerful, far-reaching, and effective government. Such is the case with Brazil, where the government has emerged as the dominant single force in the economy. Estimates of the total governmental share of GDP range up to 50 percent; by 1969 the public sector accounted for about 61 percent of total investment, and economic policy

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[29] *Visão*, Vol. 42, No. 4, February 26, 1973, p. 68.

[30] See Judith Tendler, *Electric Power in Brazil: Entrepreneurship in the Public Sector*, Cambridge, Massachusetts, Harvard University Press, 1968.

[31] Werner Baer, Isaac Kerstenetsky, and Annibal V. Villela, "The Changing Role of the State in the Brazilian Economy", *World Development*, Vol. 1, No. 11, November 1973, p. 29. This article provides an informative and well argued presentation of the increased importance of the Brazilian public sector.

[32] *Ibid*, p. 29.

[33] For an interesting treatment see Nathaniel Leff, *Economic Policy-Making and Development in Brazil, 1947—1964*, New York, John Wiley and Sons, 1968.

of late has been applied with increasing effectiveness. With a perceived weakness in the domestic private sector, the choice for a development minded government intent on lots of growth in a hurry is between foreign and government productive activity. Not to be outdone, the Brazilian government has chosen both alternatives, with the period since 1964 witnessing a progressive strengthening of governmental control over the economy. By 1976 the prevailing economic system in Brazil was that of State capitalism — a system in which the basic parameters are dictated by a strong and preponderant government and a highly discretionary, but attractive, incentives provided for private sector productive activity.

5. Some Concluding Remarks

Returning to the postulates of dependency theory raised in the beginning of this paper, the Brazilian experience presents some contrary evidence. There has been substantial economic growth, and it appears that much of the growth has been positively associated with so-called increased dependency. This increased dependency, however, may merely reflect a growing incorporation into the capitalist world economy, a phenomenon which may offer some economic rewards.