

**564 / *Social Forces* 69:2, December 1990**

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# National Politics, International Dependency, and Basic Needs Provision: A Cross-National Analysis

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## *Abstract*

*In this article we investigate the impact of selected political and economic processes on the well-being of domestic populations in samples of 41 to 110 nations. More specifically, we assess the impact on basic needs provision of regime ideology, state strength, multinational corporate investment, trade dependency, and position in the world economy. Our analysis synthesizes a literature that has focused on either international economic or intranational political processes but has not explored the relationship between them. In particular, we extend the work of Moon and Dixon (1985) by examining the impact on basic needs provision of both regime characteristics and state strength, which they did investigate, and the penetration of multinational corporations, trade dependency, and position in the world economy, which they did not.*

Concern with basic needs provision originated with development economists in the 1970s (cf. I.L.O. 1977; Hicks 1979; Hicks & Streeten 1979), when it had become clear that economic growth in many nations was not associated with improved living standards for most people, especially in less developed countries (LDCs). In other words, there seemed to be a contradiction between economic growth and the specific distribution of social resources, suggesting that development should be measured in terms of social as well as economic output. "Such a focus supplements attention to *how much* is being produced, by attention to *what* is being produced, in *what ways*, for *whom* and with *what impact*" (Hicks & Streeten 1979:577; emphasis in original). Thus much debate turns on disagreement over who benefits from economic growth if and when it occurs. In attempting to answer this question a number of scholars developed indicators of basic needs provision that contain more information about the distribution of *social* resources than do extant measures of either economic growth or income inequality, and measurement of basic needs is now seen as an important complement to these measures.

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Quantitative research on basic needs (e.g., Dixon 1985; Moon & Dixon 1985) has relied primarily on the Physical Quality of Life Index (PQLI) developed by Morris (1979), which combines measures of infant mortality at age one, literacy rates, and life expectancy. It measures as directly as possible actual conditions existing in the general population and may be seen as an indicator of the outcome of political and economic processes operating within a given nation.

There is, however, serious debate over the reliability and validity of the PQLI (see esp. Hicks & Streeten 1979:576-77). Indeed, definition and measurement of terms such as "quality of life" or "basic needs" are always controversial and resist scholarly consensus. Adopting an approach very different from that of Morris, Estes (1984) developed the Index of Net Social Progress (INSP) by combining 41 different indicators of the following dimensions: education progress, health status, women's status, defense effort, economic growth, demographic conditions, political stability, political participation, cultural diversity, and welfare effort. The INSP differs from the PQLI both theoretically and methodologically. Rather than identifying a small number of theoretically predefined indicators, as the PQLI does, the INSP defines basic needs as an essentially multidimensional concept and employs a large number of indicators that are factor-analyzed and weighted to produce a single index. While the two indices are highly correlated (see below),<sup>1</sup> their theoretical interpretations differ. In contrast to the PQLI, the INSP measures the inputs of political and economic processes in addition to actual population conditions. The INSP may be seen as a measure of effort, especially by government, to provide basic needs, whereas the PQLI measures only results.<sup>2</sup>

We conduct parallel analyses using both composite indices of basic needs in an attempt to explore the possibility that relationships might change with the measures chosen. If the results of these parallel analyses are mutually supportive, confidence in the findings will be enhanced. If they are not, careful attention must be devoted to explanation and interpretation of the discrepancies (see London & Williams 1988).

### The Determinants of Basic Needs Provision

Inquiry into the determinants of basic needs provision is an extension of the more general and highly charged debate over the impact of economic and political processes on economic growth and domestic well-being. Defenders of free-market capitalism argue that private markets allocate the scarce resources of societies best, maximizing levels of economic growth and standards of living. No matter how well-intentioned, government spending is undertaken at the expense of the private sector and tends to slow economic growth and to lower living standards. Although government redistribution of resources aimed at correcting the inequalities created by private markets may reduce income inequality, it is likely to slow economic growth and ultimately to leave everyone worse off in absolute terms. This problem is particularly severe in the least developed nations, where dramatically increased income inequality may have to be tolerated before substantial economic growth and reductions in inequality can occur. In such nations, the temptation for government to reduce inequalities

through redistribution is severe, despite its long-term drawbacks.<sup>3</sup> Thus some scholars argue that rapid economic growth is best achieved through limited government and maximum reliance on private-market forces.

Leftists — specifically, Marxist theorists — argue that private-market capitalism leads to uneven and distorted development. Though certain sectors may benefit (in particular, the capitalist classes), others are left behind, and standards of living may actually decline for the majority of a nation's population. Marxists contend that such inequality is a necessary result of capitalist development. Reformists argue that government expenditure can play a positive role in economic growth by redistributing income from those who have benefited from development to those who have not. Indeed, some theorists argue that such expenditures, because they forestall mobilization of the discontented, may be a requirement of regime stability. While many question even the possibility of sustained, balanced growth under capitalism, others argue that it cannot occur without substantial government expenditures.

Moon and Dixon (1985) make an important contribution to this literature by examining the impact on basic needs provision of regime ideology, level of democracy, and state strength (government expenditures as a proportion of GNP) in 116 nations. As conservative theorists predict, they find (controlling for level of economic development) a negative relationship between state strength and basic needs provision. This relationship, however, masks an interaction between regime ideology and state strength: strong right-wing regimes tend to depress basic needs provision, whereas strong left-wing states tend to enhance it. Furthermore, level of democracy is a consistent positive predictor of basic needs provision.

These are important findings because they contradict the assumptions of conservative theorists that "big government," because it competes with private-sector investments, tends to retard a population's well-being. Government spending *per se* does not determine slow economic growth; rather, ideology as it affects the policies governments pursue with public funds is of primary importance. Strong left-wing regimes are able to better allocate a nation's resources, at least in terms of the factors measured by the PQLI used by Moon and Dixon.

Though they break new ground, Moon and Dixon do not consider certain factors that may significantly affect their results. Specifically, they do not examine the effect on basic needs provision of the relationship between *international* economic and *intranational* political variables. Thus they do not take into account a growing body of work by dependency/world-system theorists that suggests that the functioning of the international economy and a nation's position in it significantly affect the provision of basic needs.

To test competing predictions about the international determinants of national growth, scholars have attempted to measure the empirical relationship between levels of dependency (cf. Chase-Dunn 1975) or world-system position (cf. Snyder & Kick 1979) and economic growth in developing nations. Central to this literature is the benchmark work of Chase-Dunn (1975), who has found foreign penetration of peripheral nations associated with not only slow economic growth but also greater income inequality. Though there are many problems with measures of inequality, particularly in developing nations, these

findings suggest that penetration of foreign capital, while benefiting a small elite, may actually lower the quality of life for much of the population, regardless of the effect such investment has on overall economic growth.<sup>4</sup>

Dixon's (1985) work is also relevant in this regard. Using data for 72 LDCs from 1960 to 1980 to assess the effect of trade concentration dependency on economic growth and basic needs, he argues that measures of welfare performance (i.e., basic needs) must be examined alongside conventional indicators of economic performance, such as GNP and income inequality, because the latter "reflect only potential welfare, not actual achievement" (p. 764). Furthermore, the possibility that trade dependency has both indirect (through its impact on the general economy) and direct effects (independent of economic factors) on welfare can only be examined by juxtaposing analyses of basic needs provision with those of economic growth. He finds that trade concentration dependency "does have a weak depressing effect on growth but no direct influence on basic needs" (p. 764).

Though much, but by no means all, of the quantitative analysis of these issues supports a dependency/world-system perspective, it has been criticized for ignoring the interaction of international economic and intranational political processes. Chirot (1981:259) notes that dependency and world-system theorists shifted the focus of analysis from the study of "modernization" toward that of "international power relations." He asserts that "this neglects internal causes of social change just as surely as the earlier modernization theorists ignored the importance of world politics and unequal exchange between different economies." By rejecting the internal focus of conventional theorists, dependency/world-system proponents have generally concentrated exclusively upon a state's position in the world economy, ignoring undeniably important internal characteristics of peripheral nations (e.g., regime characteristics and ideology as examined by Moon and Dixon [1985]).<sup>5</sup>

The consequence of failing to consider both international economic and intranational political factors as determinants of basic needs provision may be highlighted by comparing the findings of London and Williams (1988) with those of Moon and Dixon (1985). Though London and Williams do examine the impact of levels of political protest (largely negligible) on basic needs provision, they focus primarily upon dependency and world-system position without including the important political variables examined by Moon and Dixon. While the latter find a strong positive relationship between regime ideology, state strength, democracy, and basic needs, the former find a strong negative relationship between penetration by multinationals and basic needs. Comparing these results suggests at least three possibilities. First, the findings of London and Williams may be misleading because multinationals tend not to invest in nations with strong left-wing regimes: their measure of penetration may simply be a surrogate for regime ideology and state strength. Second, Moon and Dixon's findings may be misleading. If left-wing regimes tend to keep multinationals out, it may be this and not regime ideology or state strength *per se* that accounts for the relationship they report. Further, because they do not examine the significance of world-system position (i.e., they examine all nations in a single analysis), one cannot be sure of the stability of these findings across groups of core, peripheral, and semiperipheral nations. Finally, both sets of

findings may be accurate but incomplete because international economic and internal political processes exert simultaneous independent effects on basic needs provision.

It seems clear that analysis of the dynamics of basic needs provision would profit from simultaneous consideration of both intranational political and international economic processes. Analysts who investigate either the political or the economic determinants of basic needs provision clearly imply, albeit without explicitly theorizing, certain relationships between economic and political processes. As we have seen, however, those who have attempted to empirically test competing theoretical claims about the determinants of basic needs provision have usually included *either* economic *or* political variables in their analysis. We attempt in our analysis to address some of these issues by analyzing *both* political and economic determinants of basic needs provision. The most efficient way to achieve this goal — one that ensures the comparability of our results with already published results — is to use Moon and Dixon's model as a baseline for replication and to add to it measures of the important international economic predictors suggested by London and Williams.

### Data and Hypotheses

#### DEPENDENT VARIABLES: PQLI AND INSP

As noted above, we employ two different indices of basic needs provision in our analysis. The Physical Quality of Life Index, used by Moon and Dixon (1985), is computed for 1970 and taken directly from Morris (1979).<sup>6</sup> The Index of Net Social Progress combines 41 different indicators of ten dimensions of domestic well-being. The index is computed for 107 nations with ca. 1970 data and taken directly from Estes (1984).<sup>7</sup>

Though they rely on different component measures, the two indices are nevertheless highly correlated: for the entire sample of nations, the Pearson correlation is .84; for all noncore nations (i.e., peripheral and semiperipheral nations), it is .79; and for peripheral nations alone, it is .81. Despite these high correlations, when employing both indices in a study of the economic determinants of basic needs provision, London and Williams (1988) find that results differ somewhat by index. Thus there is evidence that the two indices tap somewhat different underlying dimensions of basic needs provision. Whereas London and Williams do not explicitly analyze the reasons for these variations, however, we attempt to in our analysis.

Aside from method of construction, the two indices differ most in the degree to which their components reflect actual conditions in the general population as opposed to the policy commitments of government. The PQLI is composed entirely of the former sort of indicators (infant mortality, literacy rates, and life expectancy) and may be characterized as an index of human capital outcomes of both political and economic processes. The INSP, on the other hand, includes indicators of government effort — including spending — across a broad spectrum of policies (e.g., welfare effort, political stability, education progress, defense effort) in addition to measures of the effect of such effort.

We expect that because it includes variables directly manipulatable by government, the INSP will be more sensitive than the PQLI to regime characteristics (of the sort used by Moon and Dixon). Left-wing governments, for example, may be able to devote greater resources to welfare policies than right-wing regimes. This difference will be reflected in the INSP even if such expenditures have little effect on actual conditions in the population (e.g., infant mortality or life expectancy). Actual levels of population well-being are likely to be a function of the economic conditions prevailing in the country. Hence, to the extent that government efforts operate only indirectly (i.e., through their impact on economic conditions) upon population well-being, we expect measures of world economic position and foreign penetration to be better predictors of the PQLI than of the INSP.

#### INDEPENDENT VARIABLES

##### *Dependency*

Many measures of dependency have been used in quantitative cross-national research: trade dependency, such as export partner concentration and export commodity concentration; foreign trade structure; debt dependency; and, of course, investment dependency. However, a measure explicitly designed to assess a nation's level of transnational corporate penetration taps the most appropriate dimension of the complex process of dependency, given the changing nature of international economic exchanges or core-peripheral relations during the last two or three decades. Cardoso (1973), Cardoso and Faletto (1979), and Evans (1979) argue that the tendency of transnational firms to invest in industrial production in the periphery makes it necessary to draw a distinction between classical dependency (characterized primarily by peripheral production of raw materials for core consumption) and a newly emergent form of dependent industrialization (termed "the new dependency" by dos Santos [1970]). Bornschier and Chase-Dunn (1985:51-52), for example, present evidence that between the mid-1960s and the mid-1970s peripheral countries became less dependent in terms of such indicators of classical dependency as export commodity concentration and an index of vertical trade (which measures the degree to which a country's trade is composed of raw materials rather than manufactured goods). Their data show, however, that for the same period "dependence on transnational corporate investment increased significantly. . . . [Thus] . . . transnational corporations and international financial agencies have been displacing traditional trade dependence as the main form of core periphery domination" (Bornschier & Chase-Dunn 1985:51-52). Including an indicator of multinational penetration may be crucial for investigating the effects of international economic processes on basic needs provision, since it is one of the changes in the world economy most frequently mentioned by dependency theorists.

In this regard, note that Dixon (1985) does not use such a measure but focuses instead on more traditional measures of trade dependency, which could account for his finding that dependency has no direct influence on basic needs. Indeed, a recent study of dependency and fertility (London 1988) finds a measure of multinational penetration to be a significant predictor of LDC fertility-rate change *between 1965 and 1984*, while two measures of classical

dependency (foreign trade structure and commodity concentration) are not significant.

Following Moon and Dixon (1985), our study is essentially cross-sectional, focusing on ca. 1965-1970 data. And, since the shift to the new dependency was only in its early stages at this time, we examine the effects of indicators of classical dependency on basic needs in addition to those of multinational penetration. In other words, we treat the appropriateness of different measures of dependency as an empirical question by examining several series of equations that each include different measures of dependence.

We measure investment dependency, or the penetration of an LDC's economy by multinational corporations, ca. 1967.<sup>8</sup> This measure is an indicator of transnational corporate penetration, computed by taking the square root of the product of (a) the stock of capital controlled by foreign direct investment as a proportion of the total capital stock of the country and (b) the stock of capital controlled by foreign direct investment divided by the total population of a country. Thus the investment dependency measure estimates the shares of both a nation's capital and its labor controlled by core-based transnational corporations. It is logged to correct for skewness.

If the logic of neoclassical economic theory is correct, one would expect to find a positive relationship between multinational penetration and our dependent variables. In this view, countries best able to attract foreign capital should experience greater economic growth and, concomitantly, increased levels of basic needs provision. On the other hand, if dependency theorists are correct, multinational penetration should be associated with lower levels of basic needs provision: the distorted development argument. If our arguments are correct about the underlying dimensions of basic needs tapped by the two indices, penetration would be expected to have a greater effect than regime characteristics on the PQLI and a lesser one on the INSP.

To test if a measure of the new dependency is more appropriate than measures of classical dependency, equations are examined that substitute measures of foreign-trade structure and commodity concentration in exports in 1965 for the measure of multinational penetration. Foreign-trade structure is the composition of a nation's total foreign trade measured by the degree traded goods are processed (Bornschier & Heintz 1979:109-12). Low scores indicate high export of raw materials and high import of processed goods, i.e., classic trade dependency. Hence finding significant positive regression coefficients for foreign-trade structure would support dependency theory.

Commodity concentration is the value of a nation's most important export commodity measured as a percentage of its total exports (Bornschier & Heintz 1979:97-98). According to dependency theory, high levels of such concentration are expected to inhibit the ability of nations to compete in world markets. Thus significant negative coefficients for commodity concentration would also support dependency theory.

#### *World-System Position*

To examine the effect of world-system position on the determinants of basic needs provision, we run each of our analyses on three separate samples of nations: all nations for which data are available (the approach adopted by Moon



and Dixon)<sup>9</sup>; all noncore nations — all nations classified as peripheral or semiperipheral in Bollen's (1983) revision of Snyder and Kick's (1979) measure of world-system position; and all nations classified by Bollen as peripheral.<sup>10</sup>

A basic assumption of those working within the world-system framework is that different developmental dynamics operate in countries depending upon their position in the world economy. In contrast, neoclassical economics tends to place little emphasis on such differing positions. From the former perspective, economic growth and basic needs provision would be expected to be much more adversely affected by the penetration of foreign capital in noncore nations than in core ones. Bornschier and Chase-Dunn (1985) relate position in the world economy to our measures of investment dependency and the new dependency: "A particularly strategic aspect of the relationship of individual countries to the structure of the world-economy is whether or not a country takes part in the control of that economy by being an important headquarters location of transnational corporations" (1985:13). Yet only a small number of core nations serve as headquarters to transnationals. Though these nations are also penetrated by multinational investment, the impact of such investment is positively influenced by their core position and control over investment derived from the presence of corporate headquarters within the boundaries of state authority. Noncore nations, which are also penetrated by multinationals, do not exercise control over these firms and thus suffer adverse consequences. Finally, socialist countries, though integrated into the world economy, have been little penetrated by transnationals.<sup>11</sup>

Because of disagreement in the literature about the effect of position in the world system, it seems prudent to test any set of results by analyzing stability across core, peripheral, and semiperipheral nations.<sup>12</sup>

#### *State Strength*

As we note above, one of our primary purposes is to compare the impact of regime (political) characteristics and economic variables on basic needs provision. To insure comparability with other work, we take our measures of regime characteristics from the analysis of Moon and Dixon. Indeed, as emphasized above, our work is essentially a replication of Moon and Dixon's that adds an international dimension to their models.

While some conservative theorists argue that an increase in the size and strength of government is undertaken at the expense of the private sector, many other scholars view government spending as an important corrective to the undesirable effects of private-market activity. In this view, increased state strength is associated with greater levels of basic needs provision.<sup>13</sup>

Following Moon and Dixon, we use as an indicator of state strength the percentage of the GNP accounted for by central government expenditures averaged over the three-year period 1969-1971 (U.S. Arms Control and Disarmament Agency 1980). We log this measure to control for skewness.<sup>14</sup>

#### *Democracy and Regime Ideology*

Moon and Dixon employ two additional indicators of regime characteristics. First, a measure of the degree of democracy in a nation is used to test the

degree to which freely elected and open regimes respond to popular demands for the provision of basic needs. Second, to assess the effect of ideological orientations, independent of the way in which regimes are selected, Moon and Dixon include a measure of the ideological norms of the ruling regime.

Again, we include in our analysis the same measures used by Moon and Dixon. First, Bollen's (1980) index of political democracy is used to measure degree of democracy. Varying between 0 and 100, this measure is a composite index based upon six indicators: freedom of the press, government sanctions, tolerance of political opposition groups, fairness of elections, methods of selecting executives, and methods of selecting legislators. To lessen the effects of sudden changes, this measure averages observations from 1960 and 1965.<sup>15</sup> Second, to measure regime ideological norms, Blondel's (1969) classification of regime ideologies into seven types is collapsed into three categories: leftist, rightist, and centrist regimes. In the actual analysis, an effects coding procedure is employed: left- and right-wing regimes are the two represented in the effect-coded variables (*left regime norms* and *right regime norms*).<sup>16</sup>

#### *Level of Economic Development*

As is standard in such analyses, we control for the great variation among nations in existing levels of aggregate wealth. Following Moon and Dixon and others, we use Morris's (1979) measure of 1970-1975 per capita GNP, which we log to correct for skewness.

#### **Findings**

To insure the comparability of our findings,<sup>17</sup> we first compare our results with the estimates reported by Moon and Dixon in their model of the political determinants of basic needs provision. Table 1 (columns 1, 2, 3, 6, 7, 10, and 11) reports the results of this comparison for the basic model (without terms for the interaction of state strength and regime norms). (Note that column 1 simply displays the findings reported by Moon and Dixon.) For both indicators of basic needs provision, parameter estimates (as measured by the standardized coefficients) and explained variance are similar, despite slightly different sample sizes (see Appendix for a list of the countries we include in our sample). Indeed, even the subsamples of peripheral and noncore nations produce results similar to those of Moon and Dixon. Columns 4, 5, 8, 9, 12, and 13, which introduce our measure of multinational corporate penetration, show evidence that regime norms may be acting as a surrogate for penetration of multinational corporations. In all six equations, regardless of the basic needs indicator, penetration has a significant<sup>18</sup> negative effect and regime norms (*left* and *right*) are no longer significant.<sup>19</sup> As dependency theorists predict, controlling for level of economic development, multinational penetration is significantly associated with lower levels of basic needs as measured by both the PQLI and the INSP. Further, introduction of the penetration measure does not dramatically affect the impact of the index of democratization: regardless of the sample or index of basic needs, democracy is associated with increased levels of basic needs.

Our findings must remain tentative with respect to the effect of world-

TABLE 1: Regression of Basic Needs Indices on Development, State Strength, Democracy, Regime Ideological Norms, and Investment Dependency

	Moon & Dixon		All Nations		
	PQLI (1)	PQLI (2)	INSP (3)	PQLI (4)	INSP (5)
Level of development	.72**	.74**	.78**	.74**	.75**
State strength	-.12**	-.11**	-.13**	-.12**	-.11*
Democracy	.24**	.21**	.14*	.29**	.20**
Left regime norms	.28**	.25**	.27**	-.02	.04
Right regime norms	-.24**	-.23**	-.23**	.05	-.04
Investment dependency	—	—	—	-.31**	-.23**
R <sup>2</sup>	na	.72	.72	.78 <sup>z</sup>	.74 <sup>ns</sup>
Adj. R <sup>2</sup>	.71	.70	.70	.77	.72
N	116	110	100	102	99

\*B is at least 1.5 times its standard error.      \*\*B is at least twice its standard error.

system position. Recall that we expected, based upon this perspective, that the effect of dependency upon transnational corporate investment would be more adverse for peripheral and semiperipheral nations than for core ones. The findings indicate that investment dependency is slightly more negative for all noncore nations than for peripheral nations alone, indicating that the adverse effects of penetration are greater for semiperipheral than peripheral nations. This could indicate, if confirmed in other analyses, that the negative effects of such investment dependency increase initially as nations are integrated further into the world economy. Moreover, the dependency coefficients for the sample of noncore nations are slightly more negative than for the entire sample, indicating that, as the world-system approach implies, the impact of penetration on core nations (included in the latter sample) is less adverse than on noncore nations.<sup>21</sup> While these patterns are generally constant throughout our analyses (see Tables 2 and 3), they must be interpreted cautiously, given the small magnitudes of the differences and our reluctance to run the regressions on core nations alone because of the small sample size.

Recall also that we argued that multinational penetration would be associated more strongly with the PQLI than with the INSP. Support for this prediction is indicated in our examination of the increment to R<sup>2</sup> attributable to the penetration measure.<sup>22</sup> Though penetration is significant for both indicators of basic needs (albeit less so for the INSP equations), the increment in explained variance attributable to penetration is significant only for the PQLI equations (columns 4, 8, 12). Thus, consistent with our predictions, while investment dependency is significantly associated with both indicators of basic needs, its effect is stronger with the PQLI.

TABLE 1: Regression of Basic Needs Indices on Development, State Strength, Democracy, Regime Norms, and Investment Dependency (Continued)

All Noncore Nations				Peripheral Nations			
PQLI	INSP	PQLI	INSP	PQLI	INSP	PQLI	INSP
(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
.76**	.76**	.79**	.74**	.81**	.76**	.85**	.74**
-.18**	-.23**	-.23**	-.22**	-.27**	-.28**	-.28**	-.24**
.24**	.14*	.33**	.22**	.19**	.20*	.28**	.29**
.27**	.35**	-.03	.07	.19*	.23*	.01	.04
-.27**	-.29**	.03	-.05	-.17*	-.14	.01	.01
—	—	-.38**	-.31**	—	—	-.28**	-.24*
.65	.62	.74 <sup>z</sup>	.65 <sup>ns</sup>	.61	.58	.72 <sup>x</sup>	.61 <sup>ns</sup>
.63	.60	.72	.63	.58	.53	.68	.56
93	84	85	83	59	53	55	53

\* Increment to R<sup>2</sup> p<.05    <sup>z</sup> Increment to R<sup>2</sup> p<.01    <sup>ns</sup> Increment not sig.

Table 2 further compares our results with those of Moon and Dixon by introducing terms that measure the interaction between state strength and regime norms: *right regime \* strength* and *left regime \* strength*. These equations reproduce Moon and Dixon's most important findings by demonstrating that the interaction between regime norms and state strength, not simply the size of government, accounts for greater or lesser basic needs provision: strong left-wing regimes are associated with higher levels of basic needs provision, strong right-wing regimes with lower levels. Once again, column 1 reproduces Moon and Dixon's equation, and columns 2, 3, 6, 7, 10, and 11 indicate that, despite slight differences in sample size, our results are similar for the entire sample of nations, regardless of the dependent variable employed. The only difference worth noting is that for the two regime norm coefficients (*right regime norms* and *left regime norms*). When Moon and Dixon added the interaction terms to their original equations, the two regime norm estimates actually changed signs (1985:682; compare our Table 1, eq. 1, with Table 2, eq. 1). In our analysis the signs do not change (compare Table 1, eq. 2, with Table 2, eq. 2). Moreover, our findings of a positive *left* effect and a negative *right* effect are consistent in all of the equations in Table 2 that exclude *investment dependence*.<sup>23</sup>

Even when we break the sample down into noncore and peripheral nations, the results remain largely consistent with those of Moon and Dixon, except that the coefficient for strong left-wing regimes (*left regime \* strength*) drops below significance in the INSP equation for peripheral nations (column 11). But the sign stays positive, and this finding may simply be a result of the smaller sample size for this equation.

Columns 4, 5, 8, 9, 12, and 13 add our measure of multinational penetration.

TABLE 2: Regression of Basic Needs Indices on Political and Economic Variables Including First-Order Interaction Terms and Investment Dependency

	Moon & Dixon		All Nations		
	PQLI (1)	PQLI (2)	INSP (3)	PQLI (4)	INSP (5)
Level of development	.72**	.73**	.75**	.75**	.73**
State strength	-.07	-.06	-.07	-.07	-.07
Democracy	.22**	.20**	.18**	.27**	.22**
Left regime norms	-.20	.18**	.19*	-.06	.01
Right regime norms	.50**	-.23**	-.22**	.02	-.07
Left regime * strength	.45**	.19**	.23**	.15**	.20**
Right regime * strength	-.71**	-.27**	-.28**	-.22**	-.25**
Investment dependency	—	—	—	-.27**	-.19**
R <sup>2</sup>	n/a	.76	.75	.81 <sup>z</sup>	.77 <sup>ns</sup>
Adj. R <sup>2</sup>	.75	.74	.74	.79	.74
N	116	110	100	102	99

\*B is at least 1.5 times its standard error. \*\*B is at least twice its standard error.

The penetration measure remains significant and negative for all equations regardless of the dependent variable; at a given level of economic development, multinational penetration is associated with lower levels of basic needs provision. The terms for rightist and leftist norms are not significant, and state strength is only significant for two equations — with the PQLI for noncore nations (column 8) and with the INSP for peripheral nations (column 11). Most importantly, in all equations the interaction terms remain significant.

Again, the positive impact of democracy on the provision of basic needs is a stable finding throughout the analysis. Regardless of world-system position, the index of basic needs used, or the inclusion of the multinational penetration measure, level of democracy remains a significant positive indicator of basic needs. Thus, where institutions of popular representation are present, regimes make a greater effort at (as measured by the INSP) and achieve better results in (as measured by the PQLI) providing for the general well-being of the population.

Examination of the increment to R<sup>2</sup> attributable to investment dependency again provides support for our argument that the PQLI is more likely to be affected by economic variables than is the INSP. The increment for dependency is significant for two of the three PQLI equations but for none of the INSP equations.

Beyond these differences in the indices, the most significant finding to emerge is the stability of *both* the international economic and intranational political determinants of basic needs provision.<sup>24</sup> Our results remain remarkably constant (in terms of the magnitude of the coefficients, significance levels, and variance explained) regardless of the sample or index of basic needs provision.

TABLE 2: Regression of Basic Needs Indices on Political and Economic Variables Including Interaction Terms and Investment Dependency (Continued)

All Noncore Nations				Peripheral Nations			
PQLI (6)	INSP (7)	PQLI (8)	INSP (9)	PQLI (10)	INSP (11)	PQLI (12)	INSP (13)
.73**	.72**	.78**	.71**	.79**	.72**	.85**	.71**
-.08	-.10	-.14*	-.12	-.12	-.19*	-.13	-.18
.22**	.17**	.31**	.22**	.16*	.23**	.24**	.30**
.15	.17	-.09	.01	.12	.18	-.06	.04
-.24**	-.21*	.02	-.06	-.22*	-.22	-.04	-.08
.23**	.32**	.17*	.26**	.18*	.11	.17*	.07
-.30**	-.31**	-.22**	-.26**	-.36**	-.28*	-.34**	-.23*
—	—	-.31**	-.22*	—	—	-.21**	-.21*
.70	.67	.76 <sup>z</sup>	.68 <sup>ns</sup>	.68	.61	.76 <sup>ns</sup>	.63 <sup>ns</sup>
.68	.64	.74	.65	.64	.55	.72	.57
93	84	85	83	59	53	55	53

\* Increment to R<sup>2</sup> p<.05    <sup>z</sup> Increment to R<sup>2</sup> p<.01    <sup>ns</sup> Increment not sig.

Multinational penetration and the interaction of state strength and regime norms are not surrogates for each other but rather exert independent and consistent effects on basic needs provision. Thus strong right-wing and strong left-wing regimes exert, respectively, significant negative and positive effects on basic needs provision over and above the significant negative effect of multinational penetration.

Table 3 reproduces the models presented in Table 2 only (to save space), with one basic change: measures of foreign-trade structure and commodity concentration, respectively, are substituted for the measure of multinational penetration. The pattern of results found in Table 3 is similar to that found in Table 2 (see esp. equations 4, 5, 8, 9, 12, and 13). Specifically, the interaction terms and the measure of democracy are significant in most equations, and both measures of classical dependency have significant or near significant, direct harmful effects on basic needs provision in all but one of the equations.<sup>25</sup> The addition of measures of foreign-trade structure and commodity concentration to Moon and Dixon's original models, however, never yields a significant increment to R<sup>2</sup>; in contrast, the addition of the measure of multinational penetration provides a significantly better fit for some PQLI equations. This could indicate that, even though both classical and new forms of dependency had direct effects on basic needs provision ca. 1965-1970, the salience of the new dependency was becoming apparent.

The overall findings indicate that the simultaneous inclusion of both intranational political and international investment dependency variables

TABLE 3: Regression of Basic Needs Indices on Political and Economic Variables Including Interaction Terms and Measures of Classical Dependency

	All Nations			
	PQLI (1)	INSP (2)	PQLI (3)	INSP (4)
Level of development	.69**	.71**	.65**	.66**
State strength	-.09*	-.06	-.07	-.05
Democracy	.18**	.19**	.17**	.18**
Left regime norms	.10	.13	.09	.04
Right regime norms	-.09	-.19**	-.13	-.12
Left regime * strength	.12*	.14*	.11	.20*
Right regime * strength	-.21**	-.18**	-.21**	-.24**
Foreign-trade structure	.17**	.06	—	—
Commodity concentration	—	—	-.23**	-.15**
R <sup>2</sup>	.80 <sup>ns</sup>	.78 <sup>ns</sup>	.79 <sup>ns</sup>	.75 <sup>ns</sup>
Adj. R <sup>2</sup>	.78	.76	.76	.72
N	87	84	83	80

\*B is at least 1.5 times its standard error. \*\*B is at least twice its standard error.

provides a significantly better fit, especially for the PQLI, than that provided by models that include only one or the other. However, the stability of the regression coefficients when such indicators are added also indicates that both the findings of London and Williams and those of Moon and Dixon are reliable.

### Conclusions

Our results add several theoretical and methodological insights to the study of the determinants of basic needs. First, they increase confidence in the findings of both dependency theorists, who have focused primarily upon economic processes, and scholars like Moon and Dixon, who have focused primarily upon political processes. When both economic and political variables are included in the same analysis, the findings with respect to several dependency measures, democracy, and the interaction of state strength and regime norms remain stable and consistent. Confidence in the reliability of these results is heightened by their stability across not only different subsamples but also alternative indices of both dependency and basic needs provision. Further, differences we do find in the variance explained by economic and political indicators are consistent with our theoretical interpretation of these alternative indices, thus increasing our confidence in their validity and our findings.

Despite stability in the coefficients for political variables, however, the significant increase in the variance explained when multinational penetration is added to the PQLI equations indicates that the inclusion of both economic and political processes enhances the fit of the model. This seems to indicate that

TABLE 3: Regression of Basic Needs Indices on Political and Economic Variables Including Interaction Terms and Classical Dependency (Continued)

PQLI (5)	All Noncore Nations				Peripheral Nations			
	INSP (6)	PQLI (7)	INSP (8)	PQLI (9)	INSP (10)	PQLI (11)	INSP (12)	
.72**	.72**	.68**	.67**	.78**	.67**	.82**	.55**	
-.18**	-.13	.02	.07	-.17*	-.15	.14	-.07	
.24**	.21**	.19**	.18*	.16*	.28**	.08	.26**	
.02	.08	-.17	-.29	-.05	.07	-.34	.00	
-.08	-.18*	-.02	.09	-.06	-.17	.14	-.19	
.16*	.23*	.33*	.57**	.13	.04	.44*	.12	
-.20**	-.20*	-.38**	-.47**	-.27**	-.17	-.58**	-.34	
.28**	.13 <sup>a</sup>	—	—	.26**	.18*	—	—	
—	—	-.24**	-.13 <sup>b</sup>	—	—	-.29**	-.23*	
.76 <sup>ns</sup>	.68 <sup>ns</sup>	.72 <sup>ns</sup>	.63 <sup>ns</sup>	.77 <sup>ns</sup>	.70 <sup>ns</sup>	.75 <sup>ns</sup>	.58 <sup>ns</sup>	
.72	.63	.67	.57	.72	.63	.69	.48	
65	63	62	60	44	42	43	41	

<sup>ns</sup> Increment to R<sup>2</sup> is not significant.    <sup>a</sup> B = 1.442(SEB)    <sup>b</sup> B = 1.414(SEB)

variables that measure international economic and internal political processes are not surrogates for each other but rather tap somewhat independent processes that affect basic needs provision. In other words, national and international dynamics are so interpenetrating in the modern world system that any analysis that disregards the effect of either set of factors is seriously deficient (see London & Smith 1988).

At a more general level, we find strong support for dependency theory. Our results are also somewhat ambiguous with respect to our interpretation of world-system theory's implications for our measure of dependency. While the differences in the impact of the dependency measure between samples are in agreement with this theory, these results must remain tentative pending more direct testing. On the other hand, the tables do reveal a striking consistency in the direction and magnitude of almost all independent variables across differing samples. We find no support for the conservative arguments that smaller government, right-wing government, multinational penetration, or trade dependency actually result in increased well-being for the general population. Finally, to us one of the more important and consistent results (both within this analysis and between it and Moon and Dixon's) is the significant positive impact of democracy on basic needs provision. Democratic institutions seemingly do make a dramatic difference in the well-being of a nation's populace, regardless of regime type, position in the world economy, or level of investment dependency.



## Notes

1. London and Williams (1988) report nonsignificant correlations of  $-.38$  between the Gini index of income inequality and the PQLI and  $-.20$  between Gini and the INSP. These modest correlations affirm that analyses of basic needs provision complement rather than simply replicate analyses limited to income distribution alone.
2. Questions might also be raised about the desirability of combining separate indicators into a single index of basic needs provision. If basic needs is a multidimensional concept, creation of a composite index might mask important, complex, detailed, and potentially countervailing relationships among the separate indicators (Hicks & Streeten 1979). London and Williams (1988) analyze the determinants of many of the components of the two indices. Though they find some differences in the determinants of the various indicators, the general consistency of their findings suggests that employing composite indices is initially useful.
3. Olson (1982) applies a similar argument to developed nations, suggesting that the build-up in stable political systems of large numbers of interest groups, all with established claims on government resources, can ultimately slow economic growth dramatically.
4. For a comprehensive literature review, see Bornschier and Chase-Dunn (1985, esp. chap. 5).
5. For a notable exception, see Snyder and Kick's (1979:1011) explicit argument that development is "a joint function of exogenetic and ontogenetic variables."
6. For the computation procedures, see Morris (1979:126-27).
7. For the computation procedures, see Estes (1984:17-42).
8. This measure is available for 103 nations in Bornschier and Chase-Dunn (1985:59-61). They do not include 8 socialist countries in their analysis: Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, North Korea, Poland, and the Soviet Union. We follow Bornschier and Heinz (1979), who, in their Zurich data set, list these 8 nations with a penetration score of 0.
9. There is a slight discrepancy between Moon and Dixon's sample of 116 nations and our sample of 110. The six cases not included in our analysis are Angola, Burma, Congo, Guinea, Luxembourg, and Mozambique. All except Burma are deleted because we could not compute the state strength variable due to missing data for 1970. Moon and Dixon included these cases by using data for the "closest available years" when it was not available for 1969-1971. We delete these cases both because it seems the more conservative methodological strategy and because Moon and Dixon do not make it clear which years they used. Burma is deleted because the democracy measure for 1965 is missing. Rather than substituting the available 1960 measure (which we assume Moon and Dixon did; see note 15), we dropped this case because a 1960 measure is much earlier than all other data points in the study. As our results indicate, the loss of six cases does not appreciably affect our ability to replicate Moon and Dixon's findings.
10. Snyder and Kick (1979:1110, 1114) examine four types of international networks: trade flows, treaty memberships, military intervention, and diplomatic relations. They "block model" these networks and find nine "blocks" of nations, which are collapsed into the core, periphery, and semiperiphery categories typical of world-system theory. Bollen's (1983:473-76) revision is based on a careful analysis of partial regression plots of residuals. He discovers six outliers, argues that they represent a misclassification of countries in Snyder and Kick's procedures, and supports his argument with historical data. As a result, Spain, Portugal, and South Africa are reclassified from the core to the semiperiphery, and Taiwan, Iraq, and Saudi Arabia are moved from the semiperiphery to the periphery.
11. Operating from a different perspective, Barnett and Mueller (1974) are much less sanguine about the possibilities for controlling multinational investment decisions, even in core nation states.
12. Ideally, we would test the differing impact of multinational penetration by directly comparing core, peripheral, and semiperipheral nations. But the very small number of core nations that operate as headquarter sites for multinationals (about a dozen, according to Bornschier and Chase-Dunn [1985]) makes this statistically unfeasible. Consequently, we can only indirectly test this proposition by comparing the magnitude of coefficients between our

three samples and inferring the relationships among core nations. Unfortunately, this analysis proves inconclusive.

13. For a discussion of this literature, see Moon and Dixon (1985:665-68).

14. Though Moon and Dixon do not log this measure, we feel doing so is appropriate since the skew of the variable equals .84 and kurtosis equals .65. In addition, a reviewer noted that for a substantial number of countries the central fiscal authority accounts for less than 80% of total tax revenue, the rest of central government revenues and expenditures being made up from local sources. This may compromise the cross-national comparability of the measure, so results should be interpreted with caution.

15. Here again, because of our more conservative treatment of missing data, our sample differs somewhat from Moon and Dixon's. Because of missing data, averaging Bollen's index for 1960 and 1965 produces a much smaller number of cases than the 116 reported by Moon and Dixon. Apparently, when one or the other measure was missing, they substituted the single available data point. We follow this practice only when the 1960 measure was missing and we could substitute the more recent 1965 measure for the average. In the case of Burma, however, where the 1965 measure was missing, we dropped the case entirely.

16. According to Cohen and Cohen (1975:191), effect coding is "particularly appropriate with nominal scales when each group is most conveniently compared with the entire set of groups, rather than with a single reference group, as is facilitated by dummy variable coding."

17. A reviewer pointed out that, by replicating Moon and Dixon's (1985) study to ensure comparability, we produce an essentially cross-sectional analysis. Much empirical cross-national work, however, employs panel regression analysis. Following London and Williams (1988), we also examined a series of panel equations. Other than the extremely high coefficients for the lagged dependent variables, few significant effects were found, which suggests that our models are unable to predict *change* in basic needs provision over time, perhaps because of the relatively short lag (approximately 1970-1980) and the corresponding high correlations between the basic needs measures at the two points in time (for PQLI,  $r = .96$  for  $N = 95$ ; for INSP,  $r = .95$  for  $N = 99$ ).

18. In analyses of this type, where the units of analysis are large aggregates and the number of cases relatively small, the ratio of the unstandardized partial regression coefficient to its standard error is the most reliable guide to interpreting the significance level of coefficients (Pedhazur 1982:242-43). Coefficients are considered significant if the unstandardized coefficient is at least 1.5 times the size of its standard error. This approximates a .10 level of significance (see London & Smith 1988:458-59).

19. As Moon and Dixon (1985:679) note, the interpretation of the effect coefficient needs some explication. Unlike dummy-coding, which compares the included variables to only a selected reference group excluded from the equations, effect coding compares a variable to all other groups taken together. Thus, in this instance, the insignificant coefficients for *left* and *right* mean that, controlling for all other variables, the PQLI and INSP scores for right-wing and left-wing regimes are not significantly different from the mean of the three group means (i.e., the mean of right-wing, centrist, and left-wing regimes).

20. Because of recent discussions and demonstrations of the importance of influential cases in analyses of this sort (Dietz et al. 1987; Muller 1986), it is prudent to carry our analysis one step further. We examine equations 4, 5, 8, 9, 12, and 13 in Table 1 for the sensitivity of parameter estimates to one or more influential cases by following the procedure used by Muller (1986), who notes that "Cook's D is a summary measure of the extent to which a data point is influential" (p. 441). Using the regression diagnostics available in SPSS (see Hull & Nie 1981:94-121), we find an unusually high value of Cook's D in equation 13 only, in which Libya has a Cook's D of .41. Moreover, Libya is the most extreme outlier in the sample (studentized residual = -3.08). The deletion of this case causes an increase in  $R^2$  from .61 to .69. There is little change, however, in either the magnitude or patterns of significance of the parameter estimates. Thus this analysis of influential cases gives more evidence of the stability of our basic findings.

21. An examination of bivariate correlations supports these observations. Investment dependence is most highly correlated with the PQLI and the INSP in the sample of all noncore nations ( $r = -.32$  and  $-.35$ , respectively). The corresponding correlations for all nations ( $r = -.23$  and  $-.23$ ) and peripheral nations only ( $r = -.16$  and  $-.14$ ) are considerably lower.

APPENDIX: Countries Included in the Analysis, with World-System Position<sup>a</sup>


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Afghanistan (P)	Honduras (P)	Peru (SP)
Algeria (P)	Hungary (SP)	Philippines (SP)
Argentina (SP)	Iceland (P)	Poland (P)
Australia (C)	India (SP)	Portugal (SP)
Austria (C)	Indonesia (P)	Romania (SP)
Barbados (U)	Iran (SP)	Rwanda (P)
Belgium (C)	Iraq (P)	Saudi Arabia (P)
Benin (P)	Ireland (SP)	Senegal (SP)
Bolivia (P)	Israel (SP)	Sierra Leone (P)
Brazil (P)	Italy (C)	Singapore (U)
Bulgaria (SP)	Ivory Coast (P)	Somalia (P)
Burundi (P)	Jamaica (P)	South Africa (SP)
Cameroon (P)	Japan (C)	Spain (SP)
Canada (C)	Jordan (SP)	Sri Lanka (SP)
Cen. Afric. Rep. (P)	Kenya (SP)	Sudan (P)
Chad (P)	Korea, North (P)	Sweden (C)
Chile (P)	Korea, South (SP)	Switzerland (C)
Colombia (P)	Laos (P)	Syria (P)
Costa Rica (P)	Lebanon (SP)	Taiwan (P)
Cyprus (SP)	Liberia (P)	Tanzania (U)
Czechoslovakia (P)	Libya (P)	Thailand (P)
Denmark (C)	Malawi (U)	Togo (P)
Dominican Rep. (P)	Malaya (SP)	Trinidad (P)
Ecuador (P)	Mali (P)	Tunisia (P)
Egypt (P)	Mauritania (P)	Turkey (SP)
El Salvador (P)	Mexico (P)	Uganda (P)
Ethiopia (P)	Morocco (P)	U.S.S.R. (SP)
Finland (SP)	Nepal (P)	United Kingdom (C)
France (C)	Netherlands (C)	U.S.A. (C)
Gabon (P)	New Zealand (P)	Upper Volta (P)
Germany, East (SP)	Nicaragua (P)	Uruguay (SP)
Germany, West (C)	Niger (P)	Venezuela (SP)
Ghana (P)	Nigeria (P)	Yemen, North (P)
Greece (C)	Norway (C)	Yugoslavia (C)
Guatemala (P)	Pakistan (SP)	Zaire (P)
Guyana (U)	Panama (P)	Zambia (U)
Haiti (P)	Paraguay (P)	

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<sup>a</sup> (C) = Core; (SP) = Semiperiphery; (P) = Periphery; (U) = Unclassified by Snyder & Kick. The "Unclassified" countries are included in equations for all noncore nations, but are excluded from equations for peripheral nations because there is not enough information to assign them to this category.

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22. The procedure for calculating the significance of the increment to  $R^2$  is taken from Cohen and Cohen (1975:135-37).
23. We attribute the sign reversal to problems inherent in Moon and Dixon's sample and specification (see notes 9 and 15).
24. An analysis of influential cases was conducted for equations 4, 5, 8, 9, 12, and 13 in Table 2 (see note 20). Influential cases were found in equations 5 (Israel; Cook's D = .57; Studentized residual = -3.52), 9 (Israel; Cook's D = .58; Studentized residual = 1.36), 12 (Mali; Cook's D = 1.07; Studentized residual = 1.36), and 13 (Libya; Cook's D = .38; Studentized residual = -2.69). Israel and Mali were also found to have high Mahalanobis' distance scores, indicating unusual scores on the independent variables. These equations were rerun with the indicated cases deleted. Once again, parameter estimates and patterns of significance remained remarkably stable, reinforcing our initial interpretations and conclusions.
25. As with the equations in Tables 1 and 2, each equation in Table 3 was examined for influential cases. While there were some influential cases in some equations, corrective procedures again yielded little change in either the magnitude or patterns of significance of the parameter estimates, providing further evidence of the stability of our basic findings.

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