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**Post-Manichean Economics: Foreign Investment, State Capacity
and Economic Development in Transition Economies**

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ABSTRACT

This paper evaluates the role of foreign direct investment (FDI) in the transition from socialism to capitalism. Fixed-effects panel regressions indicate that FDI and domestic investment have an equal effect on growth in the first year of investment, but over time FDI is associated with greater growth than domestic investment. However, this positive impact of FDI turns out to be contingent upon the presence of a relatively well-functioning state in the host economy; in the absence of such a state, the net effect of FDI on economic development may be negative. All findings are robust in light of instrumental variable estimation, which is used to account for potential endogeneity problems.

Foreign direct investment (FDI) – capital investment in one country by firms owned in a different country – is considered one of the most controversial elements of globalization. Characterizations of its role as a driving force of economic development range across the spectrum from conducive to obstructive, and scholars as well as policy-makers continue to pose questions regarding its implications for a country's long-term welfare. Over the last thirty years, empirical studies have produced inconclusive and contradictory findings regarding the developmental benefits of FDI for developing economies, although some of the more recent work suggests that positive consequences outweigh potential negative externalities (Firebaugh 1992, 1996; Borensztein, de Gregorio, and Lee 1998; De Soysa and O Neal 1999).

The role of FDI has also been at the center of a debate over which public policies are most suitable for transforming the atrophied state-owned economies of the former socialist world into competitive market systems. Some scholars have claimed that countries which attracted large amounts of FDI were able to more easily overcome the challenges of rapid economic reform by privatizing state-held assets to foreign investors, and in doing so permitting efficiency gains, facilitating technology transfers, and improving access to world markets (e.g., Eyal, Szelényi, and Townsley 1998; King and Szelényi 2005). While a variety of case studies and small-N country comparisons confirm this theory (King 2000; King 2001a, 2001b; King and Váradi 2002; Bandelj 2003; King and Sznajder 2006), other research contends that FDI has had primarily negative implications for countries, including the destruction of existing production networks, the promotion of low-wage, low-value-added manufacturing, and the permanent dependence on foreign economic actors (e.g., Bakos 1995; Matzner 1996; Ellingstad 1997; Andor and Summers 1998).

The present article offers a systematic reevaluation of the developmental dynamics surrounding FDI, focusing on the postsocialist experience. Our empirical goals are threefold: We seek to (1) determine the impact of FDI on economic development in transition economies, (2) assess the relative performance of foreign and domestic investment over time, and (3) explore to what extent the effects of FDI are contingent on the institutional environment of the host nation. A central proposition of this paper is that foreign investment is not categorically associated with either positive or negative outcomes, but that its effects depend on the presence of a relatively well-functioning state.

In order to test this hypothesis and to adjudicate between competing claims about benefits of FDI, we use a panel dataset of 31 transition economies, covering the period from 1989 to 2004.¹ Unlike previous work that relied on case studies or cross-sectional methods, our analysis is able to capture both cross-country effects and over-time dynamics. The research design is strengthened by the fact that transition economies form a *cohort*. In breaking with their state-socialist past almost simultaneously, they were collectively “new to the game” of capitalism, and subject to many of the same social, political, and economic challenges. Their subsequent trajectories, policies, and outcomes, however, were characterized by considerable variation, thus creating an unprecedented natural laboratory for social scientists. When investigating the effects of FDI, a cohort setup is advantageous insofar as it permits a significantly higher degree of comparability across cases than studies of abstract groups such as “developing countries” or “emerging markets,” whose constituent elements oftentimes share few common features.

The remainder of this paper is structured into six parts: The first reviews the existing literature on the effects of FDI; the second outlines our analytical framework based on a neoclassical sociological understanding of capitalism; the third discusses our analytical methods;

the fourth describes data and variables; the fifth presents the findings of our statistical analysis; finally, in the conclusion, we outline the theoretical and policy implications of our findings, and delineate avenues for future research.

THE CONSEQUENCES OF FOREIGN DIRECT INVESTMENT

During the post-war era, a variety of theoretical explanations emerged to account for the persistent lack of economic development in large parts of the world. While these theories agreed in principle on the features of underdevelopment – low per capita income, inadequate health care and education systems, stark rural-urban differentials, dwindling levels of industrialization, and lack of public infrastructure, to name only a few – they differed markedly in their attribution of its causes. One cause that has been consistently contentious is the effect of contact between the advanced industrial economies and the less developed regions of the world. Two sets of theories merit particular attention in this regard: modernization theory and neoclassical economics on the one hand (e.g., Lewis 1948; Solow 1956; Swan 1956; Rostow 1960; McClelland 1964; Apter 1965; Barro and Sala-i-Martin 1995), and dependency and world-systems theory on the other hand (e.g., Frank 1967; Galtung 1971; Wallerstein 1974; Cardoso and Faletto 1979; Landsburg 1979; Borschier and Chase-Dunn 1985; O’Hearn 1989).

Theories of modernization are grounded in the assumption that countries progress from traditionalism to modernity in stages. At each stage, new political, economic and social institutions emerge, allowing for more advanced economic activities. In their analyses of this process, modernization theorists have tended to be less concerned with the causes of underdevelopment than with obstacles to it, and attributed a lack of progress primarily to endogenous factors, while viewing exogenous influences as mostly positive. In the latter

category, investment by multinational corporations ranks as a particularly virtuous influence. Since modernization theory assumes that there is essentially only one correct pathway toward development, theorists in this paradigm encourage underdeveloped regions to imitate the institutional forms and practices found in advanced industrial nations in order to accelerate their convergence with the developed world and attract investment from it.

Neoclassical economics provides insight into the mechanisms that are driving this alleged convergence; it starts with the premise that growth in the *stock of capital* is the primary driver of economic expansion (Solow 1956; Swan 1956; Levine and Renelt 1992; Barro and Sala-i-Martin 1995). In the context of underdeveloped countries, investment from abroad is thought to provide capital when domestic sources are not sufficient. Since underdeveloped countries are often characterized by a dearth of domestic capital, foreign investment has come to be acknowledged as a central vehicle by which these economies can catch up to the developed world. In addition to furthering the accumulation of capital, neoclassical economists expect the presence of foreign multinational firms to generate a variety of spillovers, including the transfer of technology and management skills, the creation of jobs, and the spread of productivity and efficiency into traditional sectors of the economy.

Dependency and world-systems research fiercely contests these claims.² Scholars in these fields claim that endogenous factors play only a minor role in determining the trajectory of an underdeveloped nation, and instead point to the internal structure of an economy as being shaped primarily by exogenous forces, such as trade and foreign direct investment. They argue that the prosperity of advanced capitalist economies is contingent upon the continued exploitation of a group of peripheral countries; practices like foreign investment serve only to enrich the developed world while causing enduring detriment to poorer economies (Frank 1967; Galtung

1971; Amin 1974; Wallerstein 1974; Cardoso and Faletto 1979; Landsburg 1979; Borschier and Chase-Dunn 1985; O'Hearn 1989).

The dependency and world-systems literature has proposed a variety of mechanisms by which foreign investment may be harmful for its host economy. These include but are not limited to: various forms of surplus extraction – for instance, transfer pricing or excessive royalty payments – which harm domestic productivity and capital accumulation, thus exacerbating unequal exchange patterns within the world economy; predatory behavior of foreign multinational corporations against nascent or already successful domestic firms; manipulation of national economic policies through foreign firms which dominate the most dynamic sectors of the host economy; and alteration of domestic consumer preferences (Amin 1976; Evans 1985; Chang 1998).

A disproportionate share of empirical studies has found that foreign investment has a detrimental impact on the economic performance of host countries, although some of these findings have subsequently been challenged. Borschier, Chase-Dunn and Rubinson (1978) assess the consequences of investment dependence, defined as the degree to which an economy is penetrated and controlled by foreign capital. Contrary to previous research, Borschier, Chase-Dunn and Rubinson measure the stock of foreign investment in host economies, as opposed to annual flows. Inflows of foreign capital, they argue, can promote economic development in the short-run due to capital formation and input acquisitions by foreign corporations, but the cumulative effects of foreign investment will likely produce a reduction of the growth rate over time. Based on a quantitative cross-country comparison, the authors confirm their hypothesis that inflows of foreign direct investment increase the relative rate of economic growth in the short-term, while a growing stock of foreign direct investment dampens growth prospects in the long-

term. Similar results and arguments were presented by Bornschier (1980), Dolan and Tomlin (1980), Bornschier and Chase-Dunn (1985), Marsh (1988), Kentor (1998), and Dixon and Boswell (1996).

By contrast, Firebaugh (1992) finds that foreign investment markedly facilitates growth. He asserts that the investment dependence researchers have committed a logical fallacy in interpreting the coefficients generated by their regression models.³ Accordingly, a reanalysis of their data using his own, corrected model reveals that foreign investment consistently promotes growth; however, Firebaugh also finds that foreign capital is “not as good” (116) as its homegrown counterpart. A later analysis by the same author (Firebaugh 1996) reports similar results. De Soysa and Oneal (1999) offer a reanalysis of Firebaugh’s (1992; 1996) and Dixon and Boswell’s (1996) studies, largely replicating Firebaugh’s findings. However, they disagree with his conclusion that foreign capital performs worse than domestic capital, claiming instead that foreign investment is more productive than capital from domestic sources.

A large number of in-depth country studies have reported mixed results regarding the consequences of foreign investment. To name only a few, Chen, Chang and Zhang (1995) find that FDI in China during the post-1978 reform period has led to both economic development and increasing income inequality. Jansen (1995) concludes from a study of Thailand that foreign direct investment tends to have a positive effect on private investment and growth, but adversely affects a country’s balance of payments. Bradshaw, Kim and London (1993) show with time-series data from Korea that, while trade resulting from the presence of foreign corporations has facilitated economic growth across the economy, the capital outflow associated with foreign direct investment has caused economic expansion to proceed at less than the country’s potential.

Finally, some studies conclude that foreign direct investment has no effect on growth at all (Hein 1992; Dutt 1997).

The arguments put forth in the debate between modernization theory and neoclassical development economics on the one hand, and dependency and world-systems theory on the other hand, which focused on the experience of “Third World” countries, have resurfaced in academic debates on how to achieve a successful transition from socialism to capitalism. While increasingly few social scientists assert that all forms of exchange with advanced industrialized economies produce underdevelopment, widespread opposition to foreign investment remains, especially within the political arenas of less developed and late industrializing economies.

Growing numbers of researchers have started to employ the concepts developed in the dependency and world-systems paradigms to question the developmental merits of foreign investment in the transition from socialism to capitalism. In line with previous work, they argue that foreign investment will promote the transfer of economic control and wealth to foreign agents, ultimately producing economic stagnation. Due to foreign ownership of the economy, the normal linkages that would develop among domestic business do not occur, and profits are exported out of the country. Ellingstad (1997), for instance, argues that foreign investment in Hungary is analogous to foreign investments in the Mexican *Maquiladora* system, by promoting “low-wage, low or medium skill, low value added manufacturing, with little hope for a meaningful upgrading of skills” (9; see also Andor and Summers 1998). Another line of criticism focuses on the destruction of domestic production networks by foreign investment. Matzner (1996) refers to this as “market-destroying” behavior that occurs when a foreign firm buys a domestic company, eliminates local production, and sells output produced abroad on the domestic market. Bakos (1995) adds that foreign investment exhibits a strong tendency to

recreate and reinforce monopolies. Both of these positions are consistent with Inzlet's (1994) and Bailey's (1995) claims that foreign-owned firms cut R&D expenditures (see Gowan [1995], and Bailey, Sugden and Thomas [1998] for further examples).

Proponents of modernization theory and neoclassical economics have taken an opposite stance. They argue that foreign investment allows postcommunist countries to modernize the Soviet-style industrial order. In particular, foreign investment is thought to help replace socialist property rights and, along with domestic privatization programs, transform existing state-owned enterprises into globally competitive firms. These dynamic firms, introduced into postcommunist markets through privatizations and green-field investments, then provide the principal engine for economic growth in the postcommunist context.

Advocates argue that foreign direct investment provides a vast array of benefits to recipient firms and host economies. First, it introduces crucial knowledge, skills, and values in the form of superior Western management techniques, business ethics, entrepreneurial attitudes, labor intensity, and production techniques. Second, foreign investment allows for industrial upgrading by embedding firms into existing global research and development networks, thus promoting technology transfer. Third, it facilitates international trade by providing the invested firms with access to crucial Western markets. The ensuing economic growth, in turn, creates new employment opportunities and stimulates the demand for inputs from domestic suppliers. Fourth, foreign investment injects new, competitive firms into the economy, thus threatening existing monopoly structures (for Eastern Europe see Sachs 1993: 3; Sachs 1995; Svetlicic, Artisien and Rojec 1993: 10; Dunning 1993: 30; Mann 1991: 184; Csaki 1995: 108; Faur 1993: 204; Frydman and Rapaczynski 1994; Dobosiewicz 1992; Kozminski 1993: 35). Many of these arguments closely mirror the imagery and logic of earlier modernization theories, as is evident from a quote

by Dobosiewicz (1992): “Foreign investment and the operation of foreign enterprises can be likened to a battering-ram beating down many obstacles to the introduction of a free-market economy that for over forty years the old system has chosen to ignore” (xii).

Some scholars have taken a less absolute stance on the issue by arguing that foreign direct investment allows countries to partially compensate for the problems created by rapid economic reforms, in particular, by promoting reindustrialization. Backed by financial capital, technology, expertise, and access to world markets of multinational corporations, domestic firms in non-resource-based manufacturing are put in a position to restructure their operations and subsequently begin to export goods abroad without experiencing massive technological downgrading, sometimes leading to substantial upgrading (King 2001a, 2001b; King and Váradí 2002; King 2002; King and Szelényi 2005; King and Sznajder 2006).

A STATE-CENTERED ANALYTICAL FRAMEWORK

A central proposition of this paper is that foreign investment is not categorically associated with either positive or negative outcomes, but that its effects are contingent on a variety of domestic political and institutional factors, in particular, the presence of a relatively well-functioning state. This concern for the state goes back to Weber’s understanding of modern capitalism and his claim that state actions are a crucial factor in promoting and maintaining an environment conducive to rapid industrialization. In order to best serve the needs of modern capitalist firms, the state’s behavior must be predictable on the basis of formal rules of administration, a rational legal system, and accountable civil servants (Weber 1976, 1978; see also Collins [1980]). Absent such a state, Weber contends that “adventurous and speculative trading capitalism and all sorts of

politically determined capitalisms are possible, but no rational enterprise under individual initiative, with fixed capital and certainty of calculations” (Weber 1976: 25).

Social scientists have used Weber’s thesis – the claim that successful capitalist development requires not just markets but the presence of a strong, bureaucratic state – to account for the differential industrialization and development of various countries and regions (e.g., Evans 1985; Wade 1990; Evans and Rauch 1999). We propose to extend Weber’s notion to explaining the role of public institutions in the developmental processes surrounding FDI. The idea is that in countries whose governments exhibit low levels of state capacity and fail to enforce the rules and regulations necessary for the operation of a functioning capitalist economy, the contribution of foreign investment to economic development will be considerably smaller or even negative.

Such an outcome could manifest itself via a variety of mechanisms. First, states that fail to uphold a predictable legal and administrative system may deter investments that have the potential to create linkages with the domestic economy; such investments typically involve high fixed costs, yet foreign investors tend to shy away from such commitments in situations of perceived political risk. Second, a weak state may be unable to regulate foreign investment in a manner that is beneficial to national welfare. Many scholars claim that states which experienced periods of foreign investment-led growth in the past did so precisely because they adopted a restrictive policy regime toward foreign corporations, for instance, by requiring them to use local inputs or reinvest profits in the domestic economy.⁴ Third, states that are unable to enforce property rights protection or contract security might incentivize foreign firms to recoup their investments as quickly as possible by repatriating all profits, instead of investing them in the host economy. Finally, weak, non-bureaucratic states are oftentimes characterized by widespread corruption, as patron-client networks begin to permeate their organization, and the separation of

office-holder and office becomes indistinct. In such an environment, rent-seeking politicians and domestic elites might allow foreign corporations to influence political and economic decisions in exchange for bribes. If foreign corporations and domestic actors form an alliance of this kind, the state's capacity to act autonomously and enforce laws and regulations may evaporate, giving rise to unchecked and potentially deleterious behavior of foreign investors. In the following, we outline a methodology that allows for testing the proposed argument, that the developmental benefits of FDI are contingent upon the presence of a strong, institutionally capable state.

METHODOLOGY

We adopt a cross-sectional time-series design to study the effects of FDI on economic development, due to the superior analytical leverage such designs achieve in addressing matters of causal inference, as compared to traditional cross-sectional approaches.⁵ In particular, panel designs offer advantages in dealing with the issue of unobservable characteristics that plague such inference. Consider the following model:

$$Y_{it} = a + \sum_k \beta_k w_{kit} + \sum_p \phi_p z_{ip} + \gamma x_{it} + \theta_i + \theta_t + \varepsilon_{it} \quad (1)$$

This setup covers i units and t points in time. It contains a term θ_i for unobserved unit effects, a term θ_t for unobserved time effects, and a zero-mean transitory error term ε_{it} that varies over time and units, is mean-independent from θ_i , θ_t , and the explanatory variables in all periods, and, conditional on the explanatory variables, θ_i , and θ_t , has constant variance and is uncorrelated over time and across units. The term w_{kit} refers to a set of time-varying explanatory variables, while z_{ip} signifies a set of time-constant explanatory variables that vary only across units. Finally, x_{it} is the causal variable of interest.

The central issue in estimating Equation 1 is whether the unobserved unit effects θ_i and time effects θ_t ought to be treated as random or fixed. This choice depends on whether the θ_i and θ_t are correlated with the explanatory variables; if θ_i and θ_t are assumed to be uncorrelated with the covariates, one can treat them as random effects and estimate the model using a generalized least squares (GLS) approach. However, in the present context, as well as in many other sociological applications, this assumption is not reasonable. Various unit-specific effects that are constant or nearly constant over time but hard to measure are likely to be present. Firebaugh and Beck (1994) list a number of such effects that cross-national researchers should consider: a country's location, topography, climate, mineral resources, type and quality of soil, access to seaports, history, culture, economic system, political system, legal system, city system, religious composition, and relationship with neighbors. There is reason to believe that at least some of these attributes will be quite pronounced in the postcommunist context; hence, using an estimation procedure that does not take them into consideration will likely produce biased results. Likewise, failure to account for time-specific fixed effects – in this case, idiosyncratic historical events that affect all countries simultaneously at a given point in time – would result in biased estimates.

In addition to providing a substantive justification of why unobserved unit and time effects ought to be treated as fixed, one can carry out a statistical test to adjudicate between the fixed-effects and random effects estimators. Hausman (1978) formulated a procedure to test the null hypothesis that the unit and time effects and the explanatory variables are uncorrelated. Small values of the Hausman statistic fail to reject the null hypothesis and suggest GLS estimation of a random effects model on efficiency grounds; large values favor within-estimation of a fixed-effects model.

Fixed-effects transformation of Equation 1, when estimated by least squares, yields the following estimator:

$$(y_{it} - \bar{y}_i) = \sum_k \beta_k (w_{kit} - \bar{w}_{ki}) + \gamma(x_{it} - \bar{x}_i) + (\varepsilon_{it} - \bar{\varepsilon}_i) \quad (2)$$

The fixed-effects estimator produces correct standard errors and test statistics, provided the errors ε_{it} have a constant variance and are not serially correlated, thus producing efficient estimates. If the assumption of constant error variance is violated, Huber-White standard errors can be employed to correct for heteroskedasticity. If first-order serial correlation is present, a method developed by Baltagi and Wu (1999) can be used as a corrective.

In the present application, it is furthermore necessary to address the issue of endogeneity. As noted above, it is assumed that the error term ε_{it} in Equation 1 is mean-independent from the explanatory variables. Violation of this assumption leads to biased and inefficient estimators, regardless of whether unobserved unit effects are treated as fixed or random. Within the context of our research project, such a violation would be present if variations in FDI were partially influenced by idiosyncratic elements of the response variable (i.e., economic development). Instrumental variable (IV) estimation is one powerful technique of dealing with endogeneity. It involves identifying one or more variables that are correlated with the explanatory variable but not with the error term ε_{it} . A good instrument is one that is “correlated with the endogenous regressor for reasons the researcher can verify and explain, but uncorrelated with the outcome variable for reasons beyond its effect on the endogenous regressor” (Angrist and Krueger 1999: 8). Applying instrumental variable estimation to Equation 2 then yields the fixed-effects instrumental variable (FE-IV) estimator, which attempts to correct for endogeneity while still treating unobserved unit and time effects as fixed. This technique has become mandatory in

many economics and political science journals, although we consider it more of a useful robustness test.⁶

To illustrate the instrumental variable approach, consider the following simplified example involving the relationship between cigarette smoking and cancer. Suppose that alcohol consumption was also a cause of cancer. If one were to use the price of cigarettes as an instrument for smoking (assuming that people smoke more when cigarettes are cheaper, and that the price of cigarettes does not affect cancer except via increased smoking), one could get an estimate of the effect of smoking on cancer, purging the influence of drinking (and potential other unobserved confounders) on cancer.

We propose using foreign aid as an instrument for FDI, given the strong evidence that increased aid is associated with higher FDI in the postcommunist context (Bandelj 2008: 123), and the by now extensive literature showing that foreign aid does not promote growth, especially in the postcommunist context. Bandelj's paper demonstrates that FDI flows are socially and politically embedded. She argues that aid leads to greater levels of FDI because it facilitates the exchange of information, and "in the postsocialist period, such information may concern privatization-related investment opportunities" (15). Aid also "shows political patronage by donors of recipient countries, and... these political connections shape international economic exchange" (ibid.). Specifically, aid might inspire confidence in investors that the donating government is concerned with the long-term development of the recipient nation, and will pay attention to and perhaps help enforce property rights and contract security for foreign firms.

The reasons for the failure of aid are many. Critics argue that aid fails to create the proper incentives to promote growth, as it leads to a dependent relationship in which local actors lack internally driven motivation. That is, they do not actually "own" the projects funded by foreign

aid, and thus do not implement them well. The counterproductive conditions imposed on loans are also major culprits (see the extensive discussion in David Ellerman's *Helping People Help Themselves* [2006]). Finally, and perhaps most importantly, foreign aid almost never addresses the structural causes of poverty (Easterly 2003, 2006; Easterly, Levine and Roodman 2003).

DATA AND MEASURES

Our analysis is based on a unique dataset on the social, economic, and political development of 31 transition economies. These data are drawn from a number of principal sources: (1) the World Development Indicators Database (World Bank 2005), an annual compendium of economic, social, environmental, business, and technology indicators for 152 countries with populations of more than one million people; (2) the Foreign Direct Investment Database (United Nations Conference on Trade and Development [UNCTAD] 2005), a directory of worldwide FDI flows and directions; (3) the European Health for All Database (World Health Organization [WHO] Regional Office Europe 2005), a catalog of international health and mortality statistics; (4) the TransMONEE Database, a resource detailing social and economic trends in Central and Eastern Europe, the Commonwealth of Independent States, and the Baltics (UNICEF Innocenti Research Centre 2005); and (5) the International Development Statistics Database, a compendium of foreign aid transactions and other transnational resource flows (Organisation for Economic Co-operation and Development [OECD] 2006). In addition, some variables were generated on the basis of historical records, including those provided by the various editions of the *Transition Report* (European Bank for Reconstruction and Development [EBRD] 1996; 1999; 2000).⁷

Economic Development. The response variable of our analysis, economic development, is typically measured using gross domestic product (GDP) per capita, and we follow this practice.⁸

We purposely refrain from using annual growth rates, as is customary among many economists; doing so would be inappropriate here since the concept of interest is overall economic development (i.e., modernization or de-modernization), which can be quite different from average annual growth.⁹ A logarithmic transformation is applied to GDP per capita in order to correct for a substantially skewed distribution. GDP data were retrieved from the World Development Indicators Database (World Bank 2005).

Foreign Direct Investment. Foreign direct investment is measured as net annual investment inflows, expressed as a percentage of GDP in order to account for variations in the size of the host economy. All FDI data are drawn from the United Nations Foreign Direct Investment Database (United Nations Conference on Trade and Development [UNCTAD] 2005).

Domestic Investment. Domestic investment is calculated by subtracting foreign investment from gross capital formation¹⁰ – a quantity formerly known as gross domestic investment – and then expressing the results as a percentage of GDP.

Military Conflict. War ranks among the most severe disruptions the economy and should therefore be included in an analytical model predicting development. We employ a measure of average conflict magnitude, ranging from 1 (*least severe*) to 5 (*most severe*), that covers ethnic conflicts, revolutionary wars, and incidents of genocide. The data are drawn from a database on internal wars and failures of governance that is maintained by the Political Instability Task Force (Marshall, Gurr, and Harff 2005).

Political Rights. Measures of political rights have been identified as positive predictors of economic development (Barro and Sala-i-Martin 1995; Levine and Renelt 1992), and are therefore included in the present analysis. We use the Freedom House index of political rights (Freedom House 2005), a widely-used measure of the quality of democratic institutions. The index is coded from 1 (*most free*) to 7 (*least free*), even though we have reversed this coding scheme to render regression coefficients more readily interpretable. Despite previous findings of a positive relationship between political rights and GDP per capita, the observed complexities in the relationship between democratic rule and economic development in the transition context (see Kurtz and Barnes 2002) lead us to be agnostic as to the association between the two in our analysis.

Education. Past research has found human capital to be a strong determinant of economic development (Barro and Sala-i-Martin 1995; Levine and Renelt 1992). We employ gross higher education enrollment rates for the population aged 19 to 24 as a measure of human capital, and expect to find a positive effect on economic development. The relevant data were retrieved from the World Development Indicators Database (World Bank 2005) and the TransMONEE Database (UNICEF Innocenti Research Centre 2005).

Foreign Trade. Foreign trade, expressed as a percentage of GDP, is introduced as a measure of economic openness to account for potential equilibrium differences between open and closed economies. In accordance with most theories of economics development, we expect a positive association between trade and economic development. Trade data were drawn from the World Development Indicators Database (World Bank 2005).

Government Consumption. Government consumption, expressed as a percentage of GDP, has been found to exhibit a negative influence on economic development, a fact that economists have linked to the distorting effects of taxation and government expenditure programs (Barro and Sala-i-Martin 1995; Levine and Renelt 1992). We include the measure in our analysis but remain agnostic with regard to its effects in the context of transition economies. The data source is the World Development Indicators Database (World Bank 2005).

Agrarian Class Structure. The relative size of a country's rural population is introduced as a control for cross-country differences in class composition. Gerschenkron (1962) suggest advantages of lateness: less developed countries grow faster because they can combine new techniques with low wages. In the long run, we therefore expect higher levels of rural population to be associated with greater economic development (i.e., the a lagged, positive effect). We are, however, agnostic with respect to the contemporaneous effects of agrarian class structure that is captured by our variable. The data for this measure were drawn from the World Development Indicators Database (World Bank 2005).

Mass privatization programs. Mass privatization programs were among the most far-reaching structural reforms introduced in transition economies. These were innovative and radical programs that sought to jump-start a private economy when there were no investors interested in privatizing companies. They accomplished this by distributing vouchers to the population that could be redeemed for shares in enterprises, thus creating a type of "people's capitalism". We define mass privatization programs as privatization efforts encompassing more

than 25% of a country's medium-sized and large enterprises. Mass privatization programs have been shown to induce firm failure and deindustrialization, thus exerting a negative influence on economic development (Hamm and King 2005). The present analysis includes a time-variant categorical variable, indicating whether a given country has adopted a mass privatization program, which was coded on the basis of the EBRD *Transition Report* series (1996; 1999; 2000).

Inflation. Inflation has been found to negatively impact economic development (Barro 1995). For the present analysis, we have computed a five-year moving average of inflation, taking into account the fact that various postcommunist economies experienced periods of hyperinflation during the 1990s. The underlying data source is the World Development Indicators Database (World Bank 2005).

Europe Agreement. A time-variant categorical variable is used to indicate whether a country has signed a so-called Europe Agreement, an association agreement that aims to prepare the associated state for accession to the European Union. These agreements invoke criteria such as respect for human rights, democracy, the rule of law, and a market economy. Since most of the countries that signed such an agreement also received large amounts of FDI and experienced considerable increases in the level of economic development, it is necessary to account for the possibility that these countries would have experienced positive growth trajectories regardless of the amount of FDI they received, simply because their governments pursued policies geared towards satisfying the Europe Agreement, which also led to higher economic growth.

Life Expectancy. Based on recent findings that demographic indicators such as life expectancy and mortality exhibit significant influences on economic development (e.g., Bloom and Williamson 1998), we include male life expectancy at birth as a further control variable. Based on the assumption that an economy with a healthy labor force will be more productive, we expect that life expectancy will display a positive effect on economic development. The relevant data were retrieved from the World Development Indicators Database (World Bank 2005) and the TransMONEE Database (UNICEF Innocenti Research Centre 2005).

Internal and External Liberalization. In order to take into account the differential “progress” of a country’s transition from socialism to capitalism, we employ two indicators developed by the EBRD (1996; 1999; 2000), which measure the internal and external liberalization of a country on an annual basis. The former concept refers to the liberalization of domestic prices and trade, whereas the latter entails the liberalization of foreign trade and currency convertibility. In their original form, the EBRD indicators range from 1 to 4+, where 4+ indicates that a country’s structural characteristics are comparable to those found in an advanced capitalist economy, while 1 corresponds to the conditions in an unreformed, centrally planned economy with dominant state ownership. In order to facilitate statistical analysis, we have linearized the transition indicators by assigning a value of $+1/3$ to a “+” sign, and a value of $-1/3$ to a “-” sign. Note that the transition indicators are merely used as a *control* for economic reforms; they should not be seen as a way of assessing the viability or timing of those reform measures, and, in fact, doing so would be misleading due to an in-built positive bias in the indicators (King et al. 2008). Data on the transition indicators is unavailable for the East Asian economies in our sample.

State capacity. Past research has relied on a variety of concepts to measure the institutional capacity of states, ranging from approximate indicators – such as the ratio of tax revenue to GDP – to direct qualitative assessments – like the quality of bureaucracy index that is published annually by Political Risk Services (PRS) in a publication called the International Country Risk Guide (ICRG). Unfortunately, no such measure is available in time-series format for the countries covered by our analysis. We therefore follow a suggestion by Popov (2001) and use a country's murder rate as a proxy measure for its government's ability to enforce laws and regulations, uphold stability, and maintain the institutions necessary for a functioning capitalist economy.¹¹

Cross-sectional correlations suggest that the proposed variable may indeed be an appropriate measure of state capacity in the postcommunist context. A measure from the 1999/2000 Business Environment and Enterprise Performance Survey (EBRD 2000) – a survey of over 4000 firms in 22 transition economies – that indicates the degree to which the state is expected to uphold contract and property rights, shows a -0.61 correlation with the murder rate. Using the transition economies included in the 2000 World Business Environment Survey (World Bank 2000), the same measure correlates with the murder rate at -0.65. An ICRG index capturing the extent to which a country was characterized by law and order in 1999 (PRS 2005) demonstrates a -0.75 correlation with the murder rate. Another ICRG indicator (PRS 2005), measuring the institutional strength and quality of a country's bureaucracy in 2004, correlates with the murder rate at -0.51. Finally, an ICRG measure assessing the degree of corruption in a country's political system in 2004 (PRS 2005) is correlated with the murder rate at -0.58. To be sure, homicide rates might be related to state-capacity, but in a way that makes them a conservative measure. Weak states are more likely than strong states to not record homicides. This variable will therefore have

a conservative bias, under-recording weakness of weak states. This strengthens the case for the use of this variable.

We measure the murder rate as the number of murders per 100,000 inhabitants, using data from the European Health for All Database (WHO Regional Office Europe 2005).¹² To measure the extent to which the effect of foreign direct investment on economic development is contingent upon the presence of a strong state, we introduce a multiplicative interaction term of FDI and the murder rate, which we expect to have a negative coefficient. Note that data on homicides are unfortunately unavailable for the East Asian economies in our sample (China, Vietnam, Laos, Cambodia, Mongolia), as well as for Bosnia and Herzegovina.

Foreign aid. Identifying an instrument for FDI when the latter is endogenous is not an easy task, given that many of the variable's correlates (e.g., rate of growth, political stability, quality of the bureaucracy) tend to have a direct relationship with a country's economic development. We use the amount of foreign aid received by a country as an instrument for FDI (see discussion above). The required data were drawn from the International Development Statistics Database (Organisation for Economic Co-operation and Development [OECD] 2006).

RESULTS

The purpose of our empirical investigation is threefold. We seek to (1) determine the impact of FDI on economic development in transition economies, (2) assess the relative performance of foreign and domestic investment over time, and (3) explore the extent to which the effect of FDI is contingent upon the presence of an effective state. The results of our fixed-effects panel regressions indicate that FDI has a positive effect on economic development, even though the

magnitude of this effect is contingent on the quality of the state. Moreover, our analysis reveals that over time foreign investment has a positive impact on economic development, which is *not* observed for the domestic variety. These findings are robust in light of instrumental variable estimations.

Table 1 shows several interesting results regarding the relationship between FDI and economic development. Model 1.1 demonstrates that FDI has a positive effect on development after controlling for a variety of factors, including domestic investment, military conflict, political rights, human capital, life expectancy, foreign trade, government consumption, class structure, and inflation. Specifically, the coefficient for FDI indicates that a 1% increase in FDI is associated with a 0.67% increase in GDP per capita.¹³ The observed coefficient for domestic investment is identical in this specification, predicting a 0.67% increase in GDP for every additional percent of domestic investment.

[Insert Table 1 here]

Models 1.2 to 1.5 assess whether the above findings are robust when additional factors affecting economic development are taken into consideration. Regression 1.2 includes a variable indicating whether a country has signed a Europe Agreement; as outlined above, countries that signed such an agreement may have adopted a variety of reforms geared towards meeting EU accession criteria, which could have resulted in higher economic development, regardless of the amount of FDI received. Given that the coefficient for FDI remains unchanged when the Europe Agreement variable is added to the model, this possibility can be discounted. Model 1.3 adds the two liberalization indicators, and thus seeks to account for the considerable structural economic reforms that were implemented by many transition governments, and Model 1.4 adds to this specification the Europe Agreement measure from Model 1.2. As noted earlier, the EBRD

liberalization indicators are not available for the East Asian economies in the sample; Models 1.3 and 1.4 should therefore be evaluated against Model 1.5, which also excludes these countries but is otherwise identical to Model 1.1. It is evident from the results that the magnitude of the FDI coefficient is only marginally smaller when the East Asian economies are excluded – a 1% increase in FDI is equivalent to a 0.65% increase in GDP per capita, as opposed to a 0.67% increase for the full sample. In addition, this coefficient is robust to the introduction of the liberalization indicators (Model 1.3) and Europe Agreement measure (Model 1.4), with a reduction in the effect of only 0.05%. Note that, while the coefficient of domestic investment is larger than that of FDI for some of the above specifications, in no case is this difference statistically significant.

Model 1.6 is an exact replication of Model 1.1, except that China is excluded from the sample. China is unusual among the transition economies insofar as it began implementing economic reforms as early as 1978, whereas the other transition economies did not do so until the late 1980s or early 1990s; as it turns out, removing China from the sample leaves the coefficients observed in Model 1.1 virtually unchanged, thus attesting to the robustness of the findings.

Overall, the results reported in Table 1 indicate that the presence of foreign capital in an economy is associated with higher levels of economic development, a finding that is robust in light of a variety of controls. Although FDI is the central focus of this analysis, two of the control variables merit closer inspection. First, it is noteworthy that the political rights measure does not exhibit a statistically significant relationship with GDP per capita, suggesting that democratic institutions do not feature among the main catalysts of economic development in the transition context. Second, foreign trade consistently shows a negative relationship with GDP per capita, a

finding that persists if the total population is added as a measure of country size (not reported). This seems to indicate that economic openness is not necessarily a desirable feature for economies undergoing rapid economic transformation.

The regressions reported in Table 2 assess the effects of FDI over time, as well as the relative performance of FDI and domestic investment. Each model contains a lagged value of FDI inflows and the corresponding lagged value of domestic investment. As the number of lags is increased, the coefficient of FDI first declines and then increases again, whereas that of domestic investment consistently declines. The difference in coefficient magnitude for FDI and domestic investment is statistically significant for lags of four years and higher. More importantly, the coefficient for domestic investment ceases to be significant beginning with a two-year lag (Model 2.2), whereas that of FDI, after turning insignificant for the two-year and three-year lags (Models 2.2 and 2.3), becomes significant again in the four-year and five-year lag specifications (Models 2.4 and 2.5). These findings remain largely unchanged if Models 2.1 to 2.4 are re-estimated using the restricted sample of Model 2.5.

[Insert Table 2 here]

The findings from Table 2 suggest that whether a given investment dollar comes from a foreign or domestic source makes a difference from the standpoint of economic development in postcommunist countries. FDI outperforms – or is at least statistically indistinguishable from – domestic investment in all specifications. In addition, while both FDI and domestic investment cease to have a statistically significant effect beginning with a two-year lag, the coefficient for FDI turns significant again for lags of four years and higher. There are a number of plausible explanations for why FDI would exhibit such a lasting impact on economic development. Foreign-invested firms might attract their foreign suppliers to follow them from abroad after

some time. The effect might also reflect the behavior of foreign-invested enterprises that start to export locally manufactured products back abroad. A further explanation could be that, over time, foreign-invested businesses develop a variety of linkages with the domestic economy that ultimately lead to higher economic development. The present dataset does not permit us to adjudicate between these different explanations, but it is likely that one or several of them account for the persistent developmental benefits of FDI.

We now move on to address one of the central proposition of this paper, namely, that the positive effects of FDI on economic development are contingent upon the presence of a relatively well-functioning state, which is able to preserve law and order, enforce property rights, and generally create an environment that is hospitable to capitalist activity. In order to test this proposition, the murder rate is introduced as a measure of declining state capacity, and then multiplicatively interacted with FDI.¹⁴

The results of Regression 3.1 show that the coefficient of the interaction term is negative and statistically significant, suggesting that the developmental benefits of FDI decline as state capacity weakens. Specifically, the coefficients in Model 3.1 imply a threshold level of declining state capacity, at which the positive effects of FDI are fully absorbed by the negative consequences of having a weak state. For a country whose FDI inflows amount to 1% of its GDP, this threshold level corresponds to a murder rate of 26.5. This is about the level of homicides found in Africa, South and Central America – those regions in the world virtually all comparativists agree have the lowest state capacity.

The following two cases illustrate this logic: Russia's FDI in 2003 amounted to 1.85% of its GDP, while its murder rate was 27.8, implying that the net effect of FDI was equivalent to a reduction of 0.47% in GDP per capita, not taking into account the effects of other variables in the

model. Compare this finding to Poland, which received only marginally more FDI during that year (1.96% of GDP) but had a murder rate of 1.5; in this case, the net effect of FDI corresponded to an increase in GDP per capita of 1.53%.¹⁵

[Insert Table 3 here]

Figure 1 demonstrates this finding graphically. The greatest economic development was experienced by countries with the highest foreign investment and lowest incidence of homicide, whereas the lowest level of economic development is found in economies with the highest murder rates and lowest reception of FDI. Moreover, within each investment category, an increase in the murder rate – which is equivalent to a decrease in state capacity – is associated with considerably lower levels of economic development. Finally, the figure demonstrates that the returns to foreign investment decrease as the murder rate increases.

[Insert Figure 1 here]

To further assess the validity of these results, Regressions 3.2 to 3.4 take into account whether a country signed a Europe agreement (Model 3.2) or took steps to liberalize its domestic economy and foreign trade regime (Model 3.3). In each case, and when both controls are entered together (Model 3.4), the coefficients for FDI and the interaction term remain largely identical to those reported in Model 3.1, thus indicating a robust finding.

There are a number of potential mechanisms by which FDI might display a negative effect on economic development in countries with weak governments. For instance, such governments might not be able to exercise sufficient control over the behavior of multinational enterprises, failing to prevent the latter from setting up low-wage, low-value-added manufacturing facilities that do little or nothing to benefit the local economy, while at the same time forcing domestic competitors out of the market. Likewise, weak or corrupt governments might allow foreign

enterprises to exert an influence on domestic economic policy-making, causing the government to make decisions that benefit the activity of foreign-invested firms but are otherwise harmful to the economy.

Table 4 reports the regression coefficients from instrumental variable regressions that seek to account for potential endogeneity problems with regard to FDI. Models 4.1 to 4.4 replicate the regressions reported in Table 1, whereas Models 4.5 to 4.8 correspond to the regressions from Table 3. For the first set of models, the estimated coefficients for FDI are somewhat larger for the instrumental variable estimation, yet their directionality is the same as for ordinary least-squares estimation. A similar situation is observed for the second set of models, where the magnitudes of the FDI coefficient and the interaction term are larger under instrumental variable estimation, while their directionality is the same. In terms of the threshold level at which the net effect of FDI becomes negative, Model 4.5 implies a murder rate of about 43.6, as opposed to the value of 26.5 observed in Model 3.1. Overall, the instrumental variable regressions provide support for the substantive findings obtained using the fixed-effects ordinary least-squares estimator, given that the direction of the effects in question is the same. The differences in effect magnitude, however, suggest that the observed results may be partially affected by endogeneity, which suppresses the advantage of foreign over domestic ownership. Indeed, in the non-IV models, FDI demonstrates its superiority in the lagged models, while IV estimation indicates an advantage even during the first year.

[Insert Table 4 here]

DISCUSSION AND CONCLUSION

The results of our study suggest that foreign direct investment can act as a catalyst for economic development during periods of transition and economic uncertainty. In particular, the findings

lend support to the claim that countries in the postcommunist world that attracted FDI were able to overcome the challenges posed by rapid economic transformation with greater ease.

Results regarding the relative performance of foreign and domestic investment over time indicate that the observed benefits are largely unique to investment originating from abroad, a fact which is likely due to the various spillover effects of foreign direct investment discussed earlier, such as growing linkages with the domestic economy. This finding thus confirms that a relationship observed in other contexts (e.g., De Soysa and Oneal 1999) also holds true in the postcommunist world.

Crucially, the study confirms our hypothesis that the benefits associated with FDI are contingent upon the presence of a relatively well-functioning state. While this finding is generally in line with the work of scholars arguing for the importance of a developmentally active state in promoting economic growth (Weber 1976, 1978; Evans 1985; Wade 1990; Evans and Rauch 1999; Chibber 2002), it illuminates a more specific, previously unobserved dynamic regarding FDI: that the presence of foreign corporations in an economy is only desirable when there is an institutionally capable state. It is therefore critical for countries hoping to rely on foreign investment as an engine of economic development to take simultaneous measures that prevent the erosion of state capacity. In addition to improving the efficacy of FDI, it is likely that such measures would also attract more of it. Since the effects of FDI might actually be negative in very weak states, development policy should arguably be geared toward improving the functioning and capacity of the state, and not toward creating incentives to attract foreign investment. In fact, if a weak state spends to attract foreign investment (e.g., via tax holidays, tariff exemptions, and permissive regulatory environments) it might be doubly counter-productive because the loss of revenue will contribute to a further weakening of the state, and the

resulting FDI might be deleterious. This conclusion seems furthermore plausible because foreign firms that are attracted to low tax rates and a permissive regulatory environment are likely to be exactly the type of foreign capital which a poor country does not need (i.e. focused on low value-added sectors and prone to questionable corporate behavior).

Critics might question our findings by interrogating the validity of murder rates as a measure of state capacity. They could point out that the variable is correlated with other measures of state capacity at only about 0.6. While this correlation might be somewhat weak, it is crucial to keep in mind that existing *subjective* measures of state capacity are particularly poor variables, characterized by large amounts of coder and respondent bias (see the seminal articles by Kurtz and Schrank [2007a; 2007b]). Indeed, a concept like “state capacity” captures the performance of *many* different state institutions, so designing an overall score, based on a small number of subjective survey questionnaires filled in by businessmen and other “experts”, is bound to be an extremely imprecise affair. The resulting variable will inevitably be of questionable validity.

We believe that a measure like murder rates, especially when used in a fixed-effects framework that factors out differences in the social construction of these variables (to the extent that they are constructed similarly within different nation states), has far greater validity than any subjective measure. Conceptually, it undoubtedly fails to capture all areas of state capacity. However, it almost certainly does capture one of the basic functions of the state: its monopoly on legitimate violence in the territory under its control. High murder rates imply that a state is failing at one of its elementary tasks. It also means there is a general environment of lawlessness. Since our theorized mechanism expects opportunistic and illegal behavior by investors in the absence of a rule-enforcing state, a variable that clearly captures the enforcement of laws seems appropriate.

To be completely clear, we are not claiming that murder rates capture everything sociologists mean by the term “state capacity,” but we do think it represents an important aspect of this concept. It is also a useful measure for comparative purposes, because, unlike other indicators of state capacity, it is available across both countries and years for the postcommunist world. Despite its limitations, we therefore think it is reasonable to treat this variable as an imperfect but nonetheless practical measure of state capacity. In general, we believe sociologists should spend more time developing other “objective” measures (meaning not based on subjective surveys of economic elites) of state capacity, or, better yet, objective measures of specific components of state capacity.

Overall, our results corroborate the findings of existing micro-level research that is based on quantitative and qualitative studies at the firm-level. Research in Central Eastern Europe, the region most notable for its maintenance of state capacity during the transition, has shown that foreign-invested firms are considerably more dynamic than their domestically-owned counterparts. An extensive empirical literature confirms this notion.¹⁶ Critics of FDI argue that these micro-level findings are inconclusive, since the macro-level story might differ substantially, and this is undoubtedly a possibility. One could visit foreign-owned firms that are busily capturing large market shares in Western Europe, yet fail to observe the collapse of domestic firms that have lost their contracts to these foreign firms, which prefer to use their own suppliers from abroad.

Our own findings are inconsistent with this critique, and thus corroborate and support the micro-studies. We feel that empirical evidence is increasingly highlighting the virtues of FDI, especially in Central and Eastern Europe where lawful societies and reasonably well-functioning states have emerged. This is not to argue that all the evidence is in, and the debate on FDI is

settled. We hope that this article will open up new avenues of empirical investigation, focusing on interactions between FDI and state and social structure, as well as sector-specific effects of FDI, which have thus far been neglected in empirical studies.

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TABLES

Table 1. Fixed-Effects Panel Regressions of Economic Development on FDI and Control Variables.

Variable	1.1	1.2	1.3	1.4	1.5 [†]	1.6 [§]
FDI inflow	0.0067 (3.77)**	0.0067 (3.73)**	0.0062 (3.61)**	0.0060 (3.50)**	0.0065 (3.63)**	0.0065 (3.74)**
Domestic investment	0.0067 (5.70)**	0.0067 (5.72)**	0.0068 (5.90)**	0.0067 (5.88)**	0.0066 (5.61)**	0.0072 (6.36)**
Political rights	-0.0090 (0.9)	-0.0143 (1.34)	0.0080 (0.8)	0.0013 (0.12)	0.0079 (0.77)	-0.0036 (0.38)
Education	0.0035 (3.01)**	0.0030 (2.47)*	0.0045 (3.90)**	0.0037 (3.10)**	0.0042 (3.53)**	0.0033 (2.97)**
Life expectancy	0.0394 (5.32)**	0.0397 (5.37)**	0.0257 (3.50)**	0.0259 (3.54)**	0.0285 (3.75)**	0.0387 (5.38)**
Foreign trade	-0.0016 (5.03)**	-0.0016 (4.80)**	-0.0016 (4.77)**	-0.0015 (4.45)**	-0.0019 (5.79)**	-0.0014 (4.64)**
Gov. consumption	-0.0015 (0.66)	-0.002 (0.85)	0.0005 (0.22)	-0.0002 (0.10)	0.0003 (0.11)	-0.0011 (0.47)
Agrarian class structure	-0.0474 (8.45)**	-0.0479 (8.54)**	-0.0270 (3.88)**	-0.0267 (3.86)**	-0.0268 (3.86)**	-0.0317 (4.88)**
Military conflict	0.0048 (0.41)	0.0048 (0.41)	0.0114 (0.98)	0.0113 (0.98)	0.0083 (0.7)	0.0098 (0.83)
Mass privatization program	-0.0269 (0.72)	-0.0232 (0.62)	-0.0239 (0.62)	-0.0176 (0.46)	-0.0460 (1.25)	-0.0256 (0.71)
Inflation	<0.0001 (0.21)	<0.0001 (0.03)	<0.0001 (0.89)	<0.0001 (0.52)	<0.0001 (0.59)	<0.0001 (0.24)
Europe Agreement	-	0.0478 (1.37)	-	0.0698 (2.03)*	-	-
Internal liberalization	-	-	-0.0898 (4.83)**	-0.0855 (4.59)**	-	-
External liberalization	-	-	0.0233 (1.28)	0.0193 (1.06)	-	-
Constant	7.8064 (14.30)**	7.8042 (14.32)**	8.0985 (14.36)**	8.0869 (14.42)**	7.8274 (13.49)**	7.1631 (12.86)**
Observations (512)	404	404	335	335	335	388
Number of countries (31)	31	31	25	25	25	30
R-squared	0.71	0.71	0.74	0.75	0.72	0.70

Notes: Absolute value of t statistics (two-sided tests) in parentheses

* p<0.05; ** p<0.01

† Excludes East Asia

§ Excludes China

Table 2. Fixed-Effects Panel Regressions of Economic Development on Lagged FDI and Control Variables.

Variable	2.1	2.2	2.3	2.4 [£]	2.5 [£]
FDI inflow (1-yr lag)	0.0063 (2.99)**	-	-	-	-
Domestic investment (1-yr lag)	0.0046 (4.10)**	-	-	-	-
FDI inflow (2-yr lag)	-	0.0025 (1.07)	-	-	-
Domestic investment (2-yr lag)	-	0.0015 (1.44)	-	-	-
FDI inflow (3-yr lag)	-	-	0.0016 (0.69)	-	-
Domestic investment (3-yr lag)	-	-	0.0002 (0.16)	-	-
FDI inflow (4-yr lag)	-	-	-	0.0063 (2.80)**	-
Domestic investment (4-yr lag)	-	-	-	-0.0005 (0.53)	-
FDI inflow (5-yr lag)	-	-	-	-	0.0103 (5.00)**
Domestic investment (5-yr lag)	-	-	-	-	-0.0006 (0.74)
Political rights	0.0004 (0.04)	0.0088 (0.83)	0.0077 (0.72)	-0.0026 (0.25)	-0.0075 (0.77)
Education	0.0039 (3.36)**	0.0043 (3.88)**	0.0045 (4.11)**	0.0036 (3.46)**	0.0025 (2.55)*
Life expectancy	0.0387 (5.24)**	0.0349 (4.82)**	0.0187 (2.45)*	0.0190 (2.31)*	0.0042 (0.54)
Foreign trade	-0.0020 (5.95)**	-0.0021 (5.78)**	-0.0019 (5.20)**	-0.001 (2.56)*	-0.0001 (0.13)
Gov. consumption	-0.0041 (1.70)	-0.0005 (0.19)	0.0015 (0.60)	-0.0001 (0.05)	0.0004 (0.16)
Agrarian class structure	-0.0457 (8.22)**	-0.0378 (6.75)**	-0.0308 (5.30)**	-0.0218 (3.73)**	-0.0124 (2.13)*
Military conflict	0.0141 (1.19)	0.0054 (0.46)	-0.0163 (1.38)	-0.0228 (1.91)	-0.0282 (2.52)*
Mass privatization program	-0.0572 (1.47)	-0.1156 (2.95)**	-0.1240 (2.78)**	-0.1498 (2.81)**	-0.3605 (4.08)**
Inflation	<0.0001 (0.06)	<0.0001 (0.62)	<0.0001 (0.51)	<0.0001 (2.19)*	-0.0001 (2.94)**
Constant	7.9373 (14.50)**	7.9035 (14.76)**	8.6006 (15.91)**	8.1062 (14.10)**	8.5884 (15.82)**
Observations (512)	396	376	351	323	293
Number of countries (31)	31	31	31	31	31
R-squared	0.71	0.70	0.71	0.76	0.82

Notes: Absolute value of t statistics (two-sided tests) in parentheses

* p<0.05; ** p<0.01

£ Difference between FDI and domestic investment coefficients is statistically significant

Table 3. Fixed-Effects Panel Regressions of Economic Development on FDI, State Capacity, and Control Variables.

Variable	3.1	3.2	3.3	3.4
FDI inflow	0.0087 (2.42)*	0.0082 (2.30)*	0.0090 (2.64)**	0.0087 (2.55)*
Domestic investment	0.0073 (6.24)**	0.0073 (6.26)**	0.0076 (6.80)**	0.0076 (6.78)**
Political rights	0.0176 (1.83)	0.0109 (1.08)	0.0149 (1.64)	0.0107 (1.11)
Education	0.0077 (6.19)**	0.0069 (5.24)**	0.0080 (6.76)**	0.0074 (5.90)**
Foreign trade	-0.0021 (6.48)**	-0.0020 (6.09)**	-0.0016 (5.29)**	-0.0016 (5.06)**
Gov. consumption	-0.0013 (0.56)	-0.0020 (0.86)	-0.0011 (0.49)	-0.0015 (0.69)
Agrarian class structure	-0.0336 (4.39)**	-0.0329 (4.31)**	-0.0344 (4.64)**	-0.0337 (4.54)**
Military conflict	0.0005 (0.04)	0.0008 (0.06)	0.0060 (0.51)	0.0059 (0.50)
Mass privatization program	-0.0541 (1.58)	-0.0500 (1.46)	-0.0347 (0.98)	-0.0312 (0.88)
Inflation	<0.0001 (1.30)	<0.0001 (1.05)	<0.0001 (1.80)	<0.0001 (1.58)
Declining state capacity	0.0006 (0.45)	0.0007 (0.51)	0.0008 (0.61)	0.0008 (0.64)
FDI × declining state capacity	-0.0009 (2.12)*	-0.0009 (2.05)*	-0.0010 (2.36)*	-0.0010 (2.30)*
Europe Agreement	-	0.0676 (2.00)*	-	0.0450 (1.39)
Internal liberalization	-	-	-0.0978 (5.64)**	-0.0950 (5.45)**
External liberalization	-	-	0.0375 (2.19)*	0.0347 (2.02)*
Constant	10.0249 (27.66)**	10.0055 (27.76)**	10.1138 (29.23)**	10.0935 (29.19)**
Observations (512)	308	308	308	308
Number of countries (31)	25	25	25	25
R-squared	0.73	0.73	0.76	0.76

Notes: Absolute value of t statistics (two-sided tests) in parentheses

* p<0.05; ** p<0.01

Table 4. Fixed-Effects Instrumental Variable Regressions of Economic Development on FDI, State Capacity, and Control Variables.

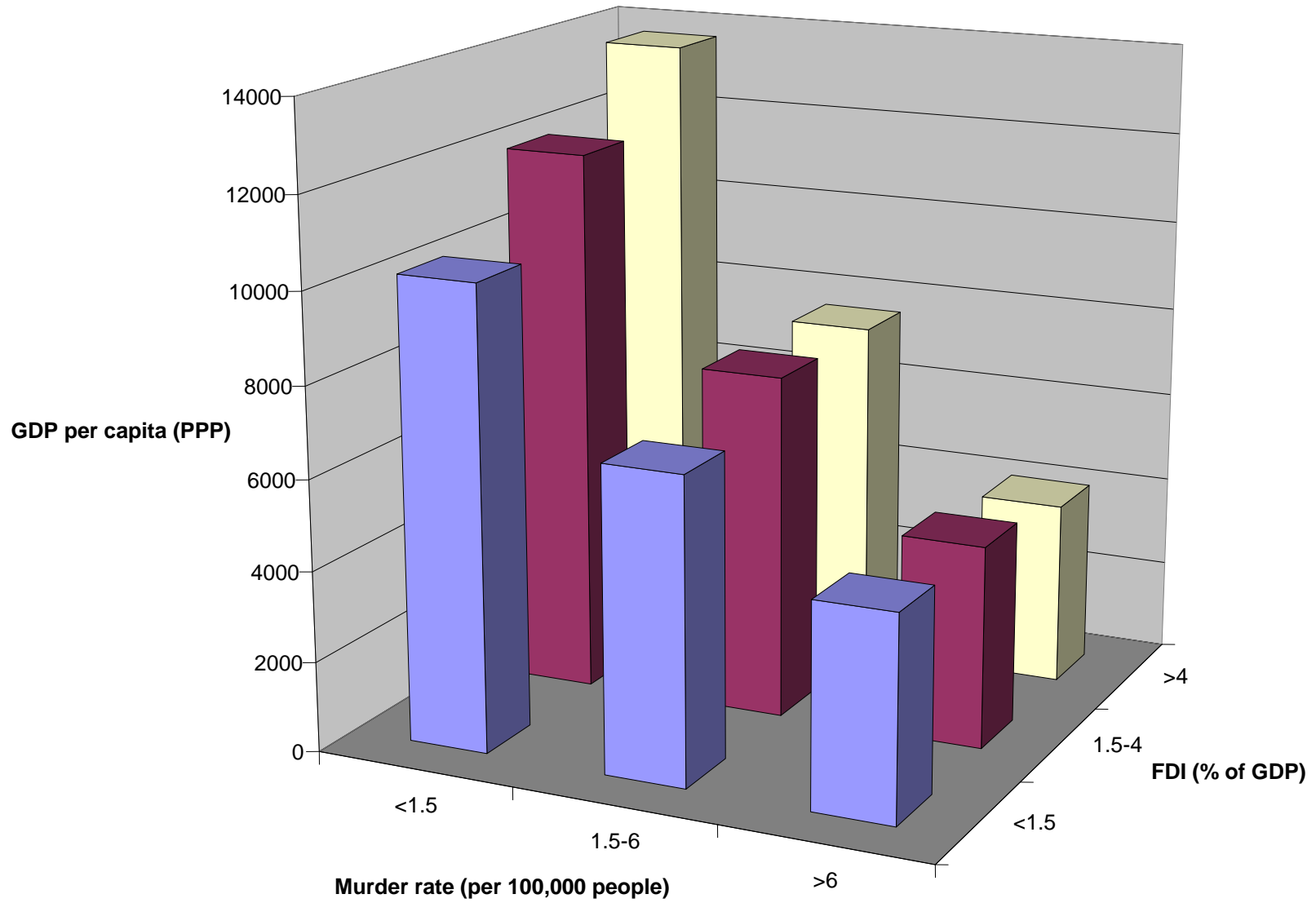
Variable	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8
FDI inflow	0.0446 (2.07)*	0.0507 (1.96)*	0.0923 (2.23)*	0.1112 (2.11)*	0.0784 (2.67)**	0.0880 (2.52)*	0.0968 (2.60)**	0.1111 (2.30)*
Domestic investment	0.0158 (2.81)**	0.0172 (2.58)**	0.0261 (2.60)**	0.0306 (2.18)*	0.0122 (5.19)**	0.0126 (4.88)**	0.0118 (4.39)**	0.0125 (3.96)**
Political rights	-0.0319 (2.32)*	-0.0248 (1.65)	-0.0373 (1.25)	-0.0277 (0.85)	-0.0463 (2.03)*	-0.0449 (1.81)	-0.0561 (1.96)	-0.0569 (1.72)
Education	0.0076 (5.80)**	0.0083 (5.14)**	0.0116 (4.21)**	0.0133 (3.64)**	0.0102 (8.00)**	0.0107 (7.59)**	0.0127 (7.94)**	0.0134 (7.20)**
Life expectancy	0.0272 (1.60)	0.0234 (1.19)	-0.005 (0.17)	-0.0166 (0.42)	-	-	-	-
Foreign trade	-0.0010 (1.62)	-0.0011 (1.57)	-0.0007 (0.60)	-0.0008 (0.54)	-0.0017 (2.68)**	-0.0018 (2.62)**	-0.0012 (1.85)	-0.0013 (1.75)
Gov. consumption	0.0022 (0.43)	0.0033 (0.58)	0.0095 (1.07)	0.0132 (1.16)	-0.0013 (0.35)	-0.0006 (0.14)	-0.0025 (0.57)	-0.0017 (0.35)
Agrarian class structure	-0.0501 (8.00)**	-0.0506 (7.66)**	-0.0225 (1.32)	-0.0248 (1.27)	-0.0142 (1.03)	-0.0143 (0.98)	-0.0175 (1.14)	-0.0178 (1.06)
Military conflict	-0.0036 (0.17)	-0.0026 (0.11)	-0.0081 (0.22)	-0.0086 (0.20)	-0.0036 (0.16)	-0.0030 (0.12)	-0.0092 (0.38)	-0.0082 (0.31)
Mass privatization program	-0.0799 (1.86)	-0.0709 (1.53)	0.0339 (0.35)	0.0552 (0.48)	-0.04 (0.68)	-0.0208 (0.30)	0.0432 (0.51)	0.0647 (0.61)
Inflation	<0.0001 (0.91)	0.0001 (1.04)	0.0001 (1.01)	0.0001 (1.04)	0.0001 (1.54)	0.0001 (1.67)	<0.0001 (1.06)	0.0001 (1.23)
Europe Agreement	-	-0.0718 (1.27)	-	-0.1211 (1.17)	-	-0.0605 (1.13)	-	-0.073 (1.08)
Internal liberalization	-	-	-0.0307 (0.75)	-0.0341 (0.71)	-	-	-0.0820 (2.28)*	-0.0924 (2.20)*
External liberalization	-	-	-0.0865 (1.66)	-0.0888 (1.45)	-	-	-0.0041 (0.16)	0.0057 (0.19)
Declining state capacity	-	-	-	-	0.0088 (1.90)	0.0098 (1.83)	0.0108 (1.81)	0.0124 (1.68)
FDI × declining state capacity	-	-	-	-	-0.0070 (2.60)**	-0.0078 (2.45)*	-0.0086 (2.52)*	-0.0098 (2.24)*
Observations (512)	392	392	323	323	296	296	296	296
Number of countries (32)	31	31	25	25	25	25	25	25

Notes: Absolute value of t statistics (two-sided tests) in parentheses

* p<0.05; ** p<0.01

FIGURES

Figure 1. The Relationship between FDI, Economic Development, and State Capacity.



ENDNOTES

¹ These 31 countries are Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Cambodia, China (PRC), Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyz Republic, Laos, Latvia, Lithuania, Macedonia, Moldova, Mongolia, Poland, Romania, Russia, Slovakia, Slovenia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan, and Vietnam.

² Note that we use the terms dependency theory and world-systems theory interchangeably. Strictly speaking, this representation is inaccurate, as world-systems research attempts to account for a far broader set of social and economic phenomena than dependency theory. Significantly, world-systems scholars claim that economic development is not a process involving relatively autonomous nation states; rather, it must be understood exclusively in light of a global capitalist system and the political and economic forces that operate within it (Wallerstein 1974). With respect to foreign investment and the behavior of multinational corporations, however, dependency theory and world-systems theory reach very similar conclusions, justifying their present treatment as one field of study.

³ Dependency researchers identified a negative coefficient for stock of FDI and inferred a dependency effect. However, as Firebaugh points out, capital stock is the denominator in their investment rate equation; thus, the greater the stock, the lower the investment rate, for a given level of new investment. Firebaugh therefore concludes that a negative coefficient in fact shows a beneficial impact, not a harmful effect.

⁴ For instance, Wade (1990) and Chang (1998) make this argument with regard to the developmental trajectories of Taiwan and Korea, respectively.

⁵ The following discussion draws heavily on work by Halaby (2004) and Wooldridge (2002). For better readability, specific references are not always provided.

⁶ It is important to note that an instrumental variable estimator is less efficient than the corresponding least squares estimator in a model with uncorrelated errors. For this reason, it is advisable to test whether endogeneity is present and IV estimation is necessary. One can specify a Hausman test to this end, testing the hypothesis that the explanatory variable of interest is uncorrelated with the time-varying error term. If all the explanatory variables are exogenous, then the FE-IV and fixed-effects least squares parameter estimates will be similar and both would be consistent. If the two estimation procedures yield substantially different results, the fixed-effects estimator is likely inconsistent due to endogeneity.

⁷ Cross-national quantitative studies are frequently plagued by quality-of-data issues, especially when variables are drawn from multiple different sources. The present analysis makes a strong effort to avoid this pitfall by only employing measures that, in the authors' opinion, derive from reliable sources and accurately operationalize the desired concepts.

⁸ Specifically, we measure GDP per capita in constant/real dollars and on PPP terms, to account for fluctuations in prices over time and in purchasing power across countries, respectively.

⁹ Using annual rates is also statistically inappropriate for the postcommunist context, because the steeper the economic decline of a given country during the early years of the transition (the transformational recession), the higher its subsequent short-run (i.e., annual) growth rates, for the economy starts out at a lower base level.

¹⁰ The data source for gross capital formation is the World Development Indicators Database (World Bank 2005).

¹¹ This choice may seem counterintuitive at first, given that the United States of America, for one, is known for both its strong government and its high murder rate. However, if one were to define a functioning state as one that is not entirely captured by the actors it is supposedly regulating, the United States would score considerably lower on state capacity measures than, say, Western or Northern Europe (Domhoff 2005). In addition, the “extensive” power (Mann 1986) of the state in those areas in the US with very high murder rates, such as inner-cities, is arguable very low.

¹² To the extent that these data are unreliable, they are likely to make our tests a conservative one, as countries with high violent crime and murder rates can be expected to underreport rather than exaggerate these figures.

¹³ In regressions where the response variable is log-transformed, coefficients of the explanatory variables can be interpreted roughly as percentage changes when multiplied by 100; however, for all in-text interpretations, we use the following, more accurate transformation: $100 \times (e^\beta - 1)$.

¹⁴ Note that due to a correlation of -0.72 between the murder rate and life expectancy, the latter variable is excluded from the state capacity regressions in order to avoid potential multicollinearity problems.

¹⁵ Note that the coefficient for the murder rate is negative and statistically significant if the interaction term is omitted (not reported).

¹⁶ For example, King and Váradi (2002) examined 59 firm-level case studies in Hungary for evidence of 18 competing mechanisms linking FDI either to beneficial or detrimental economic outcomes. They concluded that, despite evidence of deleterious effects, these were far outweighed by the positive effects. These case study findings also correspond to firm-level regressions on two large random samples of firms in Hungary, which found that foreign firms outperformed private domestic ones by roughly 100% across a variety of restructuring indicators (King 2000). Similar qualitative and quantitative findings exist for Poland – although here the magnitude of the advantage of foreign ownership was even greater, at about 300% across indicators (King 2002, King and Sznajder 2006).