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Source: *Comparative Politics*, Vol. 7, No. 3 (Apr., 1975), pp. 303-330

Published by: Comparative Politics, Ph.D. Programs in Political Science, City University of New York

Stable URL: <http://www.jstor.org/stable/421222>

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A Preliminary Test of The Theory of Dependency

Robert R. Kaufman, Harry I. Chernotsky,
and Daniel S. Geller*

A Preliminary Test of Dependency

This article reports the results of a preliminary test of "dependency theory," based on a statistical comparison of seventeen Latin American countries. The concept of dependency has been applied with increasing frequency to the development problems of Latin America and Africa, and a considerable amount of data related to the subject has been amassed from United Nations sources and from historical case studies.¹ For the most part, however, these data have previously been used to build and illustrate dependency theory, rather than to subject it to the possibility of disproof.² In this study, we have attempted to cull from the burgeoning theoretical literature a variety of disprovable, bivariate propositions which we operationalized and tested in the Latin American setting.

*The authors wish to acknowledge the extensive methodological advice of Stephen Salmore, Rutgers University. This article could not have been completed without his generous assistance in arranging, computing, and interpreting the data. We would also like to thank Robert Packenham, Abraham Lowenthal, Guillermo O'Donnell, and participants in the Harvard-MIT Joint Seminar on Political Development and the Princeton Colloquium on National Development for their helpful criticisms of an earlier draft of this article.

¹Oswaldo Sunkel, "National Development Policy and External Dependence in Latin America," in Yale H. Ferguson, ed. *Contemporary Inter-American Relations* (Englewood Cliffs, 1972), pp. 465-92; K.T. Fann and Donald C. Hodges, eds. *Readings in U.S. Imperialism* (Boston, 1971); Robert I. Rhodes, ed. *Imperialism and Underdevelopment* (New York, 1970); Barbara Stallings, *Economic Dependency in Africa and Latin America* (Beverly Hills, 1972); André Gunder Frank, *Capitalism and Underdevelopment in Latin America, Historical Case Studies of Chile and Brazil* (New York and London, 1967); Fernando Henrique Cardoso and Enzo Faletto, *Dependencia y Desarrollo en America Latina* (Mexico City, 1969).

²Partial exceptions to this are the works of Philippe C. Schmitter, "Desarrollo retrasado, dependencia externa y cambio político en America Latina," *Foro Internacional*, XII (October-December 1971), 135-74; and William G. Tyler and J. Peter Wogart, "Economic Dependence and Marginalization: Some Empirical Evidence," *Journal of Interamerican Studies and World Affairs*, XV (February 1973), 36-46. Schmitter's dependent variables, however, are solely political, and Tyler's and Wogart's sample of countries was not exclusively Latin American.

Dependency Theory: Some Definitions and Propositions

Although many writers speak of "cultural" or "political" dependency, the core of the dependency concept is derived and updated from Leninist theories of imperialism, and remains essentially economic in character. The basic thesis is that the industrialization of a few capitalist, "metropolitan" countries has, as its corollary, the creation of "satellite" nations which are locked through an international division of labor into a subordinate status within the "world capitalist" economic system.³ The satellite-metropolitan relationship is considered dependent rather than interdependent, because the satellite nations lack the resources to create or choose alternative ways of responding to the constraints impinging upon them from the international environment.⁴ Dependent countries, in other words, are unable to exert substantial influence over the basic decisions affecting their national economies; the issues of what to produce, how to produce, and for whom are all shaped directly or indirectly by international structures and processes.⁵

By the terms of this definition, it can be readily argued that Latin American nations were "born" dependent and that, to a large extent, they have remained that way ever since.⁶ Thus, Spanish and Portuguese mercantilist interests clearly furnished the initial impulse for the economic organization of the Iberian colonies. New World haciendas and mines were directly or indirectly destined to furnish Europe with foodstuffs and minerals. The small Creole elite constituted a market for British manufactured goods, funneled first through the Iberian imperial bureaucracies and then, after Latin American

³Frank, "The Development of Underdevelopment," in Rhodes, ed. *Imperialism and Underdevelopment*, pp. 9-10; Theotonio dos Santos, "The Structure of Dependence," in Fann and Hodges, eds. *Readings in U.S. Imperialism*, p. 226.

⁴Sunkel, p. 477.

⁵In this respect, dependency theory runs along lines strikingly similar to the literature on "linkage politics." See, especially, James N. Rosenau, "Toward the Study of National International Linkages," and Douglas A. Chalmers, "Developing on Periphery: External Factors in Latin American Politics," both in Rosenau, ed. *Linkage Politics, Essays on the Convergence of National and International Systems* (New York, 1969), pp. 44-63, 67-93. Both bodies of literature explore the proposition that internationally derived constraints operate on the developmental patterns of national systems. Unlike dependency theory, the linkage literature places a much less extreme emphasis on *economic* variables. And the dependency theorists' insistence that Latin American industrialization has not ended Latin American dependency diverges sharply from Chalmers' application of linkage theory to Latin America. Still, the two bodies of literature are quite closely related; and we feel that our findings should be relevant to the study of linkage politics as well as to the dependency literature.

⁶A summary of this general argument may be found in Sunkel; Frank, "The Development of Underdevelopment"; dos Santos; and Susanne J. Bodenheimer, "The Ideology of Developmentalism: The American Paradigm-Surrogate for Latin American Studies" (Beverly Hills, 1971).

independence, shipped directly from Britain herself.

From the second half of the nineteenth century until the 1930s, the industrial revolutions in North America and Europe and increased metropolitan demands for Latin American raw materials added a second dimension to Latin American dependency. Specifically, the latter area became an outlet for United States and European private capital, invested directly in the Latin American export sectors and in the communications net linking the productive areas of the hinterland to port cities. Within Latin America, such activities in turn stimulated the growth of a commercial middle class, the formation of rudimentary national economies, and, in some cases, increases in national income. But because these internal changes were tailored essentially to the needs of the metropolitan powers, the Latin American economies remained highly vulnerable to shifts in world demand and without the capacity to react against increasingly unfavorable terms of trade.

Dependency theorists argue, finally, that the post-1930 process of industrialization has not ended, but instead has exacerbated Latin America's dependent position in the world economy. They point out, in the first place, that the import-substitution practices that spur industrialization provide no incentives for expanding the size of existing national markets or for modernizing the other, more traditional economic sectors. Consequently, the traditional export sector, with all of its weaknesses, continues as the main source of government revenues and foreign exchange. Because the industrialization process itself is fueled largely by foreign capital and technology, moreover, the structure of Latin American imports has become more "rigid." Instead of purchasing "nonessential" consumer products from abroad, Latin Americans must now import raw materials, capital goods, semifinished products, and replacement parts in order to maintain the viability of the domestic manufacturing sector. Last and most important, dependency theorists emphasize the growing penetration by foreign firms into the industrial sector itself. Especially since the 1950s, they argue, United States and European multinational corporations have displaced domestic entrepreneurs through mergers and direct investment, acquiring increasing direct control over the Latin American capital goods industry, over the banking and financial structure, and over processing and retailing within the domestic market.

To summarize, the dependency theorists suggest that there has not been a great deal of qualitative change in the relationship between Latin America and the rest of the world. To be sure, the metropolitan

centers of international capitalism have shifted—from Spain and Portugal to Britain, Western Europe, and the United States. And the *form* of dependency has, as we have seen, undergone important transformations. But from the perspective of the dependency theorists, the *fact* of Latin American economic subordination continues to lie at the core of the Latin American developmental experience. Latin American economies have, in Osvaldo Sunkel's words, become even "more dependent, more vulnerable, and more unstable."⁷

The effects of dependency are treated on two rather different levels in the literature. On one level, dependency is viewed as a perversion of the Latin American developmental process, because by definition Latin American societies, as presently constituted, lack control over the forces which shape their destiny. From this perspective, there is nothing to "prove" or "disprove" empirically about dependency theory, except perhaps the fact of dependency itself. In other words, whatever other consequences may or may not flow from a dependent relationship, efforts to end Latin America's subordinate status can be justified on *prima facie* grounds as essential to the establishment of some legitimate form of "national sovereignty."⁸

At another level, however, a great deal more is claimed for dependency theory. It is offered, as an alternative to more "conventional" developmental theories, as a framework or paradigm for diagnosing the general problems of Latin American social, economic, and political underdevelopment.⁹ "Conventional" theories, so the argument goes, make a mistaken analogy between change in contemporary Latin America and the earlier developmental experiences of Europe and the United States, locating the key variables, actors, and cleavages essentially within the framework of each national Latin American system. Dependency theorists, in contrast, diagnose Latin America's developmental problems in terms of the transnational structures and processes that link Latin America to her international environment. Whereas many conventional theorists associate "modernization" with a trend toward greater equality, increased political participation, and more open political systems, dependency theorists foresee practically the opposite set of consequences.

As a step toward restating this aspect of their argument in testable

⁷Sunkel, p. 482.

⁸Sunkel; Raymond Vernon, *Sovereignty at Bay: The Multinational Spread of U.S. Enterprise* (New York, 1971).

⁹See especially Bodenheimer.

form, we have categorized some of these alleged consequences under the following four rubrics:

1. *Social stratification.* Dependency theorists seem unanimous in suggesting that dependency produces and preserves a highly unequal system of social stratification and wealth within the Latin American countries. International patterns of colonialism and domination are, in effect, replicated internally and perpetuated by small, native elites which act as “clientele” ruling classes for the metropolitan powers.¹⁰ More specifically, the theory suggests that unequal Latin American land tenure patterns can be attributed to international demands for raw materials, which stimulated the expansion and consolidation of hacienda lands at the expense of rural smallholders and Indian communities. Similarly, the evident urban-rural imbalances in Latin American societies are tied to the flow of capital resources into privileged export and industrial enclaves, which grow at the expense of the underdeveloped periphery. Thus, even if Latin American national incomes grow, it is argued that the benefits of this growth accrue largely to dependent upper, middle, and working class elites, while the mass of the population becomes increasingly “marginalized.” Following this argument, we propose to test these hypotheses:

- 1.1: Countries with high levels of dependency are likely to have highly unequal land tenure structures.
- 1.2: Countries with high levels of dependency are likely to have highly unequal distributions of income.

2. *Economic performance.* Dependency theorists are divided in their estimate of the economic consequences of dependency. Some writers (e.g., Fernando Henrique Cardoso and Enzo Faletto, Hélio Jaguaribe, and Barbara Stallings) see no inconsistency between dependency and economic growth, although they insist that such “dependent development” is likely to produce or exacerbate some of the social inequities described. The views of this set of dependency writers are thus more accurately represented by the preceding hypotheses than by the ones laid out under this rubric.

At the same time, another influential group of dependency writers

¹⁰This “infrastructure of dependency” is discussed most explicitly by Bodenheimer in “The Ideology of Developmentalism,” and in “Dependency and Imperialism: The Roots of Latin American Underdevelopment,” in Fann and Hodges, eds. *Readings in U.S. Imperialism*, pp. 155–81. For a discussion of dependency’s impact on land tenure, see Frank, “The Development of Underdevelopment,” pp. 14–15, and “Capitalism and the Myth of Feudalism in Brazilian Agriculture,” in *Capitalism and Underdevelopment in Latin America*. Also see dos Santos, “The Structure of Dependence,” p. 228. For the general process of “marginalization,” see Sunkel, Frank, dos Santos, and Bodenheimer.

(most notably André Gunder Frank, but also, at times, Theotonio dos Santos and Susanne Bodenheimer) argues that dependency has negative economic as well as social consequences—that an exploitative, “zero-sum” metropolitan-satellite relationship stifles the prospects of the satellite’s economic development.¹¹ The terms of capital investment in the satellite economies, the organization of the world market, and the pattern of world demand, according to these writers, are all structured to benefit the metropolitan countries. Thus, dependent nations must face lagging growth rates, a drain of resources, excessive rates of capital repatriation, burdensome foreign debts, and highly unstable “boom and bust” economies geared to the ebb and flow of the world capitalist market economy. These arguments indicate that the following propositions might usefully be operationalized and tested:

- 2.1: Countries with high levels of economic dependency are likely to have low rates of economic growth.
- 2.2: Countries with high levels of economic dependency are likely to have an unfavorable balance of trade.
- 2.3: Countries with high levels of dependency are likely to have unstable, fluctuating growth patterns.

3. *Political infrastructure.* The scope of dependency theory has been extended recently to explain the relatively low intensity of class conflict in Latin America and the apparent weakness of the associational infrastructure in that area of the world.¹² It is argued that Latin America’s satellite status bifurcates existing social strata, dividing

¹¹This is an especially important theme in Frank’s writing. In “Imperialism and Underdevelopment,” he states that, “within this world-embracing metropolis-satellite structure the metropolises tend to develop and the satellites to underdevelop” (p. 9). Also, “the satellites experience their greatest economic development . . . if and when their ties to the metropolis are weakest” (p. 10). Bodenheimer suggests that the “characteristics of the international system . . . impose definite limitations on the possibilities of Latin development” (“Dependency and Imperialism,” p. 161). Although both authors leave the term “development” undefined, references to economic growth are found throughout their work. Dos Santos qualifies more, stating that dependency “can have either a positive or a negative effect on [a satellite’s] immediate development” (“The Structure of Dependence,” p. 226). But his subsequent emphasis on the limitations of internal markets and on the external vulnerability of Latin economies points to significant structural constraints on their prospects for long-term growth.

¹²Schmitter, *Interest Conflict and Political Change in Brazil* (Stanford, 1971), and Chalmers, “Developing on the Periphery.” Also, see John D. Esseks, “Economic Dependency and Political Development in New States of Africa,” *Journal of Politics*, XXXIII (November 1971), 1052–77, and Giovanni Arrighi, “International Corporations, Labor Aristocracies, and Economic Development in Tropical Africa,” in Rhodes, ed. *Imperialism and Underdevelopment*, pp. 220–67. Some empirical support for propositions about the impact of dependency on the political consciousness of higher status groups is provided by Cardoso, *Ideologías de la Burquesia Industrial en Sociedades Dependientes* (Mexico City, 1971).

each into conflicting “dependent” and “nondependent” sectors. Because foreign capital has penetrated so deeply into the Latin American industrial sector, for example, the “national” bourgeoisie is fragile or nonexistent, and entrepreneurial associations are weak. Similarly, the importation of technologically sophisticated, capital-intensive investment is said to restrict the growth of a class-conscious, industrial proletariat. Instead, a privileged “labor aristocracy,” employed in the productive enclave sectors, is separated from and set against the mass of the lower class, restricting unionization and impeding mass participation in politics. We would hypothesize, therefore, the following:

3.1: The higher the level of dependency, the lower the level of unionization.

3.2: The higher the level of dependency, the lower the level of voting turnout.

4. *Political system characteristics.* Although not all dependency writers devote extensive attention to the overall political consequences of dependency, a recurrent theme in the literature is that, directly or indirectly, external dependence produces unstable or authoritarian political regimes.¹³ One line of reasoning is that restricted opportunity for individual mobility in the private economic sector (itself a product of dependency’s presumed social and economic effects) intensifies conflict over political office and threatens the tenure of political incumbents. At the same time, the reliance of governmental elites on foreign resources and support makes it less necessary for them to legitimate their power through constitutional mechanisms. A much more elaborate argument, suggested by Cardoso and Faletto, is that the economic penetration of multinational corporations produces strong pressures toward authoritarian-corporatist forms of political rule, backed by military force. Our hypotheses grouped under this general rubric are thus:

4.1: Countries with high levels of dependency will have low levels of constitutional stability.

4.2: Countries with high levels of dependency will have high levels of militarism.

¹³Schmitter, “Paths to Political Development” and “Desarrollo retrasado,” and Chalmers, “Developing on the Periphery.” Merle Kling, “Toward a Theory of Power and Political Instability in Latin America,” in James Petras and Maurice Zeitlin, eds. *Latin America, Reform or Revolution?* (Greenwich [Conn.], 1968), pp. 76–94; Cardoso and Faletto, *Dependencia y Desarrollo*. Guillermo A. O’Donnell, *Modernization and Bureaucratic-Authoritarianism* (Berkeley and Los Angeles, 1973), is also extremely relevant. However, he posits curvilinear, multivariate relations among aspects of dependency, modernization, and authoritarianism which cannot be adequately tested here.

The Structure of Dependency: Trade and Capital Dependency

Our initial tasks in putting these propositions to the test were: (1) to decide on a sample of countries; and (2) to rank these countries according to some operational measures of dependency. We decided to restrict our analysis to the Latin American countries (in order to control for shared cultural characteristics and colonial experiences), and to exclude Venezuela, Cuba, and—for most purposes—Haiti, from the sample. The lack of available data dictated Haiti's exclusion from all tests of the preceding propositions, although that country is included in our intercorrelations of the dependency measures themselves. Cuba's definitive break with the capitalist world seemed to make that country irrelevant to the study as it was conceived. After some preliminary data analysis, Venezuela was also omitted for a number of reasons. That country's extraordinary oil wealth, for one thing, seemed to represent a degree of bargaining power and an advantage in the international system not normally implied by the concept of dependency. Although our preliminary analysis showed that the inclusion or exclusion of Venezuela did not seem materially to change the statistical results of most of our tests, the unusual aspects of Venezuela's oil riches did seem to "distort," in ways unfavorable to the theory, our findings on economic growth, balance of trade, and political infrastructure. Given that our admittedly crude tests of a relatively new theoretical approach should permit that theory every benefit of the doubt, the exclusion of Venezuela from the sample thus seemed warranted. This left a maximum total of seventeen Latin American countries to be compared in the bulk of our data analysis.

Following Stallings's lead, our operational measures of dependency were designed to tap the extent of foreign involvement in Latin American economies, the degree to which a single metropolitan country dominates the flow of trade, and the diversification or concentration of the "satellite" export structure.¹⁴ Moreover, we included as many measures as possible in different time periods, in order to assess the possible lagged effects of dependency on our dependent variables. The resulting measures are listed in Table 1, under the rubrics of "trade" and "capital" dependency.

We are reasonably confident that these measures possess a certain "face" validity, inasmuch as a high score on each seems to imply a high degree of foreign input into decisions affecting the national economy and a relatively low degree of satellite bargaining power

¹⁴Stallings, "Economic Dependency in Africa and Latin America," pp. 6-7.

Table 1 Measures of Dependency

Trade Dependency	Capital Dependency
1. Value of trade to largest trading partner, as a percent of GNP, 1967 (TRADE/GNP)	1. Current foreign public and private investment, per capita, 1967 (INV/CAP67)
2. Value of trade to largest trading partner, as a percent of total trade, 1967 (TRADE67)	2. Current foreign public and private investment, as a percent of GNP, 1967 (INV/GNP67)
3. Value of trade to largest trading partner, as a percent of total trade, 1929 (TRADE29)	3. Book value of accumulated U.S. private investment, per capita, 1959 (CAPITAL59)
4. Value of two leading exports, as a percent of total exports, 1965-68 (EXPORT CONCENTRATION)	4. Book value of accumulated U.S. private investment, per capita, 1929 (CAPITAL29)

SOURCES

Value of trade to largest partner from (1967) Joseph Grunwald et al., *Latin American Economic Integration and U.S. Policy*, pp. 168-72. (1929) *U.S. Department of Commerce Yearbook*, 1930, 1932 (vol. 2)

Value of total trade from (1967) Grunwald et al., pp. 168-72; (1929) *U.S. Department of Commerce Yearbook*.

Value of two leading exports from Charles F. Denton and Preston Lee Lawrence, *Latin American Politics: A Functional Approach* (New York, 1972), p. 53.

Value of foreign public and private investment from Grunwald et al., p. 91.

Book value of U.S. direct private investment from: Victor L. Urquidi, *The Challenge of Development in Latin America*, p. 196.

GNP values from A.I.D., *Latin American Economic Growth Trends*, p. 13.

Population values from (1967), *U.N. Demographic Yearbook* (New York, 1968); (1959 and 1929) Arthur S. Banks, *Cross-Polity Time Series Data* (Cambridge [Mass.], 1971), pp. 3-55; Grunwald et al. (Washington, D.C., 1972); Denton and Lawrence (San Francisco, 1972); Urquidi (New York, 1964); and A.I.D. (Washington, 1970)

within the world market. For the most part, moreover, the actual rankings of the countries seem to correspond with more impressionistic notions about the degree of foreign penetration and control in various parts of the hemisphere. Central American and Caribbean countries, such as Panama, the Dominican Republic, and Costa Rica, are consistently among the more dependent countries by these measures; South American countries, such as Uruguay and Argentina, consistently rank among the least dependent. To explore the meaning of these measures a bit further, however, we performed a correlational and factor analysis on the variables in order to assess their interrelationships. The results of this analysis are presented in Tables 2 and 3.

One purpose of the data analysis presented in the tables was to

Table 2 Intercorrelation of Dependency Measures ($N = 18$)

	Trade					Capital		
	1	2	3	4	5	6	7	8
1								
TRADE/GNP		.41*	.52**	.23	.66**	.41**	.32*	.44**
2								
TRADE67			.74**	-.05	.08	.08	.30	.22
3								
TRADE29				-.07	.32*	.12	.39*	.26
4								
EXPORT CONCEN- TRATION					.12	.17	.38	.27
5								
INV/GNP67						.76**	.22	.42**
6								
INV/CAP67							.55**	.63**
7								
CAPITAL59								.53**
8								
CAPITAL29								

*Significant at .1 level.

**Significant at .05 level.

assess the stability of a country's dependency over time. As may be seen from Table 2, the correlations between equivalent measures of trade and capital dependency, taken in 1929, 1959, and 1967, range from .53 to .74. Thus, countries with high levels of dependency at the onset of the Great Depression seem likely to be highly dependent

Table 3 Factor Analysis of Dependency Measures

	Factor 1	Factor 2	Factor 3
TRADE/GNP.	.51	.45	.25
TRADE/67	.17	.79	.08
TRADE/29	.18	.95	.05
EXPORT CON.	.06	-.06	.43
INV/GNP67.	1.10	.10	.12
INV/CAP67.	.61	.002	.59
CAPITAL59	.07	.31	.80
CAPITAL29	.33	.19	.62

later on. Since, in some cases, the measures of our dependent variables temporally precede our independent variables, this is an important finding for the subsequent analysis; for it suggests that our individual measures of dependency reflect rather continuous structural patterns persisting over several generations. Notwithstanding the difficulties we encountered in synchronizing the time periods of the independent and dependent variables, the former can be reasonably inferred as indicating possible “causes” of the latter.

The second purpose of the analysis was to determine what, if any, relationship existed within and between our “a priori” categories of trade and capital dependency. The trade category, it was felt, probably reflected the more traditional forms of Latin American subordination within the world system, originating in colonial times. We suspected that the capital measures, on the other hand, might come closer to reflecting newer, post-1930 forms of dependency, especially the more direct penetration of multinational corporations into the Latin American economies. The results in the two tables, however, seem somewhat difficult to interpret in this regard.

On the one hand, the correlation matrix presented in Table 2 suggests that there is some clustering within each separate category. In all but one instance, the “capital dependency” measures were positively, strongly, and significantly associated with one another. Three of the four “trade dependency” measures also correlated highly, with coefficients ranging from .41 to .74. On the whole, moreover, the correlations across categories were lower than those within categories. This suggests that it makes some sense to retain, in a general way, the trade/capital distinction for purposes of analysis.

At the same time, however, there are some rather clear exceptions to the general patterns described in the preceding paragraph. Export concentration—one of the classic indicators of monoculture dependency—is not correlated with anything else and seems to represent a distinct phenomenon. Moreover, two measures of capital dependency (Inv/GNP67 and Capital59) do not correlate highly with one another. Finally, the results of the factor analysis presented in Table 3 (which depicts the loading of each variable on distinct factor dimensions) does not reveal any clearly defined separation between trade and capital variables. One of the trade variables and two of the four capital measures load highly on the first factor; two equivalent trade measures, taken in 1929 and 1967, load highly on the second; and three of the four capital measures load highly on the third. As in the correlation matrix, export concentration does not seem to fit into any of the three dimensions. Thus, it seems advisable to be cautious in

making general inferences about the larger structural patterns reflected in our individual measures. For this reason, we have decided not to attempt to combine our dependency measures into a larger index or scale, but rather to report the way each one of them relates individually to our dependent variables.

Parenthesis: Some Caveats and Assumptions

Our attempt to test the propositions listed in the theoretical section of the paper contains several hitherto implicit assumptions which must now be clarified. First, we are assuming that, for the purpose of this analysis, the concept of dependency can be treated as a continuous variable. Much of the dependency literature, on the other hand, treats dependency as a nominally distinct category which qualitatively divides "satellite" countries from "metropolitan" centers, and each of these from the nations of the "socialist" world.¹⁵ Our assumption can thus be criticized by arguing that, in not comparing our Latin American countries with others in "nondependent" categories, we have eliminated the variation in our independent variable.

On the whole, we do not feel that such a criticism is warranted. The insistence on the qualitative distinctiveness of "dependent" countries, for one thing, implies a confusion between the abstract analytical categories elaborated in the theory and socioeconomic reality itself. In other words, ideal typical constructs, such as "capitalism," "socialism," and "dependency," may *logically* be mutually exclusive, but they are applied to concrete societies which obviously mix elements of each construct in varying proportions. Anyway, dependency theorists themselves implicitly treat dependency as a continuous variable when they suggest that international center-satellite relationships are replicated internally within satellite countries. Thus, while we certainly admit the ultimate desirability of expanding the empirical frame of comparison beyond the Latin American area, we do not think it unreasonable to consider some Latin American countries more dependent than others, even if collectively all of them are more dependent than nations in other parts of the world.

A second assumption is that essentially cross-sectional comparisons can be used to test the propositions implicit in dependency theory. We feel that it is not unreasonable to use synchronic analysis in order to see if the hypothesized consequences of dependency are

¹⁵David Ray, "The Dependency Model of Latin American Underdevelopment. Three Basic Fallacies," *Journal of Interamerican Studies and World Affairs*, XV (February 1973), 13-18.

more pronounced in more dependent countries. As noted, the apparent temporal stability of the dependency measures, along with the inclusions of some measures for 1929 and 1959, should permit some cautious cause-and-effect inferences to be made from our analysis. Still, it should be emphasized that, theoretically, the condition of dependency and the alleged results of that condition should both be considered as aspects of an unfolding, historical process, the full dimensions of which should be measured longitudinally as well as synchronically. Although we have had to adapt our tests to the constraints of the data available, an evaluation of the foregoing analysis should be made with this caveat in mind.

Finally, we acknowledge that the attempt to specify dependency theory in terms of hypotheses risks the misrepresentation of authors who often write in a tradition which does not readily lend itself to the formulation of disprovable propositions.¹⁶ In particular, our elaboration of *bivariate* hypotheses does not do full justice to the subtle arguments of writers such as Cardoso and Faletto, who suggest that Latin American development outcomes are the products of a complex interplay between external dependence and domestic Latin American class forces.¹⁷ But we contend that, however simplified, our hypotheses capture broad themes found within the literature as a whole. They are thus worth testing, if only to lay the groundwork for a more complex rendering and exploration of the dependency approach.

Operational Measures of the Dependent Variables and Tests of the Hypotheses

The social, economic, and political “effects” of dependency—the dependent variables elaborated in the theoretical section of the article—are operationalized as follows:

1. *Social stratification.* To measure these variables, we have taken the gini indices of land and sectoral income inequality (circa 1960) from the *World Handbook of Political and Social Indicators*.¹⁸ According to propositions 1.1 and 1.2, each of these inequality measures should vary *positively* with dependency.

2. *Economic performance.* Economic growth (prop. 2.1) is mea-

¹⁶An important, but partial, exception to this rule is O'Donnell, *Modernization*. His work is extremely systematic and rigorous. However, while his work is relevant to dependency theory, the notion of international economic domination and subordination does not provide a central focus of his analysis.

¹⁷Cardoso and Faletto, *Dependencia y Desarrollo*.

¹⁸Charles Lewis Taylor and Michael C. Hudson, eds. *World Handbook of Political and Social Indicators* (New Haven and London, 1972), pp. 263–71.

sured by the average annual percentage increase in GNP for 1961–69.¹⁹ Balance of trade (prop. 2.2) is derived from the cumulated trade balances over the ten-year period between 1960 and 1969.²⁰ Measures of the stability of economic growth (prop. 2.3) are based on an autocorrelation of yearly GNP growth rates for each country from 1961–69.²¹ According to the propositions listed above, all of these measures should vary *negatively* with measures of dependency.

3. *Political infrastructure.* Union membership (prop. 3.1) is derived by dividing data on union members in each country by the size of that country's economically active population.²² Electoral turnout (prop. 3.2) is measured by the percentage of the eligible voters actually voting in presidential elections, circa 1965.²³ Each of these measures should vary *negatively* with dependency.

4. *Political system characteristics.* The "constitutional stability" measure (prop. 4.1) is an index derived from rankings found in Banks' *Cross-Polity Time Series Data*.²⁴ Our measure of militarism (prop. 4.2) is taken from Putnam's militarism index, aggregated for the years 1951–65.²⁵ According to hypotheses 4.1 and 4.2, dependency should be *negatively* related to the first and *positively* related to the second.

Table 4 presents the Pearson's *r* correlation coefficients measuring the association between the dependency measures and each of the dependent variables. From the point of view of dependency theory, the results are rather mixed. In some areas, the relationships show a pattern of support for the dependency hypotheses; in others, the associations are weak and in different directions; in still other cases,

¹⁹The source is Agency for International Development, *Summary Economic and Social Indicators, 18 Latin American Countries: 1960–69* (Office of Development Programs, Bureau for Latin America, June 1970), p. 9.

²⁰The source is *United Nations Statistical Yearbook* (New York, 1965, 1971) pp. 390–91, 382–83.

²¹The source is computed from Agency for International Development, *Summary Economic and Social Indicators*, p. 9.

²²Data furnished by Phyllis M. Frakt, "A Cross-National Analysis of the Effects of Democratic Development on Governmental Responsiveness: The Case of International Labor Standards" (Ph.D. diss., Department of Political Science, Rutgers University, 1974). Union membership figures were derived from U.S. Department of Labor, *Directory of Labor Organizations*, 1964; the size of the economically active population was drawn from International Labour Office, *Yearbook of Labour Statistics*, 1964.

²³*Latin American Political Statistics* (Supplement to *Statistical Abstract of Latin America*) (Los Angeles, 1972), pp. 105–14.

²⁴Arthur S. Banks and Associates, *Cross-Polity Time Series Data* (Cambridge [Mass.], 1971). Computed by Frakt from rankings on effective executive, legislative selection, effectiveness of legislature, nominating process, legislative coalitions, and party legitimacy.

²⁵Robert Putnam, "Toward Explaining Military Intervention in Latin America," *World Politics*, XX (October 1967), 109.

Table 4 Correlation of Dependency with Dependent Variables

	Social Stratification		Economic Performance		Political Infrastructure		Political System		
	Land Inequality (N = 16)	Income Inequality (N = 14)	Growth Rates (N = 17)	Stability of Growth (N = 17)	Balance of Trade (N = 17)	Voting Turnout (N = 16)	Union Membership (N = 17)	Constitutional Stability (N = 17)	Militarism (N = 18)
TRADE/GNP	-.26	.32*	.55**	-.13	.01	-.09	-.48**	-.27	.06
TRADE67	-.53**	.61**	.60**	-.15	-.45**	-.27	-.07	-.34*	.19
TRADE29	-.64**	.47**	.61**	-.39*	-.45**	-.16	-.33*	-.28	.29
INV/GNP67	-.005	.37*	.51**	-.17	-.04	-.07	-.37*	.13	-.23
INV/CAP67	-.16	.25	.44**	.12	-.18	.17	-.12	.63**	-.42*
CAPITAL59	-.30	.24	.40*	-.04	-.17	-.08	-.17	.33*	.02
CAPITAL29	-.17	.25	.21	.02	-.08	.10	.05	.26	-.15
EXPORT CONCENTRATION . . .	.38*	-.27	-.23	-.45**	.49**	-.01	-.04	.01	-.12

NOTES
Missing countries: *Voting*—Honduras; *Land*—Paraguay; *Income*—Bolivia, Colombia, Dominican Republic.
*Significant at .1 level.
**Significant at .05 level.

the correlations run consistently opposite to the direction hypothesized.

The findings with respect to income inequality and political infrastructure are among the most positive with respect to the theory. The simple correlations, which are quite high in several instances, indicate that more dependent countries tend to have higher levels of income inequality and lower levels of "political participation." These propositions reflect some of the most widely shared tenets of the dependency literature.

Multiple regression, which allows us simultaneously to assess the impact of dependency and a variety of other explanatory variables, enables us to pursue these findings a bit further. In examining the relation between dependency and the political infrastructure, we introduced two control variables—energy consumption per capita and literacy—which are theoretically and empirically tied closely to voter turnout and unionization. With respect to the income inequality hypothesis, we selected three control variables. Two of these, GNP per capita and our measure of constitutional stability, were selected on the basis of Phillips Cutright's findings that large economic surpluses and representative political institutions tend to diminish inequality.²⁶ The third control variable was the rate of growth in GNP per capita, which varied strongly and positively with our gini index measure ($r = .64$).²⁷ This correlation probably reflects the impact of a high rate of capital formation which, as Cutright also indicates, tends to exacerbate inequality.

In Tables 5 through 9, the first column lists the simple correlation between each measure of dependence and respective measures of participation and inequality. Subsequent columns present the beta associations derived from the multiple regression analysis, allowing us, as it were, to determine the impact of the dependency measures once the effects of the control variables are removed.

The results of this operation are somewhat ambiguous. With respect to voting and unionization, the dependency betas are generally small and statistically insignificant, and in most cases explain less of the total variation in participation than do the control variables. On the other hand, the associations between dependency and both unionization and voting remain consistently negative; and in one case

²⁶Phillips Cutright, "Inequality: A Cross-National Analysis," *American Sociological Review*, XXXII (August 1967), 562–78.

²⁷Sources are: literacy rates—*Statistical Abstract of Latin America*, 1970, p. 132; energy consumption—Taylor and Hudson, eds. *World Handbook*; GNP per capita and growth—Agency for International Development, *Summary*, p. 9.

Table 5 Voting Turnout, by Dependency, Energy Consumption, and Literacy

	Vote (r)	Vote (beta)	Energy (beta)	Literacy (beta)	R ²
TRADE/GNP.	-.09	.08	.14	.45	.28
TRADE67.	-.27	-.17	.14	.38	.30
TRADE29.	-.16	-.04	.12	.43	.27
INV/GNP67.	-.07	-.08	.11	.44	.27
INV/CAP67.	.17	.02	.12	.43	.27
CAPITAL59	-.08	-.34	.33	.38	.35
CAPITAL29	.10	-.06	.15	.43	.27
EXPORT CONCEN- TRATION	-.01	-.18	.09	.51	.30

(Capital59 with unionization) this association is quite strong and statistically significant. By this one measure, in other words, we can be reasonably confident that countries with high degrees of “capital dependency” are likely to have low levels of unionization, regardless of their overall levels of literacy and development.

In some respects, dependency does considerably better in predicting income inequality. Even after the effects of “economic surplus” and “political representativeness” are removed (Tables 7 and 8), there tends to be a strong, significant relationship between dependency and inequality. On the other hand, however, when controls for

Table 6 Unionization, by Dependency, Energy Consumption, and Literacy

	Unionization (r)	Unionization (beta)	Energy (beta)	Literacy (beta)	R ²
TRADE/GNP.	-.48**	-.27	.34	.26	.46
TRADE67.	-.07	.06	.39	.32	.40
TRADE29.	-.33*	-.15	.40	.27	.42
INV/GNP67.	-.37**	.29	.38	.36	.48
INV/CAP67.	-.12	-.38	.47	.36	.53
CAPITAL59	-.17	-.61**	.78**	.20	.66
CAPITAL29	.05	-.08	.44	.30	.40
EXPORT CONCEN- TRATION	-.04	-.20	.36	.39	.43

*Significant at .1 level.

**Significant at .05 level.

Table 7 Sectoral Income Inequality, by Dependency and GNP per Capita

	Inequality (<i>r</i>)	Inequality (beta)	GNP/Capita (beta)	<i>R</i> ²
TRADE/GNP.	.32	.07	-.53**	.32
TRADE67.	.61**	.48**	-.41**	.53
TRADE29.	.47**	.27	-.44**	.38
INV/GNP67.	.37*	.20	-.49**	.35
INV/CAP67.	.25	.37**	-.63**	.45
CAPITAL59.	.24	.34**	-.61**	.43
CAPITAL29.	.25	.38**	-.63**	.45
EXPORT CONCEN- TRATION	-.27	-.18	-.53**	.35

*Significant at .1 level.

**Significant at .05 level.

growth rates are introduced (Table 9), the relationship (while still in the expected direction) is inclined to be weaker and insignificant. This suggests that, if dependency produces inequality, it may well do so indirectly, through the stimulation of economic growth (and capital formation?). We should add, finally, that both the level of GNP and economic growth tend, on the whole, to be more powerful predictors of inequality than dependency itself.

Table 8 Sectoral Income Inequality, by Dependency and Political Representativeness

	Inequality (<i>r</i>)	Inequality (beta)	Representativeness (beta)	<i>R</i> ²
TRADE/GNP.	.32	.31	-.08	.11
TRADE67.	.61**	.61**	-.14	.39
TRADE29.	.47**	.46**	-.06	.22
INV/GNP67.	.37*	.41**	-.19	.17
INV/CAP67.	.25	.49**	-.40	.17
CAPITAL59.	.24	.31	-.21	.10
CAPITAL29.	.25	.33	-.22	.11
EXPORT CONCEN- TRATION	-.27	-.26	-.09	.08

*Significant at .1 level.

**Significant at .05 level.

Table 9 Sectoral Income Inequality, by Dependency and GNP Growth

	Inequality (<i>r</i>)	Inequality (beta)	GNP Growth (beta)	<i>R</i> ²
TRADE/GNP.	.32	-.05	.67**	.41
TRADE67.	.61**	.37**	.44**	.51
TRADE29.	.47**	.20	.54**	.44
INV/GNP67.	.37*	.15	.59**	.43
INV/CAP67.	.25	.002	.64**	.41
CAPITAL59	.24	.007	.64**	.41
CAPITAL29	.25	.09	.62**	.42
EXPORT CONCEN- TRATION	-.27	-.19	.62**	.45

*Significant at .1 level.

**Significant at .05 level.

The fact that dependency does not do as well as other explanations of inequality and participation, and that in several cases the relationship appears to “wash out,” indicates the need for considerable caution in accepting the dependency hypotheses. On the other hand, given the newness of the theory, the small number of cases, and the crudeness of the measures, it is promising to find that the patterns of association are so consistent and that, at least in some cases, the associations themselves are so strong. This cautions against “premature” rejection of the dependency hypotheses and, more important, points toward the need for additional empirical research. Until this is done, we leave it to the reader to draw the inferences and emphases which he feels most appropriate.

While the findings discussed above indicate at least some support for dependency theory, another interesting feature of the analysis is that so many of the simple correlations in Table 4 go strongly and significantly in the *opposite* direction from that predicted by dependency theory. By most of the measures we have devised, more dependent economies grow faster, rather than more slowly; they have more, rather than less, equal land tenure structures; and, according to our measures of capital dependency, they have more constitutional stability and less militarism. Even after discounting for data of dubious reliability and validity, these are puzzling findings and the task of theoretical inference and interpretation remains a difficult one.

The paradoxical relationships between capital dependency, constitutional stability, and militarism (most notably, the fact that current

foreign investment correlates .63 with constitutional stability and -.41 with militarism) can be unravelled relatively easily by reversing the causal inferences drawn from the correlation coefficients. It may not make a great deal of sense, in other words, to say that capital investment causes more stability and less militarism. But it is highly plausible to argue that general conditions of political stability, more secure expectations about political regimes, and so on, may do a great deal to attract foreign capital. The relatively weak and generally insignificant relationship of political system characteristics with the *trade* dependency measures, on the other hand, probably reflects the fact that this sort of economic interchange is less vulnerable to the vicissitudes of Latin American political life.

The findings with respect to economic performance also lend themselves to relatively plausible interpretations, although the latter are not very favorable to the assertions of dependency writers such as Gunder Frank. It is true that, according to our simple correlations, more dependent countries tend to have less stable growth patterns and less favorable balances of trade. Even within this latter category, however, the significant .49 correlation between export concentration (presumably the best indicator of a country's vulnerability to shifts in world demand) and a favorable trade balance presents a surprise. This may, of course, be attributable to the fact that our ten-year measure of trade balances did not cover a time span sufficient to reflect the long-term fluctuations in world demand. But it might also reflect the comparative advantage claimed by the classical economists for countries that specialize in the world trading market—an argument rejected by many dependency theorists.

Much more important, the strongly positive and significant correlations between dependency and economic growth (ranging in all but two cases from .40* to .61**) run directly counter to the arguments of Frank and Bodenheimer. Dos Santos' assertion that dependency can have "either a positive or negative" effect on immediate growth prospects also finds little support in the high correlations reported above.²⁸ If anything, the findings seem to offer the strongest support for the counterarguments of "conventional" economists that foreign trade and capital can, in fact, have beneficial economic effects; and they also indicate that the work of dependency writers such as Cardoso, Jaguaribe, and Sunkel (who acknowledge the possibility of growth within a dependent framework) offers a considerable improvement over that of their colleagues. To the extent that the latter

²⁸See footnote 11.

insist that dependency produces negative economic as well as social effects, our data suggest that this argument, made in unqualified form, is rather clearly disconfirmed.

The strong, and on the whole, negative relationship between dependency and land inequality is, in our view, the most puzzling set of findings in the correlation matrix. These findings not only run counter to dependency theory, but seem also to resist interpretation in terms of plausible alternative theoretical arguments. It may be argued, of course, that the outlines of the contemporary Latin American land use patterns were influenced more strongly by nineteenth, rather than twentieth, century world economic conditions and that a more adequate test of the hypothesis would have used much earlier measures of dependency than we had available to us. Moreover, it should be noted that the one dependency measure that probably best reflects world pressures on the land tenure structure—the concentration of (largely agricultural) exports—predicts significantly in the expected direction. Such an attempt to “rescue” the general hypothesis would be much more plausible, however, if the signs of the other correlations had been mixed in more random fashion. Instead, by seven of the eight tests of the hypothesis (two of them very strong and significant), countries with higher levels of economic dependency had *lower* levels of land inequality!

We doubt, of course, that it can be argued from this that dependency *causes* more equal distributions of land. It is more likely that the statistical associations are spurious—that they mask a variety of other ecological, political, and social factors which are independently related to both dependency and land inequality. In the following section, we turn to a closer examination of this possibility.

Multivariate Analysis: The Land Inequality Paradox

Dependency, economic development, and land inequality One of our initial reactions to the land tenure paradox was to speculate that the generally positive association between dependency and economic development might somehow be mediating the direct impact of dependency on the land tenure structure. In the light of the correlation, two sorts of mediating effects seemed consistent with the theory. On the one hand, we felt that the simple, negative correlations between dependency and inequality might actually be masking the levelling impact of economic growth. In other words, dependent countries do not have more equality because they are dependent, but because they have higher rates or levels of development. If this were

so, then once we control for development, the association between dependency and land tenure inequality should go in the expected, positive direction (Hypothesis A). At the same time, dependency theorists also suggest that within dependent countries growth is induced at the expense of social equality. Such a possibility has already been indicated by our findings on income distribution. Development begets a greater degree of dependency which then, in effect, cancels or reduces the levelling effects of economic change (Hypothesis B).

To explore both possibilities simultaneously, we performed successive multiple regressions on each of the dependency variables, controlling each time for one of two measures of economic development—the rate of change in GNP and energy consumption per capita. Figure 1 represents the hypothetical results of this operation that would be consistent with each of the two hypotheses mentioned above. Hypothesis A would be supported by positive beta associations between dependency and land inequality. (The betas in multiple regression analysis represent bivariate associations which control for the impact of third variables.) Findings consistent with Hypothesis B

Figure 1 Hypothesized Relation between Dependency, Economic Development, and Land Inequality

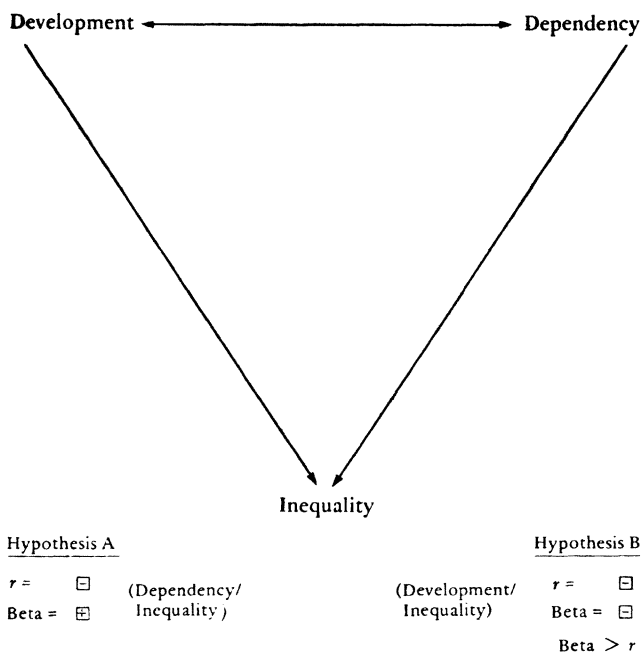


Table 10 Land Inequality by GNP Growth and Dependency

	Inequality (<i>r</i>)	Inequality (beta)	Inequality (beta)	<i>R</i> ²
TRADE/GNP	-.26	-.05	-.40	.18
TRADE67	-.53**	-.43	-.17	.30
TRADE29	-.64**	-.63**	-.02	.41
INV/GNP67	-.005	.33	-.60**	.25
INV/CAP67	-.16	.02	-.43	.18
CAPITAL59	-.30	-.16	-.36	.20
CAPITAL29	-.17	-.09	-.41	.19
EXPORT CONCEN- TRATION	.38*	.28	-.34	.25

NOTES:

*Significant at .1 level.

**Significant at .05 level.

Pearson's *r* correlation between growth and land inequality = -.42.

would show a strong, negative association between development and inequality, once the effects of dependency were removed. The beta association between these two variables, in other words, should be substantially stronger than the already negative simple correlations (-.42 for GNP and -.08 for energy consumption).

The results of our regression analysis are presented in Tables 10 and 11. As can be readily seen, there is no support for either hypothesis relating dependency, development, and land inequality. Hypothesis A postulated that, in contrast to the negative simple correlations between dependency and inequality, the beta associations should be positive. In the case of GNP growth (Table 10), this did occur in two instances. For the most part, however, the controlled beta associations between dependency and inequality were negative—in three instances quite strongly and significantly. If anything, then, the data suggest that, *at any given level of development*, more dependent countries have less inequality. The relevant comparison for Hypothesis B is between the simple and beta associations relating development to inequality. According to the hypothesis, the value of the betas should be consistently greater than that of the Pearson's *r*. But with one exception (Inv/GNP67, GNP, and Inequality—Table 10), no such pattern materialized. *At any given level of dependency*, in other words, economic development seems to have a slight impact in the direction of greater land equality.

Land inequality and geographic subregions A further scanning of

Table 11 Land Inequality, by Energy Consumption and Dependency

	Inequality (<i>r</i>)	Inequality (beta)	Inequality (beta)	<i>R</i> ²
TRADE/GNP.	-.26	-.40	-.28	.13
TRADE67.	-.53**	-.56**	-.17	.31
TRADE29.	-.64**	-.68**	-.22	.45
INV/GNP67.	-.005	-.03	-.09	.01
INV/CAP67.	-.16	-.16	-.03	.03
CAPITAL59.	-.30	-.34	.09	.09
CAPITAL29.	-.17	-.16	-.04	.03
EXPORT CONCEN- TRATION	.38*	.38	-.08	.15

NOTES:

*Significant at .1 level.

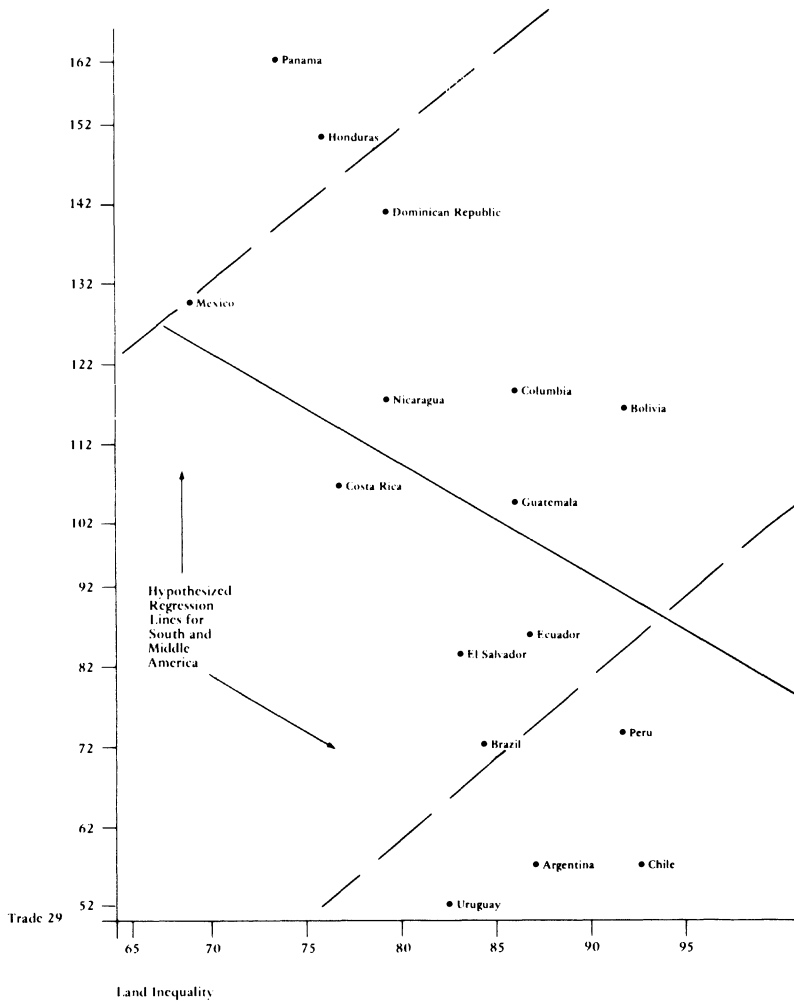
**Significant at .05 level.

Pearson's *r* correlation of energy and land inequality = -.08.

our data opened up an alternative route to unravelling the paradox. An examination of the rankings of specific countries for both land tenure and dependency revealed that the South American countries, as a group, tended to be relatively low on the dependency measures, but to have relatively highly unequal land tenure structures. Conversely, Mexico, along with the Caribbean and Central American countries (henceforth, "Middle American"), ranked, as a group, in the reverse order: they were highly dependent, with relatively equal land tenure structures. On a scatterplot of dependency and inequality, in other words, the South American countries clustered in the lower right-hand corner and the Middle American countries were in the upper left-hand corner, with the overall negative regression line being formed by connecting these two more or less distinct groups of countries. A representative scatterplot illustrates this relationship visually in Figure 2.

This consistent pattern suggested to us that the relationship between dependency and land inequality might be affected by some other set of variables associated with the geographic subregions and that correlations run between dependency and inequality *within each subregion* might go in the direction predicted by the theory. In spite of the unexpected overall *negative* relationship between dependency and inequality, in other words, we felt the associations might become *positive*, if we controlled for subregion. This hypothesized result is illustrated in the scattergram (Figure 2) by the dotted lines drawn

Figure 2 Scatterplot: Trade 29 and Land Inequality



through the data points in each subregion.

The results, presented in Table 12, are quite startling, although not entirely in line with our overall hypothesis. In the “Middle American” countries, the land inequality paradox remains, albeit in somewhat modified form. Five of the eight correlations remain negative; in two cases they are significantly so. Among the South American countries, however, the overall patterns are sharply revers-

Table 12 Dependency and Land Inequality, by Region (Pearson's r)

	All Countries (r)	South America (r)	Central America (r)
TRADE/GNP.	-.26	.66**	.07
TRADE67.	-.53**	.27	-.57**
TRADE29.	-.64**	.15	-.61**
INV/GNP67.	-.005	.86**	.06
INV/CAP67.	-.16	.71**	-.31
CAPITAL59	-.30	.55**	-.34
CAPITAL29	-.17	.62**	-.39
EXPORT CONCEN- TRATION	.38*	.06	.49*

*Significant at .1 level.

**Significant at .05 level.

ed. All of the associations between dependency and inequality become positive, four of them quite strongly and significantly. In other words, the greater the dependency in South America, *the more inequitable the distribution of the land*. With respect to this subregion, the dependency hypothesis is strongly supported.

It is not at all clear to us why these subregional differences have occurred. Since our findings with respect to this matter are completely inductive, we can only speculate about what might be happening. The subregional differences may, for example, be due to different political patterns associated with each area. Much more than in South America, the Middle American nations have displayed an extensive pattern of violent, caudillo politics; and it is possible that land ownership patterns have undergone gradual redistributions as winning caudillos have used agricultural property to pay off their followers. It may also be that different ecological patterns are at work in the two sets of countries. The capital-intensive plantation agricultural patterns found in some parts of Middle America, for example, may have reduced the incentives for landowners to expand their holdings as international market demands for cash crops increased. Unlike their South American counterparts, they may have chosen to increase crop yield per acre rather than to increase the amount of acreage under cultivation. Or we may be witnessing differing historical legacies of colonial settlement patterns themselves—differences relating to the

need to subdue large indigeneous populations, to colonize vast, underpopulated regions, or to import and control a large, slave population.

Whatever explanations may ultimately be uncovered, however, the fact remains that, with respect to land inequality, dependency seems to operate quite differently within the two subregions. The fact that at the present time the general theory offers few guidelines or clues as to why this may be so points clearly to the need for a more precise, systematic, and qualified elaboration of the theory itself.

Conclusions

A general assessment of the mixed results here must seriously take into account the word "preliminary" in the title of this article. Our bivariate hypotheses and the data used to test them, while useful for a "first pass" at a very complex set of issues, permit no definitive conclusions to be drawn about dependency theory one way or the other. However, we feel that the article shifts the burden of proof onto the shoulders of the proponents of dependency theory. Our tentative exploration calls out for suggestions about more complex and qualified ways of elaborating dependency theory and for discussion about alternative ways of subjecting the theory to empirical testing. While this is obviously not the place to undertake such an enterprise, we feel that responses to the challenge and opportunities presented by our findings will require substantial theoretical and empirical efforts in four areas.

First, the concept of dependency itself requires refinement and redefinition. Following more or less along the lines of the existing theoretical literature, we have distinguished in our own analysis between "trade" and "capital" dependency. It is reasonably clear from the data analysis, however, that this distinction is at best a crude one that does not come close to tapping the many ways that the international environment can impinge upon the socio-political systems of "satellite" countries. More specifically, it seems imperative to examine more systematically the types of commodities exchanged in the international economic system, the nature of trade relations between Latin America and the outside world, the type of foreign capital investment, and the terms and destination of this investment. It is desirable also to consider other, "noneconomic" forms of dependency—cultural, military, political—which, when carefully elaborated, might well render the results of future efforts to test dependency theory much stronger than those presented here.

Second, substantially more systematic attention needs to be paid to

a host of political, social, and cultural variables that may intervene between economic dependency and its alleged consequences. Some dependency theorists, most notably Cardoso and Faletto, have written quite suggestively about the way in which the political order mediates the impact of foreign economic penetration, about imperatives of particular types of domestic production and class relations, and about subcultural and historical factors particular to specific segments or countries of Latin America. The complexities which they introduce, however, are as yet too vague and ad hoc to provide the clear-cut theoretical dimensions which would allow for the framing and testing of more complex multivariate hypotheses.

Third, techniques must be devised for the systematic empirical exploration of such hypotheses. Obviously, there are serious limitations to the utility of the aggregate data techniques employed here. Carefully conceived case studies and in-depth comparisons, longitudinal analyses, surveys, or simulations will all probably be useful in overcoming the constraints encountered in this article. But, one way or another, dependency theorists need to address themselves much more carefully to the challenges of verification—to the specification of conditions which, if found in the empirical world, would prove them wrong.

Finally, our findings suggest that it would be highly advisable to tone down (or at least to reassess) the extravagant claims sometimes made for dependency theory as a framework for understanding all of the problems of Latin American development. Restated more cautiously—perhaps as a complement, rather than an alternative to more “conventional” theories of development—the concept of dependency may indeed be useful in the diagnosis and understanding of these problems. Several of our findings, especially those regarding inequality and participation, point in that direction. At the same time, however, it seems quite clearly necessary (as Lenin once cautioned) to take “one step backward” in the use of the dependency concept, and to proceed incrementally in its application rather than to elevate it to the status of an overarching “developmental paradigm.”