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GLOBAL CAPITALISM AND THE FLOW OF FOREIGN DIRECT INVESTMENT TO NON-CORE NATIONS, 1980-1996: A QUANTITATIVE, CROSS-NATIONAL ANALYSIS

John M. Shandra,* Robert J. S. Ross,** and Bruce London**

ABSTRACT

This paper updates an earlier quantitative cross-national study (London and Ross 1995) by examining a more recent time period and re-specifying the original model in a number of significant ways. These include the incorporation of measures of (a) International Monetary Fund penetration into non-core nations (demonstrating that IMF conditionality increases the flow of FDI), (b) the presence of "attractive investment opportunities" in nations (to incorporate a predictor suggested by neoclassical economic theory), and (c) an interaction term that points to the multiplicative significance of intranational and international factors. Our findings generally confirm those of the earlier study and produce some significant new results.

Introduction

Over the past twenty-five years, a substantial quantitative crossnational (QCN) literature has emerged that examines the consequences of foreign direct investment (FDI or investment by core-based multinational corporations) within the developing world (Bornschier and Chase-Dunn 1985; London 1987; London and Williams 1988, 1990; Huang 1995; Shen and Williamson 1997; by contrast, Firebaugh 1992). Most of these studies provide empirical support for aspects of a broadly interpreted dependency theory, especially the idea that peripheral dependence on international factors is associated with negative effects on the development of Third World countries. Some of the documented effects produced

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by dependence include: slowing of economic growth (Bornschier and Chase-Dunn 1985), increasing of income inequality (Bornschier and Chase-Dunn 1985), and lowering of basic needs provision (London and Williams 1988, 1990; Huang 1995). To date, however, little empirical research has been conducted on the determinants of variation in FDI location (Crenshaw 1991; London and Ross 1995). Crenshaw's (1991) study of foreign direct investment as a dependent variable is an interesting exploratory search for plausible determinants of change in foreign direct investment, but it is not formulated in terms of a coherent theory. On the other hand, London and Ross (1995) use a coherent, theoretically informed explanation of the movement of capital: the theory of global capitalism. Originating with concern for the restructuring and deindustrialization of the United States and other core countries, but holding significant implications for non-core countries, the theory of global capitalism (Ross and Trachte 1990) focuses on the destination of mobile capital (FDI) rather than on the consequences of its arrival. Using data for 1968 to 1978, the London and Ross (1995) study tests and finds empirical support for aspects of global capitalism theory, especially the propositions that investors from the core nations seek out (a) Third World labor that is more docile and less costly than in the industrial regions of the world and (b) Third World authoritarian political climates that welcome foreign investment (see below for a detailed analysis and description of both the theory of global capitalism and the work of London and Ross 1995).

The flow of foreign direct investment from core countries to non-core countries has increased dramatically in recent years. Mallampally and Sauvant (1999:34) write:

> Foreign direct investment has grown at a phenomenal rate since the early 1980s. Such investment, made by multinational business enterprises in foreign countries to control assets and manage production activities in those countries, has been growing faster than both international trade and international output. Between 1980 and 1997, international FDI flows from nearly 54,000 transnational corporations have increased at a rate of about 13 percent annually. The

share of developing countries in total FDI inflows has increased from just 3 percent in 1980 to 14 percent in 1997.

Furthermore, according to a more recent report of the United Nations Conference on Trade and Development (UNCTAD), total foreign direct investment in 1999 increased to a record \$827 billion (United Press International 2000). Although a large portion of this increase was accounted for by corporate investment in the United States and the European Union, flows of foreign direct investment to developing countries for 1999 were up by 15 percent from the 1998 fiscal year to \$198 billion (United Press International 2000). Moreover, UNCTAD reports that the "prime investment movers...were transnational corporations with international production facilities. Such companies now number 60,000 and boast more than 500,000 foreign affiliates, accounting for an estimated 25 percent of global production. Their combined sales of \$11 trillion in 1998 exceeded global exports by \$4 trillion" (Business Week 1999:28). In view of such data, we suggest that an updating of the London and Ross (1995) analysis is warranted. Our work presents a theoretical framework that specifies variation in the flow of recent (post-1980) foreign investment to non-core nations.

In doing so, we first replicate the work of London and Ross (1995) but for a more recent period. In addition to updating the analysis, we attempt to identify various economic, political, and social factors found to have a significant effect on FDI location. As we emphasize below, one of the key insights of previous QCN research is that Third World development outcomes are a function of both the internal characteristics of nations (level of development, sectoral inequality, and presence/absence of repression) and external characteristics such as "transnational economic linkages" (London and Williams 1988, 1990; Lena and London 1993). Gereffi (1989) classifies transnational economic linkages (TNELs) as foreign aid, foreign trade, foreign direct investment, and foreign loans. With a substantial decline in foreign aid to the developing world since the 1950s, foreign trade, foreign direct investment, and foreign loans have become the dominant types of transnational economic linkages (Gereffi 1989). Thus, any properly specified

models must include external characteristics (especially transnational economic linkages) in addition to internal factors.

In the second part of the reexamination of London and Ross' work on FDI, we employ measures that have begun to appear in a number of QCN studies over the past decade but have yet to be analyzed in a QCN study focusing on the location of foreign direct investment. In particular, given the proposition that international lending institutions create policies that increase penetration by multinational corporations (Karliner 1997; Rich 1994), we include a variable to assess the role that the International Monetary Fund plays in the "development" of the Third World (Walton and Ragin 1990; Bradshaw and Schafer 1996; Schafer 1999). In the same vein, we also employ a measure to assess the role that "attractive investment opportunities" have in the location of foreign direct investment by including a measure of deforestation—see below for a full discussion of the inclusion of these variables.

The third aspect of the new research uses capital mobility data for the mid-1990s while London and Ross (1995) assessed the predictors of foreign direct investment for 1967 to 1978. This focus on recent data allows us to test for the presence of a "period effect." In other words, we are able to establish if variables found to be relevant predictors of FDI in the earlier study maintain their significant predictive powers.

Capital Mobility in Theoretical Perspective

The theory of global capitalism, formulated by Ross and Trachte (1990) and empirically tested and supported by London and Ross (1995), argues that foreign direct investment is attracted to locations where "good business climates" have certain political and economic characteristics captured by combinations of low wages, tightly controlled labor forces, and minimal class-based political and industrial disputes. Ross and Trachte (1990) refer to these factors as "the cost and control of labor." For present purposes, a critical starting point of Ross and Trachte's (1990) research is that from 1965 to 1980 rates of profit became severely depressed in monopoly sector industries of core countries as compensation began to outdistance

productivity through union strength, wage gains, growth in the social wage, and social democratic advances (Ross and Trachte 1990). Concomitantly, some scholars suggested that a new international division of labor (NIDL) was replacing the international division of labor put forth by the dependency theory: i.e., that core nations specialized in manufacturing while non-core nations specialized in raw material extraction (Frobel et al. 1980). Frobel, Heinrichs, and Kreye (1980) state, "For the first time in the history of the 500-year old world economy, the profitable production of manufacturers for the world market has become possible to a significant and increasing extent, not only in the industrialized countries, but also in the developing countries" (as quoted in London and Ross 1995:200). As argued by Ross and Trachte (1990), this historic development is attributed to the conjuncture of three preconditions: (1) the accessibility of "a worldwide reserve of labor," (2) "technological advances that allowed for the decomposition of production processes," and (3) "technological progress that rendered the management of production largely independent of geographical distance" (London and Ross 1995:200-201).

The existence of these preconditions in conjunction with the need to revitalize rates of profit led companies to search for new forms of capital accumulation, new forms of competition among firms. These new forms of competition included spatial mobility in which firms sought sites with the lowest production costs. Specifically, monopoly sector and other firms became global by locating parts or phases of their production processes in peripheral countries where low wages and politically repressed working classes were available. The substitution of workers in the periphery at a lower cost of reproduction than for workers in the core allows firms to circumvent the high wage labor of the traditionally powerful First World sectors and increase their rates of surplus extraction. In a *direct* manner, the use of less costly workers lowers labor costs. In an *indirect* manner, this situation lowers labor costs because the threat of further relocations provides firms with the advantage needed to extract concessions from work forces in the core (Ross and Trachte 1990). The popular parlance sometimes refers to a "race to the bottom" to capture this competitive process.

Consequently, the mobilization of lower cost, less potent labor forces produced a significant change in the structure of foreign direct investment from the core to the periphery with foreign direct investment increasing dramatically and manufacturing becoming a more important fraction of FDI. Put differently, new investment capital flowed toward those locations (especially Third World countries) that offer a "good business climate" or the right balance of class forces including cheap labor, low worker militance, high political authoritarianism, and elevated state enforcement of discipline on the working class.

London and Ross (1995) use techniques pioneered in quantitative cross-national analysis to test central aspects of the theory of global capitalism-especially its explanation of the recent core to non-core movement of capital (reviewed immediately above). First, London and Ross (1995:203) use "the widely employed OECD data on foreign direct investment as a dependent variable in order to test global theory." While this measure has often been used as a proxy for investment dependency or multinational corporate penetration in the past, its availability for more than one time period (the time from 1967 to 1978 is analyzed by London and Ross 1995) makes it an excellent indicator of this important type of global capital mobility and enables the researchers to measure the overall movement of capital from the core to the periphery for precisely the period during which Ross and Trachte (1990) contend the transition to global capitalism occurred. London and Ross write, "While this is quite appropriate in the context of the theory of global capitalism, it is also quite clear that the theory is especially interested in the growth of manufacturing outside the core" (London and Ross 1995:207-208). It is important to note that, to our knowledge, there are no data available on the flow of "foreign direct investment in manufacturing only" for the most recent period (London and Ross 1995). Nevertheless, this concept of growth in manufacturing outside of the core is an important aspect of global capitalism theory and deserves consideration. Consequently, with other indicators of change in aspects of non-core manufacturing readily available, London and Ross (1995) use proxies for "foreign direct investment in manufacturing only" to test this aspect of global theory.

Specifically, London and Ross (1995) analyze as dependent variables "value added in manufacturing" and "the percent of gross domestic product in manufacturing" to better understand mobility of manufacturing capital away from the core countries to non-core countries. Second, these scholars use a set of readily available indicators to construct a model of the determinants of change in FDI in non-core nations that neatly captures the dynamics suggested by the theory of global capitalism.

To test the "business climate hypothesis" suggested above, London and Ross (1995) include indicators to assess nations' variation in "control of labor." Specifically, the researchers employ measures of strikes and protests to assess the presence or absence of actual militance or political instability. In addition, they use a regime repressiveness score (see below) that quantifies the degree to which regimes or state policy actively discourage and sanction such turbulence, an indicator of potential instability. London and Ross write:

> Ross and Trachte (1990) argue that investment opportunity is "attracted to the Third World" precisely because the work force receives low wages, has few rights, and offers little threat to the interests of capital. In other words, where worker militancy is low, where the state enforces discipline on the working class, where political authoritarianism is high, and where leftist movements are repressed, you have the sort of political conditions that foster "stability." This measure of regime repressiveness taps these conditions. (London and Ross 1995:205)

London and Ross (1995) use a strikes variable that sums the number of strikes in a country between 1963 and 1967 and divides the sum by the nation's population size for 1965 (Taylor and Jodice 1983). The protest variable is calculated using the same procedure (Taylor and Jodice 1983). Finally, the regime repressiveness score is computed by averaging together Gastil's (1979) annual rating on a seven-point scale of civil and political rights (Taylor and Jodice 1983). Regime repressiveness has been used as a variable in other

QCN analyses (Muller 1985; but see also, Boswell and Dixon 1990). Muller (1985) modeled a nonmonotonic, inverse U-curve relationship between deaths due to political violence and regime repressiveness. London and Ross write:

A similar logic informs our understanding of the relationship between regime repressiveness and the flow of foreign capital. Extremely repressive regimes may be unattractive to foreign investors in a variety of ways, summarized by noting that an atmosphere of terror produces high degrees of uncertainty in the working environment. On the other hand, moderately repressive regimes may provide the political stability/controlled labor that make them attractive site for FDI. (London and Ross 1995:204-05)

London and Ross's (1995) results show a consistent, negative, and significant relationship between the independent variables of strikes and protests and the dependent variables of foreign direct investment and value added in manufacturing. This suggests support for global theory's argument that investors seek sites characterized by high levels of political stability and "good business climates." Further, the regime repressiveness variable maintains a curvilinear relationship in every equation despite the dependent variable under examination. This indicates support for the contention that "extremely repressive regimes may be unattractive to foreign investors in a variety of ways" while generally repressive regimes "may provide the sort of political stability or controlled labor that make them attractive sites for FDI" (London and Ross 1995:205). Thus, London and Ross (1995) find empirical evidence to support Ross and Trachte's (1990) argument that investment capital "is attracted to the Third World precisely because the work force...has few rights and offers little threat to the interests of capital" (London and Ross 1995:205).

It is apparent that political stability within a country is only one characteristic of a good business climate. Another is the availability of low cost labor. Hence, London and Ross (1995) include indicators to control for the fact that foreign direct investment flows

into locations with not only a politically less potent working force but a less costly labor force as well. Particularly, London and Ross (1995) include measures of (a) sectoral inequality, (b) percent of a nation's labor force that is unionized, and (c) class exploitation, as proxies for the cost of labor.

London and Ross (1995) find mixed support for the contention that capital flows to locations with low wages with only the sectoral inequality measure being a consistent and significant predictor of capital mobility as measured by the foreign direct investment and percentage of gross domestic product in manufacturing dependent variables. The sectoral inequality measure is a measure of rural-urban disparity. This is a Gini coefficient that measures the relative inequality of production per unit of labor across three economic sectors-agriculture, industry, and services (Taylor and Jodice 1983). Scores range from zero (perfect equality) to one (complete inequality), denoting the "imbalance between the rural and subsistence farming sector and the urban and commercial sectors of a dual economy characteristic of a developing country" and are circa 1970 (Taylor and Jodice 1983:189). As noted by London and Ross (1995:206), "This urban-rural productivity disparity tends to translate into additional income, services, and advantage for urban areas. It is, therefore, a plausible indirect indication of the cost of urban labor in non-core nations." Thus, London and Ross find that high urban wages (as measured by sectoral inequality) are associated with low levels of foreign direct investment.

Critique of Prior Studies

London and Ross (1995) employ variables to measure the "control of labor" (political strikes, protests, and regime repressiveness) and variables to measure the "cost of labor" (unionization, sectoral inequality, and class exploitation) from which they find consistent support for the contentions of global capitalist theory. However, despite these initial insights certain re-specifications that fully capture the complexities and recent trends of the modern world system may be merited. Specifically, London and Ross's (1995)

work ignores the role that international lending institutions such as the International Monetary Fund (IMF) and World Bank (WB) play in promoting, sustaining, and expanding foreign investment in the Third World. However, it is important to note, at this point, that the theory of global capitalism contends, in general, the centrality of financial institutions in directing flows of investment. Gibson et al. (1984:55) write:

> The broadened geographical scope of conglomeration activity is heralded by the increased international involvement of financial firms. While the activities of finance capital have always has an international dimension, in the monopoly dominated social formation this dimension was traditionally subordinate to, and contingent upon, developments within the framework of the national economy. Banks existed primarily to mobilize capital for production enterprises within their territorial range, which was seldom global in extent. The crisis of monopoly capitalism, however, has wrought significant changes in the role and function of financial institutions and has elevated the international dimension to a position of prominence. This is in part a consequence of the valorization, which follows on the heels of sectoral devalorization in the monopoly submode. As the liquidity of financial capital increases, financial interests seek out investment targets abroad, including areas in which the "contagion" of labor militancy has yet to spread... The growth of international activity reflects a more fundamental change in the role of financial institutions. Banks, which formerly operated to allocate capital inter-sectorally, are now the instrumentality, which facilitates the spatial mobility of productive capitalism. Thus, they function as the underpinning of the exploitation mechanism under global capitalism.

Thus, any properly specified analysis of the theory of global capitalism needs to explore the relationship among international financial institutions and investment flows. In addition, their study

does not directly take into account the neoclassical contention that foreign direct investment seeks out locations that appear to be "attractive investment opportunities."

Some observers suggest that the practices of international lending agencies and of multinational corporations interact (e.g., Karliner 1997). In other words, the lending policies of the multilateral development banks may well stimulate the flow of foreign direct investment. According to this perspective, IMF and World Bank loans deliver greater benefit to transnational enterprises and investors than to the Third World poor. Indeed, Karliner (1997) outlines five key ways in which international lending institutions employ policies that serve transnational corporate interests, thereby strengthening the dependency of non-core countries on core countries through increased foreign direct investment.

First, "in what is essentially a quid-pro-quo relationship, large corporations, based in the countries that provide the international lending institutions with capital, receive lucrative contracts" for World Bank or International Monetary Fund projects (Karliner 1997:135). Karliner (1997:136) states:

> For example, net disbursements by the World Bank totaled just over \$7 billion in 1993. But borrowing countries paid out nearly an equivalent amount of money in contracts— \$6.8 billion, to corporations from the 24 core nations including the United States, Great Britain, Germany, France, and Japan—leaving only marginal positive cash flows into the coffers of recipient countries.

In the words of Lloyd Bentsen, former Secretary of the Treasury under the Clinton administration, as quoted by Karliner (1997:136), "Last year, the United States contributed \$1.6 billion to the multilateral development banks. The banks, in turn, awarded U.S. companies procurement contracts amounting to more than \$2.2 billion. The difference is thirty-nine percent. That's a thirty-nine percent bonus."

Second, international lending for infrastructure projects such as roads, electrical grids, dams, and power plants serves to lay

groundwork for further transnational investment (Karliner 1997). Unfortunately, these infrastructure projects have also led to social and environmental debacles. For example, Karliner (1997:137) states:

In Central America in the 1950s, the United States bilateral aid agency USAID and the World Bank provided loans to build roads that allowed local hacienda owners to expand export driven cotton production on the region's Pacific coast. Transnational chemical companies benefited immensely from this development with 40 percent of all U.S. pesticides going to Central America from the mid 1960s through the 1970s, mostly for use on cotton. Meanwhile, peasants pushed off their land by this process were herded along USAID and World Bank built roads into the regions eastern jungle areas, where they were encouraged to clear vast jungle areas. Once denuded, these lands were also swept into the export economy as the World Bank promoted cattle ranching produced beef for fast food and pet food transnationals such as Burger King and Ralston Purina. Between 1970 and 1980, this dynamic alone destroyed 15 percent of Central America's rainforest.

Further, World Bank infrastructure lending in the transportation sector has promoted growth of the auto industry in the Third World rather than the economically viable and energy efficient rail transport. For instance, Karliner (1997:138) writes, "While in the 1950s, the Bank's lending was twice that for railways as it was for highways, this situation became reversed in the 1960s, when road building became the largest element of this loan sector. By 1993, 74 percent of the Bank's 3.2 billion in transportation loans went to road and highway construction." Similarly, lending for energy infrastructure has catered to petrochemical and energy corporate interests while virtually ignoring environmental consequences and failing to promote alternatives. The World Bank spends 40 percent of all its energy loans on oil and gas development, 15 percent on coal, and most of the rest on electrical transmission and fossil fuel powered

generators. Less than 3 percent of all Bank energy loans go to renewable energy resources (Karliner 1997).

The third way in which international lending institutions serve large multinational firms' interests is by "policy based lending" or structural adjustment programs (Karliner 1997). From the 1980s onward, the World Bank and International Monetary fund attained a position from which they could dictate macroeconomic policies and "effectively wrest sovereign control of entire economic sectors from non-core governments" (Karliner 1997:140). Karliner writes:

> These lending policies effectively deconstructed much of the Third World nation state. They did so by conditioning loans designed to resolve balance of payments crises on the privatization of national industries, the removal of barriers to foreign investment in key sectors, the "reform" of financial systems, the gutting and privatization of social and environmental services, and the redirection of economies toward an increasing export orientation. (Karliner 1997:140)

Together, all of these components of adjustment effectively pried open previously protected markets. Escalating transnational corporate investment was enabled by imposing austerity on governmental budgets, requiring repayment of loans through production of primary product exports, and the creation of an atmosphere conducive to multinationals participating in such ventures. The result is increases in the flow of foreign direct investment to nations with structural adjustment policies in place (Karliner 1997).

The fourth way in which the World Bank and other international lending institutions support transnational corporations' interests is through a new found sense of "corporate environmentalism." As multinationals were criticized for the social and environmental consequences of their behavior, these institutions have moved to address their critics. Parallel to the corporate response to environmentalism, the international lending organizations have taken a series of steps to absorb the ecological question to their agenda (Karliner 1997). For example, in the early 1990s, the

World Bank initiated a "forest management and protection" project in the West African country of Guinea. The effort turned out to be an initiative to deforest two-thirds of the remaining pristine rainforest in the country. In addition, a 1990 World Bank forestry conservation project in the Cote d'Ivoire put a half-million hectare area of rainforest under the management of the same corporations that had pillaged the country's timber resources during the two previous decades. This logging project, which was approved in 1990 under the Bank's supposedly "environmental" forestry policy, also set the stage for the potential displacement of over 200,000 people who depended on the forest for their survival (Karliner 1997). Karliner (1997:139) maintains, "Such programs, fashionably dressed in green, promote business as usual. Environmental Defense Fund's Korinna Horta comments, 'Many of the World Bank's so called environmental policies continue to involve taking control away from local resource users and handing it over to those with power in the global economy...Forests are given to the corporations for protection while people are expelled."

Finally, the fifth method through which international lending institutions serve corporate interests is by either "directly lending to or investing in transnational corporate projects and by providing risk insurance for their endeavors in the Third World" (Karliner 1997:141). By dismantling key sectors of the nation states to which international financial institutions are chartered to lend, international lending bodies "have in a sense been working themselves out of a job" (Karliner 1997:141). Undaunted, they are remaking themselves by lending money directly to transnational corporations for development projects in the Third World. Thus, this shift has also allowed these organizations to sidestep some of the environmental and social controls that more than a decade of activists' campaigns had forced upon them (Karliner 1997). One example of this is the International Financial Corporation, an arm of the World Bank. Karliner (1997:142) maintains:

Founded in 1956 as part of the World Bank Group, the IFC was a little known entity until the mid-1980s. Since then, it has increased its total financing by more than 360 percent in

a ten-year period. By 1995, the IFC was making nearly \$3 billion in loans and equity investments for 213 corporate projects in sixty-seven countries. The IFC's support for and participation in these investments leveraged another \$15 billion in financing for these corporate ventures. The World Bank also created a new entity, the Multilateral Investment Guarantee Agency (MIGA), to provide risk insurance for corporate investment in Southern nations. And, with the new slogan "catalyst for private capital flows," the Bank itself has jumped into the private investment business. Overall, the World Bank Group (International Development Agency, IFC, MIGA, and the World Bank itself) takes credit for supporting "about \$25 billion of private sector finance a year, or 10 percent of all investment by private enterprise in developing countries."

From above, it is clear that the powerful multilateral actors in the core (i.e., International Monetary Fund and World Bank) employ many strategies attempting to ensure favorable investment returns in the periphery. Assessment of these attempts by international lending institutions to promote multinational corporate penetration in the developing world is both theoretically and practically interesting. First, are these strategies effective? Second, if the strategies are effective, then a properly specified analysis of capital mobility should control for the hypothesis that the IMF conditionality creates conditions in the developing world that promote increased penetration by foreign direct investment.

While it is plausible that certain international factors such as the lending practices of the World Bank and International Monetary Fund promote foreign investment in the periphery, neoclassical economic theory suggests that intranational forces better predict capital flow. Specifically, scholars in this tradition maintain that capital flows to locations that offer "attractive investment opportunities." It is, therefore, incumbent upon us to try to incorporate in our analysis a proxy for variation in "attractive investment opportunities." In doing so, we provide a more stringent test of the theory of global capitalism because we can assess the separate effects of

the "political" and the "political-economic" variables predicted by that theory (i.e., the cost and control of labor) on FDI flows holding these independent of a key predictor from neoclassical economic theory. It is our contention that the rate of deforestation (1980-1990) is an ideal proxy for the concept of "attractive investment opportunities." This is the case because this indicator actually measures much more than the process of logging. We turn to a detailed justification of this assertion.

First, foreign direct investment is attracted to places with an abundance of profitable resources. Forests are a prime example. For instance, multinational corporations (especially from Japan) have transferred logging operations from locations such as Thailand, Indonesia, and the Philippines with devastated forests to locations with large, pristine stocks of forest such as the Solomon Islands and Papua New Guinea (Karliner 1997). Consequently, Japanese logging interests control approximately half of all logging concessions in Papua New Guinea with "the amount of wood exported from Papua New Guinea quadrupling between 1980 and 1992 and continuing to increase dramatically as other tropical supplies in the region dwindled" (Karliner 1997:128). In particular, timber production increased from approximately 300,000 cubic meters in 1969 to more than 1.7 million cubic meters in 1985 with export earnings reaching \$76.5 million or 10 percent of Papua New Guinea's total export (Hurst 1990). By 1993, "exports increased by more than onethird, jumping from 6.6 million cubic feet to nearly 9.9 million cubic feet or roughly 3 million trees a year" (Karliner 1997:128).

Although foreign investment flows to places with an abundance of profitable resources, this is only one characteristic of an "attractive investment opportunity." Additionally, multinational corporations invest capital in locations where infrastructure development has been carried out in order to access resources in remote regions. This is the situation in the Amazon basin under the influence of the Greater Carajas Program where, by the late 1980s, about 150,000 square kilometers were deforested. Rich (1994:29) writes:

> More than three-quarters of this destruction took place on either side of a 780-kilometer railway through the provision

of \$304.5 million by the International Monetary Fund to the Brazilian state mining company Companhia Vale Do Rio Doce (CVRD) to build a railroad from the world's largest reserves of high-grade iron ore to the sea. Besides the railroad, the funding also supported the development of the Carajas iron ore mine on one end and the construction of a deep-water seaport at Sao Luis, the terminus of the railroad.

These huge infrastructure investments or modernization projects catalyzed an uncontrollable development rush into the region, with exponential expansion of cattle ranching, logging, shifting agriculture, peasant recolonization, plantation agriculture, and gold mining. Many of these activities are driven by multinational investment. Rich (1994:30) maintains:

> Once the mine, the railroad, and the port were near completion, the Greater Carajas Program proceeded with an ecological threat of still greater proportions: the proposed licensing and construction by private companies of thirtyfour charcoal burning industrial projects along the railway corridor, which would require 3 million tons of charcoal, or 14 million tons of wood a year for fuel.

Most of these projects would produce pig iron for export; others would manufacture manganese and other alloys, and cement. Although in theory large eucalyptus plantations were to supply the charcoal, in practice huge areas of remaining tropical rainforest would be the fuel source. Rich (1994:30) states:

Many of the indigenous reserves in the project area (those designated as protected regions according to the "Special Project" provision of the development plan) still composed of undisturbed forest were being logged for fuel as well. As the smelters went into operation, they threatened to degrade and destroy these forested Indian lands and other remaining forest reserves by attracting into them an army of small-scale charcoal producers desperate for income.

In other words, the opening of this remote section of the Amazon through infrastructure development led to foreign investment in the region. By 1987, six of the industrial projects were already established, four of them pig iron smelters. Rich (1994:30) continues, saying, "This economic expansion has resulted in the deforestation of 1,500 square kilometers a year, a rate that would denude an area larger than Wisconsin within ten years."

From the preceding discussion, it is apparent that foreign direct investment flows to "attractive investment opportunities" characterized by locations with an abundance of profitable extractive resources, the development of infrastructure to open remote regions, and the promotion of export oriented economic activities. In other words, many "attractive investment opportunities" in addition to the export of wood are linked to the process of deforestation. A partial list includes road building, dam building, land clearance for agribusiness, cattle ranching, plantation agriculture, and mining. Consequently, we use an indicator of deforestation to serve as a proxy for the neoclassical hypothesis that foreign direct investment flows to "attractive investment opportunities." Specifically, we argue that high levels of deforestation are associated with high levels of foreign direct investment. Furthermore, testing for the "attractive investment opportunity" hypothesis allows for a more rigorous test of the theory of global capitalism. If the political variables found to be associated with foreign investment in the work of London and Ross (1995) remain significant predictors of capital mobility while taking into account the deforestation variable, then confidence in the predictive powers of these political variables and, therefore, the theory of global capitalism will be enhanced.

Summary

Taken as a whole, the discussion of the global capitalism paradigm suggests a number of hypotheses that could and should be incorporated in a QCN study of foreign direct investment. The implied model would incorporate a measure of foreign direct investment or value added in manufacturing, as dependent variables, and a number of intranational independent variables suggested by global

theory to be determinants of the influx of foreign capital from the core and into the periphery (i.e., level of development, number of political strikes and protests, political climate, level of sectoral inequality, and level of deforestation). It would also include the international, independent variable of IMF conditionality suggested by some scholars to increase foreign direct investment (Karliner 1997).

The Population

The population for this study is defined as all non-core nations. In the initial set of equations that include all controls, complete data for our models yields a case base of 50 to 55 countries. Countries with any missing information are excluded.

Methodology

We use a panel regression model to evaluate the main hypotheses so that this study could be compared to others using the same technique. This technique is considered optimal in QCN studies designed to assess the impact of levels of certain independent variables at an initial point in time on subsequent outcomes. In panel regression analysis, the dependent variable (foreign direct investment 1996 or value added in manufacturing 1997) is regressed on itself and the independent variables at an earlier point in time. This allows the researcher to estimate the effects of the independent variables on change in the dependent variable and reduces the likelihood of reciprocal causality that is common to cross-sectional analysis. Further, since there is usually a high correlation between the lagged dependent variable and the dependent variable, panel analysis assigns maximum explanatory power to the lagged dependent variable. This produces a conservative test of the effect of the independent variables on change in the dependent variables (Heise 1970; Hannan 1979). It also estimates this effect while avoiding problems associated with other measures of change such as simple differences (London 1987; Wimberley and Bello 1992; London and Ross 1995).

Moreover, some general limitations of cross-national studies should be noted. Finding quality data for comparative analysis can be difficult, and it requires some adjustments to ideal models. We were unable to find one year for which all independent variables were available, and, therefore, the period ranges from 1970 to 1980. While it would be preferable to collect all the data for one-year (e.g., 1980); the range represented should not significantly alter the substantive results (Ehrhardt-Martinez 1998).

In addition to this analysis, we use regression diagnostic procedures to assess the presence or absence of influential cases. Recent methodological discussions of QCN analysis note that regression results may be highly sensitive to one or more influential cases (Lena and London 1993). The presence of influential cases can be indicated by Cook's D, a summary measure of the extent to which a data point is influential (Ehrhardt-Martinez 1998). When regression diagnostic procedures show the presence of influential cases, the analysis may be rerun deleting those cases. If the basic pattern of results is not dramatically changed, then confidence in the validity of the initial equations is enhanced. If, however, as is sometimes the case, the pattern is dramatically changed, then the validity of the initial equation becomes suspect (Lena and London 1993).

Also, any QCN study of this sort needs to consider the potential problem of multicollinearity. A correlation matrix for the equation regressing the protest variable, all other intranational variables, and the IMF conditionality measure on the foreign direct investment measure for 1996 (dependent variable) is reported in Table 1. In addition, Lewis-Beck (1980) suggests a test for multicollinearity in which each independent variable is regressed on all other independent variables. Multicollinearity exists if the r-squared approaches 1 in these equations (London 1987). See below for a discussion of Table 1.

Dependent Variables

Foreign Direct Investment

Following previous studies, we utilize the data on foreign direct investment as a percentage of GDP for 1996 as a dependent variable

to assess the validity of the theory of global capitalism (London and Ross 1995; but see also Bornschier and Chase-Dunn 1985; London and Williams 1988). London and Ross (1995:203) write, "While this measure has most often been used in the past as an independent variable to measure investment dependency or multinational corporate penetration, its availability for more than one time point makes it an excellent indicator of this type of global capital mobility." Its availability for 1980 and 1996 allows us to quantify the movement of capital from core to non-core nations (that is, change in stocks of FDI for a large sample of developing countries for the period 1980 to 1996) in order to test the propositions put forth by the theory of global capitalism for the most recent period.

Value Added in Manufacturing

As noted above, it is quite clear that the theory of global capitalism is especially interested in the growth of manufacturing investment outside the developed world (Ross and Trachte 1990). As such, we employ a measure of value added in manufacturing as a percentage of GDP for 1997 as an alternate dependent variable in our analysis (World Bank 1999). Like London and Ross (1995), who conducted a panel analysis using value added in manufacturing for 1978 as a dependent variable and value added in manufacturing in 1970 as a lagged dependent variable, we conduct a panel analysis by including value added in manufacturing in 1980.

Independent Variables

Level of Economic Development

As is standard in such analyses, it is incumbent for the researcher to take into account "a nation's level of development in order to make sure that any effects discovered are independent of nations' level of wealth" (London and Ross 1995:207). In this regard, we employ a measure of gross national product per capita for 1980. The variable is logarithmically transformed to correct for its highly skewed distribution. All other things being held equal, there should be a

positive relationship between this variable and the flow of foreign direct investment (London and Ross 1995).

Sectoral Inequality

As described by London and Ross (1995), an ideal operationalization of class forces would include a measure of wages (to directly indicate the relative cost of labor). Yet, London and Ross (1995:205) state, "Solid and comparable wage data are not available for large numbers of non-core nations. However, choice among low-wage sites may not be decisively governed by relative wages." Specifically, some scholars suggest the political stability of the state may well be the more important non-core national factor determining the influx of foreign direct investment (Douglas 1988). For example, Douglas (1988) writes, "Low-cost labor in a world where it may now be considered ubiquitous is insufficient in attracting and keeping transnational capital" (as quoted in London and Ross 1995:205).

Nevertheless, it is worthwhile to examine the influence of wages on foreign direct investment to the degree it is possible by using an indirect indicator of the cost of labor. London and Ross (1995) employ a measure of sectoral inequality or rural-urban disparity to accomplish this task. As such, we follow their lead by including the same indicator of sectoral inequality (see above). The variable is logarithmically transformed to correct for its highly skewed distribution. As noted by London and Ross (1995:206), "this urban-rural productivity disparity tends to translate into additional income, services, and advantage for urban areas. It is, therefore, a plausible indirect indicator of high cost urban labor in non-core nations." If this contention were valid, then we would expect high levels of sectoral inequality (i.e., relatively high urban wage levels) to be associated with lower foreign direct investment.

Level of Deforestation

As described earlier at length, incorporating the neoclassical contention that capital accumulates in places that appear to have

abundant, "attractive investment opportunities" is essential when considering the flow of foreign direct investment from the core to the periphery. As such, we employ an indicator measuring the rate of deforestation or the total change in hectares of forested areas based on Food and Agriculture Organization (FAO 1995) data for developing countries between 1980 and 1990 (World Bank 1995). It is important to note that deforestation for this study is calculated as a positive value (Ehrhardt-Martinez 1998). Therefore, a positive relationship between deforestation and the influx of foreign direct investment into a developing country is expected. In other words, foreign capital flows to the many attractive investment opportunities associated with high rates of deforestation.

Freedom-Repression Index

As detailed earlier at length, London and Ross maintain (1995:205), "Ross and Trachte argue that investment capital is attracted to the Third World precisely because the work force receives low wages, has few rights, and offers little threat to the interests of capital." Specifically, in locations in which worker militancy is high, where the state does not enforce discipline on the working class, where political authoritarianism is low, and where environmental regulations are enforced-in other words, where labor is not controlled-there are conditions that foster instability. Therefore, we include the freedom-repression index to test this hypothesis of global theory. It is important to note that earlier studies (Muller 1985; Boswell and Dixon 1990; London and Ross 1995) called this measure "regime repressiveness," but the indicators are identical. The freedom-repression index for 1979 averages Gastil's annual rating on a seven-point scale of civil and political rights (Taylor and Jodice 1983).

As noted by London and Ross (1995) and Muller (1985), repression is not necessarily linear in its effect on social occurrences. For example, London and Ross (1995:205) modeled "a nonmonotonic, inverse U-shaped curve" for the relationship between regime repressiveness and the flow of foreign direct investment." These scholars maintain, "Extremely repressive regimes may

be unattractive to foreign investors in a variety of ways, summarized by noting an atmosphere of terror produces high degrees of uncertainty in the working environment. On the other hand, non-repressive regimes may not provide the sort of political stability/controlled labor that make them attractive sites for FDI" (London and Ross 1995:205). Thus, following London and Ross, we test this nonmonotonic hypothesis using a quadratic polynomial equation in which the freedom-repression index and the square of this term are included as independent variables in the regression procedure (see also Muller 1985 for a discussion of the nonmonotonic hypothesis). A curvilinear relationship is indicated if the index has a positive and significant coefficient while its square has a negative and significant coefficient.

Protests per Capita and Strikes per Capita

Additional indicators of variation across nations in the "control of labor" (an important dimension of the balance of class forces) are available. Again, following London and Ross's work, we include a measure of political protests from 1975 to 1979 compiled by Muller (1985). In the present analysis, we divide the number of political protests in a nation from 1975 to 1979 by the nation's population size in 1975 (Muller 1988). This measure is logged to correct for skewness. As noted previously, global theory suggests investors seek out locations in which there are high levels of political stability or a "good business climate" (Ross and Trachte 1990; London and Ross 1995). Thus, a negative relationship is expected between this variable and the flow of foreign direct investment.

Similarly, a variable measuring "strikes" is included in the analysis as an alternative proxy for political instability within a developing country captured by the protest variable (London and Ross 1995). This independent variable is the number of strikes occurring in a nation from 1975 to 1979 divided by the population of the nation in 1975 (Muller 1988). The variable is logged to correct for skewness. As is the case with the protest indicator, countries with high levels of strikes should be poor candidates for the influx of foreign direct investment (i.e., a negative relationship is expected).

Since the strike and protest variables are quite highly correlated (r = .44), their effects are analyzed in separate equations. London and Ross (1995:204) state, "This use of alternative model specifications (or the building of dimensions of variation into an analysis) is a useful tactic in conducting cross-national analyses. The sequential inclusion of one or more independent or dependent variables can shed considerable light on the complexity and dynamics of the issue under examination." For example, if one variable is found to be more significant than the other variable, then we are able to better explain which aspect of the "political instability hypothesis" is supported.

Finally, it is necessary to note one important distinction between the freedom-repression index and the other two "control of labor" variables. Particularly, the freedom-repression index assesses "the degree to which regimes (or state policy) actively discourage and sanction instability," while the strikes and protests variables "measure the presence or absence of *actual* militance/political instability" (London and Ross 1995:205). Put differently, the freedom-repression index is a measure of *potential* instability and the strikes and protest indicators are measures of *actual* instability (London and Ross 1995).

International Monetary Fund (IMF) Conditionality

This independent variable measured for the period of 1975 to 1990 is the aggregation of four variables that include (1) the number of debt renegotiations between a country and an international financial body (private bank or multilateral lender); (2) the number of debt restructurings experienced by an indebted nation; (3) the number of times a country utilized IMF Extended Fund Facility; and (4) the total IMF loans received by a country as a percentage of its allocated quota (Walton and Ragin 1990; Bradshaw and Schafer 1996). The preceding four components of the index are converted to zscores and summed (World Bank 1999). Documented above, some scholars suggest that international lending agencies such as the IMF foster a variety of conditions that promote the increased investment by multinational corporations in the developing world (Karliner

1997). If these scholars are correct, then a positive relationship between IMF conditionality and the flow of foreign direct investment is expected.

At this point, it is important to note and justify a new model specification to be included in the analysis below. A close reading of much of the development literature cited above suggests that some of the key independent variables included in our models may well *interact* with each other to produce particularly significant effects on the flow of foreign direct investment. The relationship between certain internal and external variables (see above) is particularly relevant here. Specifically, considerable anecdotal evidence suggests that foreign direct investment flows to developing countries that have high levels of regime repressiveness. Nigeria is a prime example. This nation is an attractive investment opportunity because it possesses large oil reserves. That is why both Royal Dutch Shell and Chevron operate oil extraction ventures in Nigeria with Chevron's activity in the country making up 20 percent of its international oil and gas production (Karliner 1997). Additionally, as has been widely acknowledged, Nigeria has been a highly repressive regime. This contention is illustrated by the detention and murder of environmental activist Ken Saro-Wiwa. Karliner (1997:37) writes:

> Chevron's presence in Ogoniland was sufficient for Ken Saro-Wiwa, the founder of the non-government organization known as the Movement for the Survival of the Ogoni People (MOSOP), to identify it, together with Shell, as the cause of serious social and ecological disruption. Consequently, the brutal Nigerian military dictatorship, bloated and corrupted by \$10 billion a year in oil revenues, silenced Saro-Wiwa by illegally detaining and later executing the man on imaginary murder charges after delivering the following statement calling for support for MOSOP on Nigerian national television: "The result...has been the total destruction of Ogoni life, human, social, cultural, and economic...What Shell and Chevron have done to Ogoni people, land, streams, and the atmosphere, amounts to geno-

cide. The soul of the Ogoni people is dying and I am witness to the fact. I hear the plaintive cry of the Ogoni plains mourning the birds that no longer sing at dawn; I hear the dirge for trees whose branches wither in the blaze of gas flares, whose roots lie in infertile graves. The brimming streams gurgle no more; their harvests float on waters poisoned by oil spills. I hear in my heart the howls of death in the polluted air of my beloved homeland; I sing a dirge for my children, my compatriots, and their progeny."

While Shell denies involvement in the execution of Saro-Wiwa, some accounts suggest that the oil giant was involved. Karliner (1997:35) states:

Shortly after Saro-Wiwa's execution, Naemeka Achebe, general manager for Shell Nigeria, stated in defense of the actions of the Nigerian government, "For a commercial company trying to make investments, you need a stable environment. Dictatorship can give you that. Right now in Nigeria, there is acceptance, peace, and continuity."

Thus, this situation (and it is only one of many that we could have chosen) illustrates that highly repressive regimes may attract foreign investment to a country.

Furthermore, regime repressiveness may also be linked to the activities of international lending institutions. Some evidence suggests that the IMF is more likely to lend to repressive regimes and, in the process, increase flows of foreign direct investment in developing countries. Specifically, funding for economic development in non-core countries often takes the form of international loans in which developing countries borrow capital from core lenders (Walton and Ragin 1990; Bradshaw et al. 1993). As such, international lending institutions are able to impose austerity upon Third World borrowers. Specifically, obtaining a loan by the developing country and repayment of the loan to the international financiers like the World Bank or IMF is often contingent. Conditions assume essential roles in obtaining a loan, and these

conditions then increase foreign direct investment. The first condition is that the borrowers agree to use the funds to produce (primary) export commodities through activities including logging, mining, oil production, and agri-business: the sort of activities most often conducted by multinational corporations and/or to produce manufactured goods (e.g., apparel). The second condition is the creation of an atmosphere within the country conducive to the successful establishment of transnational corporations, thus increasing foreign investment in non-core nations (Leonard 1988). Third, conditions of loans are also contingent upon the privatization of national industries, thereby, again, allowing increased penetration by foreign investment. Authoritarian regimes receive World Bank or International Monetary Fund loans (thereby increasing foreign investment) more often than less repressive regimes because they can easily enforce the austerity conditions of the international financial institutions upon their populations by outlawing protests, strikes, and unions, in addition to approving (without popular support) economic incentives, wage and tax reductions, and regulatory concessions (London and Ross 1995; Leonard 1988).

Such claims are illustrated in Brazil's development since the mid-1960s. During the late 1970s, Senator James Abourezk of South Dakota entered into the Congressional Record a human rights report by the Center for International Policy that described the predilection of international lending institutions "for increasing support to military regimes that tortured and murdered their subjects, sometimes immediately after the violent overthrow of democratic regimes that these organizations had previously refused to lend to" (Rich 1994:99). Specifically, the report noted that these international lending institutions "had refused to lend to the democratically elected Goulart government in Brazil in the early 1960s, but following the 1964 military coup (which installed a twenty year military dictatorship), lending rose from zero to average \$73 million a year for the rest of the 1960s and reached levels of nearly half a billion dollars a year by the mid 1970s" (Rich 1994:99-100).

Concurrently, Brazil used the bulk of these foreign loans to begin work on two major modernization projects involving infrastructure improvements and the promotion of export-oriented

ventures-conditions imposed by international financial institutions-to open up the Amazon basin (Rich 1994). The Carajas mining project (as noted earlier) used \$304.5 million in loans from the International Monetary Fund to support the development of mining facilities at the world's largest reserves of high-grade iron ore and to support the infrastructure necessary to move the iron ore to market for export abroad (railroad and seaport) (Rich 1994). Second, Hecht and Cockburn write, "Between 1981 and 1983, Brazil with the support of the International Monetary Fund invested \$443.4 million in the Northwest Region Development Program, known by its Brazilian name Polonoroeste (northwest pole). More than half of the funds financed the placing of Brazilian national highway 364 (BR-364), a 1,500-kilometer dirt track that connected Brazil's populous south central region with the rainforest wilderness in the northwest" (quoted in Rich 1994:20). Most of the rest of the money went to the construction of feeder and access roads at the frontier end of the highway, and for the establishment of thirty-nine rural settlement centers to consolidate and attract tens of thousands of settlers (Rich 1994).

IMF Conditionality x Freedom-Repression Index

The anecdotal evidence above suggests that certain internal characteristics (i.e., regime repressiveness) and external characteristics (i.e., IMF conditionality) may well interact to enhance investment flows. This hypothesis may be tested empirically by computing a multiplicative interaction term that combines the IMF conditionality measure with the freedom-repression index ca. 1980. It is constructed by converting each variable to a z-score and simply multiplying the IMF conditionality z-score with the freedomrepression z-score (See Moon and Dixon 1985; London and Williams 1988). Note, however, as a corrective measure, a constant was added to both variables to make all scores greater than zero before multiplication. When regression models include interaction terms, proper model specification requires that the components of the interaction term be included in the equations. Parameter estimates for these components, though, may be misleading. Each

component, for example, may well be highly correlated with the interaction term. Because of this collinearity, sometimes the signs of the coefficients of the components are reversed, sometimes the parameter estimates are unusually high, and so on. Therefore, in interpreting results, attention will be focused on the sign and significance of parameter estimates for the interaction term only. This interaction term "separates" nations having both high levels of IMF conditionality and high levels of repression from the rest of the sample in an attempt to determine if such interaction produces significantly greater levels of foreign capital penetration into a developing country than either component alone. We expect the interaction of conditionality and repression to have a positive effect on FDI.

Results

Table 1 is a correlation matrix. Note that most bivariate correlations for the foreign direct investment model shown are low to moderate, suggesting that multicollinearity is not a problem for this analysis. The exception is the high correlation between the freedom-repression index and its square. Such a high correlation is expected when testing for the nonmonotonic hypothesis using a quadratic polynomial equation. Furthermore, the Lewis-Beck (1980) test is applied for equations that include the IMF conditionality measure and all

Table 1. Bivariate Correlation Matrix for Foreign Direct Investment (1996) Regression Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Foreign Direct Investment, 1996	1.000								
(2) Foreign Direct Inestment, 1980	.714	1.000							
(3) Level of Economic Development, 1980	.404	.371	1.000						
(4) Freedom-Repression Index, 1979	173	153	545	1.000					
(5) Freedom-Repression Index Squared, 1979	218	181	554	.981	1.000				
(6) Deforestation Rate, 1980-90	.627	.140	.120	117	153	1.000			
(7) Sectoral Inequality, 1970	369	314	353	.271	.246	005	1.000		
(8) Protests, 1975-79	.072	.129	.322	315	296	248	341	1.000	
(9) IMF Conditionality, 1975-90	020	244	.014	153	181	.117	.237	110	1.000

the intranational independent variables as a function of foreign investment for 1996. The r-squared in these equations does not come close to 1. With no r-squares approaching 1 in the Lewis-Beck test (described above), it is unlikely that multicollinearity is a problem in this analysis (London 1987; Rudel 1989).

Table 2 reports the results of panel regression analysis of the level of foreign direct investment for 1996 on both intranational and international variables. Odd numbered equations include a measure of protests, while even numbered equations include a measure of political strikes. Equations 1 and 2 control for all the basic intranational variables and the IMF conditionality measure. Further, equations 1 and 2 test for the presence of a curvilinear relationship between regime repressiveness and foreign direct investment by including the freedom-repression index and its square in the analysis. Equations 3 and 4 repeat the pattern for equations 1 and 2 but test for a linear relationship between the freedom-repression index and the dependent variable because the curvilinear hypothesis is not supported in equations 1 and 2. Equations 5 and 6 include the inter-

Table 2. Standardized Regression Coefficients of Foregin Direct Investment (1996) as a Function of Intranational and International Variables

· · · · · · · · · · · · · · · · · · ·	Equation	Emotion	Emutian	Enuntion	Emotion	Enuntion
	Equation 1	2a	Equation 3	4b	Equation 5	Equation 6c
	FDI 1996	FDI 1996	FDI 1996	FDI 196	FDI 1996	FDI 1996
Intranational Determinants						
Foreign Direct Investment, 1980	.571**	.608**	.580**	.610**	.575*	.613**
Level of Economic Development. 1980	.124*	.096*	.129*	.097*	.112*	.066
Freedom-Repression Index, 1979	.322	.102	092	046	951	-1.299**
Freedom-Repression Index Squared, 1979	239	058				
Deforestation Rate, 1980-1990	.495**	.497**	.502**	.498**	.496**	.499**
Sectoral Inequality, ca. 1970	233**	203**	226**	201**	239**	209**
Political Protests per Capita, 1975-1979	100*		099*		128*	
Strikes per Capita, 1975-1979		032		032		032
International Determinants						
IMF Conditionality, 1975-1990	.110*	.099*	.118*	.100*	860	-1.185**
IMF Conditionality x Freedom- Repression Index, ca. 1980					1.305~	1.661**
Adjusted R-Squared	.830	.870	.832	.872	.835	.883
Number of Cases	55	54	55	54	55	54
** Beta coefficients are at least 2.0 times the st * Beta coefficients are at least 1.5 times the st a: Controls for outlier: Portugal	standard error. andard error.					
b: Controls for outlier: Portugal						
c. Cotrols for outlier: Portugal	rd arror					
The beta coefficient is 1.44 times the standa	iu chol.					

action term between IMF conditionality and the freedom-repression index. Table 3 (see below) reproduces this pattern, but the dependent variable under examination is value added in manufacturing as a percentage of GDP for 1997. Note that the impact of three influential cases is detailed in Table 2.

The overall pattern of the results reported in Table 2 may be summarized quite succinctly. Let us begin with the impact of individual indicators on the flow of FDI (see equations 1 through 4) and then turn our attention toward the interaction term analysis (see equations 5 and 6). First, the level of deforestation is positively and significantly related to the flow of foreign direct investment in all four equations, thereby suggesting foreign direct investment flows into countries with high levels of investment opportunities. Second, the protest indicator is negatively and significantly related to foreign direct investment. However, the strikes indicator is not a significant predictor of foreign capital flow. Clearly, under these model specifications, political protests, but not political strikes, decrease flows of foreign capital into a developing country. Third, sectoral inequality is a strong, negative, and significant predictor of foreign direct investment mobility. This negative and significant effect suggests that nations with "relatively inexpensive urban labor forces attract more investment than did nations with high ruralurban productivity disparities" (London and Ross 1995:209-210). Fourth, the international variable, IMF conditionality, is positively and significantly associated with the flow of foreign direct investment into nations, suggesting that if a country becomes increasingly penetrated by the IMF then the level of foreign investment increases. Finally, the freedom-repression index does not exhibit the hypothesized curvilinear effect with foreign direct investment suggested by previous studies (see equations 1 and 2). Given its significance in London and Ross's (1995) study, the absence of significance under new specification is unexpected. Therefore, this situation warrants further examination of this variable. As such, we control for the possibility that a linear relationship exists between the freedom-repression index and foreign direct investment by dropping the squared term from the analysis (see equations 3 and 4). The freedom-repression index is negative in equations 3 and 4 but not

significant. With little support for this variable thus far, perhaps the interaction between the freedom-repression index and other factors is relevant. We examine this possibility in equations 5 and 6 of Table 2.

Turning our attention to the interaction terms in Table 2 (equations 5 and 6), we find that the interaction between IMF conditionality and the freedom-repression index is positively and significantly related to the flow of foreign direct investment into the developing world. Such findings suggest that countries with both high levels of IMF conditionality and regime repressiveness are more attractive to foreign direct investment than other developing countries. In other words, nations with the "right" combination of (a) internal political and economic characteristics and (b) transnational linkages receive significantly higher inflows of foreign direct investment.

Overall, the findings in Table 2 lend considerable support to predictions about capital mobility derived from the theory of global capitalism. To begin, nations with relatively "inexpensive" urban labor forces attracted more investment than did nations with high rural-urban productivity disparities. In addition, the flow of FDI to non-core nations between 1980 and 1996 is largely a function of political stability (especially low protests), abundant investment opportunities, and penetration by international lending agencies. Moreover, it seems clear that a combination of intranational and international predictors, tapped especially by the interaction terms, is relevant to developing an understanding of the flow of foreign direct investment. Finally, it is important to note that many of the "cost and control of labor" variables found to be significant predictors in previous research (i.e., London and Ross 1995) are herein found to be significant net of controls for (a) a key neoclassical economic insight that foreign direct investment flows to attractive investment opportunities and (b) a new control for IMF penetration.

The findings of our panel regression analyses reported in Table 3, based on the alternative dependent variable (value added in manufacturing from 1980 to 1997), are generally compatible with those for FDI in Table 2. Table 3 reproduces the same pattern of analysis found in Table 1 with one exception. We only control for the curvilinear effect of the freedom-repression index (see equations

1 and 2). First, the freedom-repression index in equations 1 and 2 is found to have the hypothesized, curvilinear effect with value added in manufacturing for 1997. This implies support for global capitalism's hypothesis that moderately repressive regimes provide the political stability or controlled labor making them attractive sites for manufacturing investment and growth, while highly repressive regimes and highly democratic regimes are unattractive to investors in the manufacturing sector. Second, the effects of protests are negative and significant in every equation as in Table 2, while the political strikes variable is negative in all equations and significant in one. Third, several other variables found to be significantly related to foreign direct investment in Table 2 are not significantly related to value added in manufacturing in Table 3. Specifically, sectoral inequality, level of deforestation, IMF conditionality, and

Table 3. Standardized Regression Coefficients of Value Added in Manufacturing (1997) as a Function of Intranational and International Variables

	Equation 1	Equation 2	Equation Equation			
	VAM 1997	VAM 1997	VAM VAM 1997 1997			
Intranational Determinants						
Value Added in Manufacturing, 1980	.776**	.684**	.885** .792**			
Level of Economic Development, 1980	099	111	120120			
Freedom-Repression Index, 1979	1.178**	.905*	-1.094455			
Freedom-Repression Index Squared, 1979	924**	-1.135**				
Deforestation Rate, 1980-1990	124	024	119018			
Sectoral Inequality, ca. 1970	.017	.020	.045 .054			
Political Protests per Capita, 1975-1979	319**		326**			
Strikes per Capita, 1975-1979		143*	147			
International Determinants						
IMF Conditionality, 1975-1990	104	090	919335			
IMF Conditionality x Freedom- Repression Index, ca. 1980			1.102 .339			
Adjusted R-Squared	.678	.608	.633 .582			
Number of Cases	50	50	50 50			
** Beta coefficients are at least 2.0 times the standard error.						

* Beta coefficients are at least 1.5 times the standard error.

the interaction term fail to predict any significant variation in value added in manufacturing. Since "manufacturing growth" is only partly a function of investment flows, these differences across tables should not be surprising. Deforestation, for example, is clearly a better predictor of multiple types of foreign investment than of investment in manufacturing alone.

Overall, the findings in Table 2 and 3 lend considerable (but not unequivocal) support to predictions about capital mobility derived from the theory of global capitalism for the latest period. Capital flows into non-core nations between 1980 and 1997 are in part a function of internal characteristics such as political stability (especially fewer protests), regime repressiveness, and attractive investment opportunity. They are also, in part, a function of external characteristics such as IMF conditionality. Further, the combination of both intranational and international factors within developing nations tapped by the interaction term is highly relevant to understanding the complexities of determinants of capital mobility in the modern world system.

Conclusion

London and Ross (1995:212) state:

The theory of global capitalism depicts a transition period that was accomplished through a new kind of competition on a world scale. The globalization of capital and the disaggregation of the stages and types of production over space brought new areas of the world into the industrial system. The worldwide pool of labor expanded beyond the borders of the countries with enfranchised working classes and high levels of reproduction. Employers seeking to minimize their direct employment costs and their indirect political burdens sought out communities of workers who were politically less potent than those in the older industrial states and whose costs of reproduction were lower.

Our study tests these aspects of global capitalism theory for the most recent period in a more stringent manner than earlier

research by controlling for variables not analyzed previously (IMF conditionality and attractive investment opportunity). Despite the more fully-specified models, the findings do suggest support for the political stability hypothesis put forth by the theory of global capitalism for the period under examination (roughly 1975 to 1997) since two "control of labor" variables significantly predict variation in capital flow as measured by our dependent variables of foreign direct investment and value added in manufacturing. First, one of the most consistent results is the significant, negative impact of the protest indicator on foreign investment whatever the dependent variable under examination. In other words, nations with high levels of protests have low levels of foreign investment. Second, the freedomrepression index is negatively related to FDI and it exhibits a curvilinear relationship with the value added in manufacturing variable. Clearly, non-repressive regimes do not provide the necessary control over labor that would make them attractive sites for investment in manufacturing. Thus, "civil and political rights as well as vigorous expressions of dissent (protests) in the developing world are not virtues in the eyes of foreign investors" (London and Ross 1995:212). Put differently, these findings do confirm the political stability hypothesis of global capitalism that authoritarian states with subordinate working classes are attractive to investors seeking relief from the political and economic environments of core nations.

While stability in the coefficients for the control of labor variable tapped by the protest indicator is found across all tables, this pattern is not discernable for other variables. Clearly, our model provides a much better prediction of the flow of foreign direct investment than it does for changes in value added in manufacturing. However, given the dramatic increases in FDI to the periphery since 1980, and the highly controversial role that such multinational investment plays in the "development" of non-core nations, the models presented in Table 2 are particularly noteworthy.

In conclusion, our findings highlight the interaction between global financial institutions and local political-economic variables. When these variables measure both international and intranational processes simultaneously, they reflect or point to highly interdependent processes that influence the location of foreign investment. 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 (London and Williams 1990, 1988). As such, our work extends the political sociology of foreign direct investment by showing the importance of international financial institutions in directing and attracting foreign direct investment. Specifically, International Monetary Fund conditionality is both a signal of approval and a generator of policies that create access to foreign investors. When these two factors interact with policies of repressive regimes, foreign investors have realized their goal: economic access and political protection. Thus, it is apparent that international investors have been somewhat more efficient than environmentalists in "thinking globally and acting locally."

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