

# **Social Development and Foreign Direct Investments in Developing Countries**

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## **Indexing terms**

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## Introduction<sup>1</sup>

The purpose of this study is to analyse if social development – broadly defined – has an effect on the level of investment in developing countries. In the general development debate, economic development as measured by growth in GDP per capita is viewed as an important, but not sufficient, means of achieving improvements in human well-being, reduction in absolute poverty, wider choices and greater opportunities to realise human capabilities, and other development goals. There is also broad agreement that a higher level of investment in a country is conducive to a higher rate of economic growth (other things being equal), though the exact relationship depends on a number of institutional and other factors. A standard development argument therefore runs as follows: Higher investment enables higher economic growth, which in turn may enable the realisation of social development and other development objectives.

However, some studies suggest that the reverse causality may be at work: Important development goals such as broad participation, equitable distribution, open societies with extensive freedoms and accountable governments, may contribute to a higher level of savings and investment, and higher economic growth. The purpose of this report is to study one such potential relationship; whether elements of what is termed social development are positively related to the level of economic investment in developing countries. Previous attempts at providing empirical evidence for the idea that social development promotes economic growth have met with mixed success. In the quite extensive empirical literature on economic growth, variables reflecting social development only occasionally prove significant and robust determinants of growth, as reflected in the literature reviews of Sala-i-Martin (1997), Durlauf and Quah (1999), Temple (1999), and Florax et al (2001). As this report shows, many elements of social development appear to have little or no impact on investment, and some may even have a negative impact, whereas other elements are positively related to investment activity.

The focus of this study is on empirical studies, and in particular on evidence from developing countries in recent years, mostly the 1990s, though comparative experience from earlier periods and from industrialised countries is also of relevance. One could argue that many of the issues discussed are best studied over medium or longer time periods, and that for instance taking a long term perspective on industrialised and semi-industrialised countries – such as Scandinavian development over the last 150 years – would provide some illuminating points. However, as the nature of investment changes over time, in terms of sector composition and other factors, the empirical analysis in this report employs recent data to get consistent and updated results. This strong focus is also necessitated by the resources available for the study.

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The report consists of six sections: The *first* section features a discussion of how to understand social development, and a classification of the various elements of social development that will be considered in the rest of the report. The basic reasons for focussing on foreign direct investment, rather than domestic or overall investment, are also given. The *second* section provides an overview of theories about investment decisions of multinational companies, as a background to our empirical reviews and analyses. The *third* section reviews recent empirical studies that document how various elements of social development have impacted on investment climate and actual investment. The emphasis is on multi-country quantitative studies of stocks and flows of foreign direct investment, that have analysed the effect of social development variables. The *fourth* section presents the findings of a special econometric analysis undertaken for the purpose of this report. This study uses data for 61 developing countries over the period 1989-2000 in order to supplement and update existing studies, and to make a special contribution to the empirical analysis of social development variables and investment. While the analysis generated some very interesting results, the scope of this exercise was nevertheless limited by availability of easily accessible and usable data. Section *five* brings out some special features that affect the relationship between social development and foreign direct investment in Africa, and section *six* sums up the main conclusions and findings.

## **1 Social development – and foreign direct investment**

The concept of social development has been used variably in the development discourse to cover a wide range of issues. The UN Social Summit in Copenhagen 1995 established “a new consensus to place people at the centre of our concerns for sustainable development and pledged to eradicate poverty, promote full and productive employment, and foster social integration to achieve stable, safe and just societies for all”. The follow-up Special Session of the UN General Assembly in 2000 reiterated these commitments, and added a full paragraph of issues to be addressed under the concept of social development (UN 2000). The UN Millennium Conference in 2000 adopted a set of eight Millennium Development Goals that focussed on poverty reduction, basic education, gender equality, reduced mortality and improved health, environmental sustainability, and a global partnership for development. The World Development Report 2000/1 identified “opportunity”, “empowerment” and “security” as key instruments for the eradication of poverty (World Bank 2001), and more recent papers from the Social Development Department of the World Bank view social development as a combination of “empowerment” (giving people voice and choice), “inclusion” (making institutions and policies more inclusive of poor people’s needs and aspiration and more effective in delivering them), and “security” (enhancing social stability and human security).

Many of the above concepts and categories are vague or ambiguous, they encompass a number of elements and are partly overlapping. For the purposes of this report, it was necessary to employ more standard indicators and

proxies, for which studies and data are available. We find it useful to decompose social development into three categories; distributive outcomes, rights and liberties, and security. Below, we discuss what each category contains, and group elements of social development accordingly. In our empirical study (section four), due to time and resource constraints, we had to make do with easily accessible and immediately usable data.

*Distributive outcomes* address the degree to which economic and social progress improves the lives of all members of a society. This includes income distribution and reduction in absolute poverty, as well as access to public services such as education and health care. Other imbalances are also important, such as an unevenness of income or resources across regions, across ethnic groups or between males and females. Inclusion is a key term; does everyone participate in and enjoy the fruits of economic and social progress, or are some socio-economic groups excluded. In our econometric study we use illiteracy rates and a composite index of socio-economic conditions as measures of distributive outcomes. We also consider corruption relevant in this context, as it entails the potential discrimination of the less resourceful, which is the opposite of inclusion.

*Rights and liberties* expand the opportunities for individuals and social entities to pursue their objectives and goals. Human rights include a wide range of political and civil rights, economic and social rights, and cultural rights. Liberties and freedom are also broad concepts that cover civil liberties as well as freedom from hunger and fear, and economic freedoms. Concepts of “empowerment” and “participation” are crucial in this connection. Political rights reflect the degree to which people can seek to influence decisions at various levels in society, and include the right to vote in elections, and the right to organise and to run for public office. Civil liberties are linked to autonomy, and include the right to form and express opinions and preferences, and to act on them without being unduly sanctioned. In section four we make use of the standard indices of political rights and civil liberties. We also use measures of democracy and democratic accountability as proxies for rights and liberties.

Formal rights are important, but rights that are exercised even more so. The degree to which a society actually empowers its members to participate in the making of decisions, is thus a vital dimension to rights and liberties. Empowerment might here refer to different groups, the poor, the landless, workers, women, ethnic and religious minorities and so on. In our econometric analysis, we use an index of religious tensions as a somewhat imperfect proxy for the degree to which democratic rights can be asserted and exercised. Other indices, such as the Gender Empowerment Index of UNDP’s Human Development Reports, may be used to further expand this issue.

*Security* includes the enhancement of social stability and human security. Social stability captures the degree to which people are able to plan ahead and pursue their ends with a minimum of disruptions, whereas human security addresses the integrity of their persons and property. Direct measures of the degree of social stability include government stability, the quality and

independence of the bureaucracy, the role of the military in politics, and the incidence of internal and external conflicts and ethnic tensions. More indirectly, the World Bank (2002) perceives the situation of workers as a determinant of social stability, focusing on such matters as labour standards, job security and social security. As for human security, the incidence of crime and conversely the rule of law can be considered key elements. We include indicators for most of these elements in our empirical analysis.

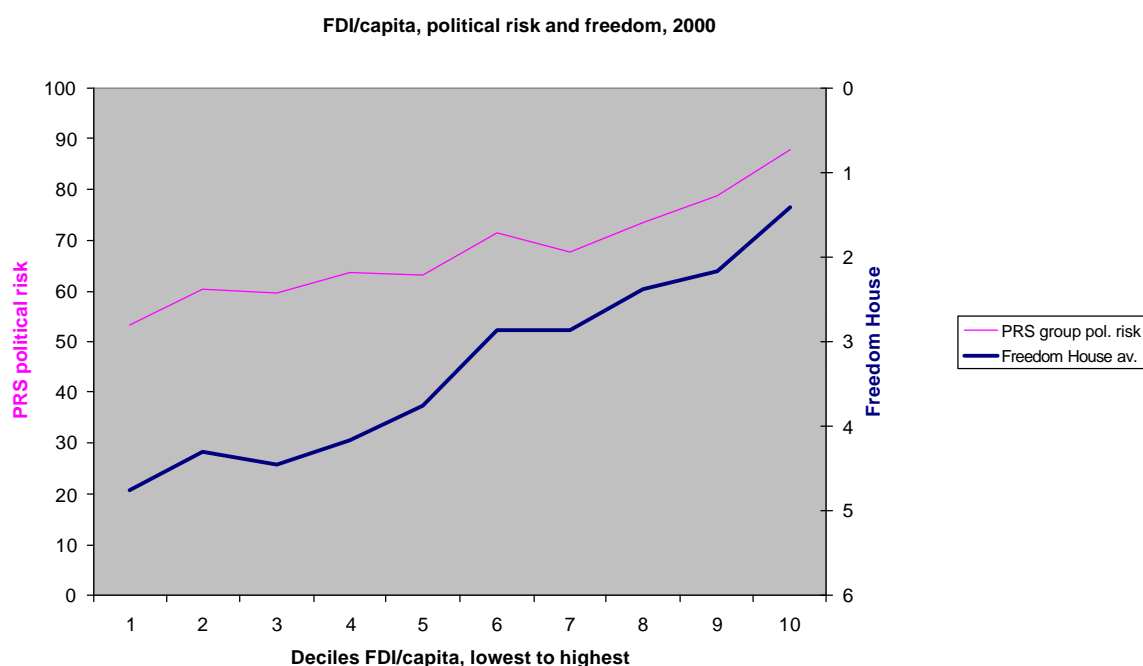
*Investment.* In this report we restrict ourselves to studying the impact of social development on foreign direct investment (FDI), i.e. private industrial investment made by foreign enterprises, rather than total (domestic and foreign) investment. There are several reasons for this choice. One reason is that FDI is believed to contain a bundle of technical, managerial and organisational know-how and to provide access to resources that would otherwise be unavailable to developing countries, thereby potentially contributing to economic development beyond the capital infusion it represents. Though there is an ongoing debate on the actual effect of FDI on developing economies, institutions such as the World Bank have come to regard FDI a crucial engine for growth. Data on FDI is also easily available, while estimates of domestic investment are less reliable and more difficult to access. This implies that factors influencing domestic investment will not be explicitly captured by our study, which is of particular importance for some countries with high levels of internal savings and domestic investment, such as India, China, and Botswana. FDI and domestic investment are presumably positively related in many cases, as factors that make a country attractive for foreign investors, also attract domestic investors. However, domestic and foreign investors do differ in certain characteristics, such as the range of their investment options, and investment of the two types might therefore exhibit important differences.

Global foreign direct investment has increased sharply in recent decades, both in absolute terms and relative to world GDP, fixed capital formation and exports. The greatest flow of foreign direct investment occurs between developed economies. More than four fifths of global FDI outflows originate in developed countries, and more than two thirds of global FDI inflows end up in these countries. The share of developing countries in global inflows has decreased over the last few years to 19 per cent in 2000. More than three quarters of the inflows to developing countries end up in the ten largest recipient countries, mainly in South-East Asia and Latin America. A mere 0.3 per cent of global inflows is received by the 49 least developed countries of the world (UNCTAD, 2001).

Figure 1 illustrates the types of relationships analysed in this report. It displays clearly how foreign direct investment per capita is higher in countries with less political risk and more “freedom”. For the year 2000, data on FDI inflows for some 120 developing and industrialised countries is used to rank countries according to FDI per capita. The countries are then divided into ten equally large groups, from the 10% of countries with the lowest FDI per capita to the 10% of countries with the highest FDI per capita. In the figure, FDI per capita increases from left to right. The upper line captures the average political risk

of each 10% group, as measured by the political risk index of the PRS group, where a higher number signifies less risk (see below for more precise definitions and sources). The line is largely upward sloping, which indicates that less political risk brings more foreign investment. The lower line denotes the average level of freedom of each 10% group, as measured by the average of the political rights and civil liberties indices of Freedom House, where a lower number implies more freedom. This line also for the most part slopes upward, so freedom – as defined by Freedom House – is positively related to investment.

*Figure 1. The relation between some aggregate socio-political indices and FDI per capita*



The positive relation of socio-political issues to FDI seen in figure 1 is suggestive, but hardly conclusive. The socio-political indices used are aggregate, conflating a number of different variables, so the exact relationship between social development and investment is not revealed by the figure. For a deeper understanding of whether and how social development affects investment, we must disentangle social development into its various components. Below, theories of foreign direct investment are explored to identify the potential impact of these components, and their significance for actual investment flows is then tested using rigorous statistical techniques.



## 2 Theories of foreign direct investment: Multinationals invest to access markets and resources, and pay little attention to social issues

Foreign direct investment decisions are made by multinational enterprises. To explain why some locations attract more FDI than others, the key is to understand how multinationals make their investment decisions. Theories of foreign direct investment normally view multinationals as maximizing their expected profits or their expected value, given the actions of their competitors and the government policies of different countries. The main theories thus focus on economic factors, and social development variables are at best of derivative importance.

The “when, where and why” of foreign direct investment have been examined in the much cited contributions of Dunning (1977, 1993). According to *Dunning’s OLI-model* (ownership-location-internalisation), FDI occurs when three conditions are met: First, a multinational enterprise must have some *ownership* advantage through which it is competitive in the market where it seeks to invest. This advantage might be in the form of a unique mode of production or management, patented goods, or brand names/trademarks. Second, there must be some *location* advantage to investing in one place rather than another, for instance in the form of cheap inputs or a large domestic market. Third, there must be some *internalisation* advantage which makes owning a plant in another country better than licensing agreements with a firm based there. This final advantage might be in the form of control over technology or reduced transaction costs.

Dunning also suggests that a multinational enterprise has four possible motives for establishing foreign operations. An enterprise might seek resources abroad, in the form of low wage skilled labour, natural resources, technology and so on. It might be drawn to locations where there is a large and growing domestic or regional market for its products. Expansion could improve the efficiency of its operations, through economies of scale or risk diversification. Or, to get an edge on its competitors, an enterprise might seek to acquire assets or positions of strategic importance.

Most of the determinants of FDI are unrelated to social development in this framework. However, the idea that multinationals are attracted to locations where labour is cheap, suggests that social development in terms of greater equality and stricter labour standards is detrimental to FDI. On the other hand, the productivity or skills of the workforce attract FDI, which suggests that social development in the form of human capital accumulation has a positive effect. The motives for investing abroad presumably vary between industries. We might thus expect industries using unskilled labour, such as in textiles, to build sweatshops where wages are low and regulations minor. Industries requiring skilled workers, such as in electronics, would be drawn to locations where the workforce is educated or well trained. For industries that primarily invest to get access to natural or strategic resources, such as the oil

industry, social development conditions might not matter one way or the other.

The relation between the actual level of FDI and the flow of new FDI, and the importance of expectations, is explored by *macro theories* of FDI. FDI flows reflect the difference between the actual stock and the capital stock foreign investors desire to have in a location, based on current conditions and perceptions. The desired stock – and thus the flow of new FDI or disinvestment – is determined by technology, human capital and general aspects of the business environment such as political stability, liberalisation, privatisation, taxes and corruption. Due to the sunk nature of investment, there also is the possibility of hysteresis, where investment is sticky in the sense that it does not react smoothly to changes in its determinants (Dixit, 1994).

One-off political events can influence investor expectations, according to Stevens (2000): “Political changes are sometimes identified by forward-looking agents as changes in policy *regimes*” (p.155). Signals of political instability, such as devaluations, debt defaults, short-lived governments, thus affect investor perceptions of the probability of future unstable conditions. Political changes thus imply “a shift from one profit function to a completely different one...”, “...implying alterations in the structure of the relevant investment functions” (pp. 155, 158). In other words, the relation between foreign direct investment and its political determinants need not be a nice linear one.

*Economic geography* theories of industrial location suggest that investors tend to flock in certain locations. The presence of some enterprises in a location makes it advantageous for others to locate there as well, for a variety of reasons. One is the Silicon Valley effect, where the presence of highly skilled workers draws companies needing their skills. Another is the presence of suppliers, well-developed infrastructure and service industries which follows in the wake of industrial location. Yet further reasons would be that investors see the investment decisions of others as a signal of good operating conditions in a location, that investors learn from each other how to operate in foreign markets, or that companies match the location choices of their competitors for strategic reasons. If any of these arguments apply, FDI inflows can be expected to have a self-reinforcing effect. The gravitational pull of investment makes it all the more important to implement policies attracting initial investment.

Multinationals care primarily about profit, and social development is important only if it affects “the bottom line”. The above review of factors affecting investment decisions indicate that social development issues are of marginal interest. However, in recent years multinational companies have been under increasing pressure from consumer groups, politicians and activists internationally as well as from the UN and international bodies to act socially responsibly. This may imply avoiding investment in countries that disregards human rights, where conditions for workers or child labour are unacceptable, or companies may feel obliged to improve education and health conditions where they invest. Failing to act socially responsibly may negatively affect a company’s reputation and sales, and thus its long-term profits. The

importance of such a link presumably varies between industries. Companies with a strong brand name that sell their products directly to end-consumers are probably more vulnerable to consumer reactions than more anonymous companies further up the supply chain.

### **3 The empirical evidence: Literacy and school enrolment, labour costs, political stability and corruption matter for FDI**

A number of empirical studies of foreign direct investment have been conducted, but unfortunately only a few of these include variables that pertain to social development. In this section we review the findings from relevant studies where the authors have found significant empirical evidence on how social development factors influence FDI. In reviewing the literature, we should recall that the causes of FDI differ across industries, between countries at different stages of development, and over time as the industrial composition of FDI changes. In order to be consistent, we focus on aggregate econometric studies that use fairly recent data. i.e. data from or at least partly from the 1990s. Since our emphasis is on flows of FDI to developing countries, studies of FDI flows between highly industrialized countries are not given much attention.

The main results from the review are summarised in table 1. This table contains a summary of standard variables found to influence FDI, and their observed effects in a number of recent empirical studies. The studies show broad agreement that FDI is attracted to countries with large domestic markets, open trade regimes, and substantial past inflows of FDI. The impact of growth rates, wages, human capital levels, taxes, infrastructure and macroeconomic conditions is more of a mixed bag. These results by and large reflect similar conclusions in previous reviews, such as Pearce et al (1992), Singh and Jun (1995) and Chakrabarti (2001).

The studies referred to in table 1 are diverse in method and data, and the conflicting results are therefore not surprising. Some do cross-country regressions, such as Lipsey (1999) and Wei (2000), others use panel data approaches, e.g. Cheng and Kwan (2000) and Noorbakhsh et al (2001). Most study general inflows of FDI, whereas Lipsey and Urata and Kawai (2001) study flows from the US and Japan, respectively. Urata and Kawai study flows into a large number of diverse countries, while Lipsey and Noorbakhsh restrict themselves to developing countries, and Cheng and Kwan (2000) and Coughlin and Segev (2000) study FDI inflows into the provinces of China. Finally, the dependent variable varies across studies, some divide FDI by population size and others by GDP to adjust for country size, and some use data on FDI stocks rather than FDI flows.

Table 1: Determinants of FDI, recent results.

DETERMINANT	OBSERVED EFFECT		
	Positive	Negative	Insignificant*
Market size	UNCTAD (1998)	Asiedu (2002)	Singh & Jun (1995)
	Singh & Jun (1995)		
	Lipsey (1999)		
	Cheng & Kwan (2000)		
	Coughlin & Segev (2000)		
	Wei (2000)		
Growth rate	Urata & Kawai (2001)		
	Noorbakhsh et al (2001)		Singh & Jun (1995)
			UNCTAD (1998)
			Lipsey (1999)
Openness			Asiedu (2002)
	Singh & Jun (1995)		
	Noorbakhsh et al (2001)		
Lagged FDI	Asiedu (2002)		
	Singh & Jun (1995)		
	Lipsey (1999)		
	Cheng & Kwan (2000)		
	Noorbakhsh et al (2001)		
Infrastructure	Urata & Kawai (2001)		
	Cheng & Kwan (2000)		Cheng & Kwan (2000)
	Asiedu (2002)		Coughlin & Segev (2000)
Macroeconomic stability			Noorbakhsh et al (2001)
			Urata & Kawai (2001)
			Asiedu (2002)
Exchange rate		Singh & Jun (1995)	Urata & Kawai (2001)
Distance from investing country		Lipsey (1999)	
		Wei (2000)	
Taxes		Wei (2000)	Lipsey (1999)
Promotion policies	Cheng & Kwan (2000)		
	Coughlin & Segev (2000)		
Business climate	Singh & Jun (1995)		
	Urata & Kawai (2001)		
<b>Social development factors:</b>			
Cost of labour	Wei (2000)	Singh & Jun (1995)	Noorbakhsh et al (2001)
		Coughlin & Segev (2000)	
		Cheng & Kwan (2000)	
		Urata & Kawai (2001)	
Human capital	Coughlin & Segev (2000)	Urata & Kawai (2001)	Cheng & Kwan (2000)
	Noorbakhsh et al (2001)		Wei (2000)

\* Significance at 5% level is required

Another reason for the conflicting results reported in the table, is that different studies include different sets of explanatory variables in their analyses.

Arguably, variables that are robust to changes in the set of explanatory variables are better substantiated as determinants of FDI. Chakrabarti (2001) tests the robustness of eight different variables to changes in the total set of variables. Of the eight, the only variable that passed his test of robustness was market size. Of the remaining seven variables, he ranked openness as the most likely to be correlated with FDI, followed by wages, net exports, GDP growth, taxes, tariffs and exchange rates. Unfortunately, variables such as past FDI and human capital are not tested for robustness in this contribution, nor are variables related to social development.

Of the standard variables reported above, only two out of thirteen have a relation to social development; human capital and labour costs. *Human capital* is usually measured by school enrolment ratios or literacy ratios. Of the studies containing this variable, Noorbakhsh et al (2001) is the one focusing most explicitly on the impact of human capital on FDI. Using three different proxies for human capital; secondary school enrolment, accumulated years of secondary school in the working population and accumulated years of secondary and tertiary school in the working population, they find all three significantly positive determinants of FDI. Moreover, the size of the coefficient implies that human capital is one of the most important determinants. Noorbakhsh et al also prove that coefficients are larger and more significant for later periods than for earlier ones, which implies that the importance of human capital increases over time.

Wei (2000) uses literacy ratios and secondary school enrolment as proxies for human capital, but finds none significant, though he does not attempt to explain why this is so. Urata and Kawai (2001) actually find a significantly negative impact of secondary school enrolment on FDI. However, disaggregating the data into developed and developing countries, they find a significantly positive relationship for FDI in developed countries and a significantly negative one for developing countries. This, they argue, reflects the fact that investors are seeking low-wage workers in developing countries, and skilled workers in developed countries.

Coughlin and Segev (2000) use illiteracy rates as a proxy for human capital, finding that FDI is significantly greater in Chinese provinces with higher literacy. Cheng and Kwan (2000), on the other hand, use three different proxies, percentage having primary, junior secondary and senior secondary education, and find none of the three a significant determinant of FDI inflows across Chinese provinces. However, they interpret the results as saying that other factors have dwarfed human capital as a determinant of FDI, rather than saying that human capital is unimportant.

The empirical evidence regarding human capital, school enrolment and literacy is therefore indicative, but inconclusive. Even though one major study (Noorbakhsh et al) does conclude that secondary school enrolment and accumulated years in secondary and tertiary education have a significant positive impact on the level of FDI, others have concluded that schooling is insignificant, and one study even finds a negative relation. One study confirms

that increased levels of literacy have a positive impact on FDI, whereas another study finds it insignificant.

The results on *labour costs* are conflicting. Most studies, such as Singh and Jun (1995), Cheng and Kwan (2000), Coughlin and Segev (2000) and Urata and Kawai (2001) find a significantly negative relation between wages and foreign direct investment. Wei (2000), however, finds a significantly positive relation and Noorbakhsh et al (2001) see no significant relation. These mixed results mirror those of earlier contributions. An explanation of the variation in results is that investors are interested in labour costs per produced unit, rather than per worker. Thus if high wages reflect high skills, investors could be drawn to high wage locations. Coughlin and Segev suggest that labour productivity should be added to properly ascertain the effect of wages, and doing so they find the expected negative relation between wages and FDI. Note that Chakrabarti (2001) does not include productivity in his robustness analysis, which raises the question of whether wages would be a more robust determinant of FDI if adjusted for productivity.

Labour costs are more than wages, they also include costs and compensations imposed by *regulation or industrial relations*. Cooke (1997, 2001) has studied the impact of industrial relations factors on foreign direct investment in highly industrialized countries. He finds FDI to be significantly negatively affected by the degree of unionisation, restrictive layoff regulations and extension of wage agreements to non-union members. On the other hand, he finds decentralised wage bargaining and compulsory work councils to have a positive effect on FDI. These studies might not be directly applicable to developing countries. However, Singh and Jun (1995) find a significantly negative relation between the number of workdays lost, as measured by the International Labour Organization, and FDI for countries with low FDI inflows. This result partly complements the findings of Cooke, by suggesting that countries with more labour unrest are less attractive to international investors.

Going beyond the standard variables, the effect of *political stability* on FDI has been studied from a variety of angles. In several surveys, investors name this as an important decision factor. Singh and Jun (1995) find that the political risk index of BERI, where higher numbers on the index signify less risk, is positively related to FDI. The BERI index is a composite index including many of the elements of social development discussed above, and the result is therefore interesting. Wei (2000) finds a positive relationship between political stability and FDI, but fails to report which index of political stability is used. In the econometric studies performed by UNCTAD (1998), political stability has no significant relation to FDI stocks and inflows.

Some studies use narrower indices of political stability. Asiedu (2002) performs an econometric analysis of net FDI inflows to developing countries, using two different measures of political instability; the number of assassinations and revolutions over a 10-year period, and the risk of expropriation. Neither of the two proves significant.

Tuman and Emmert (1999) get somewhat different results for Japanese FDI into twelve Latin American countries. They find that annual deaths caused by revolutionary movements had a significantly negative impact on FDI. Moreover, the Argentinean defeat in the Falklands war and the subsequent regime shift had a negative impact on FDI inflows. However, two further proxies for political instability, *coups d'état* and attacks against rebel forces in neighbouring countries, proved of little explanatory power.

Stevens (2000) studies US plant and equipment spending in Mexico, Brazil and Argentina over a number of years. For all three countries, various political events had significant impacts on FDI flows. For Mexico, periods of devaluations or restrictions on FDI were important, for Brazil, the 1980s debt crisis and restrictions on FDI mattered, and for Argentina, the debt crisis, restrictions on FDI and short-lived governments were significant. It may be noted, however, that indices of domestic violence or military disturbances in Argentina do not have a significant relation to FDI. And for none of the three countries did the way in which a government came to power matter for FDI inflows.

The majority of the above findings nevertheless conclude that some aspects of political stability have a positive effect on the level of FDI, and no study claims that political stability deters FDI.

*Democratisation* is related to political stability. Nevertheless, a direct link between democracy and FDI has proved hard to substantiate. Noorbakhsh et al (2001) include the democracy index of the Freedom House in their set of explanatory variables, finding no significant relationship, or at best “an inverted U-shaped relationship between FDI and democracy” (p. 1599). Using the components of the democracy index, the index of political rights and the index of civil liberties, did not affect the result. Singh and Jun (1995) also find no significant relationship between the Freedom House political rights index and FDI. This conflicts with the trend observed in figure 1, but more substantial evidence is needed to confirm that the trend is significant. We return to this in our special empirical study (section 4). From previous studies, it appears that political stability has more of an impact on FDI than democracy and freedom.

Finally, *corruption* has a negative impact on foreign direct investment. Wei (2000) uses three different corruption indices, compiled by Business International, International Country Risk Group and Transparency International, and finds all three to be significantly negatively related to FDI. The sizes of the coefficients suggest, according to Wei, that “an increase in the corruption level from that of Singapore to that of Mexico would have the same negative effect on inward FDI as raising the tax rate by fifty percentage points” (p. 1). Wei notes that his data does not allow him to distinguish between different kinds of corruption, preventing him from analysing whether the predictability of corruption, i.e. if you can expect to get what you pay for, has an impact on FDI flows. The results of Campos et al (1999) on aggregate investment, suggests that predictability is indeed important.

Summarising the empirical evidence found in recent studies, it confirms that social development issues play a relatively minor role in influencing levels of FDI, as compared to the major determinants relating to market size, openness of the economy, and level of previous FDI. Relatively few studies pay much attention to social development factors, and most elements of social development are not seen as significant. However, there are results suggesting that improvements in human capital through literacy as well as secondary and tertiary education have a positive impact on FDI. Most studies also show that higher wages have a negative impact on FDI, and so does unionisation, but these factors may be compensated by higher productivity. Finally the studies find that in most cases investors are deterred by political instability and corruption, while the extent of democratisation, political rights and civil liberties have little or no impact.

The studies reviewed here do not, however, provide any direct evidence that FDI flows are determined by the explanatory factors, or whether the causality is the other way; that investment causes improvements in education or political stability. Richards et al (2001) analyse whether a foreign economic presence in terms of foreign direct investment, foreign portfolio investment, foreign debt and aid have an impact on the human rights situation in developing countries. They find FDI to be a significantly positive determinant of political rights and civil liberties, but they also provide no evidence of the causal direction. Further in-depth studies, for instance in the form of individual country case studies, will be required to establish these causal relationships with greater certainty.

#### **4 An econometric analysis of social development and FDI: Rights and liberties, internal conflict and corruption matter for FDI inflows**

To further analyse the impact of social development variables on FDI inflows, we conducted an econometric study based on panel data from 61 developing (low- and middle-income) countries over the period 1989-2000. The purpose of this study is to update and complement existing studies reviewed above, and contribute additional findings to the analysis. We collected data on FDI flows for each of these years, and on 14 different indicators of social development and three control variables. Due to time and resource constraints, we were able to make use of only a set of easily accessible and useable indicators. The analysis might have benefited from including a wider set of relevant indicators, but this was unfortunately not possible. For the indicators and control variables, we have no less than 5 observations for any country, and the average number of observations is 10. Our country sample, which does not include oil exporting countries, is listed in the appendix, as are descriptive statistics for the main variables. As compared to time-series and cross-sectional data sets, panel data sets provide a larger set of observations thereby increasing the number of degrees of freedom as well as reducing collinearity between the explanatory variables. Thus, the use of panel data sets improves the efficiency of econometric estimates.



We use *gross FDI inflows per capita* as the dependent variable, thus adjusting for differences in country size. Based on the above review of previous empirical work, we select two factors as control variables in our regressions; *market size* as measured by GDP per capita, and *openness* as reflected by the ratio of trade (exports + imports) to GDP. This is consistent with the robustness tests of Chakrabarti (2001), where market size and openness prove the most robust determinants of FDI. In initial regressions we also included *annual GDP growth*, which on the whole proved insignificant, and was therefore subsequently omitted. The reason for including control variables is that these factors are clearly important for influencing the level of FDI, and the purpose of our study is to identify social development factors that influence FDI in addition to these standard variables.

We employ 14 different indicators as proxies for various aspects of social development. Three of these fall into the category of distributive outcomes: illiteracy, socio-economic conditions and corruption. For *illiteracy*, we use data from the World Bank, which captures the percentage that is literate of those aged 15 or more. For *socio-economic conditions* we use a composite index from the Political Risk Services group / International Country Risk Guide (PRS-ICRG), which captures a whole range of issues from infant mortality and medical provision to housing, unemployment and interest rates. We also include the *corruption index* of PRS-ICRG, which measures perceived corruption in the political system. A high level of corruption is likely to reduce opportunities for the poor and entrench inequalities.

Four indicators serve as proxies for rights and liberties. As others have done before us, we use both the *political rights* and *civil liberties* indices of Freedom House. The political rights index measures the degree to which citizens can vote and run for office, and whether elected officials have a decisive say in public policy. The civil liberties index assesses the extent to which citizens are free to develop views, form organisations and assert their autonomy from state intervention. The *democratic accountability* index of PRS-ICRG captures the degree to which a country has free and fair elections, but also takes into account whether elected governments are responsive to its electorate while in office. Finally, we use the PRS-ICRG index on *religious tensions*, which measures whether dominant religious groups seek to restrict civil liberties or political rights, and whether secessionist religious groups are present in a country.

The final seven indicators relate primarily to stability and security. These are all obtained from the PRS-ICRG. The index of *bureaucratic stability* measures the strength of the bureaucracy in absorbing external shocks, and its independence from political pressure. The *law and order index* measures the degree to which there is a strong and impartial legal system, and whether laws are generally obeyed. The *ethnic tensions* index captures the degree of strife that can be attributed to racial, national or linguistic divisions, while the *internal conflict* index measures political violence. The index of *external conflict* assesses the level of conflict with other countries, and captures aspects ranging from trade restrictions and embargos to political disputes, armed threats and war. *Government stability* measures the ability of governments to

implement its policies, and its chance to remain in office. Finally, the *military in politics* index captures the risk or reality of a military regime (PRS group, 1998).

Table 2 sums up the variables used in the analysis, their sources and abbreviations. For the PRS-ICRG indices, a higher score implies better conditions, whereas on the Freedom House indices, a lower score implies better conditions.

*Table 2. Variables, abbreviations and sources of data*

VARIABLE	ABBREVIATION	SOURCE
<b>Dependent variable</b>		
Foreign direct investment per capita (logged)	lfdi	UNCTAD
<b>Independent variables</b>		
<b>Control variables</b>		
Gross domestic product per capita (logged)	lgdp	World Bank
Trade (Imports + exports) as % of GDP	Trade	World Bank
<b>Social development indicators</b>		
<i>Distributive outcomes</i>		
Illiteracy	ill	World Bank
Socio-economic conditions	SC	PRS group ICRG
Corruption	C	PRS group ICRG
<i>Rights and liberties</i>		
Political rights	PR	Freedom House
Civil liberties	CL	Freedom House
Democratic accountability	DA	PRS group ICRG
Religious tensions	RP	PRS group ICRG
<i>Security</i>		
Bureaucracy quality	BQ	PRS group ICRG
Ethnic tensions	ET	PRS group ICRG
Law and order	LO	PRS group ICRG
Internal conflict	IC	PRS group ICRG
External conflict	EC	PRS group ICRG
Government stability	GS	PRS group ICRG
Military in politics	MP	PRS group ICRG

The method applied when conducting these regressions, consisted of first running regressions where each social development indicator was added individually to the control variables, and then regressions where several indicators were added collectively to the control variables. Since indicators belonging to the same social development category can be heavily correlated, regressions never included more than one variable from each of the three categories. Tables 3a and 3b present the results from those regressions where all social development variables included prove significant:

Table 3a. Regressions including political rights and civil liberties

Variable	Baseline Model	Model PR1	Model PR2	Model PR3	Model CL1	Model CL2	Model CL3
lgdp	1,29** (0,084)	1,236** (0,084)	1,204** (0,087)	1,193** (0,087)	1,225** (0,083)	1,19** (0,085)	1,182** (0,086)
Trade	0,012** (,002)	0,012** (,002)	0,011** (,002)	0,012** (,002)	0,011** (,002)	0,011** (,002)	0,011** (,002)
time	0,135** (0,011)	0,131** (0,011)	0,116** (0,012)	0,117** (0,012)	0,131** (0,011)	0,116** (0,012)	0,118** (0,012)
PR		-0,093** (0,032)	-0,093** (0,032)	-0,096** (0,032)			
CL					-0,176** (0,043)	-0,177** (0,043)	-0,176** (0,043)
ET				0,124** (0,044)			0,124** (0,044)
IC			0,06** (0,021)			0,06** (0,021)	
C			-0,144** (0,053)	-0,125* (0,052)		-0,14** (0,052)	-0,12* (0,051)
cons	-8,193** (0,586)	-7,457** (0,626)	-7,176** (0,627)	-7,193** (0,62)	-7,02** (0,634)	-6,737** (0,635)	-6,78** (0,63)
$R^2$ within	0,4003	0,4057	0,4225	0,4192	0,4125	0,4297	0,4263
$R^2$ between	0,7984	0,8071	0,7942	0,8027	0,8114	0,7984	0,8055
$R^2$ overall	0,6773	0,6850	0,6805	0,6866	0,6910	0,6865	0,6911
No. observations	625	623	623	623	623	623	623
No. countries	61	61	61	61	61	61	61

\*) significant at 5% level, \*\*) significant at 1% level

Table 3b. Regressions including democratic accountability and religious tensions

Variable	Model DA1	Model DA2	Model DA3	Model RP1	Model RP2	Model RP3
lgdp	1,23** (0,088)	1,189** (0,088)	1,196** (0,088)	1,235** (0,082)	1,196** (0,084)	1,216** (0,084)
Trade	0,012** (0,002)	0,012** (0,002)	0,011** (0,002)	0,012** (0,002)	0,013** (0,002)	0,012** (0,002)
time	0,124** (0,012)	0,111** (0,012)	0,108** (0,012)	0,126** (0,011)	0,113** (0,012)	0,114** (0,012)
DA	0,1* (0,04)	0,104* (0,042)	0,103* (0,042)			
RP				0,16** (0,057)	0,159** (0,058)	0,139* (0,06)
ET		0,121** (0,044)			0,118** (0,044)	
IC			0,061** (0,021)			0,053* (0,022)
C		-0,128* (0,052)	-0,149** (0,053)		-0,116* (0,51)	-0,128* (0,052)

Variable	Model DA1	Model DA2	Model DA3	Model RP1	Model RP2	Model RP3
cons	-8,058** (0,592)	-7,811** (0,574)	-7,76** (0,585)	-8,553** (0,572)	-8,319** (0,564)	-8,265** (0,575)
$R^2_{within}$	0,4068	0,4197	0,4242	0,4006	0,4131	0,4153
$R^2_{between}$	0,7975	0,7946	0,7838	0,8215	0,8167	0,8076
$R^2_{overall}$	0,6780	0,6807	0,6731	0,6974	0,6982	0,6912
No. observations	625	625	625	625	625	625
No. countries	61	61	61	61	61	61

\*) significant at 5% level, \*\*) significant at 1% level

Both control variables; market size and openness, have a significant positive relationship to FDI across regressions featuring different social development indices, and can thus be termed robust determinants of FDI, as shown in tables 3a and 3b. (Variables that are significant and consistent in sign, no matter which other variables are included, are robust determinants of FDI.) This is fully in line with previous studies and confirms that countries with larger markets and countries with open economic policies are more attractive to FDI. A time trend variable, which was included for technical reasons, proves similarly robust.

Our basic econometric model is similar to that of UNCTAD (1998) and Lipsey (1999) in not including FDI in previous years as a control variable. If lagged FDI is included, a number of instruments in the form of other lagged variables must be included to get reliable estimates. This reduces the number of observations, which makes it harder to get significant estimates for most variables. With our limited set of data, this problem comes to the fore, and an in-depth analysis of the self-reinforcing aspects of FDI thus produces few tangible results. The impact of past FDI on current FDI has been satisfactorily established by others, as seen in table 1.

We find that none of the indicators used to measure distributive outcomes are robust determinants of FDI. Illiteracy and socio-economic conditions fail to be significant at the 5% level, both individually and when combined with other social development indices. In other words, our study indicates that improved literacy or improved socio-economic conditions have no discernible impact on FDI. The findings regarding literacy are in line with some previous studies. More surprising, however, is the fact that we did not find any significant correlation between socio-economic conditions and FDI levels. It might be interesting, however, to study closer the impact of various components of this composite index.

Corruption is not a significant factor when added individually to the control variables, but is found to be significant in combination with certain other social development variables. However, the sign of the corruption coefficient is negative, which is puzzling. The corruption index attributes higher numbers to less corrupt countries, and we would thus expect a positive relationship

between the index and FDI. The result, however, is the opposite, which implies that more corrupt countries get more foreign investment. This is contrary to the results of Wei (2000), who uses the same index. One possible explanation could be that countries that attract FDI have more predictable corruption (see Campos et al, 1999). Another is that FDI is positively related to corruption in certain industries, such as construction, and negative or insignificant elsewhere. It is important to note, however, that the result is not very robust.

We find that rights and liberties are very robust determinants of FDI. The indicators on political rights and civil liberties are significant at the 1% level both individually and in any combination with other variables. The sign of the coefficients is negative as expected, implying that countries with a more expansive set of political rights and civil liberties attract more FDI. The other two indicators in this category, democratic accountability and religious tensions, were both significant at no less than the 5% level, individually and combined with other variables. The sign attributed to these variables is positive, which implies that countries whose governments are responsive to the population, and where there is little religious strife, attract more FDI. These findings are very interesting, since previous studies have not arrived at these clear conclusions.

Ethnic tensions and internal conflicts prove the most robust among the variables relating to security. The ethnic tensions index is significant at the 1% level when added individually to the control variables, and significant at least at the 5% level in 15 of 19 regressions where it is combined with other variables. Internal conflict was similarly found individually significant at the 1% level, and significant at least at the 5% level in 11 of 19 regressions featuring other variables. Of the other security indices, law and order proved individually insignificant, and significant at the 5% level only in two cases where other variables were included. The other four variables, bureaucratic quality, external conflict, government stability and military in politics, are insignificant individually and in all combinations.

These findings show that FDI investors are concerned about and deterred by ethnic tensions and internal conflicts in a country. However, they seem to pay less attention to external conflict, the law and order situation, and military dominance in politics. We also find that government stability does not influence the level of FDI, which seems contrary to some previous findings about the importance of political stability. Likewise, this analysis indicates that bureaucratic quality does not matter, while we have previously seen that the extent of corruption can be important for investors.

The robustness of political rights and civil liberties is noteworthy, since previous studies using the same indices have found them insignificant, see Singh and Jun (1995) and Noorbakhsh (2001). Most of the factors we have found to matter for FDI inflows are in some way related to the degree to which countries are internally volatile, in terms of suppression and conflict between various groups. It might be that the factors we find significant have a stronger association with investors' sense of risk compared to other factors,

and our findings can be summed up by the idea that political risk deters foreign investment. In particular, rights, liberties and democratic accountability might shape investors' perception of the long term stability of a society.

In terms of economic impact, our results show that improvements in the social development variables we have found statistically significant, can have marked effects on FDI inflows as compared to for instance increases in openness. A comparison of coefficients reveals that raising a country one category on the political risk and civil liberties indices, or on the indices of democratic accountability and religious tensions (all of which have 6 categories), is comparable to increasing openness by 8-16 percentage points. Similarly, one category up on the ethnic tensions index is comparable to an increase in openness of 10 percentage points, while one category up on the internal conflict index is comparable to a 5 percentage point increase in openness, but note that the latter index has 12 categories where the former has only 6. On our corruption index (which has 6 categories), a one category improvement is comparable to, roughly, a 10 percentage point increase in openness.

On the other hand, we find that illiteracy, socio-economic conditions, law and order, bureaucracy quality, external conflict, government stability and military in politics, are all insignificant for FDI inflows. The result on illiteracy is not too surprising, given the mixed results on human capital measures that have been found in other studies. The index of socio-economic conditions captures a range of aspects, and each aspect is also weighted differently for different countries, making cross-country comparisons difficult. Law and order and bureaucracy quality we find to be largely insignificant, yet this result must be qualified by the fact that both these indices are quite strongly correlated with the control variable GDP. If these variables influence or are influenced by the level of economic activity GDP, it is less likely that we find a significant relation to FDI. The result that government stability is insignificant for FDI clashes with the results of Tuman and Emmert (1999) and Stevens (2000) on Latin American FDI, yet might reflect the fact that we use other indices and a larger set of countries. The unimportance of external conflict and military in politics, confirms the results of Stevens on Argentinean FDI, but goes against the results of Tuman and Emmert.

Our results do of course depend on the econometric specification we have chosen. Additional analyses show that had we used FDI/GDP as our dependent variable, instead of FDI per capita, fewer of the social development variables prove significant. That we get different results from such a re-specification is to be expected, since the ranking of countries according to FDI inflows is significantly different when GDP is used to control for country size rather than population.

If more control variables were included, we would probably see a similar effect, fewer variables would emerge as significant for FDI flows. However, to fully address the issue of robustness requires analysis beyond the confines of this study.

The results we get also depend on our data, particularly the fact that we use aggregate data on FDI flows. As noted earlier, this means that we are conflating some important issues, in particular whether the investment decisions of different industries are driven by different variables. Additional analyses performed on a sample of oil exporting countries only, do indeed suggest that investment in the oil industry is driven by considerations different from those of other industries.

Finally, though our results indicate a relationship between some social development variables and FDI, the results in and of themselves do not imply that the causal direction is from the former to the latter. Additional tests would have to be performed to determine causality. As econometric causality tests leave something to be desired, a different methodological approach might be needed to satisfactorily address this issue. Theoretical arguments and anecdotal evidence suggest that the direction of causality is perhaps more easily established for variables such as internal conflict, where investment appears to follow as conflict subsides, than for variables such as political rights and civil liberties. Further theoretical and empirical examination is needed to conclude anything about causation for the latter variables.

## **5 The African experience: Being at the periphery of FDI flows**

The aggregate empirical studies obscure the fact that some countries or regions do better than average in attracting FDI, and some do worse. As an example of the latter, African economies have had comparatively little success in attracting foreign direct investment. In recent years, Africa's share of global FDI inflows has declined to 0.7 per cent in 2000. The share flowing to Sub-Saharan Africa representing approximately 10 per cent of world population, is a mere 0.5 per cent, with South Africa and oil-exporters Angola and Nigeria receiving more than half of this share. As illustrated by these numbers, most African countries are at the periphery of global FDI flows.

A number of studies indicate that being a country located on the African continent in itself deters foreign investment. Jaspersen et al (2000) and Asiedu (2002) find that "being an African country" is a significantly negative determinant of FDI. Based on her results, Asiedu suggests that "the average FDI/GDP [ratio] for a country in Sub-Saharan Africa is about 1.3% less than that of a comparable country outside the region" (p. 113). Being an African country is thus bad for investment, which Asiedu attributes to a perception among investors of Africa as inherently risky. This idea is supported by the findings of Haque et al (2000), that commercial risk rating agencies rate African countries as riskier than justified by their fundamental investment conditions.

The bad reputation of African countries is only part of the explanation. If an undeservedly bad name were the only aspect distinguishing African countries from other developing countries, rational investors would perceive a chance of greater rewards for less actual risk by investing in African economies, which

would eventually correct the imbalance. To explain a persistent and deepening African investment drought, we need a more permanent cause.

The self-reinforcing features of FDI flows, where large past inflows encourage current inflows, are one such cause. A number of empirical studies confirm that there is a link between FDI in one period and the next (see table 1), or that countries that attract above average FDI inflows in one period continue to do so in the next period (UNCTAD, 1998 and Lipsey, 1999). There is also evidence that FDI in one location may spill over into neighbouring locations. Coughlin and Segev (2000) find that the level of FDI in Chinese provinces is significantly related to FDI in neighbouring provinces. In other words, FDI in one location attracts more FDI to that location, but also to locations nearby. Finally, physical distance from investor home countries deters FDI (see table 1). And some studies also find that cultural distance deters investment; Wei (2000) sees significantly stronger flows between countries that share a common language.

The implication of this is that a country with large past FDI inflows, that is a neighbour to countries with large past FDI inflows, or that is close in physical or cultural distance to the major investors, attracts more investment. The flip side is that a country that does not have a history of FDI inflows, that has no neighbours with such a history, and that is physically and culturally distant from the major economies, is at a distinct disadvantage in attracting FDI. And the disadvantage is further entrenched as more FDI flows to the more attractive regions. By being at the periphery of global FDI flows, African countries certainly seem to fit this pattern. This suggests that foreign investors do not locate production in Africa because there is a weak history of industrial location in Africa, as much as because Africa has a bad name among investors.

In discussing the means to make African economies more attractive for foreign investors, some suggest that Africa is different, and that the measures taken to attract FDI to other regions might therefore not work in Africa. Asiedu (2002) finds that factors that have a significant influence on FDI in developing countries as a whole, such as infrastructure and returns to capital, have no significant impact on FDI in Africa. And factors that are significant both across developing countries and for African countries, such as openness, have less of an impact on FDI in Africa than in other regions. Based on these findings, Asiedu suggests that “policies that have been successful in other regions should not be blindly repeated in Africa, since these policies may have a differential impact on Africa”.

On the issue of whether Africa is different, an important distinction must be made between the effect of policies and their effectiveness. There is no basic reason to believe that foreign investment in Africa is governed by entirely different principles than investment elsewhere. The investors are the same across regions, and can be expected to look for the same things when assessing the profitability of investing in African economies as in other economies. Policies would therefore not have an opposite effect in Africa as compared to elsewhere. The fact that a variable such as infrastructure is insignificant for

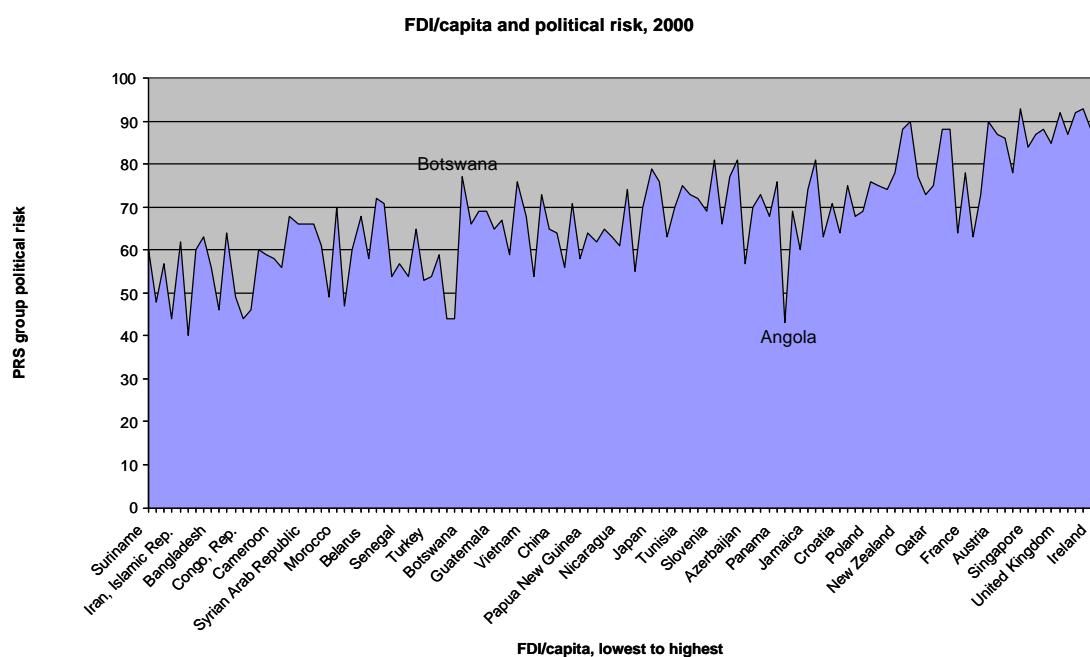


African countries, does not mean that improved infrastructure would hurt FDI to Africa.

There is, however, reason to believe that the effectiveness of policies might be different in African economies. Africa has a weak base of previous FDI investment, which implies that African economies must be more attractive than other economies to get as much FDI. African FDI inflows might therefore react more weakly to improvements to the basic investment climate than would FDI in other regions, but the direction of the impact would still be the same as elsewhere. The results of Asiedu (2002) on openness, which state that FDI in Africa is less responsive to changes in openness than FDI elsewhere, underscore this point.

In assessing the impact of social and political development on foreign direct investment in Africa, a striking pattern is revealed. In figure 2 we have ranked some 120 countries, including oil exporters, individually from those receiving the least FDI per capita in the year 2000 to those having the most, left to right on the horizontal axis. On the vertical axis we measure the score of each country on the composite political risk index of the PRS group, where a higher number implies less political risk.

Figure 2. Political risk and foreign direct investment.



As the figure reveals, there is a definite upward-sloping trend, where countries that are less risky attract more FDI per capita. However, the countries furthest from the average trend are notable. Among the countries that have a low level of political risk, but receive little FDI, we have quite a few African countries, exemplified in the figure by Botswana. The countries that have a high level of political risk, but that still attract heavy FDI inflows, are more often than not

countries rich in oil or other natural resources, Angola being a conspicuous case. If we substitute the political rights and civil liberties indices of Freedom House for the political risk index in the above figure, we get a similar picture.

Our findings regarding a positive relationship between certain aspects of social development and foreign direct investment are thus not immediately confirmed for the African economies. However, we ran an additional econometric analysis of 20 non oil exporting Sub Saharan African countries, and found some of the same variables significant as in our general sample. In particular, internal conflict and ethnic tensions emerge as significant deterrents of FDI to African economies. Other social development variables, such as rights and liberties, are insignificant, which might be due to the reduced number of observations compared to the original sample. We thus do not conclude that rights and liberties are unimportant, but the observed importance of internal strife suggests that these variables have more of a decisive impact on African FDI inflows.

## 6 Conclusions

This study has reviewed recent literature and presented the findings of an econometric study of the relationship between components of social development and foreign direct investment in developing countries. Foreign direct investment is moved by economic considerations and is primarily attracted by large markets, open economic regimes, access to natural resources and other competitive advantages. FDI tends to flow to countries where there is already a substantial volume of FDI, investors give priority to countries in geographic vicinity, and show a preference for countries with cultural or linguistic linkages to the home country. The findings of this study confirm the theoretical presupposition that social development issues play a relatively marginal role in influencing investment climates and investment decisions.

We found it useful to decompose social development into three categories; distributive outcomes including 'inclusion'; rights and liberties including participation and 'empowerment'; and security including social stability and human security. Indicators of social development were grouped according to these categories. We found that various indicators have different relationships to FDI flows; some have a positive relation, others may have a negative relation, and some elements were found to have no significant relation to the level of FDI.

The most robust social development indicators with a positive relation to FDI, are those pertaining to long term political stability and reduced internal conflict and ethnic tensions. While previous studies have found no clear relation between political rights, civil liberties and democratisation on the one hand and FDI, our econometric study clearly shows a positive relationship. Our results on conflicts also complement and expand on similar results from previous studies, adding to our understanding of what kinds of conflicts matter for foreign investors.

Corruption, which may include grand corruption as well as petty corruption affecting social development, has a negative effect on FDI according to previous studies. Our study nevertheless produced the opposite effect; that more FDI goes to countries with a higher level of corruption. This result should however be interpreted with caution, as it is not very robust. In addition, the result might be due to the fact that the corruption index used does not capture the predictability of corruption, and to the fact that we have used aggregate data as opposed to industry data when estimating the relationship.

Where some previous studies see a positive effect on FDI of literacy and school enrolment, our study finds no significant relationship between literacy and investment. Most previous studies find a negative relationship between wage levels and FDI, a determinant not tested in our empirical study. To the extent that wage levels capture the standard of living of a population, it might be partially similar to our index of socio-economic conditions, which we find to be insignificant. Many other indicators of social development have no discernible impact on the investment climate and levels of FDI, according to available evidence.

Our survey of the literature on FDI reveals that there are few solid and comprehensive studies in recent years that have analysed the issues in this report. In addition, existing studies do not seem to have tested the effects of health indicators, income distribution and equity considerations, or gender relations. There is thus a need for further, more detailed, studies in order to shed more light on possible links between social development variables and FDI.

Future studies should also pursue the idea that companies in different sectors have different motives for investment in developing countries. Companies in more advanced industries such as electronics and ICT require better educated employees and different environments, than companies investing in extractive industries or footloose labour intensive industries. Another idea to pursue is whether company attitudes are changing due to the increased emphasis on corporate social responsibilities, and that they are becoming increasingly more influenced by social development factors.

This study has nevertheless revealed that the relationship between foreign direct investment and social development is complex, and sometimes weak or contradictory. We do not offer a sweeping conclusion about the causality of the social development – investment relationship. The standard development argument that investment enables growth, which in turn enables social improvement, might be a valid one. Nevertheless, most likely there are mutually reinforcing forces at work, where economic development promotes social development, which in turn lays the foundations for further investment and economic expansion, through improved governance, participation and stability.

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## Appendix

The countries included in the sample satisfy three conditions. Firstly, they are labeled developing countries in the Global Development Network Growth Database<sup>2</sup>. Secondly, there has to be at least 5 observations of each variable of interest for the period 1989-2000, and thirdly they should not be exporters of oil. A total of 61 countries satisfy these conditions: Albania, Argentina, Bahrain, Bangladesh, Bolivia, Botswana, Brazil, Bulgaria, Burkina Faso, Chile, Congo, DR, Costa Rica, Cote d'Ivoire, Czech Republic, Dominican Republic, El Salvador, Gambia, Ghana, Guatemala, Guinea, Guyana, Haiti, Honduras, Hungary, India, Jamaica, Jordan, Kenya, Korea, Rep., Lebanon, Madagascar, Malawi, Mali, Mongolia, Morocco, Mozambique, Namibia, Nicaragua, Niger, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Romania, Senegal, Sierra Leone, Slovak Republic, South Africa, Sri Lanka, Tanzania, Thailand, Togo, Tunisia, Turkey, Uganda, Uruguay, Zambia and Zimbabwe.

*Table A1. A description of all variables included in the analysis*

Variable	Observations	Mean	Std. Dev.	Min.	Max.
Fdi	701	47.992	156.896	-206.536	3419.032
gdp	713	1689.096	1948.128	115.861	11421.78
lfdi	656	2.397	2.021	-4.722	8.137
lgdp	713	6.851	1.100	4.752	9.343
Trade	693	68.345	36.828	5.207	282.402
ill	682	29.195	22.796	0.3	89.1
SC	722	5.137	1.641	0	11
C	722	3.054	1.088	0	5
PR	720	3.704	1.847	1	7
CL	720	3.871	1.313	1	7
DA	722	3.360	1.323	0	6
RP	722	4.609	1.187	1	6
BQ	722	1.761	1.023	0	4
ET	722	3.834	1.452	0	6
LO	722	3.284	1.291	0	6
IC	722	8.223	2.766	0	12
EC	722	9.733	2.342	0	12
GS	722	6.814	2.399	1	11
MP	721	3.436	1.676	0	6

<sup>2</sup> <http://www.worldbank.org/research/growth/GDNdata.htm>. Developing countries are defined as low-income and middle-income economies.

Table A2. Pair-wise correlation between the variables

	lfdi	lgdp	Trade	ill	SC	C	PR	CL	
lfdi	1.0000 (656)								
lgdp	0.7467** (650)	1.0000 (713)							
Trade	0.3676** (627)	0.1756** (688)	1.0000 (693)						
ill	-0.5763** (622)	-0.6974** (673)	-0.2141** (656)	1.0000 (682)					
SC	0.3263** (656)	0.3602** (713)	0.1143** (693)	-0.1559** (682)	1.0000 (722)				
C	0.2827** (656)	0.3085** (713)	0.1126** (693)	-0.2539** (682)	0.2259** (722)	1.0000 (722)			
PR	-0.4472** (654)	-0.4417** (711)	-0.0863* (691)	0.3864** (682)	-0.1652** (720)	-0.3214** (720)	1.0000 (720)		
CL	-0.5180** (654)	-0.4831** (711)	-0.1730** (691)	0.4103** (682)	-0.2200** (720)	-0.3053** (720)	0.8534** (720)	1.0000 (720)	
DA	0.4292** (656)	0.4229** (713)	0.1401** (693)	-0.3675** (682)	0.1299** (722)	0.3941** (722)	-0.6022** (720)	-0.5304** (720)	
RP	0.3633** (656)	0.2327** (713)	0.0872* (693)	-0.3492** (682)	0.1977** (722)	0.2302** (722)	-0.2233** (720)	-0.2616** (720)	
BQ	0.3711** (656)	0.4828** (713)	0.1935** (693)	-0.2574** (682)	0.3553** (722)	0.4752** (722)	-0.2766** (720)	-0.2632** (720)	
ET	0.5133** (656)	0.4749** (713)	0.0946* (693)	-0.3338** (682)	0.2098** (722)	0.3227** (722)	-0.3803** (720)	-0.4452** (720)	
LO	0.4879** (656)	0.4352** (713)	0.2512** (693)	-0.3124** (682)	0.2861** (722)	0.4920** (722)	-0.2562** (720)	-0.2885** (720)	
IC	0.4679** (656)	0.4120** (713)	0.2555** (693)	-0.2839** (682)	0.3105** (722)	0.4017** (722)	-0.3500** (720)	-0.3670** (720)	
EC	0.3514** (656)	0.3116** (713)	0.0872* (693)	-0.2523** (682)	0.1575** (722)	0.2915** (722)	-0.3772** (720)	-0.3218** (720)	
GS	0.3733** (656)	0.2408** (713)	0.1378** (693)	-0.1637** (682)	0.0734* (722)	0.1484** (722)	-0.1850** (720)	-0.1994** (720)	
MP	0.4305** (655)	0.4660** (712)	0.3870** (692)	-0.4299** (681)	0.2713** (721)	0.4730** (721)	-0.4393** (719)	-0.4356** (719)	
	DA	RP	BQ	ET	LO	IC	EC	GS	MP
DA	1.0000 (722)								
RP	0.1868** (722)	1.0000 (722)							
BQ	0.4534** (722)	0.1098** (722)	1.0000 (722)						
ET	0.3221** (722)	0.3212** (722)	0.1917** (722)	1.0000 (722)					
LO	0.4022** (722)	0.2681** (722)	0.4941** (722)	0.5670** (722)	1.0000 (722)				
IC	0.4188** (722)	0.3396** (722)	0.4075** (722)	0.6244** (722)	0.7209** (722)	1.0000 (722)			
EC	0.3766** (722)	0.3620** (722)	0.2415** (722)	0.4367** (722)	0.4427** (722)	0.5676** (722)	1.0000 (722)		
GS	0.2854** (722)	0.1562** (722)	0.2423** (722)	0.3371** (722)	0.4349** (722)	0.4132** (722)	0.2861** (722)	1.0000 (722)	
MP	0.5311** (721)	0.3284** (721)	0.4966** (721)	0.3830** (721)	0.5140** (721)	0.5965** (721)	0.3940** (721)	0.2015** (721)	1.0000 (721)

\* indicates significance at the 5 percent level, \*\* indicates significance at the 1 percent level.  
The number of observations upon which the coefficient is estimated is in parenthesis.



# Summary

This study analyses the link between social development and foreign direct investment (FDI) in developing countries. Previous empirical studies conflict in their view of the impact of wage levels and human capital on FDI, whereas some aspects of political stability appear to attract investment, and corruption deters FDI. In this study, we use panel data from 61 developing countries for the period 1989-2000, and estimate the relationship between disaggregate socio-political indices and FDI. The most robust variables influencing FDI prove to be political rights, civil liberties, democratic accountability, religious and ethnic tensions and internal conflict. Interpreting the results, the social development variables that matter for FDI flows seem to be those most closely associated with investors' perception of long term stability, whereas other social development variables have limited impact on overall FDI.

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