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## Homework Assignment 1: Background Reading

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Many of the homework assignments that you will work on in Math Xa will be accompanied by a background reading. The intention of these readings is to provide a context for the mathematical problems that you work on. You are not required to read these documents, and you will not be examined on them. However, the background readings will describe some of the important current issues that face us; issues that the mathematics you learn can help us to understand.

The background readings are posted as separate documents – intended to be read on-line – to reduce the number of pages (and full-color images) that you have to print out.

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### What, exactly, is Corruption?

The World Bank<sup>1</sup> defines corruption as “the use of one’s public position for illegitimate private gains.” Corruption is a very negative word, and it might seem natural to assume that individuals who engage in corrupt practices are evil or immoral. However, research by economists<sup>2</sup> at the International Monetary Fund have gathered evidence to suggest that when civil service wages are low in comparison to local wages in general, corruption is more likely to occur. As the *New York Times*<sup>3</sup> observed (at the beginning of the 1990’s in the context of the War on Drugs):

“ When an army colonel [in Peru] with a base pay of \$90 a month could turn a quick \$15,000 by ignoring a single drug flight out of the Uchiza airport, anyone with [drug trafficking] reform on his mind was almost certain to be disappointed.”

Although corruption might be described as an “unattractive trait in others,” Van Rijckeghem and Weder suggest that, at least in some cases, poorly paid civil servants may almost be forced to engage in corrupt practices in order to put food on their tables.

The point of this reading is to introduce some of the background issues to make a case that corruption (especially when widespread) works against the economic interests of developing nations. Not only may corruption be unattractive in an ethical sense, it may also be a force that works to keep the Earth’s poorest people poor.

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<sup>1</sup> Source: Mauro, P. 1998. Corruption: Causes, consequences, and agenda for further research. *Finance and Development*, March 1998: 11-14.

<sup>2</sup> Van Rijckeghem, C. and B. Weder. 1997. Corruption and the rate of temptation: Do low wages in the civil service cause corruption? *IMF Working Paper* WP/97/73.

<sup>3</sup> New York Times November 11, 1991. p. A6.

## Foreign Aid, Loans and Development



Figure 1: U2 front man Bono (left) and Professor Jeffrey Sachs (right).

Harvard professor, and director of the Earth Institute at Columbia University, Jeffrey Sachs (see Figure 1<sup>4</sup>) has argued<sup>5</sup> that since the end of the Cold War, the principal goal of U.S. foreign policy is “... [to help] to ensure that all parts of the world, including the poorest, are integrated into global economic and ecological networks in mutually beneficial ways.”

Citing the findings of a CIA task force on state failure<sup>6</sup>, Sachs links the phenomena of political, social, medical and economic implosion in developing nations to the following three key variables.

- The openness of the economy (open economies – that permit transactions with the rest of the world – are associated with decreased risk of national failure).
- The degree of totalitarianism in government (genuinely democratic governments are associated with decreased risk of national failure).
- Infant mortality (high infant mortality is associated with increased risk of national failure).

Why should people who live in the United States care whether or not nations in the developing world succeed or implode into violence and chaos? Sachs points out that, “... aside from humanitarian concerns, crises in such far-away places often suck the United States into the conflict as well.” Examples from our lifetime include Somalia<sup>7</sup>, Colombia and the former Yugoslavia.

One of Sachs’ important observations is that it is plausibly in the interests of the United States to promote the stability of developing nations, and to do so facilitating their integration – to the mutual benefit of all nations – into the global economy.

Traditionally, the money to make this happen has taken the form of foreign aid from wealthier nations and loans from organizations such as the World Bank and International

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<sup>4</sup> Image source: <http://www.solcomhouse.com/music.htm>

<sup>5</sup> Sachs, J. 2001. What’s good for the poor is good for America. *The Economist*, July 14<sup>th</sup> 2001.

<sup>6</sup> The findings of this task force have been published as the pair of books:

- Esty, D. C., J. Goldstone, T. R. Gurr, P. T. Surko and A. N. Unger. 1995. *Working Papers: State Failure Task Force Report*. McLean VA: Science Applications International Corporation.
- Esty, D. C., J. Goldstone, T. R. Gurr, B. Harff, M. Levy, G. D. Dabelko, P. T. Surko and A. N. Under. 1998. *State Failure Task Force Report: Phase II Findings*. McLean VA: Science Applications International Corporation.

<sup>7</sup> Some of the incidents of U.S. involvement in Somalia were documented in the book and recent movie “Black Hawk Down” by Mark Bowden.

Monetary Fund (IMF). A careful analysis of foreign aid spending<sup>8</sup> concedes that while a limited number of individual development projects have succeeded<sup>9</sup>, the overwhelming conclusion is that foreign aid has fostered neither economic growth nor social development, and that aid usually aggravates tense international situations, rather than serve to prevent crises.

Likewise, as Professor Sachs reports<sup>10</sup>, some staff members of the World Bank and IMF “... now publicly acknowledge that they have failed [to promote economic growth and development through loans] ...”. Some economists<sup>11</sup> have gone as far as to make an analogy between accumulation of debt (as a result of loans) by a nation and ingestion of “bad” cholesterol by a person. Hausman and Fernandez-Arias write:

“The bad cholesterol is represented by debt, especially of the short-term variety. It is driven by speculative considerations based on interest rate differentials and exchange rate expectations, not on long-term considerations. Its movement is often the result of moral hazard distortions ... It is the first to run for the exits in times of trouble and is responsible for the boom-bust cycles of the 1990’s.” (p. 2)

The “good” cholesterol, according to Hausman and Fernandez-Arias is **foreign direct investment (FDI)**. FDI generally refers to economic activity that is controlled by firms that are headquartered in another country<sup>12</sup>. They note that:

“The good kind – foreign direct investment (FDI) – brings with it technology, managerial skills and market access and this accelerates growth and development. Furthermore it is bolted down and cannot leave so easily at the first sign of trouble.” (p. 2)

Although they acknowledge that there are still risks associated with FDI, the IMF has recently published<sup>13</sup> substantial evidence to suggest that (unlike loans and traditional foreign aid) FDI is beneficial to the country that hosts the economic activity.

### **Corruption, Business and Capital Flows**

In a recent working paper, economists Shang-Jin Wei and Yi Wu<sup>14</sup>, have demonstrated a relationship between the level of corruption in a country and the composition of the streams of capital that flow into the country. Wei and Yu found evidence to suggest that in countries with high levels of corruption, more of the foreign capital flowing into the

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<sup>8</sup> Bandow, D. 1997. Help or hindrance: Can foreign aid prevent international crises? *Cato Institute Policy Analysis Report N° 273*.

<sup>9</sup> See: “For 80 cents more. Health care in poor countries.” *The Economist*, August 17, 2002.

<sup>10</sup> Sachs, J. 2001. What’s good for the poor is good for America. *The Economist*, July 14<sup>th</sup> 2001.

<sup>11</sup> Hausman, R. and E. Fernandez-Arias. 2000. Foreign direct investment: Good cholesterol? *Inter-American Development Bank Working Paper #417*.

<sup>12</sup> Microsoft™, headquartered in the United States, built and opened their European Operations Center in Ireland, they were engaged in FDI.

<sup>13</sup> Loungani, P. and A. Razin. 2001. How beneficial is foreign direct investment for developing countries? *Finance and Development*, 32(2). Available on-line from: <http://www.imf.org/>

<sup>14</sup> Wei, S.-J. and Y. Wu. 2001. Negative alchemy? Corruption, composition of capital flows and currency crises. *National Bureau of Economic Research Working Paper #8187*.

country was comprised of loans (“bad” cholesterol) than FDI (“good” cholesterol). In less corrupt countries, more foreign investment took the form of FDI than loans. This trend is also shown in Figure 2<sup>15</sup> (below).

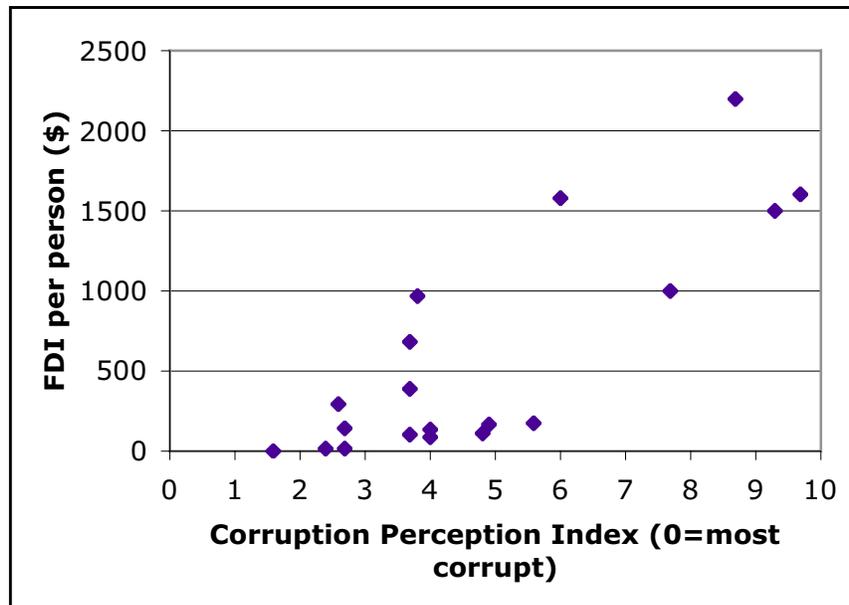


Figure 2: Plot of per capita FDI versus corruption perception index.

Cumulatively, the arguments put forth by Professor Sachs and the evidence on the relationship between FDI and corruption given by Wei and Wu suggest that it is in everybody’s interests (developed and developing nations) to try to reduce corruption in the developing world. Reduced levels of corruption may attract foreign direct investment into the economies of developing nations, stimulating the growth of their social, political and medical infrastructures, and ultimately promote a greater likelihood of long-term stability for developing nations.

### **One Nation’s Recent Struggles with Corruption: The Case of Kenya.**

The east African nation of Kenya (see Figure 3<sup>16</sup>) has a population<sup>17</sup> of almost 31 million and a gross domestic product<sup>18</sup> of \$45.6 billion. More than 40% of Kenya’s people live on an income of less than \$1 per day, and more than 50% are currently unemployed. The political situation in Kenya became front-page news in 1998 when terrorists (suspected to have been part of the al-Queda terror network) exploded a bomb in the Kenyan capital, Nairobi. The bomb destroyed the U.S. embassy, killing 243 people and injuring more than 1000.

<sup>15</sup> The data used to construct Figure 2 was collected from Transparency International, [www.icegec.org](http://www.icegec.org), the CIA World Fact Book 2002, UNCTAD and the U.S. Census Bureau.

<sup>16</sup> Image source: <http://www.esig.ucar.edu/>

<sup>17</sup> Source: CIA World Fact Book, 2002. Available on-line from: <http://www.cia.gov/>

<sup>18</sup> A country’s gross domestic product is the value of all goods and services produced within the country’s borders during a given year. The source of this information is the CIA World Fact Book, 2002.

According to the figures published by Transparency International, Kenya has an extremely corrupt civil service. On a scale where zero represents the most corrupt nation and ten the least corrupt, Kenya scored a 1.9 making it the sixth most corrupt nation on Earth.

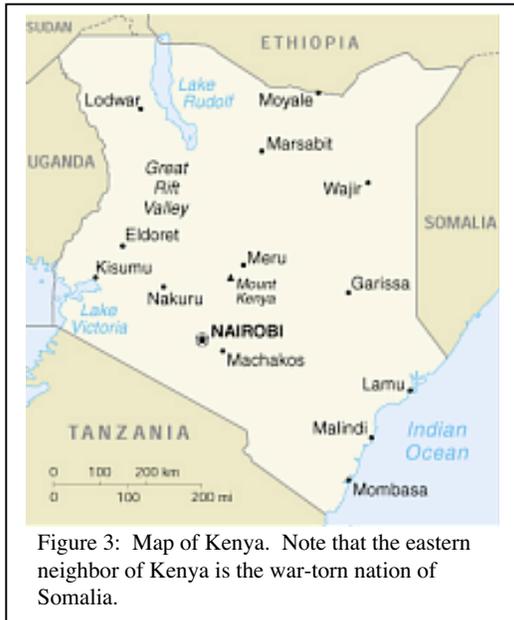


Figure 3: Map of Kenya. Note that the eastern neighbor of Kenya is the war-torn nation of Somalia.

How does civil service corruption affect the Kenyan economy? One way to get some insight into this question is to consider the experience of individual Kenyans who are struggling to try to improve their personal situations. The following is quoted from “The view from the slums,” a story that appeared in *The Economist*<sup>19</sup>.

“Bureaucrats rarely venture into Kibera [see Figure 4<sup>20</sup>], a Nairobi slum of narrow, muddy alleys. When they do, David Mutua closes and locks his shoe shop. However, every week he has to visit a wholesaler in the city, and when city officials see him carrying a big bag of shoes, they harangue him until they find some rule he has broken, and then demand bribes to let him off. ‘They never ask for less than 500 shillings [about \$6],’ he laments, ‘And sometimes as much as 20,000. We try to avoid them, but sometimes they get you five times in a

month.’”



Figure 4: Kibera, one of the slum areas that adjoin the Kenyan capital of Nairobi.

Kenya’s president, Daniel arap Moi (see Figure 5<sup>21</sup>), was elected in 1978. In 1997, after withdrawal of donor funding<sup>22</sup> by the IMF and World Bank, President Moi’s government scrambled to institute market-based economic reforms<sup>23</sup>. One of these hastily assembled initiatives was the creation of the Kenya Anti-Corruption Authority (KACA).

<sup>19</sup> Source: “The view from the slums. Kenya’s rulers keep the poor poor, but still win elections.” *The Economist*, June 29, 2002.

<sup>20</sup> Image source: <http://www.time.com/>

<sup>21</sup> Image source: <http://www.whitehouse.gov/national-anthem/kenya-moi.jpg>

<sup>22</sup> The IMF and World Bank cited the government’s inability to institute and maintain reforms and the failure to address civil service corruption as major factors in the decision.

<sup>23</sup> Ogden, C. 1998. Good will Bill. *Time*, 151(3): 17.

Two years later, in a speech on the occasion of the Kenyan national holiday, “Madaraka Day,” (June 1, 1999) President Moi made the following statements during his address to the Kenyan nation.



Figure 5: Kenyan president Daniel arap Moi poses with President Bush during an official visit to the White House.

“With regard to the issue of corruption, the government has appointed the Kenya Anti-Corruption Authority which will be expected to move with speed in bringing to justice all those involved in this malpractice, irrespective of their status in society. As I have stated before, my government is committed to eliminating corruption in both the government and the private sector. Corruption must indeed be eliminated if this country is to move into the future with confidence and prosperity for all Kenyans.

Civil servants in particular, as implementers of development projects, will be expected to maintain high integrity and

professional ethics in their work. Civil servants must stop engaging themselves in corrupt practices at all levels. No one engaging himself in corruption in the Civil service will be spared from meeting the full force of the law. The Kenya Anti-Corruption Authority is under instructions to deal firmly with those involved in this practice until the vice is eliminated from our society.”

Late in 2000, the IMF and World Bank were sufficiently satisfied with this progress and renewed their financial support to Kenya. However, in December 2000, a Kenyan court ruled that KACA was an unconstitutional rival to Kenya’s Office of the Attorney General. (The ruling resulted from a suit brought by two civil servants who were, themselves, accused of corruption.) This ruling effectively meant that either KACA had to cease to exist, or that the Kenyan constitution had to be amended. On August 14, 2001, some members of the Kenyan government attempted to introduce legislation (the Anti-Corruption and Economic Crimes bill) to do this. However, the bill failed to gain the number of votes needed to effect a constitutional amendment. At that point the IMF and World Bank again suspended their financial support to Kenya, and at the time of writing this support had not resumed.

### **What does this have to do with the homework?**

As noted, reasonable arguments can be put forth to suggest that it is in the interests of developed nations (such as the United States) to promote the economic development of other countries around the world.

However, in order to combat obstacles to development (such as disease) and to build infrastructure, developing nations usually need to attract capital from overseas. The form of capital that appears to have the best track record for fostering growth and development is foreign direct investment (FDI). However, nations with high levels of corruption do not usually attract as much FDI as less corrupt countries.

In Homework #1, you investigated the link between poverty and corruption, and in particular used data to see whether or not there was evidence to support the theory that poverty causes corruption. *If* there is some evidence that makes a strong case to suggest that poverty may in fact cause corruption, then poverty may indirectly discourage the FDI that poor nations need to attract in order to develop. At the very worst, a strong link between poverty and corruption send the economies of poor and corrupt countries into a destructive, vicious cycle of economic recession (see Figure 6).

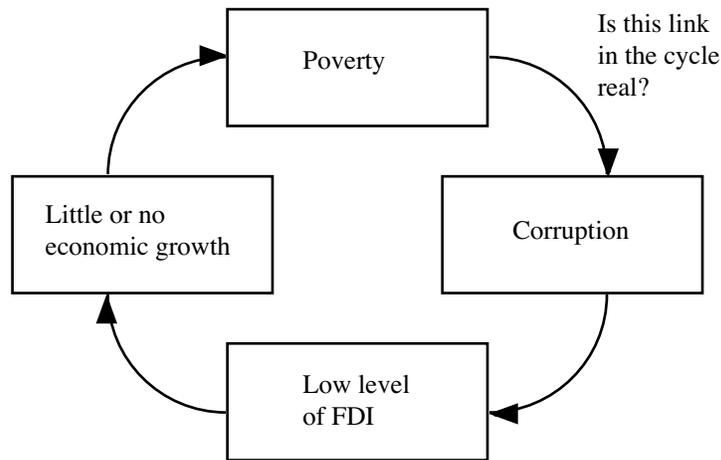


Figure 6: A vicious cycle of economic destruction.

The particular case of Kenya may be an example of such a vicious cycle. During Daniel arap Moi's 25 year presidency, Kenyan citizens have become steadily poorer. Kenyans are, on average, about 20% poorer now<sup>24</sup> than they were in 1978 when President Moi was elected. In contrast, the average resident of the United States is about 25% wealthier now than in 1978.

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<sup>24</sup> Source: "The view from the slums. Kenya's rulers keep the poor poor, but still win elections." *The Economist*, June 29, 2002.