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Population Health  
and Foreign Direct  
Investment: Does Poor  
Health Signal Poor  
Government Effectiveness?

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**Population Health  
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Does Poor Health Signal Poor  
Government Effectiveness?**

**Ajay Tandon**

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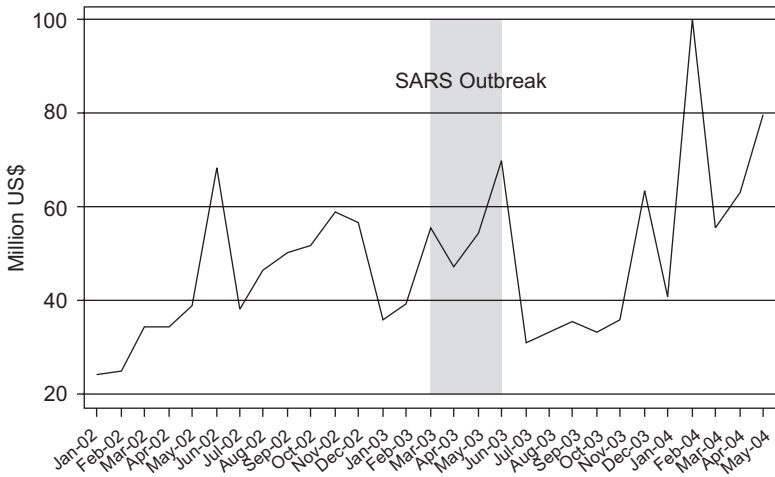
The outbreak of severe acute respiratory syndrome (SARS) in 2003 in Asia brought into sharp focus the linkages between health and the macroeconomy. The economic impact of SARS was largely driven by fear and uncertainty, resulting in sharp declines in tourism and consumer confidence. Foreign direct investment (FDI) in SARS-affected countries such as People's Republic of China (PRC) saw a significant decline in the immediate aftermath of the outbreak. The decline in FDI, however, did not last very long: the numbers rebounded after a lag period (Figure 1). Nevertheless, the SARS outbreak has brought to surface the following question: if episodic health “shocks” such as SARS can put a brake on FDI and trigger capital flight, what might be the consequences of high levels of prevalence of more endemic communicable diseases for international investment?<sup>1</sup> From the perspective of FDI, a health shock such as SARS is likely to have economic effects akin to those seen after a political shock such as a revolution or an assassination. This is quite different from the effects of widespread endemic prevalence of other communicable diseases such as HIV/AIDS, malaria, and tuberculosis (TB). The latter signify low levels of human capital, lower labor productivity, higher absenteeism, and likely higher costs of operations due to health-related expenditures. More generally, widespread disease prevalence contributes to the perception of operational risk in the investment climate of a country. And, as is argued in this policy brief, poor levels of population health can deter FDI because they can act as potent signals of institutional weaknesses and, more broadly, of lower levels of government effectiveness.

The remainder of the brief is organized as follows. The next two sections review the theory behind the general determinants of FDI and the specific link to population health levels. The focus is on FDI rather than on international capital inflows more generally because the former represents a longer-term—and potentially irreversible—commitment on the part of international investors, and hence are more likely to be influenced by population health related issues. Following that, some recent empirical evidence on the link between health and FDI is summarized. The final section concludes.

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<sup>1</sup> This issue has recently been addressed by Alsan et al. (2004).

Figure 1. Time Trend of FDI Inflows to the PRC, Jan 2002-Jun 2004



Source: China Monthly Statistics (CSICC various years).

## Population Health as a Determinant of FDI

There are numerous theoretical arguments that underscore the positive effects of FDI for economic growth and, therefore, for poverty reduction. First and foremost, FDI can provide resource- and savings-poor economies with much-needed injections of capital. Unlike other forms of international capital, FDI inflows are less likely to be volatile and destabilizing to the host economy. Foreign direct investment is a relatively efficient mechanism for technology transfer to developing countries, having the potential to boost knowledge “spillovers” and long-term productivity. In addition, FDI can have a positive stimulatory effect on domestic firms, enhancing their international competitiveness (Ram and Zhang 2002).

Given this backdrop, there has been extensive research on the determinants of FDI, especially in terms of identifying enabling characteristics of successful host countries. The theoretical basis for FDI flows into developing countries is often considered to be based on two broad motivating factors: (i) the desire by firms to increase market size for their products (often referred to as *horizontal* FDI); and (ii) the need to exploit cost advantages in the supply chain by seeking out lower factor-price locales or other such advantages (*vertical*

FDI) (Shatz and Venables 2000). In addition to these, several other characteristics of host countries such as infrastructure, openness, political and macroeconomic stability, governance, and human capital are deemed to be conducive to FDI inflows.

The health of the workforce in the host country is one factor determining returns to investment.<sup>2</sup> The higher the productivity of workers, the more conducive is the climate for investment in general, and FDI in particular. In addition to productivity effects, there are several other general arguments put forth for expecting a positive link between FDI and health. Foreign direct investment may be deterred due to risks related to high morbidity (and mortality) in employees. Poor health levels add to operational burdens and risks in the form of uncertainty related to health expenditure and insurance costs, health-related absenteeism, and costs related to employee turnover.

A more general argument can be put forth relating FDI and population health. Given information asymmetries, foreign firms are likely to view poor population health conditions as a *signal* of government ineffectiveness and of institutional weaknesses. Poor health conditions may depress FDI due to this effect. Population health levels are one crude indicator of the concern a government has for the welfare of its citizens. This is especially true since resource constraints cannot fully account for poor health outcomes in less developed countries. In several cases, e.g., in Kerala and in Sri Lanka, these constraints have been shown to be nonbinding. The labor-intensive nature of health services helps keep costs of provision low in poorer countries, and this factor combined with political will and good governance can yield outcomes that are comparable to those observed in developed countries (Sen 1998). Arguably, therefore, poor health will signify poor governance: either in the form of a lack of political will, or in the form of the inability to implement effective social policies.<sup>3</sup> The former may or may not influence FDI; the latter is more likely to do so.

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<sup>2</sup>This has also recently been highlighted in the latest *World Development Report* (World Bank 2004).

<sup>3</sup>There is significant evidence of the link between governance and health; see Kaufmann et al. (1999).

## Some Recent Empirical Evidence

Empirical evidence suggests that governance matters in health outcomes. One example comes from Kaufmann et al. (1999) who estimate the effects of several governance- and corruption-related indicators on infant mortality per 1000 live births as a proxy for population health, and find a strong negative relationship. Gupta et al. (2000) reach a similar conclusion in their study of users' perception of corruption in the public provision of social services such as health and education. In a recent study by the World Health Organization (WHO), lower levels of government effectiveness were found to be a significant explanatory factor for lower levels of health system efficiency, where efficiency was derived as deviation from the maximum health output controlling for health system inputs (Evans et al. 2003). Evidence of good governance as a factor for successful health intervention comes from several case studies as well, including one examining the success of family planning in the state of Kerala in India (World Health Organization 1998).

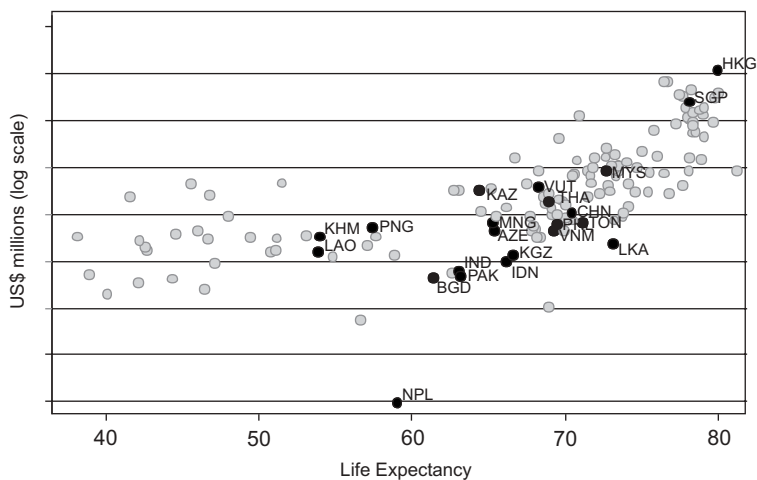
Furthermore, in cross-section data, FDI inflows have been found to be positively correlated with population health measures (Figure 2). Alsan et al. (2004) assess the robustness of this link using panel data for 74 countries for the time period 1980-2000 (Alsan et al. 2004). They proxy population health by life expectancy and find that indeed, at least for low- and middle-income countries, health had a positive and statistically significant influence on FDI inflows, after controlling for other determinants.

The fact the governance matters in health outcomes, and that FDI is correlated with health—although suggestive—does not in of itself mean that health signals government effectiveness. More insight into this comes from a recent survey of opinions conducted by the Global Health Initiative of the World Economic Forum (Bloom et al. 2003).<sup>4</sup> On being asked if the current and future impact of HIV/AIDS had affected access to FDI in the past five years in their countries, respondents from countries with high HIV/AIDS prevalence were much

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<sup>4</sup> The survey polled over 7,000 business leaders from 103 countries (the sample included firms from 15 Asian countries) on several issues relating to the perceived impact of HIV/AIDS on business operations. Also included were questions relating to the investment climate in the country, as well as those relating to the impact of malaria and TB on firms.

Figure 2. FDI Inflows versus Life Expectancy, 2000



Note: Asian countries included in the sample are identified.  
 Source: World Development Indicators (World Bank 2004).

more likely to respond that HIV/AIDS had a “serious impact” or “some impact” on FDI (Table 1).<sup>5</sup> Similarly, respondents from countries with a high prevalence of malaria and TB in Asia were more likely to report that the disease was having “serious” or “some” impact on business operations. Figure 3 plots the two response categories for TB (the countries are ranked by TB prevalence per capita with the Philippines being the highest and Sri Lanka the lowest among the sampled Asian countries) (World Health Organization 2004).

The analysis of the data also indicated that the perception of the severity of the impact of HIV/AIDS was significantly *lower* in countries with *higher* governance indicators.<sup>6</sup> The anticipated impact was also significantly related to social policy orientations in the country of the respondent. Firms based in countries that were perceived to

<sup>5</sup> Similar sentiments have been noted elsewhere, e.g., in Rosen et al. (2003), who go further and argue that widespread prevalence of diseases such as HIV/AIDS is destroying the very basis of the twin rationale for globalization: cheap labor and fast-growing markets.

<sup>6</sup> Governance was proxied by several variables such as whether or not the government had an effective national legislative body, lower red tape, clarity and transparency on policies and regulations, and a more neutral approach to making policies and decisions.

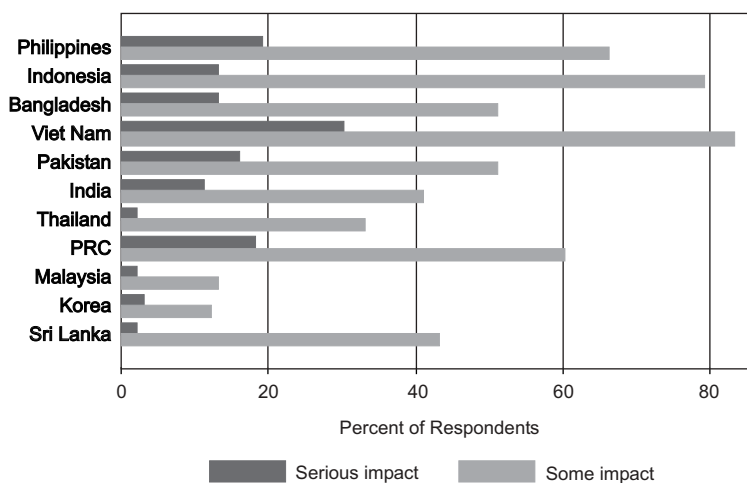
Table 1. **Impact of HIV/AIDS on FDI, by Prevalence of HIV/AIDS in Country of Respondent**

HIV/AIDS Prevalence Group (percent)	Impact		
	Serious	Some	Minimal
< 1	2	16	74
1 - 4	4	38	54
5 - 9	9	49	38
10 - 14	5	60	24
15 - 19	6	60	26
> 20	12	61	24

Source: World Economic Forum (2004).

have more effective poverty reduction strategies, better public schools, and more egalitarian health outcomes were less worried about the impact of HIV/AIDS. This suggests that public health problems are—at least in part—viewed in the context of their relation to government effectiveness and commitment to improving citizen welfare: firms operating in countries where the policy making and implementation environments are more robust are less worried about the impact of endemic diseases on their operations. Longer-term population health problems appear to be taken by foreign investors as indicative of institutional and other systemic governance weaknesses.

Figure 3. **Survey Responses on Seriousness of Impact of TB on Firms**



Source: World Economic Forum (2004).

## Conclusions

Recent health outbreaks such as SARS and avian flu have brought into focus the linkages between health and the macroeconomy. As recent experience has shown, international economic linkages such as tourism and FDI are particularly responsive to such health shocks. If a relatively short health shock such as SARS can lead to drops in FDI and capital flight, what might the effects on FDI be of more endemic diseases such as HIV/AIDS, malaria, and TB? This brief has reviewed the theoretical arguments that link population health levels with FDI. There is some empirical evidence that suggests that population health levels are indeed correlated with FDI, and that one reason why poor health depresses FDI—in addition to the traditional productivity arguments—is because it may serve as a signal of the general investment climate in the country. This is because of the association that poor levels of population health have with lower levels of governance and other structural or institutional constraints in the economy. This link is especially relevant for FDI given information asymmetries in that foreign investors are less likely to have information about the investment climate in the host country vis-à-vis domestic investors. Of course, the arguments put forth here are just as relevant for domestic investment as well.

In terms of policy implications, the primary conclusion of this brief is that public-sector investments in health must be viewed in a more general sense—not only as indicative of a commitment to social-sector development—but also as a signal of a commitment to provision of a conducive climate within which economic activities (including FDI) are allowed to flourish resulting in economic growth, employment generation, and poverty reduction.

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