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Foreign Direct Investment and Institutions

This policy brief is based on a study* that analyzes determinants of net foreign direct investment (FDI) inflows to emerging economies between 1978 and 1995. The study states that FDI inflows are determined less by a country's inherent characteristics than by its laws and policies, and how they are implemented and enforced. Effective policy implementation requires a suitable institutional framework. Foreign direct investment is best increased through a concerted effort by national institutions. These institutions are government, markets, and educational and socioculture systems.

Description of FDI Fitness and the Importance of Institutions

The ability of a country to attract FDI is defined in terms of FDI fitness. FDI fitness is determined by four institutions: government, markets, education, and the socioculture. The ability of these institutions to adapt successfully to the conditions facing them determines their level of institutional fitness. Institutional fitness can be represented as a pyramid, wherein the base is formed by the oldest and most pervasive institution, i.e., the sociocultural system. Because of the remaining institutions' (i.e., markets and governments) widespread requirements for education and human capital, education is the next layer in this pyramid representation.

Markets are the economic and financial indicators of FDI fitness. While education is an indicator of human capital, markets reflect physical and financial capital such as machinery and credit. Finally, government reigns over the other FDI fitness institutions at the top of the pyramid. Investors focus on government as the primary source for actions and policies shaping FDI.

These four institutions interact in a number of ways. Government forces shape markets, education, and socioculture. Market forces affect the government, education, and socioculture. Education affects the available human capital and, consequently, the government, markets, and sociocultural norms.



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The degree to which an institution can be changed and the time required for that change to take effect depends on how much they are influenced by other institutions. Governments can change faster than the deeply rooted, diffused sociocultural system that permeates all aspects of society. Sociocultural change is usually evolutionary, unplanned, and multicausal and cannot be ascribed to an individual group of decision-makers, whereas governmental change may be revolutionary, planned, and attributable to a single cause. Between the two extremes of government and socioculture, lie markets and education. Markets may be distorted or made competitive by government policies within days or years. Changes in the educational system take decades to generate changes in the available human capital.

The Empirical Study

The thesis that the four institutions are important determinants of FDI is tested in an econometric analysis of the performance of 67 emerging economies between 1978 and 1995. The regression analysis tests the FDI fitness theory proposition that institutional variables have a greater impact on levels of foreign direct investment than fixed or inherent variables. The correlation between the dependent variable FDI and the four FDI fitness subconcepts—which embody the explanatory variables for government, markets, education, and socioculture—is measured in a cross-sectional analysis. The regressions are conducted in the form of ordinary least squares (OLS) analysis.

In the model, **government fitness** is measured by the following variables:

- **Economic openness index**—A dummy variable represents an index reflecting exchange rate distortion, socialist policies, government control of markets, and import barriers.

- **Legal and administrative impartiality and transparency**—Variables include risk of government repudiation of contracts (scale of 0-10); risk of expropriation (0-10); corruption in government (0-6); law and order tradition/rule of law (0-6); and bureaucratic quality (0-6).

Market fitness is measured by the following variables:

- **Gross domestic product (GDP) at market prices (US\$) per capita**—GDP per capita tracks economic productivity and development trends.

- **Total population**—Population is a proxy for the size of the domestic market.

- **Urban population (percent of total population)**—Population variables that are more specific than total population and can gauge the capacity of institutions to support a country's population.

- **Population density, rural (people per square kilometer)**—This variable is a proxy for rural infrastructure.

- **Foreign trade (percent of GDP)**—Foreign trade measures the importance of trade to the economy.

- **Tax revenue (percent of GDP)**—Tax revenue measures (actual) taxation of the private sector.

- **Domestic credit provided by banking sector (percent of GDP)**—This variable indicates credit availability and financial intermediation.

- **Commercial energy use (kg of oil equivalent per capita)**—Energy use indicates the development of energy infrastructure.

The following variable measures the explanatory concept of **educational fitness**:

- **Primary school enrollment (percent of gross enrollment)**—Enrollment indicates the level of basic education.

To keep subjectivity of sociocultural measures to a minimum, the explanatory concept **sociocultural fitness** is measured by regional dummy variables as follows:

- **Regional dummy variables**—These dummy variables capture regional socioculture.

- **Time dummy variables as control variables**—Time dummy variables capture period-specific characteristics.

Regression Results

Government fitness. FDI fitness theory assumes that high government fitness will enhance economic, political, legal, and administrative stability; thus reducing investment risk and increasing FDI. As expected, the regression shows economic openness as positively, robustly correlated with foreign direct investment inflows. Similarly, the two variables indicating strong rule of law and low corruption show a high and robust positive correlation with FDI.

Market fitness. High market fitness means that domestic markets for goods, services, and

capital are well developed and linked to one another through a functioning infrastructure. Well-functioning markets are expected to increase FDI inflows. In fact, the regression results suggest that foreign direct investment tolerates a low degree of economic development. They show, however, a positive robust correlation between urbanization and FDI inflows and an expected positive correlation between rural population density and FDI. Similarly, trade as a percentage of GDP was positively and robustly correlated with FDI inflows. Taxes were negatively correlated with FDI. As expected according to the FDI fitness theory, increased financial intermediation and higher per capita energy use both had a positive correlation with FDI inflows.

Educational fitness. The regression results showed that higher education levels had a positive correlation with FDI inflows.

Sociocultural Fitness. The regional dummy variables used to capture sociocultural factors carried the expected signs but were not significant. The result can be interpreted to mean that other variables captured most of the significant factors that determine FDI inflows. Alternatively, the sociocultural effects on FDI inflows may be so diverse and complicated that it is impossible to relate them to specific FDI outcomes, especially if they do not lend themselves to measurement as continuous variables.

Conclusions

The econometric analysis corroborates the FDI fitness model, especially with regard to the model's implications for assigning priorities to policies and their implementation. As predicted by the FDI

fitness theory, generic variables reflecting conditions that are unchangeable over long periods, such as total population and socio-cultural variables, show little significance in the regressions. Variables more explicitly related to institutional development, namely urbanization and rural population density, are positively and robustly correlated with FDI. This result indicates that even though initial, country-specific conditions may play a certain role, they definitely can be overcome with human effort, particularly in the adoption and implementation of better policies.

Policy making and implementation exert a particularly strong influence on FDI. Economic policies that allow free investment and trade are primary determinants of FDI inflows. Economic openness in the form of free markets is vital and means little regulation, particularly no controls on currency exchange or on imports and exports. Trade volume shows a positive, robust correlation with FDI. Robust, too, is the finding that

high taxes—in developing countries, chiefly trade taxes—deter FDI. The results demonstrate that a country can reap substantial FDI rewards by choosing a free trade and investment regime. The positive robust correlation with energy use shows an additional opportunity for governments to increase FDI inflows, namely, through infrastructure development.

Variables related to governing the economic, legal, and administrative spheres prove to be effective at explaining government fitness. Government fitness, particularly strong institutions involved in formulating and implementing sound policies and laws, is pivotal to increasing FDI inflows.

**This policy brief is based on EAGER Discussion Paper Number 9, Foreign Direct Investment and Its Determinants in Emerging Economies, 1998, by Saskia Wilhelms [wilhelms@ms.com] Morgan Stanley, London, UK.*

The views and interpretations in this policy brief are those of the author(s) and not necessarily of the affiliated institutions.

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