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The Effect of Weighting Development Indicators on Countries Eligibility for International Development Funding: the Case of the Millennium Challenge Corporation (MCC)

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THE EFFECT OF WEIGHTING DEVELOPMENT INDICATORS ON COUNTRIES ELIGIBILITY FOR INTERNATIONAL DEVELOPMENT FUNDING: THE CASE OF THE MILLENNIUM CHALLENGE CORPORATION (MCC)

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ABSTRACT

The Millennium Challenge Corporation (MCC) is a U.S. government agency whose purpose is to promote economic growth and reduce poverty in low and low middle-income countries. It uses indicators to endorse countries eligibilities for international development funding. These indicators are related to economic growth and are developed by independent third parties (e.g., United Nations, World Bank), to evaluate a country's policy performance in three specific areas: (1) Ruling Justly, (2) Investing in People, and (3) Encouraging Economic Freedom (MCC, 2011). The MCC weighs indicators equally regardless of their myopic in-country relevancy to economic development. The goal of this study is to first replicate the MCC funding mechanism then examine the effect of weighting each of the MCC's indicators differently and analyzing the subsequent effects on a countries' funding eligibilities. This study found that many countries were marginally below the median because of one outlier which skewed the mean score. The results signify both the transparency of the calculations and the MCC's funding decisions. Given that by definition low-income countries need economic assistance, and such assistance is often times distributed through indicators like those used by the MCC; this thesis suggests making the index holistic to capture the relative strengths and weaknesses of each country.

This thesis is approved for recommendation
to the Graduate Council.

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DEDICATION

This thesis is dedicated to my parents Fati Bangna and Noma Issa, and my daughter Fatimata Idrissa for giving me the values of hard work and success in my life.

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LIST OF ABBREVIATIONS

CCI: Control of Corruption Indicator

CIESIN: Center for International Earth Science Information Network

COFOG: Classification of the Functions of Government

CPI: Corruption Perceptions Indicators

DPT3: Diphtheria-Pertussis-Tetanus

CBD: Convention on Biological Diversity

ECOWAS: Economic Community of West African States

FY: Fiscal Year

GDP: Gross Domestic Product

GNI: Gross National Income

GNP: Gross National Product

GG: General Government

HIPC: Highly Indebted Poor Countries

IBRD: International Bank of Reconstruction and Development

IDA: International Development Association

IFAD: International Fund for Agricultural Development

IFC: International Finance Corporation

IMF: International Monetary Fund

LIC: Low-Income Countries

LMIC: Low Middle-Income Countries

MCA: Millennium Challenge Account

MCC: Millennium Challenge Corporation

MCV: Measles

MDRI: Multilateral Debt Relief Initiative

MFN: Most Favored Nation

MoF: Ministry of Finance

NA: National Accounts

NHA: National Health Accounts

NGO: Non-Governmental Organizations

NTB: Non-tariff barriers NTB

UCM: Unobserved Components Model

UEMOA: Union Economique et Monétaire de l'Afrique de l'Ouest

UIS: Institute for Statistics

UNESCO: United National Educational, Scientific, and Cultural Organization

UNDP: United Nations Development Programme

UNICEF: United Nations Children's Fund

OECD: Organization for Economic Co-operation and Development

PER: Public Expenditure Reviews

PRGF: Poverty Reduction and Growth Facility

PRSP: Second Poverty Reduction Strategy Paper

WBI: World Bank Institute

WEO: World Economic Outlook

WGI: Worldwide Governance Indicators

WHO: World Health Organizations

YCELP: Yale Center for Environmental Law and Policy

I. INTRODUCTION

A. Overview

Given their wide range of applications economic indices are used for many purposes. Some published indicators are used to understand an event (economic growth, economic development, social behavior, poverty, etc.), while others are useful for comparing countries within economic or social context (Gross Domestic Product, Gross National Income, Human Development Index, Global Hunger Index, etc.). According to Renaud (2009), indicators play three primary roles: (1) to inform citizens and public opinion in general, (2) to alert the actors of a given system by providing indications by which actors should take actions, and (3) to enable guidance and actions by helping actors to understand and deepen their thinking, and to act. In addition, indicators are considered to be incentives to decision makers and designers of decision making processes because processes that rely on indicators can be presented as efficient, consistent, transparent, scientific, and impartial (Davis, Kingsbury and Merry, 2010).

However, developing and subsequently estimating social and economic indicators is a challenging task. It has to be related to the event that people or institutions want to properly understand and respond to. This typically involves many variables (endogenous and exogenous) that have to be considered whenever a given indicator is to be estimated. Each individual, country, or system has his/its internal characteristics that people or institutions have to integrate when weighing or scoring indicators; otherwise they will lead to inconsistent or misleading results. Many times, people or institutions choose some variables that are easily analyzed and lead to predictable results, and ignore (either consciously or sub consciously) the most important variables because of their complexity or lack of data. Therefore, it is important

to understand the context or the situation in order to design a reliable indicator regardless of its complexity. This thesis focuses on the seventeen indicators used by the Millennium Challenge Corporation (MCC) to endorse countries eligibilities for development funding.

B. Approach and Objective

The MCC, a U.S. government corporation, established in January 2004, provides grants to developing countries (low and low-middle income) in order to expedite their economic growth. Grants provided by the MCC fall into two categories; a compact program (a multi-year agreement between the MCC and an eligible country to fund specific programs targeted at reducing poverty and stimulating economic growth) or threshold program (small and shorter-term grants to help countries improve their performance on eligibility policy indicator). Since 2004, sixteen countries have benefited from the MCC's grants, which are considered to be a significant economic catalyst for development in these selected countries. Yet, the MCC's approach has been subject to criticism and the results in terms of development priorities and results are ambiguous. There were instances of economic progress and success, the first phase of the MCC was marked by controversies, criticism and missteps (Hewko, 2010). Hewko (2010) stated that the MCC was not equipped to monitor the sixteen initial eligible countries, which forced the MCC's senior management to be more bureaucratic rather than working to assist the world's poor. Furthermore, a country's data may hide the differences between urban and rural populations ("Urban Bias"), ethnic groups (social classes' differences), genders (discrimination against women because of religious reasons), etc. The MCC uses indicators (see Figures 2.1 to 2.3) to evaluate a country's policy performance throughout three broad policy dimensions: (1) Ruling Justly, (2) Investing in People, and (3) Encouraging Economic Freedom (MCC, 2011a). The MCC has chosen to

weigh indicators differently, and gives a high weight to corruption which is a subjective indicator. To be eligible for MCC funding, a country must be above the median for the Control of Corruption indicator when compared to its peers (same income group). There is no steadfast scientific method to analyze corruption; it is solely based on experts' subjective opinions. The on the ground experts may use different sources to analyze corruption or may be sensitive to common endogenous or exogenous factors while giving their opinions (Razafindrakoto and Roubaud, 2006). The World Bank's indicators which the MCC uses can over represent expert opinions because of their greater availability on the market, which can introduce a sample bias in their favor, which is difficult to control (Razafindrakoto and Roubaud, 2006). Razafindrakoto and Roubaud, (2006) question how these experts weigh these differences between bureaucratic corruption and political corruption, or between central government and local government corruption. Razafindrakoto and Roubaud also stated that the poorer the country and those with sparser information, the more fragile the corruption indicator will probably be, and thus the less accurate. Therefore, those who are maybe the most needy (the poorest of the poor who likely have the weakest data) have a reduced probability of getting funding. In addition, when considering certain indicators such as health, education and the environment, how can a poor country afford to invest in these sectors in order to be above the median and be competitive for funding? The funding mechanism itself is build somewhat like the poverty trap, those who are poor (with either poor indicator score or no data at all) simply fall further behind those countries above the mean who receive MCC funding and continue to develop. For instance, suppose there are two low income countries, A and B. Country A gets funding because it is above the median whereas B does not get funding since its performance is below the median. Several years

later, country A makes progress while country B does not; in fact country B's situation gets worse. For the future MCC funding, country A will have a higher probability of receiving funding compared to country B which will be further below the median, thus reduce its probability for the MCC funding. Examples like this are why Hewko (2010) considered that indicators might exhibit a perpetual income bias. In order to select an indicator, the MCC should consider the role it may play in providing an incentive for countries to perform better in that area to receive the future MCC funding (Bellefleur and Plagman, 2010). That is, instead of disqualifying a country for being below the average, a better question could be "if we invested in this country, would it enhance a sector that would bring the country above the average?" If a funding agency is rewarding development ex post instead of encouraging development on the ground level, are priorities not skewed?

This study intends to explore a relative approach to economic indices based on what has been done, and what could be fairly applicable to all low income countries for development agencies to reach funding decisions. To reach this goal, this thesis will analyze two issues: 1) deconstruct and then replicate the existing MCC indicators based on what MCC currently uses. Currently the MCC simply counts the number of "passes" a country has in each category regardless the relative scores. So, a country simply passes or fails. 2) create a model which uses the same indicators as the MCC currently uses provides equal weighting to each indicator. The new model would standardize all the indicators (so they could be compared) and then sum up the standardized score for ALL indicators. The difference between this proposed model and the one the MCC currently uses is that the proposed model takes into account each indicator (even those a country failed). The rationale being that a difference between a marginal pass and a marginal fail is just that, marginal. However, currently the

MCC treat that marginal difference as an absolute difference where the proposed model compares it as a marginal difference. That is, a country who passes an indicator 100% of the time is rewarded more than a country who passes the same indicator 51% of the time in the proposed model, whereas currently the MCC would treat them the same, simply as a pass. On the same token, a country who passes a indicator 0% of the time is punished more than a country who passes 47% of the time, whereas currently the MCC would treat them the same, simply as a fail. The proposed model would seem to be an improvement over what the MCC is currently using in the sense it is more holistic. The proposed index was created as an alternative to the current MCC funding mechanism (although it uses the same variables) in that it aggregates all scores into one; therefore countries that marginally fail some indicators but are well above the median for others are rewarded for the later and not punished as much for the former. This would seem to be what development is truly about, how well a country is performing in ALL facets of development not simply a counting exercise on how many facets they are above some fluid mean. The hypothesis of this study is that using the same social and economic development indicators the MCC currently utilizes but by aggregating and comparing one score across countries rather than simply counting the total number of indicators above the mean that funding decisions will differ. This is pertinent, since some countries (A) could marginally all fail of their indices which results in a "non funding" decision, whereas some countries (B) marginally pass some of their indices but fail the others relatively bad but obtain a "funding" decision. Thus the hypothesis of this thesis is that under the proposed index country (A) would not be punished as much for a marginal fail as country (B) would be for a relative bad fail and thus relative funding decisions may be altered under the new index.

These objectives may help certain institutions such as the MCC, which based on indicators measures to help developing countries, to take into consideration certain endogenous and exogenous factors to make their decisions for funding. How do these funding decisions matter for poverty reduction in developing countries? A poor country could have a good policy to reduce poverty, but could not receive funding because it was not above the median of the Control of Corruption indicator.

This thesis is structured into five chapters. Following this introduction, the second chapter summarizes the literature review about the MCC, its methodology, and other studies or points of view which support or criticize what the MCC has done. It also offers more details about the way indicators are calculated and the methodology used by the other sources from which the MCC gets the scores for their indicators. Data and methodology for this thesis are explained in the third chapter. Data analysis is developed in the fourth chapter and results are presented. Finally, chapter fives presents a conclusion and underlines some suggestions for the MCC and for further research.

II. LITTERATURE REVIEW

While the first section of this thesis laid out the problem statement, the current chapter gives an overview about the MCC and its funding methodology. It then describes the seventeen MCC indicators and the sources they are derived from; and examines how each indicator is calculated and what the scoring process is. In reality, the MCC uses twenty four indicators instead of seventeen; this means that some sub-indicators have been combined to build a main indicator (see Figures 2.1 to 2.3). Additionally it will explore how the MCC weighs indicators based on exogenous work of each indices creator. For an empirical example, the scoring of the Republic of Niger will be brought out as an example for each indicator. This chapter will also identify and examine the criticisms of certain indicators.

A. MCC's Background

The MCC is a U.S. government corporation, established in January 2004. First proposed by President George W. Bush in 2002, its purpose is to promote economic growth and reduce poverty in low- and middle-income countries through the development of country agreements called "compacts" with the U.S. government, an approach considered to be a new model for U.S. foreign assistance when first proposed. According to the MCC, a compact is a multi-year agreement between the MCC and an eligible country to fund specific programs targeted at reducing poverty and stimulating economic growth. Housed in the Executive Branch of the US Federal government, the MCC is led by a chief executive officer, who is a presidential appointee requiring Senate confirmation. The MCC is overseen by a board of directors, consisting of five ex officio members and four public members.[1] Public members

[1] Ex officio members include the Secretary of State, Secretary of Treasury, U.S. Trade Representative, USAID Administrator, and the MCC CEO.

are nominated by the President from names submitted by the majority and minority leaders of the House and Senate. The MCC provides development grants to a select group of low and middle-income countries (the former with per capita incomes below or equal $1,905 USD and the latter between $1,905 USD and $3,945 in 2011) that demonstrate a commitment to good governance by investing in the health and education of their people and adopting sound economic policies. First funded at $994 million USD in Fiscal Year 2004 (FY 2004), funding for the MCC reached its peak of $1.75 billion USD in FY 2006, was leveled off in FY 2007, and has declined since then; FY 2009 funding was $875 million USD (Tarnoff, 2009). Table 2.1 depicts the trends of the MCC appropriations from FY 2004 to FY 2011. The administration's FY 2010 budget request includes $1.4 billion for the MCC (Tarnoff, 2010). The MCC disburses funds to eligible countries that apply for and are awarded assistance. To be eligible to apply to the MCC for "compact" funding, countries must pass a corruption indicator and score at or above the median on some of the other indicators (Tarnoff, 2010). Kaufmann, Kraay and Mastruzzi, (2010), defined a corruption indicator as **"**capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests." Candidate countries that do not meet these criteria may be eligible for "threshold" program assistance if they demonstrate commitment to improving their performance to reach eligibility for compacts. According to the MCC, a threshold program agreement is a contract between the United States and an eligible country through which the MCC provides financial assistance for targeted policy reform efforts. Threshold programs are typically smaller in dollar terms, shorter-term grants to help countries improve their performance on eligibility policy indicators. For instance, Burkina Faso received a threshold program in 2005 ($12.9

million USD) and given its progress it was rewarded a compact program in 2008 ($480.9 million USD) (MCC, 2011b). The first compact grant was signed in 2005. To this early 2011, 22 countries have been awarded compacts, totaling $7.9 billion USD (MCC, 2011b).[2]

The first threshold program was signed in 2005, and to this early 2011, 23 countries have been awarded threshold assistance, totaling $494 million USD (MCC, 2011b)[3]. In February 2011, the Obama administration issued its FY 2012 budget, requesting $1.125 billion USD for the MCC, a two percent increase from the enacted FY 2010 appropriation and a 25% increase over the final FY 2011 appropriation (Tarnoff, 2011).

Table 2.1

MCC Appropriations: Fiscal Year 2004-2011 (in 2011 Billion USD's)

	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
MCC funds requested by the President	1.3	2.5	3.0	3.0	3.0	2.225	1.4	1.3
MCC funds appropriated by Congress	0.1	1.5	1.8	1.8	1.5	0.9	1.1	0.9

Source: Tarnoff (2011).

[2] (Armenia($235.7 million USD), Benin($307.3 million USD), Burkina Faso($480.9 million USD), Cape Verde($110 million USD), El Salvador($460.9 million USD), Georgia($295.3 million USD), Ghana($547 million USD), Honduras($215 million USD), Jordan ($275.1 million USD) Lesotho($362.6 million USD), Madagascar($109.8 million USD), Mali($460.8 million USD), Mongolia($284.9 million USD), Moldova ($262 million USD) Morocco($697.5 million USD), Mozambique($506.9 million USD), Namibia($304.5 million USD), Nicaragua($175 million USD), Philippines ($434 million USD), Senegal($540 million USD), Tanzania($698 million USD), Vanuatu($65.7 million USD)).

[3] (Albania($13.9 million USD), Albania II ($15.7 million USD), Burkina Faso($12.9 million USD), Guyana($6.7 million USD), Indonesia($55 million USD), Jordan($25 million USD), Kenya($12.7 million USD), Kyrgyz Republic($16 million USD), Liberia($15.1 million USD), Malawi ($20.9 million USD), Moldova($24.7 million USD), Niger($23.1 million USD), Paraguay($34.6 million USD), Paraguay II($30.3 million USD) Peru($36.6 million USD), Philippines($20.7 million USD), Rwanda($24.7 million USD), Sao Tome and Principe($7.4 million USD), Timor-Leste ($10.5 million USD), Tanzania($11.2 million USD), Uganda($10.4 million USD), Ukraine($45 million USD), Zambia($22.7 million USD)).

The MCC uses publicly available data developed by independent third parties, such as the World Bank, Freedom House, International Monetary Funds, UNICEF, United National Educational, Scientific, and Cultural Organization, World Health Organization, etc. to develop their indicators. The MCC chooses these because they are all linked to economic growth and poverty reduction. To select countries as eligible for funding, the MCC's board of directors considers three factors: performance on the defined policy criteria, the opportunity to reduce poverty and generate economic growth in the country, and funds available to the MCC (MCC, 2011a).

B. The MCC Selection Process

According to the MCC (2011a), there are four important steps in considering a county for MCC funding. These are described below.

1. Identification of Candidate Countries

The candidate countries are chosen based on their per capita GNI (must be low and low middle-income countries) and whether they are legally eligible to receive the U.S. economic assistance (they qualify only if they are not statutorily prohibited from receiving the U.S. economic assistance), (Table 7.1). The MCC then submits a report to Congress with a list of candidate countries prior to the selection of countries eligible for Millennium Challenge Account (MCA) assistance.

Due to the fact that the range of per capita income varies from year to year, a country's eligibility could be negatively affected by it moving from one income classification to another (Tarnoff, 2011). For instance, Tarnoff (2011) adds that Azerbaijan and Albania have moved from low middle-income to upper middle-income status and are, therefore, now ineligible for further MCC assistance. Countries in the low-income group compete with other countries in

the low-income group; and countries in the low middle- income group compete with each other (Tarnoff, 2011). In addition, in September 2009, the MCC Board announced that, for countries that move from low to low middle-income status, it will consider their performance relative to both their former income group and the newer one for a period of three years (Tarnoff, 2009). That could be an advantage/disadvantage for other countries in the each of the classifications. That is, if a low-income country was reclassified as a low middle-income country theoretically the mean for the entire group would fall thus bumping some countries over the mean. Conversely, if a low middle-income country was reclassified as a low income country then theoretically the mean of the indicators in the low-income bracket should increase thus bumping some countries marginally below the mean. Countries that move from low-income to lower-middle-income status may be affected negatively by having to compete against countries at a higher level of development (Tarnoff, 2011).

2. Publication of the MCC's Selection Criteria and Methodology

After submitting a report to Congress, the MCC holds a formal public comment period following publication of the report. To be considered eligible, a country should perform above the median in relation to its peers (income group) on at least half of the indicators in the Ruling Justly and Economic categories, above the median on at least three of the five indicators in the Investing in People category (Immunization Rates, Public Expenditures on Health, Girls' Primary Education Completion Rate, Public Expenditure on Primary Education, Natural Resources Management), and above the median on the control of corruption indicator. There is no median for inflation, but it must be under a fixed ceiling of 15% annually. However this ceiling is flexible, in FY2004, when the inflation rate ceiling was 20% only 6 of the 63 candidate countries failed the test, so the MCC lowered the inflation rate to 15% in

order to make the test more difficult (Tarnoff, 2011). Tarnoff (2011) also adds that the MCC Board can take into consideration whether a country performs substantially below the median on any indicator; it may exercise discretion for the final list of eligible countries. It can also take into consideration other quantitative and qualitative information such as recent policy changes or positive trend lines. Besides the corruption indicator, this could be a subjective way to endorse funding to countries. For instance, Cape Verde scored poorly on the Trade Policy indicator, but the Board considered the country's progress towards joining the World Trade Organization (WTO) and implementing a value added tax to reduce reliance on import tariffs (Tarnoff, 2011).

3. Publication of the MCC Scorecards

The MCC publishes country performance "scorecards" on its website (www.mcc.gov) for all candidate countries.[4]

4. Selection of Compact-Eligible and Threshold-Eligible Countries

Compact-eligible countries are then chosen from the pool of candidate countries by the MCC board. The MCC compacts are grant agreements, no more than five-years in length (as required by the MCC authorization), proposed and implemented by countries selected by the MCC Board. In other words after being eligible, a given country should come to the MCC with a proposal for funding. According to Tarnoff (2011) 36% of the MCC compact funding was in the transport sector, predominately roads; 20% was targeted on agriculture; 9% on health, education, and community services; 9% on water supply and sanitation; 8% on energy; 4% on governance, and 2% on financial services. Of all 22 compact countries to date, 58% of

[4] For more details please read: http://www.mcc.gov/pages/selection/scorecards

compact funding has gone to sub-Saharan African countries, 12% to North Africa and the Middle East, 10% to the former Soviet Union, 10% to Latin America, and 10% to Asia and the Pacific (Tarnoff, 2011).

Just because a country passes the requisite number of qualifying indicators does not mean that it will be selected for compact eligibility since the MCC board does not depend on indicator scores alone for selection (Tarnoff, 2011).This is important, in essence it says that the MCC is writing their own caveats on ways either to fund or not to fund countries that fail or pass their index. The Board can consider other information but it is not required to divulge it. For instance, Tarnoff (2011) states that in FY2006, Bhutan, China, and Vietnam passed enough indicators but were not chosen based on very low scores on political rights and civil liberties; Uganda passed 12 of the 17 indicators and did not fall significantly below the median on the other four, but was not selected for unexplained reasons. Tarnoff (2011), says the MCC accepts that the indicators themselves are imperfect measures of a country's policies and performance because they suffer from lag time, reflecting when the raw data was derived as much as a year or more previously; or a country's position vis-a-vis its peers could also fluctuate considerably from year to year without reflecting any significant change in the country's policies. Tarnoff (2001), explains this imperfection was a function of three reasons: 1) countries with good policies might fall behind the performance criteria while other countries are making progress, thus raising the bar; 2) any shift from the low income to lower-middle income group could alter a country's relative scores since it would competes with countries more likely to achieve better indicators; 3) countries may fail when new criteria are introduced.

Also, Tarnoff (2011) states that the MCC Board has the right to select countries to participate in the Threshold Program which support targeted policy reform efforts. In other words, countries in this program might receive modest funds for programs designed to improve indicator performance that might make it eligible for a future MCC compact.. For instance in FY2005, 19 countries were awarded threshold assistance, totaling $470 million (Tarnoff, 2011). So far 23 threshold programs worth a total of about $494 million have been awarded, two of which have received second programs (Albania and Paraguay) (Tarnoff, 2011).

C. Indicators Used by the MCC

According to the MCC (2011), there are seven primary reasons why the MCC chose these indicators. Indicators should 1) be developed by an independent third party, 2) utilize an analytically-rigorous methodology and objective with high-quality data, 3) be publicly available, 4) have broad country-coverage and are comparable across countries, 5) have a clear theoretical or empirical link to economic growth and poverty reduction, 6) be policy-linked, i.e. measure factors that governments can influence within a two to three year horizon, and 7) have broad consistency in results from year to year.

The MCC uses seventeen indicators throughout three broad policy dimensions, which are reviewed annually by the MCC Board based on their performance. In reality, the MCC uses twenty four indicators instead of seventeen; this means that some sub-indicators have been combined to build a main indicator (see Figures 2.1 to 2.3).

Figure 2.1

Indicators Used in the MCC's Ruling Justly Category

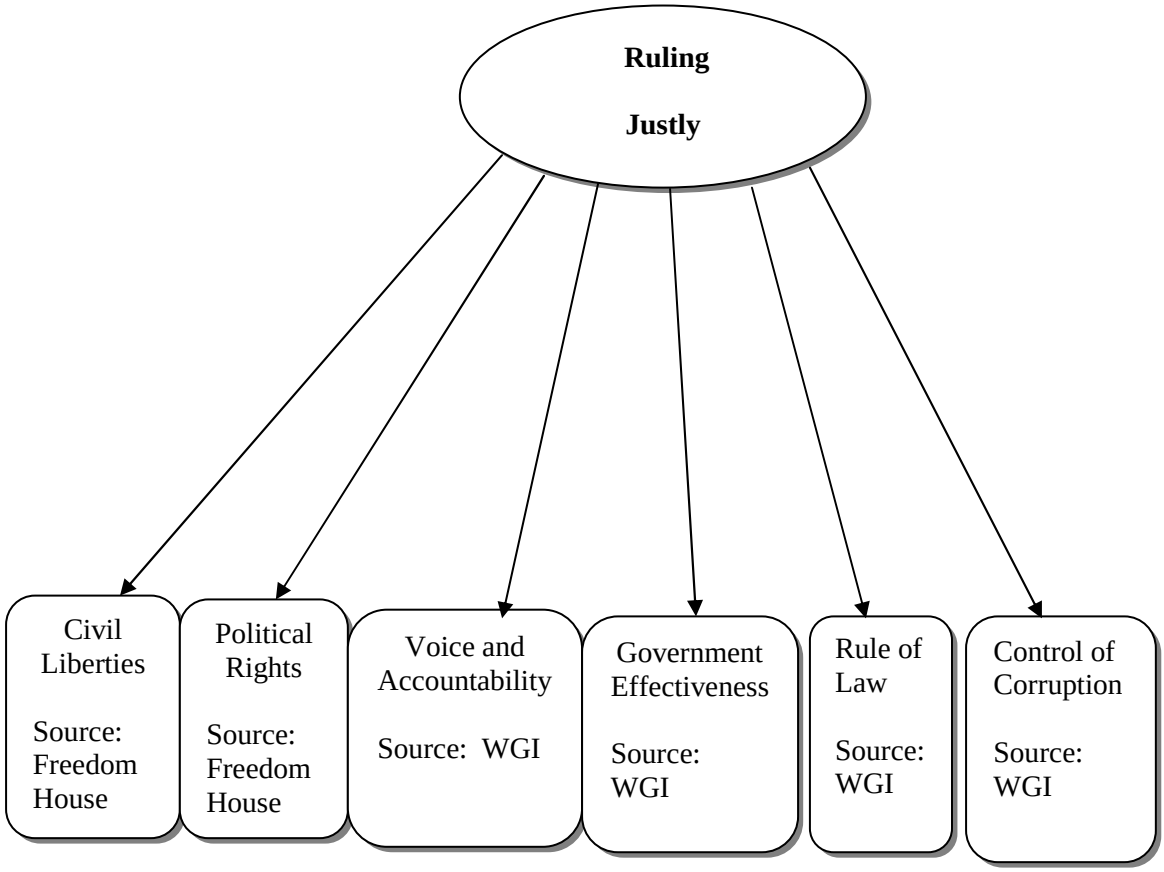


Figure 2.2

Indicators Used in the MCC's Investing in People Category

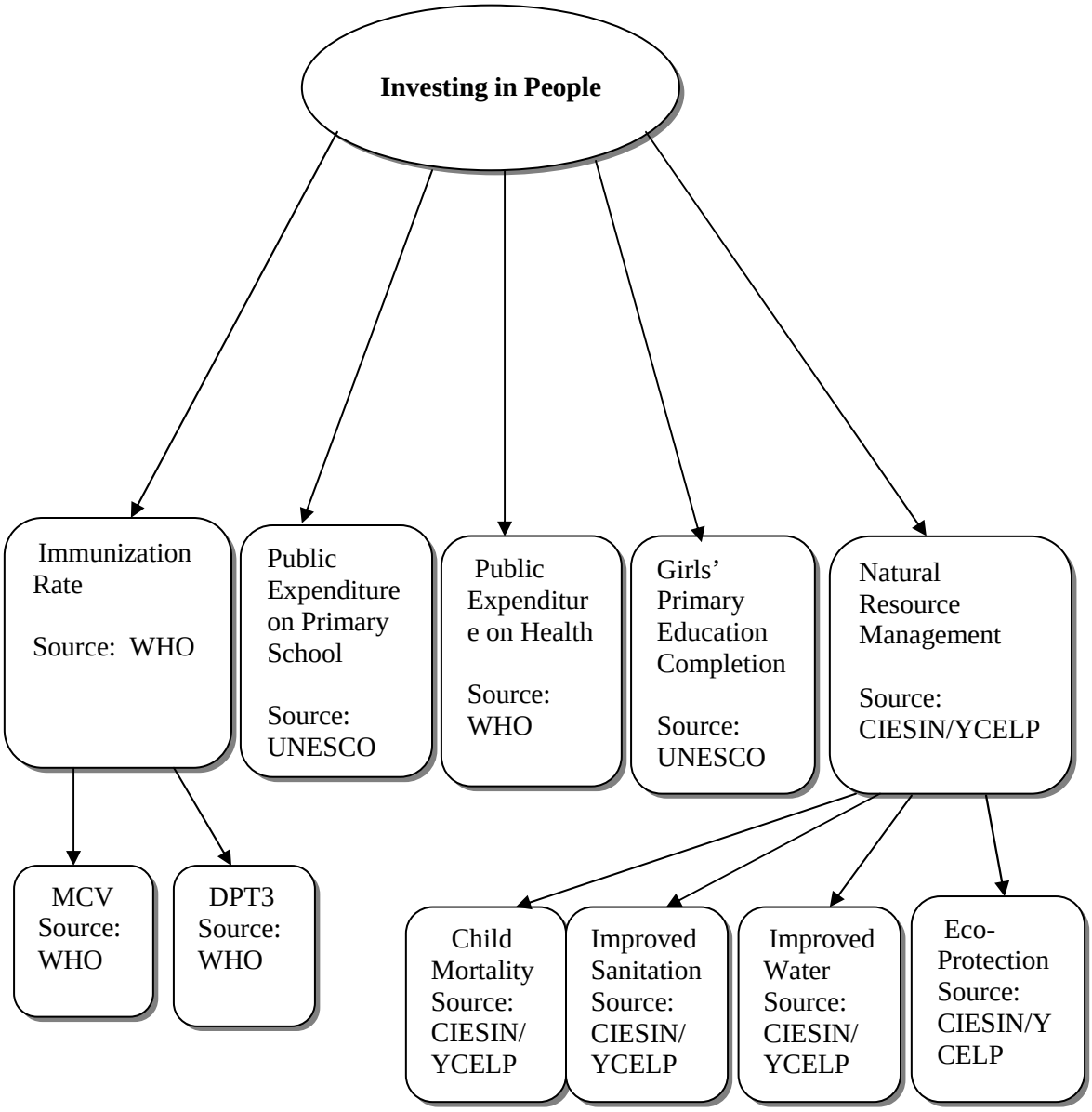
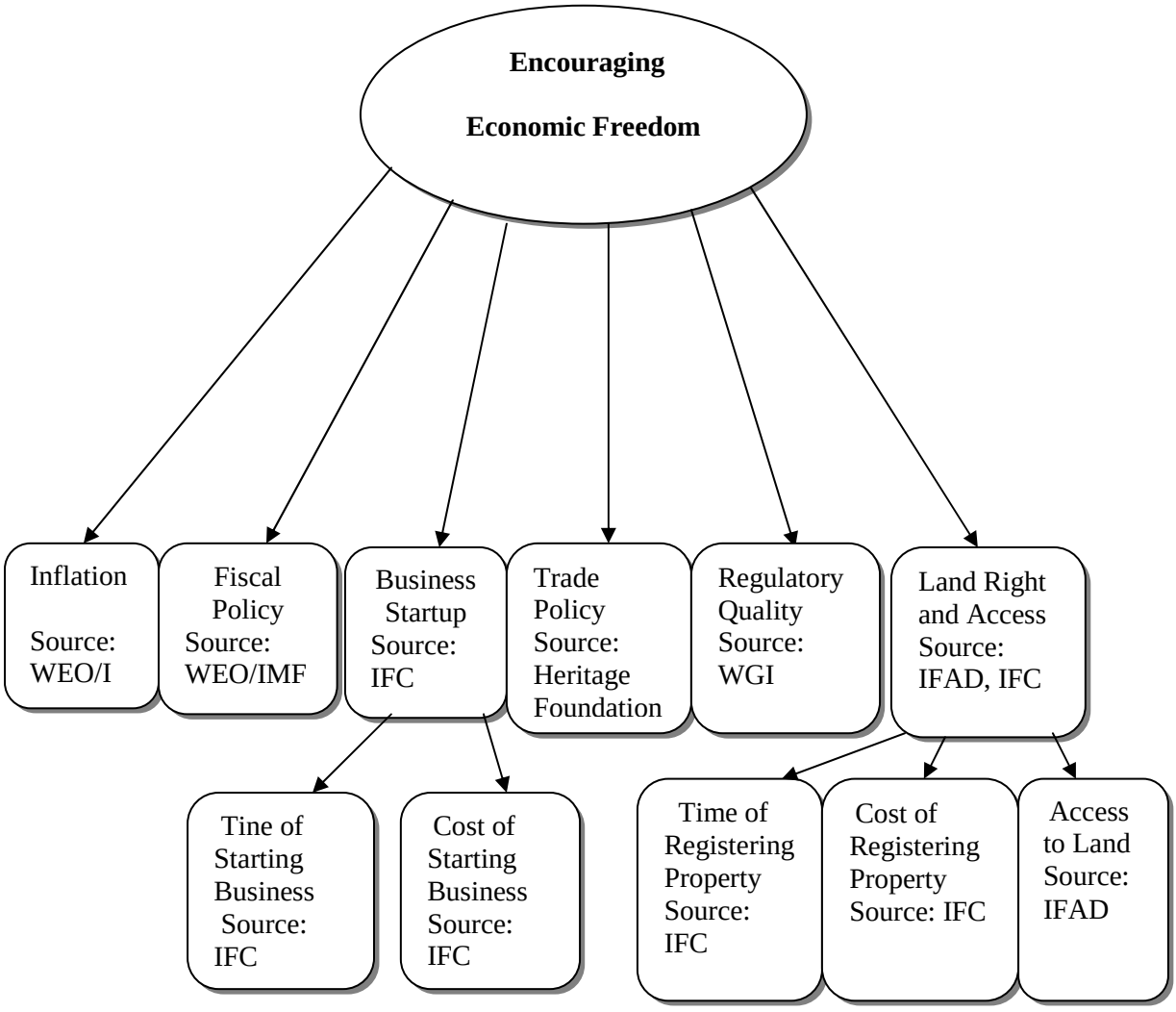


Figure 2.3

Indicators Used in the MCC's Encouraging Economic Freedom Category



1. Ruling Justly

This first broad policy dimension includes six indicators: Civil Liberties, Political Rights, Control of Corruption, Government Effectiveness, Rule of Law, and Voice and Accountability (Figure 2.1). A country needs to pass three of the six indicators to be eligible for the MCC funding. The sources of these six indicators are provided by Freedom House and World Bank/Brookings Institution WGI. The MCC (2011b) states that the six indicators have been chosen based on several distinct reasons. First, civil liberties can promote economic growth by reducing social conflict, removing legal impediments to participation in the economy, encouraging adherence to the rule of law, enhancing protection of property rights, increasing economic rates of return on government projects, and reducing the risk of project failure, according to some studies. Second, democratic institutions are better at reducing economic volatility and provide a more consistent approach to poverty reduction than do autocratic regimes, thus political rights are important. Third, corruption hinders economic growth by increasing costs, lowering productivity, discouraging investment, reducing confidence in public institutions, limiting the development of small and medium-sized enterprises, weakening systems of public financial management, and undermining investments in health and education. It can also increase poverty by slowing economic growth, skewing government expenditure in favor of the rich and well-connected, concentrating public investment in unproductive projects, promoting a more regressive tax system, siphoning funds away from essential public services, adding a higher level of risk to the investment decisions of low-income individuals, and reinforcing patterns of unequal asset ownership, thereby limiting the ability of the poor to borrow and increase their income. Fourth, countries with more effective governments tend to achieve higher levels of economic growth by obtaining

higher credit ratings and attracting more investment, offering higher quality public services and encouraging higher levels of human capital accumulation, putting foreign aid resources to better use, accelerating technological innovation, and increasing the productivity of government spending.

Fifth, business environments characterized by consistent policies and credible rules, such as secure property rights and contract enforceability, create higher levels of investment and growth. Finally, improving public participation and democratic accountability can foster an environment conducive to economic growth by reducing corruption, constraining opportunistic and discretionary behavior, improving the efficiency and responsiveness of public institutions, expanding investor protections, encouraging political stability and social trust, and building respect for the rule of law and property rights.

2. Investing in People

Investing in People is the second board policy dimension and includes five indicators. A country needs to pass at least three of the five indicators to be eligible for MCC funding. The MCC has chosen these indicators because of their correlation with economic and poverty reduction. First, immunization rates (the national Diphtheria-Pertussis-Tetanus (DPT3) vaccination rate and the measles (MCV): the MCC (2011b) considers that healthy workers are more economically productive and more likely to save and invest; healthy children are more likely to reach higher levels of educational attainment; and healthy parents are better able to invest in the health and education of their children. It also added that immunization programs also increase labor productivity among the poor; reduce spending to cope with illnesses, and lower mortality and morbidity among the main income-earners in poor families. Second, public expenditure on health: the MCC (2011b) implies that increased spending on health,

when coupled with good policies and good governance, can promote growth, reduce poverty, and trigger declines in infant, child, and maternal mortality. Third, girls' primary education completion rate: According to the MCC (2011b) empirical research consistently shows a strong positive correlation between girls' primary education and accelerated economic growth, slower population growth, higher wages, increased agricultural yields, and increased labor productivity. Fourth, public expenditure on primary education (general government expenditure on primary education as a percentage of total government expenditure which includes the consolidated outlays of all levels of government): the MCC (2011b) stated that, for given levels of quality, well-managed and well-executed government spending on primary education can improve educational attainment and increase economic growth; and regions that begin with higher levels of education generally see a larger poverty impact of economic growth. Finally, natural resource management: sustainable natural resource management facilitates long- term economic growth by providing essential ecosystem services such as fertile soil, clean air and water, renewable energy, and genetic diversity (MCC, 2011b).

3. Encouraging Economic Freedom

Encouraging Economic Freedom is the third broad policy dimension contains six indicators (Figure 2.3). A country needs to pass at least three of the six indicators be eligible for MCC funding. The MCC has chosen these indicators because of their correlation with economic growth and poverty reduction. First, business start-up: the MCC (2011b) states that easing business entry into the formal economy can reduce unemployment, encourage investment, expand the tax base, help small entrepreneurs to access bank credit, allow workers to enjoy health insurance and pension benefits, and enable businesses to achieve economies of scale. Second, land rights and access: Secure land tenure plays a central role in the economic

growth process by giving people long-term incentives to invest and save their income, enhancing access to essential public services, allowing for more productive use of time and money than protecting land rights, facilitating use of land as collateral for loans, and contributing to social stability and local governance (MCC, 2011b). Third, trade policy: Trade openness can help accelerate long run economic growth by allowing for greater economic specialization, encouraging investment and increasing productivity. One study estimates that "open" economies on average register 2.2% higher economic growth than "closed" economies (MCC, 2011b).

Fourth, regulatory quality: Good regulatory policies help the poor by creating opportunities for entrepreneurship, reducing opportunities for corruption, increasing the quality of public services, and improving the functioning of the housing, service, and labor markets on which they rely (MCC, 2011b). Filth, inflation: high inflation creates an environment of risk and uncertainty, drives down the rate of investment, and is often associated with distorted relative prices and tax incentives. Inflation can also hinder financial market development and create incentives for corruption (MCC, 2011b). Finally, fiscal policy: fiscal deficits driven by current expenditures decrease national savings and put upward pressure on real interest rates, which can lead to a crowding out of private sector activity; and they either force governments to increase tax rates, reducing the capital available for domestic investment, or to increase the stock of public debt (MCC, 2011b).

D. The Sources of Indicators Used by the MCC

1. Worldwide Governance Indicators (WGI)/World Bank:

Established in 1944, the World Bank is a source of financial and technical assistance to developing countries around the world. Owned by 187 member countries of the

International Bank of Reconstruction and Development (IBRD) and the International Development Association (IDA), its mission is to fight poverty and to help people help themselves and their environment by providing resources, sharing knowledge, building capacity and forging partnerships in the public and private sectors (WGI/World Bank, 2011). The World Bank obtains its funding from its formal members. The World Bank provides low-interest loans, interest-free credits and grants to developing countries for a wide array of purposes that include investments in education, health, public administration, infrastructure, financial and private sector development, agriculture and environmental and natural resource management.[5] It provides five indicators to the MCC (Control of Corruption, Government Effectiveness, Voice and Accountability, and Regulatory Quality).

2. Freedom House

Freedom House was established in 1941 in New York City. It emerged from an amalgamation of two groups that had been formed, with the encouragement of President Franklin D. Roosevelt, to encourage popular support for American involvement in World War II (Freedom House, 2011a). It continues to serve as a leading advocate for policies to advance the democratic idea; and it was a founder of the Community of Democracies, an alliance of global democracies that seeks a greater voice for democracy at the United Nations and other international forums (Freedom House, 2011a). Freedom House supports critical reforms of the United Nations to make its work in human rights and democracy more effective and it is a voice for a U.S. foreign policy that places the promotion of democracy at the forefront (Freedom House website). Its flagship survey, *Freedom in the World*, was chosen as a formal

[5] For detailed information please read : http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/0,,pagePK:50004410~piPK:36602~theSitePK:29708,00.html

source for the determination of country eligibility for MCC, and it gets funding from donation.[6] It provides two indicators to the MCC (Civil Liberties and Political Rights).

3. World Health Organizations (WHO*)*

WHO is the directing and coordinating authority for health within the United Nations system, and it is responsible for providing leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries and monitoring and assessing health trends.[7] It gets funding from its member states and voluntary contributions. It provides two indicators to the MCC (Immunization rate and Health Expenditures).

4. United National Educational, Scientific, and Cultural Organization (UNESCO)

UNESCO works to create the conditions for dialogue among civilizations, cultures and peoples, based upon respect for commonly shared values (UNESCO, 2011). Its mission is to contribute to the building of peace, the eradication of poverty, sustainable development and intercultural dialogue through education, the sciences, culture, communication and information.[8] It gets funding from its member states and donations. The UNESCO provides two indicators to the MCC (Public Expenditure on Primary School and Girls' Primary Education Completion).

5. Center for International Earth Science Information Network (CIESIN) CIESIN was established in 1989 as an independent non-governmental organization to provide information that would help scientists, decision-makers, and the public better understand the changing relationship between human beings and the environment (CIESIN, 2011). It works at the

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[6] For detailed information please read: http://www.freedomhouse.org/template.cfm?page=249
[7] For detailed information please read: http://www.who.int/about/en/
[8] For detailed information please read: http://www.unesco.org/new/en/unesco/about-us/

intersection of the social, natural, and information sciences, and specializes in on-line data and information management, spatial data integration and training, and interdisciplinary research related to human interactions in the environment, and its mission is to provide access to and enhance the use of information worldwide, advancing understanding of human interactions in the environment and serving the needs of science and public and private decision making.[9] It gets funding from grants, contracts and collaborations, international organizations, foundations, centers, and departments within Columbia University.

Yale Center for Environmental Law and Policy (YCELP): The Yale Center for Environmental Law and Policy seeks to advance cutting edge environmental thinking and policy analysis so that decision-making in the public, business, community, and personal realms promotes sustainability (YCELP, 2011). Specifically, the center seeks to: train future environmental leaders by encouraging innovative thinking and rigorous analysis; identify pressing environmental problems and advance effective policies, strategies, and decision-making tools in response; move the environmental debate beyond political and sectored boundaries to enable integrated approaches to problem-solving; identify scientific and technological advances that can ease uncertainty and respond to the complexity of environmental protection; and cultivate a greater understanding of stakeholder attitudes, values, and behavior toward environmental policy choices and how these diverse perspectives affect policy outcomes.[10] The CIESIN/YCELP provides one indicator to the MCC (Natural Resource Management).

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[9] For detailed information please read: http://www.ciesin.org/aboutus.html

[10] For detailed information please read: http://envirocenter.yale.edu/about-the-center/history

6. World Economic Outlook (WEO)/International Monetary Fund (IMF)

The World Economic Outlook (WEO) presents the IMF staff's analysis and projections of economic developments at the global level, in major country groups (classified by region, stage of development, etc.), and in many individual countries (IMF, 2011). It focuses on major economic policy issues as well as on the analysis of economic developments and prospects. It is usually prepared twice a year, as documentation for meetings of the International Monetary and Financial Committee, and forms the main instrument of the IMF's global surveillance activities.[11] IMF gets funding mainly from its members states. The WEO/IMF provides two indicators to the MCC (Inflation and Fiscal Policy).

7. International Finance Corporation (IFC*)*

The IFC fosters sustainable economic growth in developing countries by financing private sector investment, mobilizing capital in the international financial markets, and providing advisory services to businesses and governments; also, it helps companies and financial institutions in emerging markets create jobs, generate tax revenues, improve corporate governance and environmental performance, and contribute to their local communities (IFC, 2011). The goal is to improve lives, especially for the people who most need the benefits of growth.[12] It gets funding from donor governments, other foundations and companies. The IFC provides two indicators to the MCC (Business Start-up and Land Rights and Access).

[11] For detailed information please read: http://www.imf.org/external/ns/cs.aspx?id=29
[12] For detailed information please read: http://www1.ifc.org/wps/wcm/connect/corp_ext_content/ifc_external_corporate_site/about+ifc/vision

8. International Fund for Agricultural Development (IFAD)

IFAD is a specialized agency of the United Nations. It was established as an international financial institution in 1977 as one of the major outcomes of the 1974 World Food Conference which was organized in response to the food crises of the early 1970s that primarily affected the Sahelian countries of Africa; and its mission is to enable poor rural people to overcome poverty (IFAD, 2011). Working with rural poor people, governments, donors, non-governmental organizations and many other partners, IFAD focuses on country-specific solutions, which can involve increasing rural poor peoples' access to financial services, markets, technology, land and other natural resources.[13] It gets funding from its formal member states. The IFAD provides one sub-indicator to the MCC (Access to Land).

9. Heritage Foundation

The Heritage Foundation was founded in 1973. It is a research and educational institution whose mission is to formulate and promote conservative public policies based on the principles of free enterprise, limited government, individual freedom, traditional American values, and a strong national defense.[14] It gets funding from its memberships and donations. The Heritage Foundation provides one indicator to the MCC (Trade Policy).

As a case study of the MCC's indicators the country of the Republic of Niger will be analyzes. The Republic of Niger is one of the poorest countries in the world that has benefited from the MCC threshold program in 2008. Niger will be used in the remaining portion of this chapter as a case study to interpret each of the indicators used by the MCC.

[13] For detailed information please read: http://www.ifad.org/governance/index.htm
[14] For detailed information please read: http://www.heritage.org/about

E. The Republic of Niger Economic Overview

The Republic of Niger is a landlocked country (490,000 sq mi, about three times the size of California) with an estimated population of 16.4 million in July 2011 (CIA, 2011), the majority of whom live along a narrow band of arable land (15% of the Republic of Niger land) in the south of the country (U.S. Department of State, 2011). The Republic of Niger's reliance on rain fed agriculture, mining, and official development assistance (45% of the Republic of Niger's budget), make it highly vulnerable to climatic fluctuations, locust invasions, changes in global demand and prices for its mineral exports, well as well as fluctuations in donor financing (World Bank, 2011). These vulnerabilities are reflected in large year to year fluctuations in economic growth, exports, and government revenue and expenditures; and with a large share of households living near or below the poverty line (34.1%), negative shocks translate directly into households not being able to cover basic needs and exposing them to hunger and malnutrition and inability to build human capital though education and adequate health care and nutrition (World Bank, 2011).

Besides food crises, the prolonged political crisis also threatens the continued flow of much needed donor assistance; and with official development assistance financing about 45% of the Republic of Niger's budget, a sustained decline in development assistance would threaten existing progress that has been made in recent years to increase access to health and education (World Bank, 2011). In 2009, the Republic of Niger was ranked last (182 out of 182 countries) on the United Nations Development Programme's Human Development Index (World Bank, 2011). In the mining sector, the Republic of Niger is only partially benefitting from the upward trend in uranium prices, as a large share of its uranium export are sold at fixed prices (World Bank, 2011).

The Government's Second Poverty Reduction Strategy Paper (PRSP), which was approved by decree on October 10, 2007, included seven pillars: (1) strong, diversified, sustainable and job-creating growth; (2) equitable access to quality social services; (3) addressing the demographic challenge; (4) reduction of inequalities and strengthening of social protection for the vulnerable groups; (5) infrastructure development; (6) promotion of good governance; and (7) effective implementation of the strategy (World Bank, 2011).

Based on its PRSP, the government (Mamadou Tandja's) made a range of critical reforms which include a focus on macro-economic and debt sustainability, strengthening of public expenditure and debt management, the transparent management of mining revenue, restructuring and privatization of state owned enterprises, increasing access to social services, measures to manage the rate of population growth, and enhancing the environment for private sector activities, especially in the agriculture sector (World Bank, 2011).

According to World Bank, 2011, in April 2004, the Republic of Niger reached the Highly Indebted Poor Countries (HIPC) completion point and received debt relief from International Development Association (IDA), including topping-up, equivalent to $142 million (USD). The country also qualified for $300 million (USD) in debt relief from the Multilateral Debt Relief Initiative (MDRI); and a three-year Poverty Reduction and Growth Facility (PRGF) arrangement with the International Monetary Fund (IMF) was approved by the Fund's Board in May 2008 for a total amount of $23 million (USD) (World Bank, 2011). The third review was completed by the IMF's Board in February 2010, allowing a disbursement of about US$5 million (World Bank, 2011).

In 2008, the Republic of Niger benefited from the MCC's threshold program which is designed to assist the Republic of Niger improve its performance on the policy areas

measured by the Control of Corruption, Land Rights, Business Start-Up and Girls' Primary School Education indicators used on MCC's scorecard (MCC, 2011c). The $23.1 million (USD) threshold program mainly focused on improving the quality of and access to education for girls and by improving local governance and reducing corruption through increased through civil society engagement, improved business start-up procedures tax codes, and revised trade laws (MCC, 2011c). The MCC's Board of Directors suspended the Republic of Niger threshold program, effective December 31, 2009, due to political events that were inconsistent with the criteria used to determine a country's eligibility for MCC assistance.

F. Worldwide Governance Indicators (WGI)

The Worldwide Governance Indicators (WGI) includes six indicators of broad dimensions of governance covering over 200 countries since 1996: Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. It defines governance based on these six indicators. Thus, governance is: "*the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them*" (Kaufmann, Kraay and Mastruzzi, 2010). The same authors defined each indicator as following:

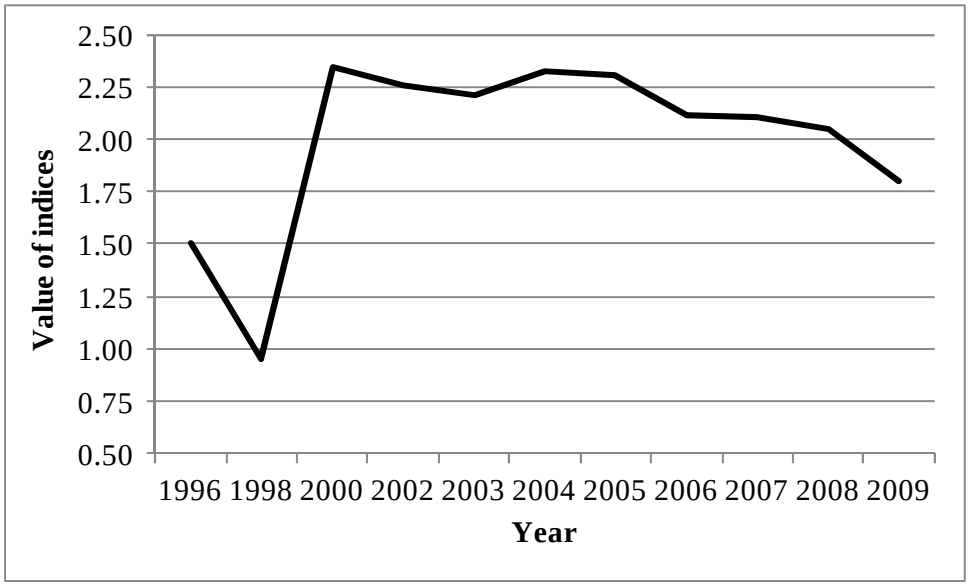
1. Voice and Accountability

Voice and Accountability is described as "capturing perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of

expression, freedom of association, and a free media" (Kaufmann, Kraay and Mastruzzi, 2010).

Figure 2.4

The Republic of Niger's Scores of Voice and Accountability (1996-2009)



Source: WGI (2011).

As a case study the Republic of will be used to highlight and interpret all of the indictors. Figure 2.4 shows that Niger made progress in Voice and Accountability between 2000 and 2005. However, the Republic of Niger's scores in Voice and Accountability started decreasing since 2005. It only worsened in 2009 when the government of Mamadou Tandja changed the constitution of the Republic of Niger in order to stay in power after his second term. This is one of the reasons why in 2010, the Republic of Niger experienced a military coup in order to bring back democracy in the Republic of Niger.

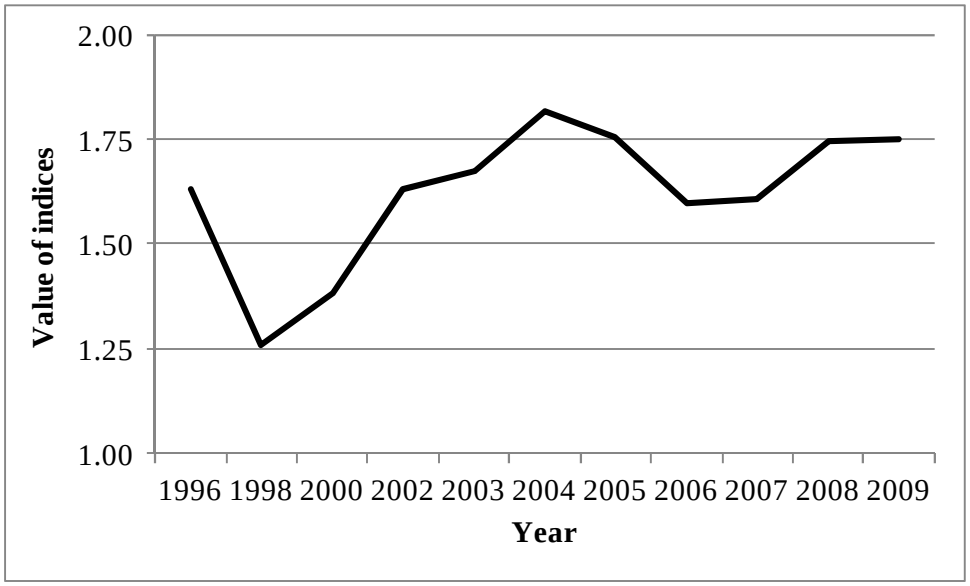
2. Government Effectiveness

Government Effectiveness is defined as "capturing perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political

pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies" (Kaufmann, Kraay and Mastruzzi, 2010).

Figure 2.5

The Republic of Niger's Scores of Government Effectiveness (1996-2009)



Source: WGI (2011).

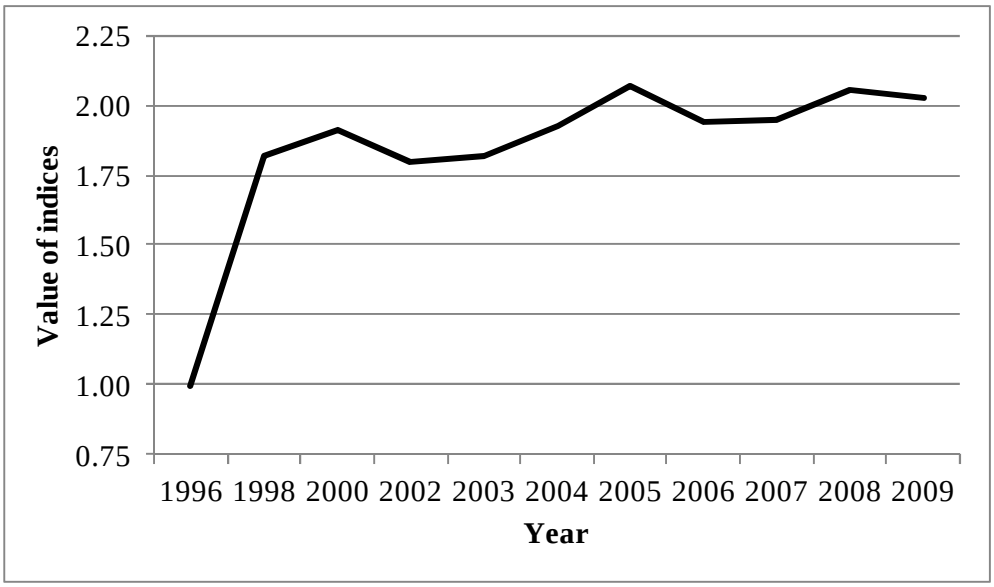
Figure 2.5 shows the impact of the policy that the government implemented since the presidential election of 2004. In other words, since 2004 improved services were provided to public.

3. Regulatory Quality

Regulatory Quality can be defined as "capturing perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development" (Kaufmann, Kraay and Mastruzzi, 2010).

Figure 2.6

The Republic of Niger's Scores of Regulatory Quality (1996-2009)



Source: WGI (2011).

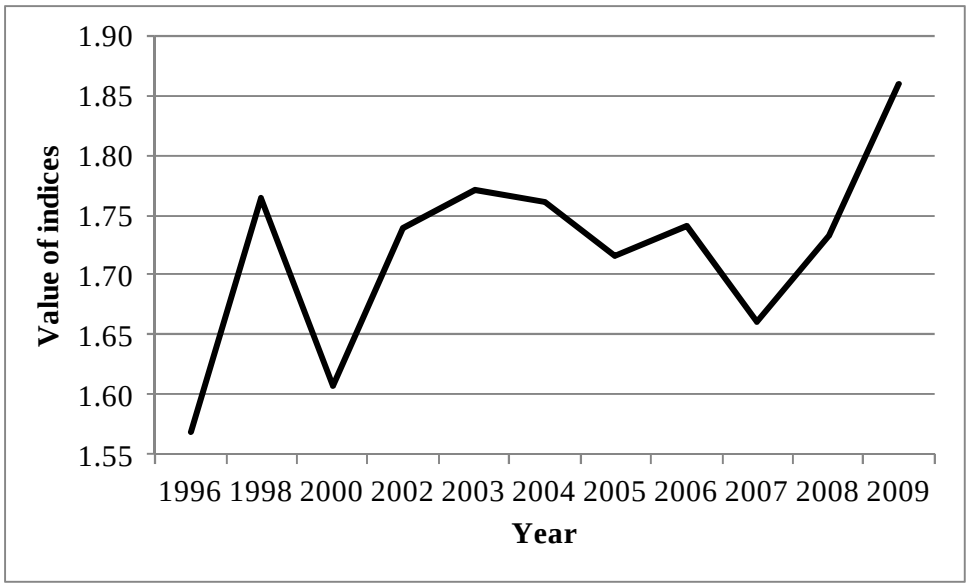
Figure 2.6 shows since 2000, the Republic of Niger was making progress. However, it needs to strengthen regulatory environment that encourages local and foreign investors.

4. Rule of Law

Rule of law is defined as "capturing perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence" (Kaufmann, Kraay and Mastruzzi, 2010).

Figure 2.7

The Republic of Niger's Scores of Rule of Law (1996-2009)



Source: WGI (2011).

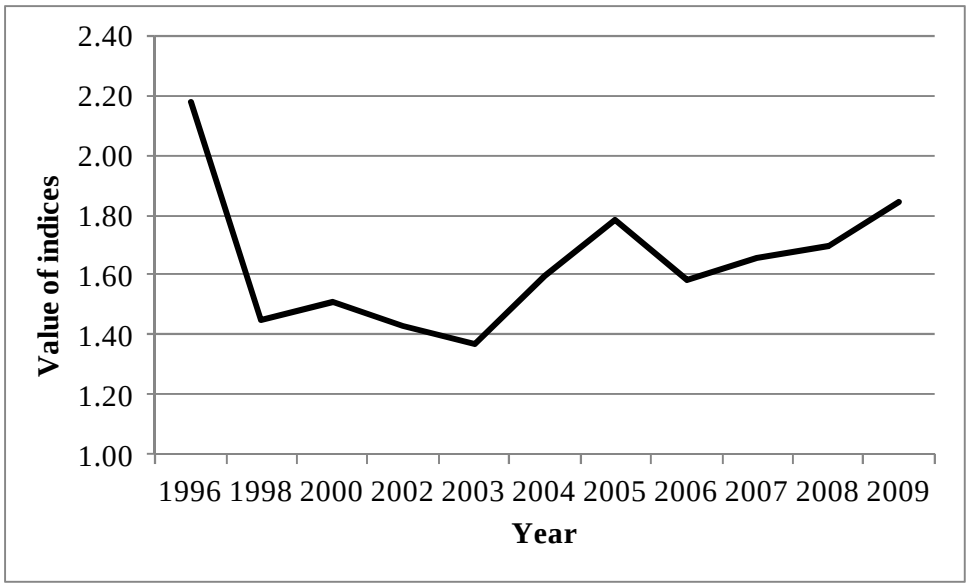
Figure 2.7 shows that between 2002 and 2007, the Republic of Niger did not make a significant progress concerning the rule of law. However, there is a progress between 2008 and 2009.

5. Control of Corruption

Control of Corruption is defined as "capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests" (Kaufmann, Kraay and Mastruzzi, 2010).

Figure 2.8

The Republic of Niger's Scores of Control of Corruption (1996-2009)



Source: WGI (2011).

Figure 2.8 shows since 2003, the Republic of Niger made improvements to increase their corruption indicator. It also tells us it is a long run process to fight against corruption in the Republic of Niger since the progress is very slow. The Republic of Niger needs to strengthen its policies in order to be above the median.

These five indicators (Voice and Accountability, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption) come from 31 different data sources and include several hundred variables. Kaufmann, Kraay and Mastruzzi, 2010, stated that data are collected through surveys of firms and households, commercial business information providers, non-governmental organizations, multilateral organizations and other public sector. Each of the data sources are chosen to provide a set of empirical proxies for the indicators (Kaufmann, Kraay and Mastruzzi, 2010). For example, a cross-country household or firm survey might provide information about respondents' perceptions or experiences with corruption, while a NGO or commercial data provider might provide its own assessments of

corruption based on its network of respondents (Kaufmann, Kraay and Mastruzzi, 2010). The WGI combine these different measures of corruption into a composite indicator that summarizes their common component (MCC, 2011). The same process is done for each indicator.[15] In a few cases data sources are updated by WGI only once every two to three years. The data sources are available annually reflect the perceptions of diverse group of responds and new data sources can be introduced or dropped, depending on the situation (Kaufmann, Kraay and Mastruzzi, 2010). The WGI data sources reflect the perceptions of different types of respondents, and several are surveys of individuals or domestic firms with first-hand knowledge of the governance situation in the country (Kaufmann, Kraay and Mastruzzi, 2010). These include the World Economic Forum's Global Competitiveness Report, the Institute for Management Development's World Competitiveness Yearbook, the World Bank / EBRD's Business Environment and Enterprise Performance surveys, the Gallup World Poll, Latinobarometro, Afrobarometro, and the Americasbarometer (Kaufmann, Kraay and Mastruzzi, 2010).

Additionally, WGI takes into consideration the views of country analysts at the major multilateral development agencies (the European Bank for Reconstruction and Development, the African Development Bank, the Asian Development Bank, and the World Bank), reflecting these individuals' in-depth experience working on the countries they assess; and together with some expert assessments provided by the United States Department of State and France's Ministry of Finance, Industry and Employment, WGI classifies these as "Public Sector Data Providers" in (Kaufmann, Kraay and Mastruzzi, 2010).

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[15] For further details: www.govindicators.org

A number of data sources provided by various Non-Governmental Organizations (NGOs), such as Reporters Without Borders, Freedom House, and the Bertelsmann Foundation, are also included; and WGI considers certain types of data from commercial business information providers, such as the Economist Intelligence Unit, Global Insight, and Political Risk Services (Kaufmann, Kraay and Mastruzzi, 2010).

Of the 31 data sources used in 2009, five are from commercial business information providers; surveys and NGOs contribute nine sources each; and the remaining eight sources are from public sector providers (Kaufmann, Kraay and Mastruzzi, 2010). Kaufmann, Kraay and Mastruzzi (2010), add that the largest surveys of WGI are Global Competitiveness Report survey and the Gallup World Poll each cover around 130 countries, but several regional surveys cover necessarily smaller sets of countries. The majority of the data sources from Freedom House and Reporters Without Borders are simply reproduced by WGI, and several other sources provided by commercial risk rating agencies and commercial survey organizations are purchased (Kaufmann, Kraay and Mastruzzi, 2010).

6. Scorings Process[16]

Kaufmann, Kraay and Mastruzzi (2010), state that the WGI rescales all the individual variables to run from zero to one by using the statistical approach called Unobserved Components Model (UCM). For WGI each of the individual data sources provides an imperfect signal of some deeper underlying notion of governance that is difficult to observe directly. How do they isolate an informative signal about the unobserved governance

[16] The scoring process is clearly explained by Kaufmann, Kraay and Mastruzzi in their book "World Governance Indicators, Methodology and Analytical Issues", 2010 or Kaufmann D., Kraay A.and Mastruzzi M., 2005: "Governance Matters IV: Governance Indicators for 1996-2004".

component common to each individual data source, and how do they optimally combine the many data sources to get the best possible signal of governance in a country based on all the available data?(Kaufmann, Kraay and Mastruzzi, 2010). WGI believes that the UCM could help them to deal with this signal extraction problem, and considers that UCM produces the point estimates for governance for every country, also provides an estimate of the margins of error for each individual source as well as for each of the composite governance indicators for each country (Kaufmann, Kraay and Mastruzzi, 2010). In other words, it expresses the observed data as a linear function of unobserved governance plus a disturbance term capturing perception errors and/or sampling variation in each indicator (Kaufmann, Kraay and Zoido-Lobatón, 1999). They assume that true governance has a mean of zero and a standard deviation of one, and that the error term has a zero mean (Kaufmann, Kraay and Mastruzzi, 2005). The main advantage of the model is that it allows WGI to obtain estimates of the variance of the disturbance term of each indicator; and then compute the mean of the conditional distribution of governance given the observed data for each country as a natural point estimate of the level of governance in that country; it is just a simply weighted average of the rescaled scores for each country (Kaufmann, Kraay and Mastruzzi, 2010).

Since WGI also knows that each of the sources of governance data uses different units to measure governance, they re-orient data from each source so that higher values correspond to better outcomes, and rescale each indicator by subtracting the minimum possible score and dividing by the difference between the maximum and the minimum scores, so that each indicator is on a possible scale from zero to one (Kaufmann, Kraay and Zoido-Lobatón, 1999).

For each of the components of governance defined above, Kaufmann, Kraay and Mastruzzi (2010) assume that the observed score of country *j* on indicator *k*, y_{jk}, as a linear function of unobserved governance in country *j*, g_j, and a disturbance term, ε_{jk}, as follows

$$(1) \qquad y_{jk} = \alpha_k + \beta_k (g_j + \varepsilon_{jk})$$

where α_k and β_k are parameters which map unobserved governance in country *j*, g_j, due to the fact that different sources use different units to measure governance. Kaufmann, Kraay and Mastruzzi (2010) also assume that g_j is a normally distributed random variable with mean zero and variance of one as well as the error terms with mean zero and variance that is the same across countries, but differs across indicators, i.e. $V[\varepsilon_{jk}] = \alpha_k^2$; and these error terms are independent across sources. The weights assigned to each source k are given by

$$(2) \qquad w_k = \alpha_k^{-2} / 1 + \sum_{k=1}^{k} \alpha_k^{-2}$$

which means a more informative signal of governance receive higher weight.
The WGI recognizes that there is imprecision due to the fact that available data are imperfect proxies and the margins of error provide users to take this imprecision into consideration when comparing countries over time (Kaufmann, Kraay and Mastruzzi, 2010). It also assumes that "changes in countries' relative positions are unlikely to be very different from changes over time in countries' absolute positions" (Kaufmann, Kraay and Mastruzzi, 2010).

In brief, measures are reported either in the standard normal units of the governance indicator, ranging from -2.5 to 2.5, with higher values corresponding to better governance, or in percentile rank terms ranging from 0 (lowest) to 100 (highest) among all countries worldwide (Kaufmann, Kraay and Mastruzzi, 2010).

It is important to note that, the WGI' s methodology has been the subject of criticisms due to the fact that there are problems in the interpretation of data as well as various biases in

perceptions data on governance. Despite criticisms against the WGI's indicators, there are many users (academics and policymakers) such as the MCC which based their decisions on these indicators to make countries eligible for development funding (Kaufmann, Kraay and Mastruzzi, 2007).

The MCC adjusts the median for low-income countries (LICs) and low middle-income countries (LMICs) to zero for all of the WGI; and country scores are calculated by taking the difference between actual scores and the median (MCC, 2011). The MCC (2011d) states that if the unadjusted median for LICs on Voice and Accountability is -0.70, in order to set the median at zero, the MCC simply adds 0.70 to each country's score. For instance, the Republic of Niger's Voice and Accountability score, which was originally -0.698, has been adjusted to 0.002 (0.70 + (-0.698) = 0.002).

Note that one of the main indicators of MCC "Control of Corruption is the "hard" hurdle in the selection process, meaning a country must score above the 50^{th} percentile to be eligible (Amy & Sheila, 2008). The indicator for corruption is a "pass/fail" test: should a country fall below the median on the corruption indicator, it will be disqualified from consideration unless other, more recent trends suggest otherwise (MCC, 2011b).

The indicators used by the World Bank Institute's (WBI) Governance Indicators are called the CCI (Control of Corruption Indicator) which is directly comparable with the CPI (Corruption Perceptions Indicators) developed by the NGO Transparency International. Table 2.2 below shows the differences between the CPI and CCI.

Table 2.2

Differences between the Corruption Perceptions Indicator and the Control of Corruption Indicator

Corruption Perceptions Index (CPI)/NGO Transparency International	Control of Corruption (CCI)/World Bank
- At least three different data base sources have to exist for a country to be included in the index.	- It uses 31 different data sources and several hundred variables.
- For a given year, the information on the three previous years is taken into consideration and treated as if it came from independent sources.	- It uses only the indicators for the year in question, hence better reflecting changes from one year to the next.
- It standardizes to run on an ordered scale of 0 (maximum corruption) to 10 (minimum corruption).	- It standardizes quantitative measure (standard normal variable) giving rise to a scale generally ranging from –2.5 (high level of corruption) to +2.5 (minimum level).

Source: Razafindrakoto and Roubaud (2006).

A country could fail the corruption hurdle last year and pass it this year and vice-versa, depending on experts' opinions used by the World Bank Institute's (WBI) Global. Also, it is important to note that a bad government's policy could affect a new good government program. Data lag on many of the indicators in a given year consider policies undertaken one or two years earlier (Hewko, 2010). In this case instead of judging a country on the speed and quantity of disbursements, the MCC could consider innovations and greater risk in the design and implementation of long term programs that focus on economic growth (Hewko, 2010).

In the study "The Cause of Corruption: A Cross-National Study" conducted by Treisman in 1998, it was confirmed that there is a correlation between higher perceived corruption and lower investment and growth. The more corrupt a country is, the less developed it will be. However, there is an exception that corruption is not correlated to

economic growth. For instance, Bangladesh scored poorly on most cross-country assessments of corruption, yet has managed to turn in impressive growth performance over the past decade (WGI, 2007). Rapid modernization could increase corruption, and corruption itself might inhibit rapid modernization (Treisman, 1998). A bad government, political instability (alternate military coups and presidential elections), and civil wars could definitely contribute to enhance corruption in a given country. Treisman (1998) regroups the causes of corruption into three mains areas: historical and cultural aspects, economic aspects and political aspects.

Historically and culturally speaking, Triesman (1998) states that "in nearly all Asian countries there has always been a tradition of corruption."A country background has to be considered when weighing its corruption indicator. Treisman (1998), states that countries that were former British colonies were perceived as significantly less corrupt than countries that had been colonized by other powers, but not more or less than a country that had never been colonized. Based on this result, a country other than a British colony would have more difficulty in receiving funding, and reducing the level of corruption would be a long run challenge without external support. That is why, instead of "failing" or "passing" the eligibility criteria, this study is going to explore other factors that might be taken into consideration to improve the current method for funding eligibility.

Economically speaking, bribery could have different meaning depending on where it is used. In underdeveloped countries "a bribe to a person holding a public position is not different from gifts" (Treisman, 1998). However, funding given by business companies to support presidential election in developed countries in order to access to some privilege is called "lobbying." Corruption is defined as "the abuse of public office for private gain"

(Razafindrakoto and Roubaud, 2006). That means both “gifts” and “lobby” are used for the same purpose, but users considered them different just by changing words.

Politically speaking, the structure of a government could enhance corruption. For instance, “decentralized political systems are more corruptible, because the potential corrupter needs to influence only a segment of the government, and because in a fragment system there are fewer centralized forces and agencies to enforce honesty” (Treisman, 1998). Treisman also adds whatever the nature of government; the level of corruption is determined by the policies adopted by this power. “Within a corrupt environment, people adjust their strategies accordingly and contribute to the general acceptance of the phenomenon, thus making it routine” (World Bank, 2010). Based on these factors, Treisman (1998) concludes that the relationships among variables (economic growth, GDP, total investment, private or public expenditure, international trade, foreign investment and capital flows, inflation, etc.) are too complex that it will be difficult to find efficient instruments for their analysis. According to Triesman (1998), while the corruption is frequent in federal countries, it is possible that the competition between jurisdictions reduces the size of bribes. In addition, he suggested that to deal with these complex relationships among variables, further work with new data and a broader search for appropriate instruments need to be done in order to avoid the controversial conclusions of some factors such as the influence of democratic institutions and the extent of state intervention.

As previously mentioned, corruption is based on experts’ opinion; the question Treisman (1998) poses then arises is all corruption equal? For instance, Razafindrakoto and Roubaud (2006) imply that if a construction company bribes a government to get a contracting job, is that the same as a doctor bribing his way into a government run university?

That is why they conclude that there are ideological biases when experts tend to rank countries based on their own political preferences. What happens when experts underestimate or overestimate the real level of corruption? When there is underestimation, the population of the lowest income countries would be hit by "triple whammy": the whammy of their leaders, the whammy of the application of the principle of selectivity and the whammy of the underestimation of the governance indicators in the application of aid selectivity (Razafindrakoto and Roubaud, 2006). In their 2006 study, Razafindrakoto and Roubaud, found that the experts' estimations of petty corruption have nothing to do with the reality; therefore cannot be used as a satisfactory proxy for the objective phenomenon. They added the more poorly a country scores in the international databases, the higher the experts' overestimation. So why does the MCC focus mainly on this indicator which is based on subjective perceptions? Suppose two countries A and B. Country A is "not corrupt"; however, after getting funding, this country is becoming more and more corrupt according to MCC. In contrast, country B is "corrupt" according to MCC, but is consistently making improvements to become less corrupt. In this case what would be the preferable funding choice? Chose a country based on its result on corruption for a given year or chose a country based on the progress it is making to get out of the corruption.

G. Freedom House's Indicators

The Freedom House index gives annual estimates on a country's opportunity to act spontaneously in a variety of fields mostly outside the control of the government and other centers of potential domination throughout two categories: political rights and civil liberties. "Political rights enable people to participate freely in the political process, including the right to vote freely for distinct alternatives in legitimate elections, compete for public office, join

political parties and organizations, and elect representatives who have a decisive impact on public policies and are accountable to the electorate" (Freedom House, 2011a). "Civil liberties allow for the freedoms of expression and belief, associational and organizational rights, rule of law, and personal autonomy without interference from the state" (Freedom House, 2011a).

The methodology of the survey is based on Universal Declaration of Human Rights' standards of political rights and civil liberties. The survey rates the rights and social freedoms enjoyed by individuals, and it includes both analytical reports and numerical ratings for 193 countries and 15 select territories (Freedom House, 2011a).

1. Ratings Process

According to the Freedom House (2007), the ratings process is based on a checklist of 10 political rights questions and 15 civil liberties questions. The political rights questions are grouped into the three sub-categories: Electoral Process (3 questions), Political Pluralism and Participation (4), and Functioning of Government (3). The civil liberties questions are grouped into four sub-categories: Freedom of Expression and Belief (4 questions), Associational and Organizational Rights (3), Rule of Law (4), and Personal Autonomy and Individual Rights (4). The highest number of points that can be awarded to the political rights checklist is 40 (or a total of up to 4 points for each of the 10 questions). The highest number of points that can be awarded to the civil liberties checklist is 60 (or a total of up to 4 points for each of the 15 questions). The total number of points awarded to the political rights and civil liberties checklists determines the political rights and civil liberties ratings from 1 through 7. Each pair of political rights and civil liberties ratings is averaged to determine an overall status of "Free," "Partly Free," or "Not Free" (Table 2.3). Those whose ratings average 1.0 to 2.5 are considered Free, 3.0 to 5.0 Partly Free, and 5.5 to 7.0 Not Free.

Table 2.3

Freedom House Political Rights (PR) and Civil Liberties (CL) Scoring Criteria

Combined Average of the PR and CL Rating	Country Status
1.0 to 2.5	Free
3.0 to 5.0	Partly Free
5.5 to 7.0	Not Free

Source: Freedom House (2011).

Table 2.4

Freedom House Political Rights Scores for Low and Low Middle-income Countries

Total Scores	Political Rights Rating	% Low-Income Countries 2011	% Low Middle-Income Countries 2011
36-40	1	2	12
30-35	2	11	21
24-29	3	19	21
18-23	4	17	6
12-17	5	15	6
6-11	6	19	21
0-5	7	17	12

Source: Freedom House (2011).

Table 2.5

Freedom House Civil Liberties Scores for Low and Low Middle-income Countries

Total Scores	Civil Liberties Rating	% Low-Income Countries 2011	% Low Middle-Income Countries 2011
53-60	1	1	12
44-52	2	7	12
35-43	3	24	27
26-34	4	21	21
17-25	5	23	18
8-16	6	15	9
0-7	7	9	0

Source: Freedom House (2011).

For each category, the Freedom House gives these following explanations about the ratings:

2. Political Rights

Political rights ratings are presented in Table 2.4. Countries and territories that receive a rating of 1 for political rights come closest to ensuring the freedoms embodied in the checklist questions, beginning with free and fair elections. Two % of low-income countries earned this rating in 2011. A rating of 2 means that factors as political corruption, violence, political discrimination against minorities, and foreign or military influence on politics may be present and weaken the quality of freedom. Eleven % of low-income countries earned this rating in 2011. Ratings of 3, 4, 5 imply that states and territories in these categories may still enjoy some elements of political rights, including the freedom to organize quasi-political groups, reasonably free referenda, or other significant means of popular influence on government. Countries and territories with political rights rated 6 have systems ruled by military juntas, one-party dictatorships, religious hierarchies, or autocrats. Nineteen % of low-income countries earned this rating in 2011. Finally, for countries and territories with a rating of 7, political rights are absent or virtually nonexistent as a result of the extremely oppressive nature of the regime or severe oppression in combination with civil war. Seventeen % of low-income countries earned this rating in 2011.

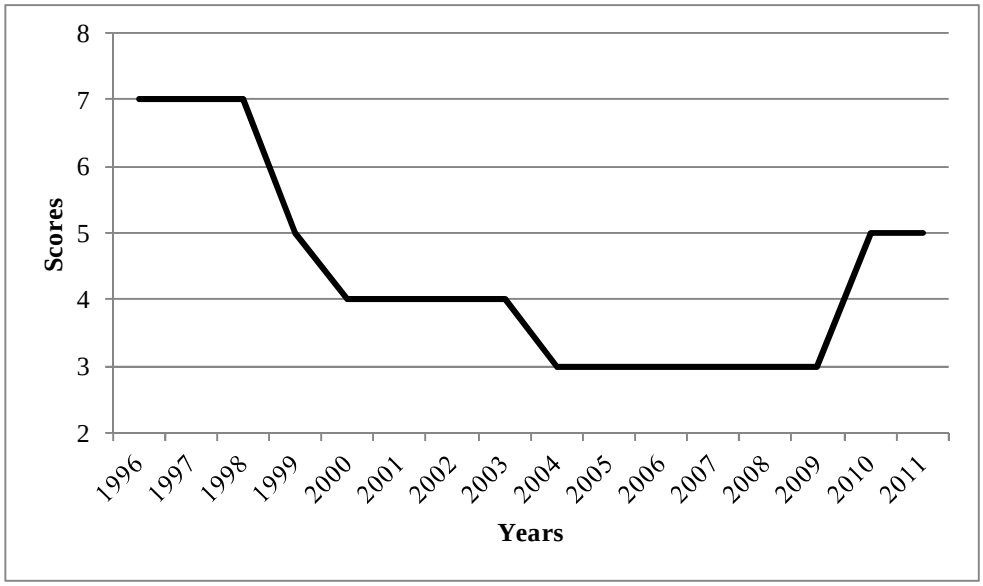
3. Civil Liberties

Civil liberties rankings are presented in Table 2.5. Countries and territories that receive a rating of 1for civil liberties enjoy free economic activity and tend to strive for equality of opportunity. One % of low-income countries earned this rating in 2011. A Rating of 2 means that states and territories have deficiencies in a few aspects of civil liberties, but are still

relatively free. Seven % of low-income countries earned this rating in 2011. Ratings of 3, 4, 5 imply the level of oppression increases at each successive rating level, including in the areas of censorship, political terror, and the prevention of free association. Countries and territories with civil liberties rated may be characterized by a few partial rights, such as some religious and social freedoms, some highly restricted private business activity, and relatively free private discussion. Fifteen % of low-income countries have this rating in 2011. Finally, countries and territories with a rating of 7 have virtually no freedom. For instance, in 2011, seven low-income countries designated as the worst of the worst: Burma, Eritrea, North Korea, Somalia, Sudan, Turkmenistan, and Uzbekistan; all seven received Freedom in the World's lowest ratings: 7 for political rights and 7 for civil liberties (Freedom House, 2011b).

Figure 2.9

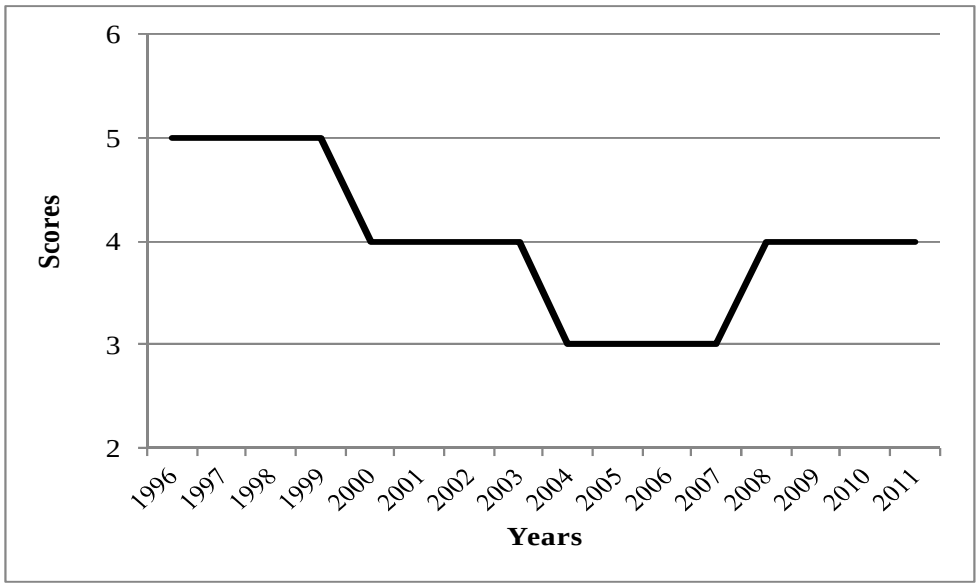
The Republic of Niger's Scores of Political Rigths (1996-2011)



Source: Freedom House (2011).

Figure 2.10

The Republic of Niger's Scores of Civil Liberties (1996-2011)



Source: Freedom House (2011).

Both figures 2.9 and 2.10 show that the Republic of Niger made progress from 1998 to 2008. Based on these scores for both political rights and civil liberties, the Republic of Niger could be considered as partly free, according to Freedom House's interpretation of scores from 1998 to 2011.

For both categories Civil Liberties and Political Rights, the MCC adjusts the years on the x-axis of the MCA Country Scorecards to correspond to the period of time covered by the *Freedom in the World* publication. For instance, Fiscal Year 2011 (FY11) Political Rights data come from *Freedom in the World 2010* and are labeled as 2009 data on the scorecard.

H. World Health Organization (WHO)

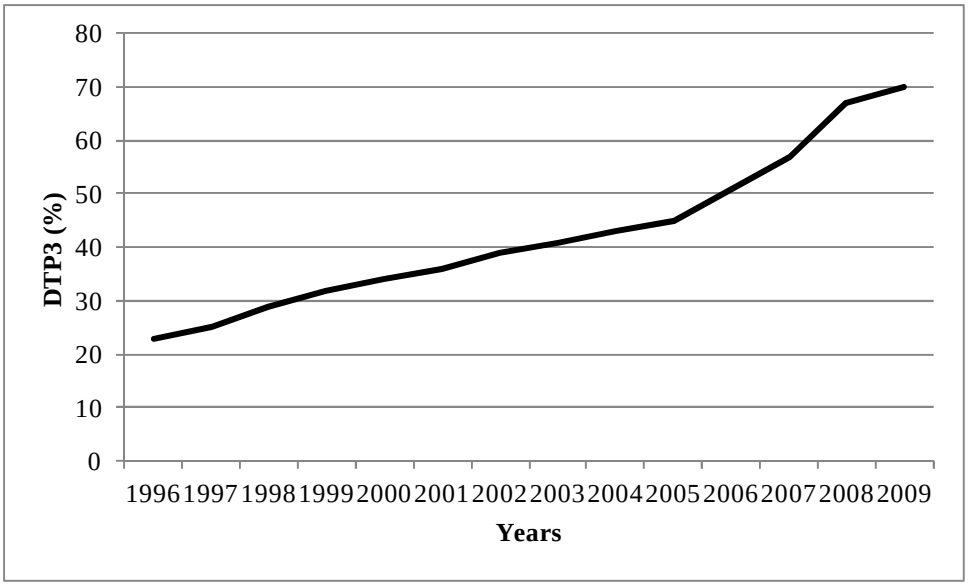
1. Immunization Rate

The MCC considers the national Diphtheria-Pertussis-Tetanus (DPT3) vaccination rate and the measles (MCV) vaccination rate estimated by the WHO and UNICEF. Diphtheria-Pertussis-Tetanus (DPT3) vaccination: is "The percentage of one-year-olds who have received

three doses of the combined diphtheria, tetanus toxoid and pertussis vaccine in a given year (WHO, 2011). WHO considers the Diphtheria Tetanus toxoid and Pertussis (DTP3) immunization coverage among 1 year olds. The estimate of immunization coverage is derived by dividing the total number of vaccinations given by the number of children in the target population, often based on census projections; and the indicator is estimated as the percentage of children ages 12–23 months who received three doses of the combined diphtheria, tetanus toxoid and pertussis vaccine time before the survey (WHO, 2011).[17]

Figure 2.11

The Republic of Niger's Scores of Diphtheria Tetanus Toxoid and Pertussis (DTP3) Immunization Coverage Among 1-Year-olds (1996-2009)



Source: WHO (2011).

Figure 2.11 shows that the Republic of Niger is making significant progress concerning the Diphtheria Tetanus toxoid and Pertussis (DTP3) immunization coverage among 1year olds since 1996 (around 47% increase between 1996 and 2009).

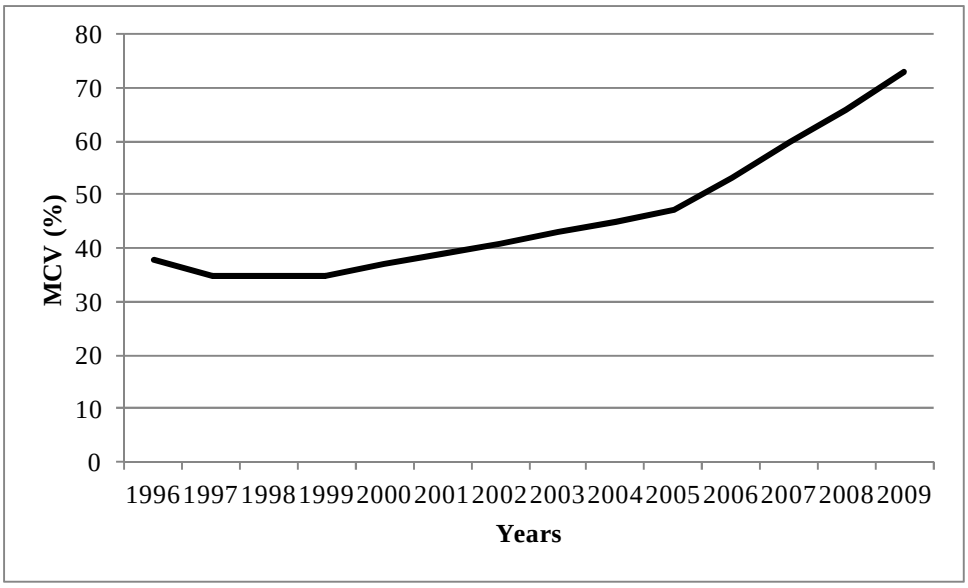
[17] For detailed information please read: http://apps.who.int/gho/indicatorregistry/App_Main/view_indicator.aspx?iid=88

Measles Vaccination: is defined as "The percentage of children under one year of age who have received at least one dose of measles-containing vaccine in a given year" (WHO, 2011).[18] The indicator is calculated as the proportion of children less than 12-23 months of age receiving one dose of measles-containing vaccine, and WHO considers Measles (MCV) immunization coverage among 1 year olds. The estimate of immunization coverage is derived by dividing the total number of vaccinations given by the number of children in the target population, often based on census projections (WHO, 2011). For both indicators, the highest estimate of coverage is 99%, and there is no coverage greater than 100%; otherwise results contained errors (WHO, 2011). One weakness of this method is the choice of rules, the decision as to which rule should apply in a given circumstance, and the absence of any articulation of uncertainty (WHO, 2011).

[18] For detailed information please read:
http://apps.who.int/gho/indicatorregistry/App_Main/view_indicator.aspx?iid=95

Figure 2.12

The Republic of Niger's Scores of Measles (MCV) Immunization Coverage Among 1-Year-olds (1996-2009)



Source: WHO (2011).

Figure 2.12 shows that the Republic of Niger is making progress concerning the MCV coverage among 1 year olds since 1999, an increase of 38% between 1999 and 2009).

The MCC uses the simple average of the national diphtheria-pertussis-tetanus (DPT3) vaccination rate and the measles (MCV) vaccination rate. If a country is missing data for either DPT3 or Measles, it does not receive an index value (MCC, 2011d).

2. Health Expenditures

WHO (2011) estimates health expenditures as "the sum of outlays for health maintenance, restoration or enhancement paid for in cash or supplied in kind." This indicator represents general government expenditure on health as a percentage of total government expenditure which includes the consolidated outlays of all levels of government: territorial authorities (Central/Federal Government, Provincial / Regional / State / District authorities;

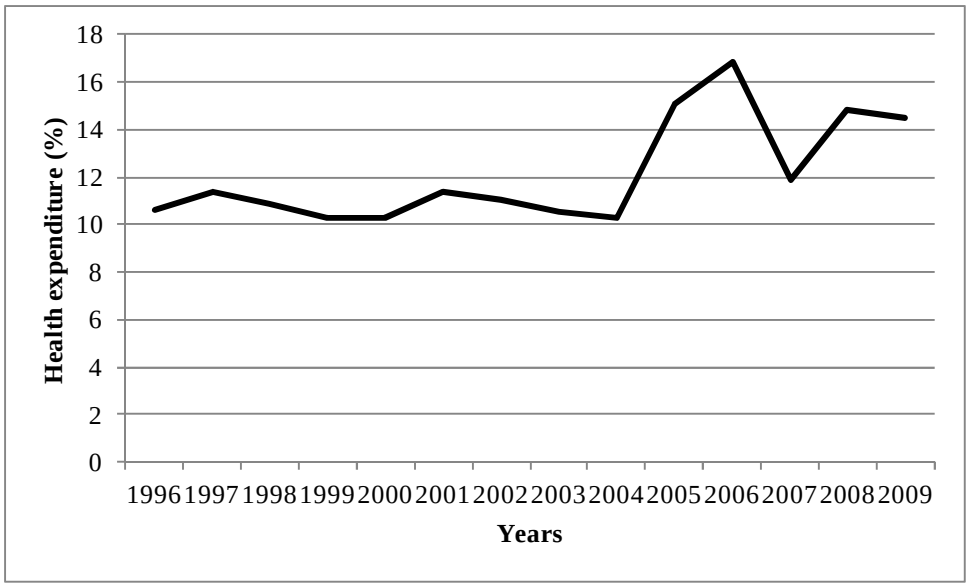
Municipal/Local governments), social security and extra budgetary funds (WHO, 2011).[19] In this indicator, WHO considers that resources are tracked for all public entities acting as financing agents such as managing health funds and purchasing or paying for health goods and services.

Data are generated from sources that WHO has been collecting for over ten years. The main sources are the EUROSTAT database, International Monetary Fund (IMF), government financial statistics and international financial statistics; Organization for Economic Co-operation and Development (OECD) health data; and the United Nations national accounts statistics. National sources include National Health Accounts (NHA) reports, National Accounts (NA) reports, General Government (GG) accounts, Public Expenditure Reviews (PER), government expenditure by purpose reports Classification of the Functions of Government (COFOG), institutional reports of public entities involved in health care provision or financing, notably social security and other health insurance compulsory agencies and Ministry of Finance (MoF) reports (WHO, 2011). Other possible data sources include executed budget and financing reports of social security and health insurance compulsory schemes, central bank reports, academic studies, reports and data provided by central statistical offices and ministries, statistical yearbooks and other periodicals, and on official web sites (WHO, 2011). WHO implies that to estimate the indicator, averages are weighted by population to obtain global and regional averages for income groups (World Bank classification) and for WHO Regions; and missing values are estimated using various accounting techniques depending on the data available for each country.

[19] For detailed information please read:
http://apps.who.int/gho/indicatorregistry/App_Main/view_indicator.aspx?iid=93

Figure 2.13

The Republic of Niger's Scores of General Government Expenditure on Health As a Percentage of Total Government Expenditure (1996-2009)



Source: WHO (2011).

Figure 2.13 shows that the Republic of Niger did not make a significant progress concerning health expenditure between 1996 and 2003. The share of expenditure for health started increasing in 2004 and reached its highest point in 2006, this could be related to the political stability that the Republic of Niger experienced during this period. The MCC relies on the World Health Organization (WHO) for data on public health expenditure.

I. United National Educational, Scientific, and Cultural Organization (UNESCO)

1. Primary Education Expenditures[20]

Primary education expenditures represent the total public expenditure on education (current and capital) expressed as a percentage of the Gross National Income (GNI) or Gross National Product (GNP) or Gross Domestic Product (GDP) in a given financial year

[20] Graph cannot be drawn because there were not data in 2003, 2004, 2005, and 2008.

(UIS/UNESCO, 2009). This indicator shows the proportion of a country's wealth generated during a given financial year that has been spent by government authorities on education, and it is calculated by dividing the total public expenditure on education in a given financial year by the GNI of the country for the corresponding year and multiply by 100 (UIS/UNESCO, 2009).

$$(3) \qquad \%XGNI_t = (PXE_t/GNI_t) * 100$$

Where :

$\%XGNI_t$ = Percentage public expenditure on education in financial year t

PXE_t = Total Public expenditure on Education in financial year t

GNI_t = Gross National Income in financial year t

The MCC relies on UNESCO Institute of Statistics as its primary source and self-reported data from national governments as its secondary source; and UNESCO data are treated as the preferred source of information (MCC, 2011d). For instance, according to MCC (2011d), MCC first determined if a country has a value reported by UNESCO for 2010, 2009, 2008, or 2007. If so, the most recent data available within those four years were used. If a country did not have a value from UNESCO within four years, the MCC uses the most recent available data from national sources. If a country has neither UNESCO data nor nationally reported data it does not receive a score.

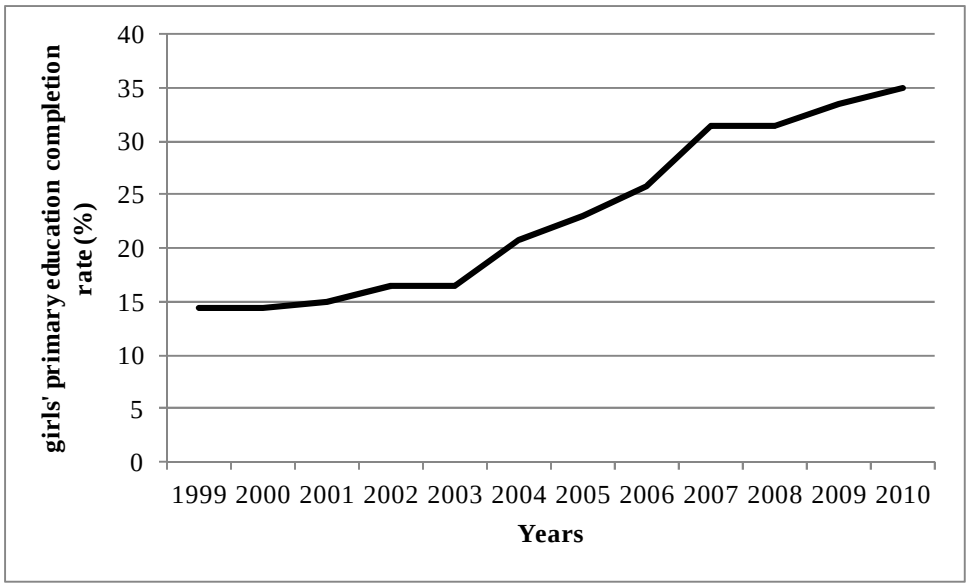
The MCC requires inclusion of all government expenditures, including sub-national expenditures and the consolidated public sector. Also, as better data become available, UNESCO and the MCC make backward revisions to historical data (MCC, 2011d).

2. Girls' Primary Education Completion Rate

Girls' primary education completion rate is measured as the gross intake ratio in the last grade of primary which is the "total number of new entrants in the last grade of primary education, regardless of age, expressed as a percentage of the population at the theoretical entrance age to the last grade of primary (UIS/UNESCO, 2009). This could be an automatic disadvantage for countries where cultural and religious practices discourage girls' education. This indicator is calculated as the total number of female students enrolled in the last grade of primary, minus the number of female students repeating the last grade of primary, divided by the total female population of the entrance age of the last grade of primary (MCC, 2011d). The MCC uses the most recent score year available. However, due to the fact that the ratio can exceed 100%, due to over-aged and under-aged children who enter primary school late/early and/or repeat grades, the MCC considers the upper-bound estimate of the actual female primary completion rate (MCC, 2011d).

Figure 2.14

The Republic of Niger's Scores of Gross Intake Ratio to the Last Grade of Primary: Female (1999-2010)



Source: UNESCO (2011).

Figure 2.14 shows a significant progress that the Republic of Niger made since 1999 about girls' education completion rate (around 21% increase).

It is important to underline that another area of the MCC's eligibility criteria that has been subject of criticism is "investing in people." This area includes immunization rate, public expenditure on health, and public expenditure on primary education, girls' primary education completion rate, and natural resources management. All these indicators require upstream investments in order to perform above the median. How can a poor country invest in these areas without external sources of funding? When comparing to countries which are flooded by foreign aid, a poor country with little external support would be discriminated against in this case and in case fall further behind the mean because other countries could have money going to them, thus could improve their scores. There appears to be two main problems when using these indicators. First, these indicators are not directly linked with

economic growth in a given country. In other words, it takes time to see their impacts on economic growth. For instance, the increase of funding does not translate into better education or quality of education; it will take sometimes decades to fully measure their impacts on economic growth (Bellefleur et al 2010). Second, the data collected are somehow ambiguous or with errors since the MCC uses data form WHO which in turn uses many sources to collect data. The "urban bias" could be mistaken by sources due to the fact that a government spends a lot on health services does not mean that everyone benefits from them.

Even though there are critics against some of the MCC's indicators, some abovementioned studies have made suggestions in order to improve the selection process. Bellefleur et al (2010), suggest that there would be flaws in "investing in people" due to the difficulties of using an input indicator, the MCC could take output indicators and supplemental data such as Body Mass Index and child mortality into consideration. Bellefleur et al (2010) also suggest to the MCC to consider equitable distribution of services across the population, and fit the concept of "investing in people" with poverty reduction and sustainable economic growth.

Table 2.6

MCC vs. Bellefleur et al (2010) Investing in People Indicators

MCC's Investing in People indicators (2010)	Bellefleur et al 2010 (suggestions)
1. Public Expenditure on Health	1. Immunization Rates
2. Public Expenditure on Primary Education	2. Public Expenditure on Health, supplemented by output indicators and other information when possible
3. Immunization Rates (DPT3 and Measles)	3. Body Mass Index*
4. Girls' Primary Education Completion	4. Child Mortality
5. Natural Resource Management	5. Investment in Education
	a. Public Expenditure on Primary Education
	i. Educational Quality Indicator(s): e.g., grade repetition rates, percentage of trained teachers, etc.
	b. Girls' Education
	i. Girls' Primary Education Completion Rate
	ii. Girls' Secondary Education Enrollment
	6. Natural Resource Management
	a. Eco-Region Protection
	b. Access to Improved Water
	c. Access to Improved Sanitation
	7. Investment in Infrastructure
	a. Public Expenditure on Roads
	b. Nighttime Lights

Source: Bellefleur et al (2010).

* Denotes Body Mass Index and Investment in Infrastructure performed well in terms of data quality and their abilities to serve as proxies for a government's commitment to investing in people (Bellefleur et al, 2010).

J. Center for International Earth Science Information Network (CIESIN) and the Yale Center for Environmental Law and Policy (YCELP)

1. Natural Resource Management

The Natural Resource Management indicator has been identified due to a proposal submitted to MCC in May 2005 by the Center for International Earth Science Information Network (CIESIN) at Columbia University, and which included the Yale Center for Environmental Law and Policy (YCLEP), the University of New Hampshire Water Systems Analysis Group, the Wildlife Conservation Society, and the Columbia University Tropical Agriculture Program, trough a consortium. It includes four indicators (MCC, 2011d): 1) Eco-Region Protection: Developed by CIESIN, this indicator assesses whether a country is protecting at least 10% of all of its biomes (e.g. deserts, forests, grasslands, aquatic, and tundra). According to CIESIN, they treat protected status as a necessary but not sufficient condition for an ecological region to be "effectively conserved." The data comes from World Wildlife Fund and the United Nations Environment Program World Conservation Monitoring Center; 2) Access to Improved Sanitation: Produced by the WHO and the UNICEF, this indicator measures the percentage of the population with access to facilities that hygienically separate human excreta from human, animal, and insect contact; 3) Access to Improved Water: Produced by the WHO and the UNICEF, this indicator measures the percentage of the population with access to at least 20 liters of water per person per day from an "improved" source (household connections, public standpipes, boreholes, protected dug wells, protected springs, and rainwater collection) within one kilometer of the user's dwelling; 4) Child Mortality (Ages 1-4): Produced by the Population Division of the United Nations Department of Economic and Social Affairs. They stated that the causes of child mortality among 1–4 year

olds are mainly influenced by environmental causes. Since 2009, the indicator was changed to the probability of dying between age 1 and 5 instead of the number of deaths per 1000 children aged 1 to 4.

2. CIESIN and YCLEP methodology

For Access to Adequate Sanitation and Access to Improved Water, the proximity-to-target measure is equal to the reported percentage. For example, if a country has 84% of its population with access to adequate sanitation, it is considered to have a proximity-to-target score of 84. For child mortality, CIESIN and YCLEP compute the ratio of the measured probability of dying to the highest observed probability of dying, which is 0.141, and multiply that by 100 to make it comparable to the 0-100 scale used in the other measures. The proximity-to-target measure is this number, which ranges from 0-100, subtracted from 100. For example, a country whose children in the 1-5 age groups have a probability of dying of 0.004 would have a proximity-to-target score of 97.2 (0.004/0.1414=0.028; 0.028 x100=2.8; 100-2.8=97.2). For eco-region protection the proximity-to-target score is 10 times the weighted average of the biome protection scores, which are capped at 10% to correspond to the target. For example, a country with an eco-region protection score of 7 would have a proximity-to-target score of 70. The 10% target was established by the Convention on Biological Diversity (CBD) in decision VII/30 as target 1.1 of the 2010 Targets, "At least 10% of each of the world's ecological regions effectively conserved."

The MCC simply averages the four, equally weighted indicators (25%).

K. International Finance Corporation (IFC)

1. Business Start-up

International Finance Cooperation (IFC) calculates the business start-up indicator as the average of two indicators: 1) Days to start a business: This component measures the number of calendar days it takes to comply with all procedures that are officially required for an entrepreneur to start up and formally operate an industrial or commercial business. These include obtaining all necessary licenses and permits and completing any required notifications, verifications or inscriptions for the company and employees with relevant authorities; 2) Cost of starting a business: This component measures the cost of starting a business as a percentage of country's per capita income. The IFC records all procedures that are officially required for an entrepreneur to start up and formally operate an industrial or commercial business. These include obtaining all necessary licenses and permits and completing any required notifications, verifications or inscriptions for the company and employees with relevant authorities.

The MCC normalizes the indicators to create a common scale for each of the. Each indicator is transformed using a simple formula:

(4) Normalized score = $\frac{\text{Maximum observed value} - \text{Country X's raw score}}{\text{Maximum observed value} - \text{Minimum observed value}}$

For instance, to calculate the Republic of Niger's normalized score on the Days to start a business indicator, the MCC first subtracts the Republic of Niger's raw score (17) (minimum observed value) from the maximum observed value (694).[21] They then divide the difference between those two numbers (677) by the difference between the maximum

[21] The minimum and maximum observed values are the minimum and maximum of all 183 countries covered by the Doing *Business report* 2011 (MCC, 2011).

observed value (694) and the minimum observed value (1), which determines a normalized "days to start a business" score of 0.9769.

After both of the two subcomponents were transformed into a common scale, MCC calculates the Business Start-Up Index using the following formula:

(5) Business Start-Up = .5(IFC Days to Start a Business) + .5(IFC Cost of Starting a Business)

In the Republic of Niger's case, its normalized Days to Start a Business score (0.9769) is given a 50% weight and its Cost of Starting a Business score (0.8391) is given a 50% weight. This leads to a Business Start-Up index value of 0.908 (0.5(0.9769) + 0.5(0.8391) = 0.908).

When it is easy and cheap to do business in a given country, there is an incentive for businesses to invest in the country which lead to reduce the unemployment rate, thus contribute to the country's economy. In addition, more jobs in a formal economy will mean that more workers are protected by pensions, safety regulations and health benefits (World Bank/IFC, 2006).

2 Land Rights and Access

The land rights and access indicator is an aggregation of International Fund for Agricultural Development (IFAD)'s *Access to Land* (50% weight) and the International Finance Corporation IFC's Days to Register a Property (25% weight) and Cost of Registering a Property (25% weight). The IFAD *Access to Land* indicator is formed from an equally weighted average of five subcomponents (Radelet, Rose and Herrling, 2006): 1) The extent to which the law guarantees secure land tenure for the poor. IFAD defines poverty as the situation of households with persons having the lowest incomes per person, usually one half to two thirds of GDP per person; 2) The extent to which the law guarantees secure land tenure

for women, indigenous peoples, and other vulnerable groups; 3) The extent to which land is titled and registered; 4) The status and functionality of formal land markets; and 5) The extent to which the law provides regulation for the allocation and management of communal lands.

The Land Rights and Access indicator gives a 10% weight to each of the five IFAD sub-components and 25% weight to each of the two IFC indicators, the number of days and the costs to register land (Radelet, Rose and Herrling, 2006).The IFC indicators provide a complement to the IFAD indicators; however, the IFAD indicator is strong on measures of equity while the IFC data adds measures of efficiency (Radelet, Rose and Herrling 2006).

According to the MCC (2011d), countries that received a "no practice" score on the IFC's time to register property indicator were assigned the maximum observed value (i.e. the worst possible score) plus one additional day. Also, countries that received a "no practice" score on the Cost of Registering Property indicator were assigned the maximum observed value (i.e. the worst possible score) plus one additional percentage point of the property value. For instance, in FY2011, Liberia had the worst score (0.362). When an economy has no laws or regulations covering a specific area, for example bankruptcy, it receives a 'no practice' mark; similarly, if regulation exists but is never used in practice, or if a competing regulation prohibits such practice, the economy receives a 'no practice' mark (MCC, 2011d).

The MCC creates a common scale for each of the indicators by normalizing them based on this following formula:

(6) $$\text{Normalized score} = \frac{\text{Maximum observed value} - \text{Country X's raw score}}{\text{Maximum observed value} - \text{Minimum observed value}}$$

For instance, to calculate Niger's normalized score on the IFC Days to Register Property indicator, MCC first subtracts the maximum observed value (513) from the Republic

of Niger's raw score (35).[22] They then divide the difference between those two numbers (478) by the difference between the maximum observed value (513) and the minimum observed value (2). This determines a normalized "days to register property" score of 0.9354. After each of the three sub-components was transformed into a common scale, MCC calculates the Land Rights and Access Index using the following formula:

(7) Land Rights and Access = .5(IFAD) + .25(IFC Time to Register Property) + .25(IFC Cost of Registering Property)

In the Republic of Niger's case, its normalized IFAD score (0.2754) is given a 50% weight, its IFC Time to Register Property score is given a 25% weight (0.9354), and its IFC Cost of Registering Property score (0.6174) is given a 25% weight. This gives a Land Rights and Access index value of 0.5260 (05(0.2754) + 0.25(0.9354) + 0.25(0.6174) = 0.5260).[23]

L. World Economic Outlook (WEO)/International Monetary Fund (IMF)

1. Inflation

WEO inflation data reflect annual percentage change averages for the year, not end-of-period data (MCC, 2011d). A country needs to have an inflation rate of less than 15% to pass this indicator (MCC, 2011).

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[22] The minimum observed values is the minimum of all 183 countries covered by the Doing Business report 201 (MCC, 2011).

[23]Since high scores on the IFC indicators represent *low* levels of performance and high scores on the IFAD indicator represents *high* levels of performance, MCC chooses to invert either the IFAD normalized scale or the IFC normalized scales. MCC just subtracts each country's normalized value from 1. As such, Niger's original normalized IFAD score was 0.7246 and its inverted normalized IFAD score was 0.2754 (1-0.7246) (MCC, 2011).

2. Fiscal Policy

The MCC (2011d) states that the fiscal policy indicator measures general government net lending/borrowing as a percent of GDP, averaged over a three year period. Net lending / borrowing are calculated as revenue minus total expenditure (MCC, 2011d).

M. Heritage Foundation

1. Trade policy

Trade policy indicator is based on Trade Freedom score which is one of the Heritage Foundation' annual *Index of Economic Freedom*. "In an economically free society, individuals would be free and entitled to work, produce, consume, and invest in any way they choose under a rule of law, with their freedom at once both protected and respected by the state" (Heritage Foundation, 2011). Heritage Foundation defines Trade Freedom as "an economy's openness to the import of goods and services from around the world and the citizen's ability to interact freely as buyer or seller in the international marketplace". The indicator scale ranges from 0 to 100, where 0 represents the highest level of protectionism and 100 represents the lowest level of protectionism (Heritage Foundation, 2011). Heritage Foundation uses two inputs to score the Trade Freedom; the trade weighted average tariff rate and the non-tariff barriers.

The calculation of the scores is based on their following equation:

(8) Trade Freedomi = (((Tariffmax–Tariffi)/(Tariffmax–Tariffmin)) * 100) – NTBi

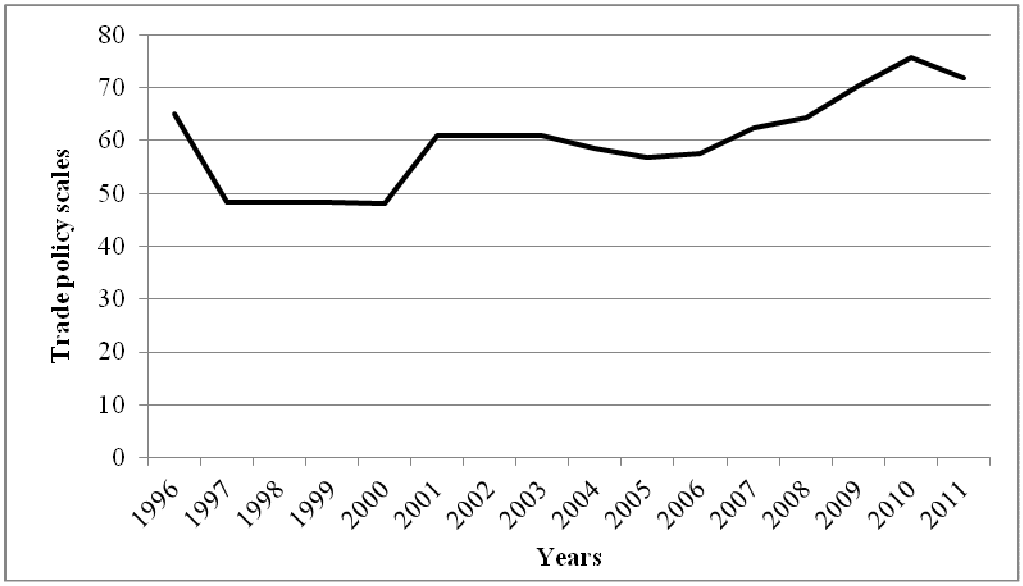
where Trade Freedomi represents the trade freedom in country *i*, Tariffmax and Tariffmin represent the upper and lower bounds for tariff rates (%), and Tariffi represents the weighted average tariff rate (%) in country *i*. The minimum tariff is naturally zero percent, and the upper bound was set as 50 percent. An NTB penalty is then subtracted from the base score.

There are five penalties used by Heritage Foundation (Heritage Foundation, 2011): First, 20 (penalties) - NTBs are used extensively across many goods and services and/or act to effectively impede a significant amount of international trade. Second, 15 (penalties) - NTBs are widespread across many goods and services and/or act to impede a majority of potential international trade. Third, 10 (penalties) - NTBs are used to protect certain goods and services and impede some international trade. Fourth, 5 (penalties) - NTBs are uncommon, protecting few goods and services, and/or have very limited impact on international trade. Finally, 0 (penalty) - NTBs are not used to limit international trade.

Besides these penalties, Heritage foundation considers other factors: First of all, the *Index* uses the most recently reported weighted average tariff rate for a country; however, if another reliable source reports more updated information on the country's tariff rate, the grading of this component could be reviewed. Second, the *Index* uses the country's average applied tariff rate when the weighted average applied tariff rate is not available; and when the country's average applied tariff rate is not available, the weighted average or the simple average of Most Favored Nation (MFN) tariff rates is used. Finally, data on tariffs and NTBs are obtained from different sources: the World Bank's *World Development Indicators* and *Data on Trade and Import Barriers: Trends in Average Tariff Rates for Developing and Industrial Countries*; the World Trade Organization's *Trade Policy Reviews*; the Office of the U.S. Trade Representative's *National Trade Estimate Report on Foreign Trade Barriers*, the World Bank's *Doing Business* report, the U.S. Department of Commerce's *Country Commercial Guide*, the Economist Intelligence Unit's *Country Reports*, *Country Profiles*, and *Country Commerce* data, and "official government publications of each country" (Heritage Foundation, 2011).

Figure 2.15

The Republic of Niger's Scores of Trade Policy Scale (1996-2011)



Source: Heritage Foundation (2011).

Figure 2.15 shows that the level of protectionism in the Republic of Niger trends to be low since 2000. In other words, the Republic of Niger is opened to international market, given the definition of trade freedom by Heritage Foundation. Niger was member of the Economic Community of West African States (ECOWAS) in 1975 and later on member of Union Economique et Monétaire de l'Afrique de l'Ouest (UEMOA) in 1994.

III. DATA AND METHODOLOGY

A. Data Sources

As previously defined in the literature review, the MCC uses indicators from ten different sources (see Figures 2.1 to 2.3). This study collected data from the above-mentioned sources used in computing the MCC index. The data collected are from 2009 for the purpose of this study. Table 7.2 gives an example of WGI's indicators from 2009 with a standard error associated with a mean score. Given the fact that the mean of an indicator score from the WGI is the average of multiple on the ground surveys, a standard error is also published by the WGI. This is important to this study because if the standard error is low then the experts' perceptions seem to be similar. If the standard error is large (relative to the mean) then there would appear to be disagreement among the experts on the ground about how a country faired on a certain indicator. It is also important to note that even if the standard error is small the distribution around the mean may be large enough to result in some observations where a country is above the median for its World Bank income grouping and some observations it is below the median. This is of the upmost importance since the MCC makes funding decisions based on a countries relative standing to its income group's median. Table 7.3 shows an example of indicator scores in 2009 from three different sources: 1) World Bank: per capita Gross Domestic Product (per capita GNI) data permits the model to classify countries in the manner MCC does for funding decisions (low and low-middle income countries); 2) Freedom House: Civil Liberties and Political Rights data help to illustrate the level of freedom in a given country. These indicators range from 1 to 7; with 1 being the most desirable and 7 being the least desirable. Freedom House then breaks that 1 to 7 rating into three distinct groups: Free, Partly Free and Not Free; 3) UNESCO provides the Primary Education indicator which

shows the proportion of a country's wealth generated during a given financial year that has been spent by government authorities on primary education (UNESCO, 2009). Girls' primary education indicator implies "total number of new entrants in the last grade of primary education, regardless of age, expressed as a percentage of the population at the theoretical entrance age to the last grade of primary" (UIS/UNESCO, 2009). Table 7.4 depicts an example of Child Mortality, Improved Sanitation, Improved Water, and Ecoregion Protection scores from CIESIN and YCLEP in 2009. Child Mortality is the probability of dying between age 1 and 5 (MCC, 2011d). Improved Sanitation measures the percentage of the population with access to facilities that hygienically separate human excreta from human, animal, and insect contact (MCC, 2011d). Improved Water measures the percentage of the population with access to at least 20 liters of water per person per day from an "improved" source (household connections, public standpipes, boreholes, protected dug wells, protected springs, and rainwater collection) within one kilometer of the user's dwelling (MCC, 2011d). Ecoregion Protection assesses whether a country is protecting at least 10% of all of its biomes (e.g. deserts, forests, grasslands, aquatic, and tundra), (MCC, 2011d). Table 7.5 illustrates MCV, DPT3, Health Expenditures scores from WHO, and Fiscal Policy and Inflation scores from WEO/IMF in 2009. According to WHO (2011), MCV and DPT3 indicators represent respectively the proportion of children less than 12-23 months of age receiving one dose of measles-containing vaccine and the percentage of children ages 12–23 months who received three doses of the combined diphtheria, tetanus toxoid and pertussis vaccine. For both indicators, the highest estimate of coverage is 99%, and there is no coverage greater than 100% (WHO, 2011). The Health Expenditures indicator represents general government expenditure on health as a percentage of total government expenditure. A high Inflation rate is

not a good sign for the economy is a given country; so the MCC requires a country to be under 15% of inflation to pass this indicator. The fiscal policy indicator measures general government net lending/borrowing as a percent of GDP (MCC, 2011d). Table 7.6 depicts Days and Cost of Starting Business scores from IFC, Days and Cost of Registering Property scores from IFC/IFAD, and Trade Policy scores from Heritage Foundation. The scores from IFC and IFAD are clearly explained in section II. The Trade policy scale ranges from 0 to 100, where 0 represents the highest level of protectionism and 100 represents the lowest level of protectionism (Heritage Foundation, 2011).

B. Methodology

The MCC has chosen to weigh indicators differently in that if you pass a specific percentage (say 60%) of one indictor it does not consider if or how bad you fail the other 40% of the indicators and does not make a difference in a funding decision, thus only a set percentage of any given category is considered to be pertinent. The MCC also weights the control of corruption indicator the most, in that it's a hard hurdle, which was explained in the literature review to be a highly subjective indicator. Thus if a country fails to be above the median for its income group for control of corruption it is denied funding regardless of how many other indicators it passes. The MCC (2011a) states that to be considered eligible for funding, a country should perform above the median in relation to its peers (income group) on at least half of the indicators in the Ruling Justly (3/6) and Encouraging Economic Freedom (3/6), above the median on at least three of the five indicators in the Investing in People category, and above the median on the control of corruption indicator as defined in the literature review. The MCC (2011a) also adds that there is no median for inflation rates, but countries need to be under a fixed ceiling of 15% annually.

Given the subjectivity in some of the indicators (multiple on the ground scores which can possess a large variance) and the fact that the mean score for five indicators is built from an average of several expert opinions, and thus a distribution of scores exists, this study replicates and re-estimates the MCC methodology using three techniques:

1. Model I: Replication of MCC Funding Procedure

First, countries were classified by their World Bank income groupings (low and low-middle income countries (Table 3.1). Since each country is compared against the median scores of their World Bank income classifications the first model groups all low and middle income countries (the former with per capita incomes below or equal $1,905 USD and the latter between $1,905 USD and $3,945 2011 USD) together so that median scores for each indicator for each classification could be estimated. From this, Model I then estimates the median score for each income classification and then compares the said median to each individual country score. Since the MCC only compares the mean score of a country to the median of all scores in an income group the first step in Model I is to compare the mean score of each indicator for each country and analyze if it is larger than the median score for a countries income classification. Table 3.1 illustrates this procedure. Suppose there are two countries, W. Timor and Dutchland. As they are classified in different income groups (LIC and LIMC) their indicator scores (A and X, respectively) will be compared to the median scores of their respective income groups. Thus, in W. Timor's case if their Civil Liberties score, A, is greater than the median of all LMIC's then they will pass (“YES”) that indicator (just as the MCC calculates). If Dutchland's Civil Liberties score, X, is less than the median of all LIC's Civil Liberties scores then they would fail (“NO”) that indicator. Note, there is no comparison between X and A since W. Timor and Dutchland are in different World Bank

income groupings. That is if A is greater than X and X passes that does not imply A will pass since the median of comparison is different. Table 3.2 takes the individual example from above and shows how the Model I calculates the number of "passes" and "failures" a country has across indices. In this example W. Timor passes all (100%) of the indices that make up this fictional indicator while Dutchland only passes 33%. Since the MCC sets the number of passes that a country must have to pass an index the model can set a "threshold" passage rate for funding. While Dutchland and W. Timor's individual indicator scores cannot be compared because of the median difference between LIC and LMIC's, the percentage passed can be compared and is used to by the MCC. That is, since the threshold passage rate set by the MCC for Ruling Justly is three out of six for both LIC and LMIC's then the passage rate on Table 3.2 would have to be greater than 66.6% (which in this case it is for W. Timor but not for Dutchland). By doing this procedure for all 24 variables the Model I can replicate MCC funding decisions based on actual empirical data for 2009.

Table 3.1

Example of World Bank Country Income Classification and Data Collection for Various Indices

Country	World Bank classification	Civil Liberties	Rule of Law			Control of Corruption		
		score	mean	SE*	N.**	mean	SE*	N.**
Dutchland	LIC	X	X	Y	Z	X	Y	Z
W. Timor	LMIC	A	A	B	C	A	B	C

* Denotes Standard Error

** Denotes Number of observations

Table 3.2

Example of Threshold Passage Rates for Model I

	Classification	Civil Liberties	Rule of Law	Control of Corruption	Number passer	% of times passed
Dutchland	LIC	NO	YES	NO	1	33.33%
W. Timor	LMIC	YES	YES	YES	3	100%

2. Model II: Simulating Indicators

Since all of the WGI's indicators (Rule of Law, Government Effectiveness, Control of Corruption, Voice & Accountability, and Regulatory Quality) are based on a number of on the ground experts' opinions, the mean value MCC uses is the mean of all scores but a standard error is also provided. Model II uses these standard errors to simulate random pulls from the distribution of scores from which the ground experts provide. Again, this is important because a country may be marginally below the median because of one outlier (in this example a very low score) in a series of multiple observations. Using the Excel add on @Risk Model II simulated 1000 iterations of an indicator score based on the aforementioned distribution and calculated the number of times each country would be above the median for its income grouping.

Based on their mean scores and standard errors provided in Table 3.1, Model II simulates the number of times that each country would pass (be above the median for an income group) each indicator. It should be noted that the median of each income group changes based on each random draw from every country. That is, the median score is a function of the random draws from every country and each draw from a country is compared to the new median score. In many cases the standard error is large enough where some experts

scores would indicate that a country passed while other experts scores for the same country would result in that country failing. Table 3.3 indicates that based on the fictional range of experts scores that Dutchland passes (above the median for an LMIC) the Rule of Law indicator 87% of the time. Thus one could assume that in Dutchland the experts' opinions are fairly consistent. However; W. Timor passes the same indicator 48% of the time which would mean that the experts seem to be divided on Rule of Law in W. Timor. Since, W. Timor failed more than it passed in this example (albeit by the slightest margin) the model considers them to fail the MCC criteria. The MCC stipulates the number of indicators you have to pass in order to pass an index. The MCC states that a country must pass at least half of the indicators in the Ruling Justly (3/6) and Encouraging Economic Freedom (3/6), above the median on at least three of the five indicators in the Investing in People category (3/5). Therefore the model can simulate, based on actual scores and associated standard errors, the percentage of times a country would pass that threshold. That is, if a threshold of a general indicator (made up of multiple indices) was to pass at least four out of six indices the model could provide the number of times that threshold was met given all of the scores provided for each index. Again, this is important because if there is one really low or really high score the mean value (which the MCC uses) may be misleading. Table 3.3 shows this hypothetically where W. Timor passes the threshold (in this case 3 out of six indicators) 75% of the time where Dutchland only passes 5% of the time. This is a solid contribution to the MCC methodology in that it shows the robustness of the indicator. The closer to 0 and 100% the more robust an indicator is the closer to 50% the less robust an indicator becomes. This process is conducted for each index where a standard error is provided. From this Model II can show which countries seem to have "stable" indictors and which countries may need more data or observations to lower

the standard error. Since the MCC simply uses a "pass" or "fail" score, based on being above the median, for each indicator a simulated passage rate of 48 and 51% of the time is vastly different than a simulated passage rate of 83 and 86% of the time even though the absolute difference is the same.

Table 3.3

Model II Example of Simulating Passage Rates for Ruling Justly

		Actual data		Simulated Passage Rate*				Number needed to pass Ruling Justly = 3	
Country	Classification	CL	PR	Risk VA	Risk GE	Risk RL	Risk CC	Indicators passed in simulation	% of times passed
Dutchland	LIC	1	1	0%	1%	48%	15%	2	5%
W. Timor	LMIC	1	0	100%	8%	87%	25%	3	75%

*Based on distribution from Table 3.1

3. Model III: Standardized of Mean Score

Unlike the Model I which attempts to replicate the funding procedure that the MCC uses and the Model II which simulates MCC passage rates based off distributions from on the ground scores Model III standardizes the mean scores for each indicator so that all scores range between 0 and 1. This model is important because by aggregating all scores into one, those countries that marginally fail some indicators but are well above the median for others are rewarded for the later and not punished as much for the former. Model III uses the same indicators as the MCC, and in Model's I and II, but instead of having to pass X out of Y indicators a country must score above a single value for each index. That is, Model III jettisons the three of six rules for Ruling Justly and sums all the standardized scores for each indicator for Ruling Justly into one score and compares that score to the median of either LIC

or LIMCs. So, instead of passing three of six indicators for Ruling Justly a country now has one score for Ruling Justly and would be the basis of comparison.

Model III standardizes the mean scores for each indicator so that all scores range between 0 and 1. Since the WGI's indicators scores range from -2.5 to 2.5 and can have negative mean scores, 2.5 is added to each of the mean scores of Control of corruption, Regulatory Quality, Government Effectiveness, Rule of Law, and Voice and Accountability, to ensure that all are positive, which gives a new range between 0 and 5; then divided the sum value by 5 (maximum value) to get the standardized mean scores for each index. For instance, the fictional country Dutchland (Table 3.4) which has a mean score of -1.57 in Control of Corruption (has a standardized mean score of 0.19 ((-1.57+2.5)/5 = 0.19) (Table 3.11). Table 3.5 indicates that based on the standardized mean score, Dutchland passes (above the median for LIC) the Control of Corruption 19% of the time. Second, concerning the other eighteen indicators, the model divides each score by the maximum value relative to the income group to get the standardized mean value. For instance, Table 3.6 indicates that W. Timor which has a score of 3 in Civil Liberties has a standardized mean value of 0.43 in that indicator if the maximum value within the low-middle income group is 7 (3/7 = 0.43). Then Model III sums the simulated standardized mean scores for each country in a given broad policy dimension. For instance, Table 3.6 indicates that the summation of all simulated standardized mean score for Dutchland is 2.69 for Ruling Justly. Note that Table 3.5 depicts just the standardized mean score summation while Table 3.6 indicates the simulated standardized mean score summation.

Finally, Model III sums the standardized median score respectively to the income grouping. For instance, Table 3.6 shows that the sum of the standardized median scores for all low middle-income countries for Ruling Justly is 2.75 (Median Sum LMIC). From this new

standardized mean Model III then takes the standard errors (which have been adjusted to the new scoring process by adding 2.5 to each standard error, then divided the sum value by 5) and simulates the number of times a country would be above the median. Again, Model III rewards those countries that have very high scores and reduces the punishment for those countries who marginally fail an indicator. Intuitively this seems more robust than simply assigning a "pass" or "fail" score. Model III estimates if a country would passes an index if the sum of its simulated standardized mean scores is greater or equal to the sum of the standardized median of its income grouping. The difference between Model III and I and II is that Model III takes into account each indicator (even those a country failed). The rationale being that a difference between a marginal pass and a marginal fail is just that, marginal. However, Model I and II treat that marginal difference as an absolute difference where Model III compares it as a marginal difference. Model III appears to be a large improvement over what the MCC is currently using (Model I) in the sense it is more holistic. That is, it rewards a country who is improving in all facets of development (even marginally) more so than a country who is very good at half of the development indicators and who is poor at the other half.

Table 3.4

Model III Example Ruling Justly

				Mean Scores			
Country	Classification	CL	PR	VA	GE	RL	CC
Dutchland	LIC	6	5	-1.39	-1.56	-2.04	-1.57
W. Timor	LMIC	3	3	0.16	-0.2	-0.52	-0.4

Table 3.5

Model III Example of Standardized Mean Scores for Ruling Justly

		Standardized Mean Scores					
Country	Classification	CL	PR	VA	GE	RL	CC
Dutchland	LIC	0.86	0.71	0.22	0.19	0.09	0.19
W. Timor	LMIC	0.43	0.43	0.53	0.46	0.4	0.42

Table 3.6

Model III Example of Simulated Standardized Mean Scores Ruling Justly

								Median Sum LMIC =	2.75
								Median Sum LIC =	2.52
		Standardized Mean Score		Simulated Passage Rate*				% Median =	0.8
Country	Classification	CL	PR	Risk VA	Risk GE	Risk RL	Risk CC	Simulated Score Summation	Funded
Dutchland	LIC	0.86	0.71	0.22	0.19	0.09	0.19	2.69	Yes
W. Timor	LMIC	0.43	0.43	0.53	0.46	0.4	0.42	1.81	No

* Based off distribution from Table 3.1

IV. RESULTS

This chapter presents the results of the analyses. The empirical models described in the previous chapter were implemented and used to decipher the specific objectives laid out in chapter I.

The first model (Model I) attempted to mimic the MCC funding methodology by comparing each country's score against the median scores of their World Bank income classifications. Table 4.1 illustrates those countries who received funding in 2009 from the MCC. By definition those countries on Table 4.1 would have passed (been above their World Bank income classification median) at least half of the indicators in the Ruling Justly (3/6) and Encouraging Economic Freedom (3/6), and passed least three of the five indicators in the Investing in People category (3/5). Model I analyzes the raw data presented in the previous chapter and calculates the median scores for low income and low middle-income countries and denotes which countries are eligible for MCC funding using MCC's definition of eligibility.

1. Model I Results: Eligibility using MCC's Criteria

To this early 2011 there are 23 countries which have received a compact program and 23 countries under funded for the threshold programs (Tables 7.7 and 7.8). Based on the above-mentioned the MCC's criteria, Table 4.2 illustrates those countries that pass the three broad policy dimensions in 2009 using Model I. These countries were above their World Bank income classification for at least half of the indicators in the Ruling Justly (3/6) and Encouraging Economic Freedom (3/6), and passed least three of the five indicators in the Investing in People category (3/5). Based on the above-mentioned MCC's criteria, Table 4.3 indicates countries that passed MCC's Model in 2009. Table 4.4 indicates countries that pass

Model I but did not receive MCC funding in 2009. Conversely, Table 4.5 shows countries that received MCC funding but did not pass Model I. Tarnoff (2011) states that the MCC board does not depend on indicator scores alone to determine the selection but apply other criteria which the board is not required to divulge. This other criteria seem to come into play for Bolivia, Comoros, Tunisia, and Thailand (Table 4.4), in that they seemingly pass the necessary conditions (according to Model I) but did not get funded. However, this "multiple reasons" seem to be in favor for the Republic of Niger who fails Model I. The Republic of Niger passes the Ruling Justly and Encouraging Economic indices, but fails the Investing in People index. This could be due to the fact that the Republic of Niger, one of the poorest countries in the world cannot afford to invest in such index in order to be above the median of three out fives of the Investing in People. How can a poor country like the Republic of Niger can invest in health, education, or environment in order to be above the median without external financial supports. That was why in 2008, the Republic of Niger benefited from the MCC's threshold program which is designed to assist the Republic of Niger improve its performance on the policy areas measured by the Control of Corruption, Land Rights, Business Start-Up and Girls' Primary School Education indicators used on the MCC's scorecard (MCC, 2011c). Unfortunately, due to political events that were inconsistent with the criteria used to determine a country's eligibility for MCC assistance, the Republic of Niger's threshold program was suspended on December 31, 2009.

Model I also provides a list those countries which received MCC's funding but failed the control of corruption indicator. This is important given the fact that according to the MCC control of corruption is the only hard hurdle, meaning if a country is below its World Bank classification median they automatically are rejected for funding. However; Model I indicates

that Nicaragua; Armenia; Mongolia; Honduras; Philippines; Kyrgyz Republic; Paraguay; and East Timor failed the control of corruption indicator in 2009 but still received MCC funding. (Tables 7.7 and 7.8 give the respective date each of these countries received the MCC's funding). Again, these anomalies may be more of political intervention than simply passing or failing an indicator. The interesting point however is that although the MCC says that control of corruption is a "hard hurdle" there looks to be exceptions to this rule.

Table 4.6 lists those countries who fail Model I (which attempts to mimic the MCCs standards for funding) but receive MCC funding. Morocco for instance failed Model I but received MCC funding. Ghana also did not pass Model I but received MCC funding. Given these anomalies (countries who passed Model I but did not get funding and those countries who got funding but failed Model I) it could appear that the MCC's funding are both index and politically based which begs the question how much of the decision making for funding allocations is based on the index and how much is based on political issues between the U.S and a recipient country? Given that being in the same income group does not mean having the same per capita GNI or the same external funding, the MCC, besides the political stability, should take into consideration that the policy performance of a country is also related to its own income and external financial support.

Table 4.1

Countries That Received MCC's Funding

Compact programs		Threshold programs	
Low-income	Low middle-income	Low-income	Low middle-income
Benin	Armenia	Burkina Faso	Albania I
Burkina Faso	Cape Verde	Guyana	Albania II
Ghana	El Salvador	Kenya	Indonesia
Lesotho	Georgia	Liberia	Jordan
Madagascar	Honduras	Malawi	Kyrgyz Republic
Malawi	Jordan	Moldova	Paraguay I
Mali	Morocco	Niger	Paraguay II
Moldova	Namibia	Rwanda	Peru
Mongolia	Philippines	Sao-Tome and Principle	Philippines
Mozambique		Tanzania	East-Timor
Nicaragua		Uganda	Ukraine
Senegal		Zambia	
Tanzania			
Vanuatu			

Source: MCC (2011a).

Table 4.2

Countries That Pass Model I in 2009

Low-income	Low middle-income
Bolivia	Albania
Comoros	Bhutan
Cuba	Bosnia and Herzegovina
Gambia	Cape Verde
Guyana	Colombia
Lesotho	El Salvador
Malawi	Jordan
Rwanda	Marshall Islands
Senegal	Sri Lanka
Solomon Islands	Suriname
Tanzania	Thailand
Zambia	Tunisia

Table 4.3

Countries That Pass MCC's Model in 2009

Low-income	Low Middle-income
Bhutan	Bosnia and Herzegovina
Bolivia	Colombia
Burkina Faso	Jordan
Egypt	Macedonia
Ghana	Thailand
Guyana	Tunisia
Honduras	
Indonesia	
Lesotho	
Malawi	
Moldova	
Mongolia	
Nepal	
Nicaragua	
Rwanda	
Senegal	
Sri Lanka	
Tanzania	
Vietnam	
Zambia	

Table 4.4

Countries That Pass Model I but Fail the MCC's Funding in 2009

Low-income	Low middle-income
Bolivia	Bhutan
Comoros	Bosnia and Herzegovina
Cuba	Colombia
Gambia	Marshall Islands
Guyana	Sri Lanka
Solomon Islands	Suriname
	Thailand
	Tunisia

Table 4.5

Countries That Received the MCC's Funding but Fail Model I in 2009

Low-income	Low middle-income
Benin	Armenia
Burkina Faso	El Salvador
Ghana	Georgia
Guyana	Honduras
Kenya	Indonesia
Liberia	Jordan
Madagascar	Kyrgyz Republic
Malawi	Morocco
Mali	Namibia
Moldova	Paraguay
Mongolia	Peru
Mozambique	Philippines
Nicaragua	Timor-Leste
Niger	Ukraine
Sao-Tome and Principle	
Senegal	
Uganda	
Vanuatu	

2. Model II Results: Simulated Passage Rates Given Multiple on the Ground Scores

Model II, unlike Model I which looks solely at the mean of an indicator score, analyzes the distributions of the scores that make up the mean score. That is, if there is one really low or really high score the mean value (which the MCC uses) may be misleading because the mean score is a function of all of the on the ground reports. By simulating and then taking random pulls from the actual distribution for each indicator Model II can assess how stable an indicator is. It also indicates the robustness of the indicator, that is the closer to 0 and 100% (either always failing or always passing) the more robust an indicator is, the closer to 50% the less robust an indicator becomes. Model II is beneficial for analyzing how

close a country came to passing and can provide said country information on how to increase its chances of passing next year. Again many countries may be marginally below the median because of one outlier which skews the mean score. Model II attempts to analyze how any such outlier affects the probability of passing.

Table 4.6 depicts the simulated passage rates for each indicator of the Ruling Justly index for low-income countries. The first four columns on Table 4.6 are the percentage of times that each country passes a specific indicator based on the distribution of scores provided for each indicator on each country. For example, Djibouti has multiple scores given for all its indicators and as such Model II simulates random pulls from that distribution. Table 4.6 illustrates that Djibouti passes Voice and Accountability on average only 1% of the time. This would indicate that based on the scores provided by on the ground experts and the distribution associated with those scores that they would only be above the median for Voice and Accountability for Low Income-countries 1% of the time. To pass that indicator, they would need to be above the median at least 50% of the time. The Republic of Niger passes the Ruling Justly index 100% of the time (it passes all the six indicators under Model II). This shows the robustness of the result since all experts seem to agree about the Republic of Niger's score for the Ruling Justly index. Table 4.6 also illustrates that Djibouti passes Government Effectiveness 41% of the time. While this is still below 50% and would be considered a "fail" it is vastly different than only passing something 1% of the time. Political Rights and Civil Liberties are not simulated given the fact they are not given a range of scores. Thus the last column on Table 4.6 indicates the number of times that a country would pass the necessary three out of the six Ruling Justly indicators. Djibouti fails, only passing 39% of the time, but gives a signal about the robustness of that failure. That is, according to

on the ground scores if random draws were drawn from the actual Djibouti scores they would pass the MCC Ruling Justly indicator 39% of the time. Alone this number does not provide much light on the robustness it does when compared to the Afghani score on Table 4.6 of 0% passage rate. That is, the closer to 50% the indicator the less robust the results, the closer to 0% and 100% the more confidence in the results.

Countries like Guinea-Bissau make interesting case studies since they passed the Ruling Justly indicator 53% of the time but failed according to the MCC. This is mostly likely due to the wide variance and the skewed distribution of the on the ground scores for Voice and Accountability, Rule of Law, Government Effectiveness, and Control of Corruption. Since Guinea-Bissau passes Political Rights and Civil Liberties (Table 4.6) they only would need to pass one more indicator to pass the Ruling Justly index. Table 4.6 shows that the average passing rate for Guinea- Bissau is low for Voice and Accountability, Rule of Law, Government Effectiveness, and Control of Corruption; Model II still indicates that on average they pass one of those indicators 53% of the time. This would indicate that there are either some "very high passing scores" or some "very low failing scores" leading to a skewed distribution. Again, this is important information for MCC because they could see this 53% passage rate and request more on the ground reports from Guinea-Bissau next year to increase the robustness of the indicator.

Table 4.7 indicates the simulated passage rates for each indicator of the Ruling Justly index for low middle-income countries. Table 4.8 shows the simulated passage rates for each indicator of the Encouraging Economic Freedom index for low-income countries. The seven first columns on Table 4.8 are the results of passing or failing each indicator. The indicators (Time of Business, Cost of Business, Trade Policy, Time of Registering, Cost of Registering,

Fiscal Policy, and Inflation) are not simulated since they are not given a range of scores. If a country passes each of these seven indicators, it gets “1” or “0” otherwise. For instance, Cameroon passes Fiscal Policy indicator and fails Trade Policy indicator. The column for the Regulatory Quality indicator shows the percent of time that each country passes this indicator based on the distribution of scores provided for this indicator on each country. To pass that indicator a country needs to be above the median at least 50% of the time. The Republic of Niger passes the Regulatory Quality indicator 91% of the time (Table 4.8). Cameroon has multiple scores given for the Regulatory Quality indicator and Model II simulates random pulls from this distribution. Table 4.8 indicates that Cameroon passes the Regulatory Quality indicator on average 50% of the time. This could give valuable information to the MCC in that it would appear that the on the ground experts in Cameroon are truly "split" on their opinions on Regulatory Quality and more data is needed to make a sound decision. The last column on Table 4.8 indicates the number of times that a country would pass the necessary four out of the eight Encouraging Economic Freedom indicators. Cameroon passes 50% of the time; this gives a signal about the robustness of the indicator as a whole. Again the fact that the passage rate is 50% speaks to the fact the indicator is not very robust. Similarly to Table 4.8, Table 4.9 presents the simulated passage rates for each indicator of the Encouraging Economic Freedom index for low middle-income countries.

Interestingly, Kenya and Kyrgyzstan (Table 4.6), and Honduras, and Indonesia (Table 4.7), fail the control of corruption indicator (Model I and II) but receive MCC funding. Again, while the MCC states that Control of Corruption is a hard hurdle they also state they provide themselves some flexibility in funding decisions.

Another interesting case study is that of Paraguay. Paraguay failed the Control of Corruption indicator 99% of the time and theoretically should have been disqualified for MCC funding (Table 4.7). It also failed the Rule of Law and Government effectiveness 100% of the time. That being said, Paraguay received funding possibly due to the fact it passed at least half of the indicators in the Ruling Justly (3/6) and all but one of the six Encouraging Economic Freedom indicators (Table 4.8). This begs the question "does MCC look at the holistic package (number of total indicators passed across categories)" or does it really stick by the hurdle of passing "at least half of the indicators in the Ruling Justly (3/6) and Encouraging Economic Freedom (3/6), and passing least three of the five indicators in the Investing in People category (3/5)?" That is, as they define it, a country needs to pass at least nine indicators to get funding, but given these three categories a country could possibly pass 14 indicators and not get funding (all six of the Encouraging Economic Freedom, all six of the Ruling justly and only two of the Investing in People). A country can be punished (or in Paraguay's case rewarded) for passing at least three of six indicators with no credence to "how bad" they failed the other three indicators. That is, if you have a country like Paraguay who passed the necessary three of six but failed the Rule of Law, Government Effectiveness and Control of Corruption 99% of the time is that the same as a country like Ethiopia (Table 4.7) who passes Rule of Law 79% of the time, Government Effectiveness 100% of the time Control of Corruption 69% of the time but fails Political Rights and Civil Liberties (both do not have distributions only pass or fail)? It begs the question of whether a country who scores highly on three indicators and fails the other three indicators badly is truly different from a country that passes no indicators but marginally fails all of them. This is the question Model III attempts to address.

Table 4.6

Simulated Passage Rates from Model II for Each Indicator in the Ruling Justly Index for Low-income Countries in 2009

Country	Voice and Accountability	Rule of Law	Government Effectiveness	Control of Corruption	Political Right	Civil Liberties	% of time pass****
Afghanistan	0%	0%	0%	0%	0**	0	0%
Bangladesh	99%	88%	26%	17%	1***	1	100%
Benin*	100%	92%	99%	83%	1	1	100%
Bolivia	100%	1%	81%	72%	1	1	100%
Burkina Faso*	100%	100%	91%	99%	0	1	100%
Burundi	46%	2%	9%	4%	1	0	8%
Cambodia	8%	13%	74%	0%	0	0	1%
Cameroon	1%	10%	64%	23%	0	0	2%
Central African Rep	2%	0%	0%	45%	0	0	0%
Chad	0%	0%	0%	0%	0	0	0%
Comoros	100%	16%	0%	58%	1	1	100%
Congo, Dem Rep	0%	0%	0%	0%	0	0	0%
Côte d'Ivoire	0%	0%	2%	2%	0	0	0%
Cuba	0%	93%	96%	100%	0	0	89%
Djibouti	1%	93%	41%	99%	0	0	39%
Eritrea	0%	1%	1%	99%	0	0	0%
Ethiopia	0%	79%	100%	69%	0	0	55%
Gambia	1%	100%	87%	89%	0	1	99%

* Denotes MCC funding in 2009
** Denotes did not pass
*** Denotes pass
**** Denotes passing three of six indicators

Table 4.6

Cont'd

Country	Voice and Accountability	Rule of Law	Government Effectiveness	Control of Corruption	Political Right	Civil Liberties	% of time pass****
Ghana*	100%	100%	100%	100%	1***	1	100%
Guinea	0%	0%	1%	1%	0**	0	0%
Guinea-Bissau	38%	1%	19%	10%	1	1	53%
Guyana*	100%	96%	100%	90%	1	1	100%
Haiti	81%	0%	0%	4%	1	0	5%
India	100%	100%	100%	100%	1	1	100%
Iraq	0%	0%	4%	0%	0	0	0%
Kenya*	100%	8%	88%	2%	1	1	100%
Kyrgyzstan*	2%	0%	29%	0%	0	1	1%
Laos	0%	38%	20%	4%	0	0	0%
Lesotho*	100%	100%	100%	100%	1	1	100%
Liberia*	100%	9%	5%	92%	1	1	100%
Madagascar*	77%	86%	92%	100%	1	1	100%
Malawi*	100%	100%	98%	97%	1	1	100%
Mali*	100%	100%	73%	76%	1	1	100%
Mauritania	1%	63%	42%	80%	0	0	22%
Moldova*	100%	100%	93%	67%	1	1	100%
Mongolia*	100%	100%	63%	59%	1	1	100%
Mozambique*	100%	99%	100%	99%	1	1	100%
Nepal	88%	30%	31%	61%	1	1	97%

* Denotes MCC funding in 2009
** Denotes did not pass
*** Denotes pass
**** Denotes passing three of six indicators

Table 4.6

Cont'd

Country	Voice and Accountability	Rule of Law	Government Effectiveness	Control of Corruption	Political Right	Civil Liberties	% of time pass****
Nicaragua*	97%	66%	17%	60%	1	1	100%
Niger*	53%	95%	74%	79%	1	1	100%
Nigeria	10%	1%	1%	5%	0**	1	1%
Pakistan	1%	41%	35%	3%	1***	0	17%
Papua New Guinea	100%	29%	57%	0%	1	1	100%
Rwanda*	0%	99%	100%	100%	0	0	99%
Sao Tome & Principe*	100%	84%	79%	96%	1	1	100%
Senegal*	100%	100%	100%	96%	1	1	100%
Sierra Leone	100%	27%	4%	17%	1	1	100%
Solomon Islands	100%	85%	31%	94%	1	1	100%
Sudan	0%	0%	1%	1%	0	0	0%
Tajikistan	0%	1%	11%	2%	0	0	0%
Tanzania*	100%	100%	100%	99%	1	1	100%
Togo	1%	49%	0%	7%	0	0	0%
Uganda*	98%	100%	93%	33%	0	1	100%
Uzbekistan	0%	1%	74%	0%	0	0	0%
Viet Nam	0%	100%	100%	97%	0	0	97%
Yemen	0%	4%	9%	11%	0	0	0%
Zambia*	100%	100%	88%	97%	1	1	100%
Zimbabwe	0%	0%	0%	0%	0	0	0%

* Denotes MCC funding in 2009

** Denotes did not pass

*** Denotes pass

**** Denotes passing three of six indicators

Table 4.7

Simulated Passage Rates from Model II for Each Indicator the Ruling Justly Index for Low Middle-income Countries in 2009

Country	Voice and Accountability	Rule of Law	Government Effectiveness	Control of Corruption	Political Right	Civil Liberties	% of time pass****
Albania*	100%	31%	80%	69%	1	1	100%
Algeria	0%	2%	10%	45%	0	0	0%
Angola	0%	0%	0%	0%	0	0	0%
Armenia*	0%	65%	99%	20%	0	1	71%
Azerbaijan	0%	1%	7%	0%	0	0	0%
Belarus	0%	0%	0%	3%	0**	0	0%
Bhutan	0%	100%	100%	100%	1***	0	100%
Bosnia and Herzegovina	94%	67%	8%	88%	1	1	100%
Cape Verde*	100%	100%	96%	100%	1	1	100%
China	0%	76%	100%	35%	0	0	27%
Colombia	64%	53%	99%	89%	1	1	100%
Dominican Rep	100%	3%	34%	12%	1	1	100%
Ecuador	45%	0%	1%	1%	1	1	46%
Egypt	0%	100%	67%	63%	0	0	43%
El Salvador*	100%	1%	96%	96%	1	1	100%
Fiji	1%	8%	2%	18%	0	1	2%
Georgia*	73%	98%	100%	95%	1	1	100%
Guatemala	26%	0%	3%	22%	1	1	43%
Honduras*	4%	0%	3%	1%	1	1	7%
Indonesia*	95%	19%	81%	5%	1	1	100%
Iran	0%	0%	3%	4%	0	0	0%
Jamaica	100%	40%	99%	58%	1	1	100%

* Denotes MCC funding in 2009

** Denotes did not pass *** Denotes pass **** Denotes passing three of six indicators

Table 4.7

Cont'd

Country	Voice and Accountability	Rule of Law	Government Effectiveness	Control of Corruption	Political Right	Civil Liberties	% of time pass****
Jordan*	0%	100%	100%	100%	0**	0	100%
Kiribati	100%	100%	9%	90%	1***	1	100%
Macedonia	100%	94%	88%	100%	1	1	100%
Maldives	71%	96%	48%	23%	1	1	99%
Marshall Islands	100%	65%	0%	61%	1	1	100%
Micronesia	100%	99%	21%	78%	1	1	100%
Morocco*	0%	98%	94%	93%	0	1	99%
Namibia*	100%	100%	100%	100%	1	1	100%
Paraguay*	55%	0%	0%	1%	1	1	56%
Peru*	99%	7%	53%	77%	1	1	100%
Philippines*	88%	26%	91%	5%	1	1	99%
Sri Lanka	2%	100%	86%	75%	1	1	100%
Suriname	100%	96%	94%	75%	1	1	100%
Swaziland	0%	12%	5%	83%	0	0	1%
Syria	0%	46%	9%	0%	0	0	0%
Thailand	9%	99%	100%	96%	0	1	100%
Timor-Leste*	99%	0%	0%	1%	1	1	99%
Tonga	83%	97%	50%	21%	0	1	91%
Tunisia	0%	100%	100%	100%	0	0	100%
Turkmenistan	0%	0%	0%	0%	0	0	0%
Ukraine*	95%	1%	1%	0%	1	1	94%
Vanuatu*	100%	100%	64%	100%	1	1	100%

* Denotes MCC funding in 2009

** Denotes did not pass

*** Denotes pass **** Denotes passing three of six indicators

Table 4.8

Simulated Passage Rates from Model II for Each Indicator the Encouraging Economic Freedom Index for Low-income Countries in 2009

Country	Time of Business	Cost of Business	Trade Policy	Time of Registering	Cost of Registering	Fiscal Policy	Inflation	Regulatory Quality	% of time pass****
Afghanistan	0**	0	0	1	1	1	1	0%	100%
Bangladesh	1***	0	0	1	1	1	1	27%	100%
Benin*	1	1	1	1	1	1	1	97%	100%
Bolivia	1	1	1	1	0	1	1	4%	100%
Burkina Faso*	0	0	1	1	1	0	1	100%	100%
Burundi	1	1	0	1	1	1	1	1%	100%
Cambodia	1	1	0	0	0	1	1	97%	100%
Cameroon	1	1	0	1	1	1	1	50%	100%
Central African Rep	0	1	0	1	1	1	1	1%	100%
Chad	1	1	0	0	1	0	1	1%	100%
Comoros	0	1	0	0	1	1	1	0%	100%
Congo, Dem Rep	1	1	0	0	1	0	0	0%	0%
Côte d'Ivoire	1	1	1	0	1	1	1	4%	100%
Cuba	0	0	0	1	1	1	1	0%	100%
Djibouti	1	1	0	0	1	0	1	69%	100%
Eritrea	1	1	1	1	1	0	0	0%	100%
Ethiopia	0	0	1	0	0	1	0	3%	0%
Gambia	0	1	0	1	1	1	1	98%	100%

* Denotes MCC funding in 2009
** Denotes did not pass
*** Denotes pass
**** Denotes passing four of eight indicators

Table 4.8

Cont'd

Country	Time of Business	Cost of Business	Trade Policy	Time of Registering	Cost of Registering	Fiscal Policy	Inflation	Regulatory Quality	% of time pass****
Ghana*	0**	0	0	0	0	0	0	100%	0%
Guinea	1***	1	0	1	1	0	1	0%	100%
Guinea-Bissau	1	1	1	1	0	1	1	1%	100%
Guyana*	1	0	1	0	0	1	1	66%	100%
Haiti	1	1	1	1	0	0	1	22%	100%
India	0	0	0	0	1	0	1	99%	0%
Iraq	1	1	0	0	0	0	1	22%	100%
Kenya*	0	0	1	1	0	0	1	100%	100%
Kyrgyzstan*	0	0	1	0	0	1	1	97%	97%
Laos	1	0	1	1	0	0	1	2%	100%
Lesotho*	1	0	0	1	1	1	1	75%	100%
Liberia*	1	0	0	0	1	0	1	0%	0%
Madagascar*	0	0	1	1	1	1	1	93%	100%
Malawi*	1	1	1	1	0	0	1	82%	100%
Mali*	0	1	1	0	1	1	1	95%	100%
Mauritania	0	0	1	0	0	0	1	57%	0%
Moldova*	0	0	1	0	0	0	1	100%	0%
Mongolia*	0	0	1	0	0	0	1	99%	0%
Mozambique*	0	0	1	0	1	0	1	99%	99%
Nepal	1	0	0	0	0	1	1	29%	29%

* Denotes MCC funding in 2009
** Denotes did not pass
*** Denotes pass
**** Denotes passing four of eight indicators

Table 4.8

Cont'd

Country	Time of Business	Cost of Business	Trade Policy	Time of Registering	Cost of Registering	Fiscal Policy	Inflation	Regulatory Quality	% of time pass****
Nicaragua*	1	1	1	1	0	1	1	97%	100%
Niger*	0**	1	1	0	1	0	1	91%	100%
Nigeria	1***	1	0	1	1	0	1	46%	100%
Pakistan	0	0	0	0	1	0	0	87%	0%
Papua New Guinea	1	0	1	1	0	0	1	83%	100%
Rwanda*	0	1	0	1	0	1	1	97%	100%
Sao Tome & Principe*	1	1	0	0	1	0	0	37%	37%
Senegal*	0	0	1	1	1	0	1	100%	100%
Sierra Leone	0	1	0	1	1	1	1	33%	100%
Solomon Islands	1	0	1	1	0	1	1	1%	100%
Sudan	1	0	1	0	0	0	1	0%	0%
Tajikistan	1	0	1	0	0	0	1	1%	1%
Tanzania*	0	0	1	1	0	0	1	97%	97%
Togo	1	1	1	1	1	1	1	20%	100%
Uganda*	0	1	1	1	0	1	1	100%	100%
Uzbekistan	0	0	0	1	0	1	1	0%	0%
Viet Nam	1	0	0	0	0	0	1	79%	0%
Yemen	0	1	1	0	0	0	1	69%	69%
Zambia*	0	0	1	0	0	1	1	92%	92%
Zimbabwe	1	1	0	0	1	1	1	0%	100%

* Denotes MCC funding in 2009
** Denotes did not pas
*** Denotes pass
**** Denotes passing four of eight indicators

Table 4.9

Simulated Passage Rates from Model II for Each Indicator the Encouraging Economic Freedom Index for Low Middle-income Countries in 2009

Country	Time of Business	Cost of Business	Trade Policy	Time of Registering	Cost of Registering	Fiscal Policy	Inflation	Regulatory Quality	% of time pass****
Albania*	0**	1	1	1	0	0	1	100%	100%
Algeria	0	0	0	1	1	0	1	0%	0%
Angola	1***	1	0	1	1	0	1	0%	100%
Armenia*	0	0	1	0	0	0	1	100%	0%
Azerbaijan	0	0	1	0	0	1	1	51%	51%
Belarus	1	0	0	0	1	1	1	0%	100%
Bhutan	1	0	0	1	0	1	1	0%	100%
Bosnia and Herzegovina	1	1	1	1	0	0	1	90%	100%
Cape Verde*	1	1	0	1	1	0	1	94%	100%
China	1	0	0	0	0	1	1	71%	71%
Colombia	1	0	0	0	0	1	1	100%	100%
Dominican Rep	0	1	1	1	0	0	1	79%	100%
Ecuador	1	1	1	0	0	0	1	0%	100%
Egypt	0	0	0	1	0	0	0	82%	0%
El Salvador*	0	1	1	0	0	0	1	100%	100%
Fiji	1	1	0	1	0	0	1	0%	100%
Georgia*	0	0	1	0	0	0	1	100%	0%
Guatemala	1	1	1	0	0	1	1	89%	100%
Honduras*	0	1	1	0	1	0	1	61%	100%
Indonesia*	1	1	1	0	1	1	1	99%	0%
Iran	1	0	0	0	1	1	1	52%	100%
Jamaica	0	0	0	1	1	0	1	0%	100%

* Denotes MCC funding in 2009

** Denotes did not pas

*** Denotes pass **** Denotes passing four of eight indicators

Table 4.9

Cont'd

Country	Time of Business	Cost of Business	Trade Policy	Time of Registering	Cost of Registering	Fiscal Policy	Inflation	Regulatory Quality	% of time pass****
Jordan*	0**	1***	1	0	1	0	1	100%	100%
Kiribati	0	1	0	1	0	0	1	0%	0%
Macedonia	0	0	1	1	0	1	1	100%	100%
Maldives	0	0	0	1	1	0	1	29%	29%
Marshall Islands	0	0	0	1	1	1	1	1%	100%
Micronesia	0	1	1	1	1	1	1	1%	100%
Morocco*	0	1	0	1	1	1	1	96%	100%
Namibia*	1	1	1	0	1	1	1	98%	100%
Paraguay*	1	1	1	1	0	1	1	98%	100%
Peru*	1	1	1	0	0	1	1	98%	100%
Philippines*	1	1	1	0	1	0	1	96%	100%
Sri Lanka	1	0	0	1	1	0	1	51%	100%
Suriname	1	1	0	1	1	1	1	6%	100%
Swaziland	1	1	0	1	1	0	1	12%	100%
Syria	0	0	0	0	1	1	1	0%	0%
Thailand	1	0	1	0	0	0	1	100%	100%
Timor-Leste*	1	0	1	1	1	1	1	0%	100%
Tonga	0	0	0	1	1	1	1	8%	100%
Tunisia	0	0	0	0	1	1	1	99%	99%
Turkmenistan	0	0	1	0	0	1	1	0%	0%
Ukraine*	0	0	1	1	1	0	0	6%	6%
Vanuatu*	1	1	0	1	1	1	1	4%	100%

* Denotes MCC funding in 2009

** Denotes did not pas

*** Denotes pass **** Denotes passing four of eight indicators

3. Model III Results: Standardized of Mean Scores

Model III standardizes the mean scores for each indicator so that all scores range between 0 and 1. These standardized scores are summed and compared to the relevant median score of the LICs or LIMCs. By aggregating all scores into one, those countries that marginally fail some indicators but are well above the median for others are rewarded for the later and not punished as much for the former. Results for the Ruling Justly and the Encouraging Economic Freedom indices are presented.

Table 4.10 depicts the mean standardized scores from Model III for Ruling Justly for all of the low-income countries in 2009. The first six columns on Table 4.10 are the mean standardized scores for each indicator for each country. It should be noted that in all instances a higher score is better. It should also be noted that while Freedom House scores Political Rights and Civil Liberties from 1 to 7 with 1 being the highest score. Because of this all scores for Political Rights and Civil Liberties were reversed such that a score of 1 (the best according to Freedom House is now a 7, a 2 converted to a 6, etc.). In this manner it is desirable for all of the indictors to have a high score and an accurate comparison can be made across indicators. As an example, on Table 4.10 Afghanistan's total score for Ruling Justly is 1.40 which is the summation of all the indicators (first row in Table 4.10). Model III estimates if a country would pass an index if the sum of its mean standardized scores is greater or equal to the sum median standardized score of its income grouping. In Afghanistan's case it's single score for Ruling Justly (1.40, Table 4.10) is below the median score for all low-income countries of 2.40 (top of Table 4.10), thus they would fail. This model is important since it takes into consideration country’s performance across all indicators and doesn't simply count the number it passes. Intuitively this seems more robust than simply assigning a "pass" or "fail" score. Table 4.11

indicates the mean standardized scores for Ruling Justly for low middle-income countries in 2009.

Comparing the results of model's II and III makes for interesting case studies. When looking at Table 4.7 both Morocco and Paraguay pass the Ruling Justly threshold of three out of six indicators with scores of 99 and 56%, respectively. Morocco sources a zero percent on Voice and accountability and over 90% on Rule of Law, Government Effectiveness, and Control of Corruption. Paraguay on the other hand scores 0% on Rule of Law and Government Effectiveness. Under the scoring system in Model's I and III these zero scores are irrelevant because both Paraguay and Morocco pass at least three of six indicators easily. However; in Model III (Table 4.11) both countries score below the median and would not be funded. The case of East-Timor could also be highlighted. East-Timor passes the Ruling Justly index 99% of the time in Model II, but under Model III it fails, since East-Timor performs very poorly in Rule of Law (0% of the time), Government effectiveness (0% of the time), and the Control of Corruption (1% of the time). This is due to the fact that model III looks at all indicators and punishes these countries heavily for such low scores (0%).

Model III works in the favor in those countries such as Nepal who in Model I and II only passes three out of eight indicators 29% of the time and thus would not get funding (Table 4.8). However; given the fact that Nepal marginally failed some of the indicators they are rewarded in Model III and actually would be funded. Table 4.12 indicates that Nepal earns a score of 0.78 for Encouraging Economic Freedom which is higher than the median score of 0.38. In this sense the multiple marginal fails for Nepal are scored as relative fails not absolute fails and thus in the aggregate they are funded. While Model III worked in favor for countries like Nepal it can work

against them just as easily. Because of this it would seem that Model III is a more holistic indicator.

Table 4.12 shows the mean standardized scores for Encouraging Economic Freedom for low-income countries in 2009. It should be noted that some of the values are negative and that the total score can be negative. This is due to the fact that with some variables (time of registering a business, cost of doing business, inflation, fiscal policy) a higher score is not desirable. In these cases instead of adding to a score a variable is subtracted. Thus if it took 1 day to start a business you would subtract a number less than a country where it took 100 days to start a business. The goal for Model III with Encouraging Economic Freedom is still to obtain a high score and the break between positive and negative scores is arbitrary, where the relative difference between scores is the only meaningful comparison and not if a score is positive or negative. The first eight columns on Table 4.12 are the mean standardized scores for each indicator for each country. For instance, the Republic of Niger's Regulatory Quality score is 0.41. The last column on Table 4.12 shows the sum of the standardized median scores (total score) for each low-income country for the Encouraging Economic Freedom index. For instance, the Republic of Niger's total score is 0.41, which is above the median standardized score for all low-income countries is 0.38 indicating they would pass under model III's scoring mechanism. Recall that a country would pass an index if the sum of its mean standardized scores is greater or equal to the sum median standardized score of its income grouping according to Model III. Model III works in favor for countries like Tajikistan who in Model I and II only passes three out of eight indicators 1% of the time (Table 4.8). Tajikistan marginally fails some indicators but is rewarded in Model III. Table 4.12 indicates that Tajikistan scores of 0.73 for Encouraging Economic Freedom which is greater than 0.38, thus passes Model III. Model III looks at a

country holistically in development and simply does not say you need to be doing well in X out of Y sectors and if you are every other sector is irrelevant. Table 4.13 shows the mean standardized scores for Encouraging Economic Freedom for low middle-income countries in 2009. Countries like Georgia, who in Model I and II only pass three out of eight indicators 1% of the time (Table 4.8), are rewarded in Model III even if they fail some indicators. Again, Model III is important since it takes into consideration country's performance on all indicators.

Table 4.10

Mean Standardized Scores from Model III for the Ruling Justly Index for Low-income Countries in 2009

Sum Median Score = 2.49

Country	Voice and Accountability	Rule of Law	Government Effectiveness	Control of Corruption	Political Right	Civil Liberties	Total Score
Afghanistan	0.22	0.09	0.19	0.19	0.43	0.29	1.40
Bangladesh	0.43	0.36	0.30	0.31	0.57	0.57	2.53**
Benin*	0.56	0.36	0.40	0.37	0.86	0.86	3.41**
Bolivia	0.48	0.26	0.36	0.36	0.71	0.71	2.88**
Burkina Faso*	0.45	0.44	0.37	0.41	0.43	0.71	2.82**
Burundi	0.35	0.26	0.28	0.28	0.57	0.43	2.17
Cambodia	0.32	0.29	0.35	0.26	0.29	0.43	1.94
Cameroon	0.29	0.29	0.34	0.32	0.29	0.29	1.81
Central African Rep	0.30	0.24	0.22	0.34	0.43	0.43	1.95
Chad	0.22	0.19	0.20	0.22	0.14	0.29	1.27
Comoros	0.44	0.28	0.14	0.35	0.71	0.57	2.50**
Congo, Dem Rep	0.21	0.16	0.16	0.22	0.29	0.29	1.31
Côte d'Ivoire	0.27	0.23	0.26	0.27	0.29	0.43	1.74
Cuba	0.16	0.37	0.40	0.56	0.14	0.29	1.92
Djibouti	0.28	0.37	0.32	0.45	0.43	0.43	2.27
Eritrea	0.07	0.25	0.22	0.43	0.14	0.29	1.40
Ethiopia	0.25	0.35	0.42	0.36	0.43	0.43	2.23
Gambia	0.29	0.41	0.37	0.39	0.43	0.57	2.46

* Denotes MCC funding in 2009

** Denotes pass (total score greater than sum median score)

Table 4.10

Cont'd

Sum Median Score = 2.49

Country	Voice and Accountability	Rule of Law	Government Effectiveness	Control of Corruption	Political Right	Civil Liberties	Total Score
Ghana*	0.60	0.48	0.51	0.51	1.00	0.86	3.96**
Guinea	0.21	0.18	0.24	0.25	0.14	0.43	1.46
Guinea-Bissau	0.35	0.22	0.29	0.28	0.57	0.57	2.28
Guyana*	0.52	0.38	0.46	0.39	0.86	0.71	3.32**
Haiti	0.38	0.23	0.21	0.28	0.57	0.43	2.10
India	0.59	0.51	0.50	0.43	0.86	0.71	3.61**
Iraq	0.27	0.13	0.25	0.22	0.29	0.29	1.44
Kenya*	0.44	0.29	0.37	0.28	0.57	0.71	2.65**
Kyrgyzstan*	0.31	0.24	0.30	0.26	0.43	0.57	2.11
Laos	0.16	0.31	0.29	0.27	0.14	0.29	1.46
Lesotho*	0.47	0.45	0.45	0.53	0.86	0.71	3.47**
Liberia*	0.44	0.28	0.27	0.39	0.71	0.57	2.66**
Madagascar*	0.38	0.35	0.37	0.45	0.57	0.71	2.84**
Malawi*	0.46	0.46	0.40	0.41	0.57	0.57	2.86**
Mali*	0.53	0.42	0.35	0.36	0.86	0.71	3.23**
Mauritania	0.30	0.33	0.32	0.37	0.29	0.43	2.03
Moldova*	0.44	0.41	0.39	0.35	0.57	0.57	2.73**
Mongolia*	0.49	0.42	0.34	0.35	0.86	0.86	3.31**
Mozambique*	0.49	0.38	0.43	0.42	0.71	0.71	3.15**
Nepal	0.38	0.31	0.31	0.35	0.57	0.57	2.49**

* Denotes MCC funding in 2009

** Denotes pass (total score greater than sum median score)

Table 4.10

Cont'd

Sum Median Score = 2.49

Country	Voice and Accountability	Rule of Law	Government Effectiveness	Control of Corruption	Political Right	Civil Liberties	Total Score
Nicaragua*	0.40	0.33	0.29	0.35	0.57	0.71	2.66**
Niger*	0.36	0.37	0.35	0.37	0.71	0.57	2.74**
Nigeria	0.33	0.26	0.25	0.29	0.43	0.57	2.13
Pakistan	0.30	0.31	0.31	0.28	0.57	0.43	2.21
Papua New Guinea	0.52	0.31	0.33	0.22	0.57	0.71	2.67**
Rwanda*	0.24	0.40	0.46	0.53	0.29	0.43	2.35
Sao Tome & Principe*	0.53	0.35	0.36	0.42	0.86	0.86	3.39**
Senegal*	0.44	0.44	0.42	0.39	0.71	0.71	3.12**
Sierra Leone	0.45	0.31	0.26	0.30	0.71	0.71	2.75**
Solomon Islands	0.54	0.37	0.30	0.43	0.57	0.71	2.91**
Sudan	0.18	0.23	0.24	0.25	0.14	0.14	1.19
Tajikistan	0.23	0.26	0.28	0.28	0.29	0.43	1.76
Tanzania*	0.47	0.41	0.42	0.42	0.57	0.71	3.00**
Togo	0.29	0.32	0.23	0.28	0.43	0.43	1.98
Uganda*	0.40	0.41	0.37	0.33	0.43	0.57	2.52**
Uzbekistan	0.11	0.26	0.36	0.25	0.14	0.14	1.26
Viet Nam	0.20	0.41	0.45	0.40	0.14	0.43	2.03
Yemen	0.25	0.27	0.28	0.29	0.43	0.43	1.94
Zambia*	0.45	0.40	0.37	0.40	0.71	0.71	3.04**
Zimbabwe	0.19	0.12	0.17	0.20	0.14	0.29	1.10

* Denotes MCC funding in 2009

** Denotes pass (total score greater than sum median score)

Table 4.11

Mean Standardized Scores from Model III for the Ruling Justly Index for Low Middle-income Countries in 2009

Sum Median Score = 2.85

Country	Voice and Accountability	Rule of Law	Government Effectiveness	Control of Corruption	Political Right	Civil Liberties	Total Score
Albania*	0.53	0.40	0.46	0.42	0.71	0.71	3.24**
Algeria	0.29	0.35	0.38	0.40	0.29	0.43	2.14
Angola	0.27	0.26	0.32	0.23	0.29	0.43	1.80
Armenia*	0.34	0.42	0.51	0.38	0.29	0.57	2.51
Azerbaijan	0.26	0.34	0.37	0.28	0.29	0.43	1.96
Belarus	0.19	0.31	0.28	0.34	0.14	0.29	1.56
Bhutan	0.37	0.53	0.58	0.67	0.57	0.43	3.15**
Bosnia and Herzegovina	0.49	0.42	0.37	0.44	0.57	0.71	3.01**
Cape Verde*	0.67	0.59	0.50	0.64	1.00	1.00	4.40**
China	0.17	0.43	0.52	0.39	0.14	0.29	1.95
Colombia	0.46	0.41	0.51	0.44	0.71	0.57	3.10**
Dominican Rep	0.52	0.36	0.41	0.36	0.86	0.86	3.37**
Ecuador	0.45	0.24	0.33	0.32	0.71	0.71	2.77
Egypt	0.28	0.49	0.44	0.42	0.29	0.43	2.34
El Salvador*	0.52	0.34	0.49	0.47	0.86	0.71	3.39**
Fiji	0.36	0.35	0.31	0.35	0.29	0.57	2.22
Georgia*	0.46	0.47	0.54	0.45	0.57	0.57	3.07**
Guatemala	0.43	0.28	0.36	0.38	0.71	0.57	2.74
Honduras*	0.41	0.33	0.36	0.32	0.71	0.71	2.84
Indonesia*	0.49	0.39	0.46	0.36	0.86	0.71	3.27**
Iran	0.20	0.32	0.35	0.33	0.29	0.29	1.78
Jamaica	0.61	0.40	0.53	0.41	0.86	0.71	3.52**

* Denotes MCC funding in 2009

** Denotes pass (total score greater than sum median score)

Table 4.11

Cont'd

Sum Median Score = 2.85

Country	Voice and Accountability	Rule of Law	Government Effectiveness	Control of Corruption	Political Right	Civil Liberties	Total Score
Jordan*	0.33	0.58	0.56	0.55	0.43	0.43	2.87**
Kiribati	0.65	0.54	0.36	0.48	1.00	1.00	4.02**
Macedonia	0.53	0.46	0.47	0.49	0.71	0.71	3.38**
Maldives	0.47	0.48	0.43	0.36	0.57	0.57	2.89**
Marshall Islands	0.72	0.44	0.21	0.43	1.00	1.00	3.80**
Micronesia	0.71	0.52	0.38	0.48	1.00	1.00	4.09**
Morocco*	0.34	0.47	0.48	0.45	0.43	0.57	2.74
Namibia*	0.56	0.55	0.54	0.55	0.86	0.86	3.91**
Paraguay*	0.45	0.30	0.31	0.32	0.71	0.71	2.82
Peru*	0.51	0.37	0.43	0.43	0.86	0.71	3.31**
Philippines*	0.48	0.39	0.47	0.36	0.57	0.71	2.99**
Sri Lanka	0.40	0.49	0.47	0.43	0.57	0.57	2.92**
Suriname	0.58	0.47	0.50	0.43	0.86	0.86	3.70**
Swaziland	0.26	0.37	0.36	0.45	0.14	0.43	2.01
Syria	0.17	0.41	0.38	0.31	0.14	0.29	1.70
Thailand	0.42	0.47	0.53	0.45	0.43	0.57	2.88**
Timor-Leste*	0.52	0.25	0.27	0.30	0.71	0.57	2.63
Tonga	0.49	0.49	0.43	0.36	0.43	0.71	2.91**
Tunisia	0.25	0.54	0.58	0.50	0.14	0.43	2.45
Turkmenistan	0.09	0.23	0.23	0.21	0.14	0.14	1.05
Ukraine*	0.49	0.35	0.35	0.32	0.71	0.86	3.08**
Vanuatu*	0.62	0.58	0.45	0.58	0.86	0.86	3.94**

* Denotes MCC funding in 2009

** Denotes pass (total score greater than sum median score)

Table 4.12

Mean Standardized Scores from Model III for the Encouraging Economic Freedom Index for Low-income Countries in 2009

Sum Median Score = 0.38

Country	Regulatory Quality	Time of Business	Cost of Business	Trade Policy	Time of Registering	Cost of Registering	Fiscal Policy	Inflation	Total Score
Afghanistan	0.14	-0.01	-0.06	0.00	-0.49	-0.25	-0.03	-0.26	-0.96
Bangladesh	0.34	-0.11	-0.03	0.45	-0.48	-0.37	-0.06	-0.12	-0.36
Benin*	0.43	-0.04	-0.21	0.76	-0.23	-0.43	-0.06	-0.05	0.17
Bolivia	0.30	-0.07	-0.12	0.93	-0.18	-0.18	-0.01	-0.07	0.60**
Burkina Faso*	0.47	-0.02	-0.07	0.80	-0.27	-0.48	-0.09	-0.06	0.29
Burundi	0.27	-0.05	-0.23	0.71	-0.18	-0.28	-1.00	-0.23	-0.98
Cambodia	0.43	-0.12	-0.16	0.72	-0.11	-0.16	-0.07	-0.01	0.51**
Cameroon	0.36	-0.05	-0.15	0.63	-0.18	-0.69	0.00	-0.07	-0.14
Central African Rep	0.28	-0.03	-0.25	0.57	-0.15	-0.66	0.00	-0.08	-0.33
Chad	0.28	-0.11	-0.27	0.66	-0.09	-0.67	-0.17	-0.22	-0.58
Comoros	0.18	-0.03	-0.20	0.31	-0.05	-0.74	-0.05	-0.10	-0.68
Congo, Dem Rep	0.18	-0.19	-1.00	0.70	-0.11	-0.33	-0.09	-1.00	-1.83
Côte d'Ivoire	0.31	-0.06	-0.14	0.80	-0.12	-0.50	-0.03	-0.02	0.23
Cuba	0.18	0.00	-0.09	0.73	-0.15	-0.26	-0.09	0.00	0.31
Djibouti	0.38	-0.05	-0.21	0.36	-0.08	-0.47	-0.08	-0.04	-0.19
Eritrea	0.05	-0.12	-0.11	0.78	-0.15	-0.33	-0.25	-0.71	-0.85
Ethiopia	0.30	-0.02	-0.03	0.78	-0.08	-0.11	-0.02	-0.79	0.03
Gambia	0.44	-0.04	-0.27	0.67	-0.13	-0.27	-0.04	-0.10	0.26

* Denotes MCC funding in 2009

** Denotes pass (total score greater than sum median score)

Table 4.12

Cont'd

Sum Median Score = 0.38

Country	Regulatory Quality	Time of Business	Cost of Business	Trade Policy	Time of Registering	Cost of Registering	Fiscal Policy	Inflation	Total Score
Ghana*	0.52	-0.02	-0.03	0.71	-0.07	-0.04	-0.10	-0.42	0.56**
Guinea	0.26	-0.06	-0.15	0.67	-0.20	-0.50	-0.12	-0.17	-0.26
Guinea-Bissau	0.26	-0.37	-0.50	0.76	-0.41	-0.19	-0.05	-0.04	-0.54
Guyana*	0.38	-0.06	-0.07	0.82	-0.07	-0.16	-0.06	-0.06	0.72**
Haiti	0.33	-0.28	-0.28	0.90	-0.79	-0.23	-0.08	-0.07	-0.50
India	0.45	-0.03	-0.06	0.88	-0.04	-0.20	-0.08	-0.19	0.74**
Iraq	0.44	-0.11	-0.08	0.86	-0.08	-0.38	-0.03	-0.10	0.52**
Kenya*	0.56	-0.01	-0.01	0.80	-0.11	-0.39	-0.19	-0.21	0.45**
Kyrgyzstan*	0.25	-0.03	-0.07	0.62	-1.00	0.00	-0.22	-0.19	-0.64
Laos	0.29	-0.14	-0.01	0.75	-0.26	-0.15	-0.11	0.00	0.36
Lesotho*	0.38	-0.06	-0.04	0.64	-0.20	-0.29	-0.07	-0.13	0.25
Liberia*	0.26	-0.04	-0.07	0.61	-0.10	-0.48	-0.20	-0.16	-0.18
Madagascar*	0.56	-0.01	0.00	0.92	-0.13	-0.12	-0.05	-0.04	1.14**
Malawi*	0.39	-0.06	-0.13	0.78	-0.17	-0.12	-0.09	-0.18	0.42**
Mali*	0.42	-0.01	-0.01	0.50	-0.15	-0.26	-0.36	-0.09	0.03
Mauritania	0.30	-0.02	-0.02	0.00	-0.15	-0.26	-0.09	0.00	-0.25
Moldova*	0.32	-0.02	-0.15	0.92	-0.15	-0.26	-0.09	0.00	0.56**
Mongolia*	0.43	-0.02	0.00	0.92	-0.02	-0.08	-0.09	-0.14	1.01**
Mozambique*	0.50	-0.02	-0.02	0.77	-0.09	-0.18	-0.04	-0.02	0.90**
Nepal	0.52	-0.10	-0.02	1.00	-0.04	-0.35	-0.03	-0.19	0.78**

* Denotes MCC funding in 2009

** Denotes pass (total score greater than sum median score)

Table 4.12

Cont'd

Sum Median Score = 0.38

Country	Regulatory Quality	Time of Business	Cost of Business	Trade Policy	Time of Registering	Cost of Registering	Fiscal Policy	Inflation	Total Score
Nicaragua*	0.42	-0.06	-0.13	0.90	-0.24	-0.13	-0.03	-0.08	0.65**
Niger*	0.41	-0.03	-0.18	0.80	-0.07	-0.40	-0.09	-0.02	0.41**
Nigeria	0.36	-0.04	-0.10	0.70	-0.16	-0.75	-0.17	-0.27	-0.43
Pakistan	0.40	-0.03	-0.01	0.74	-0.10	-0.26	-0.09	-0.45	0.20
Papua New Guinea	0.39	-0.07	-0.02	0.99	-0.14	-0.18	-0.16	-0.15	0.65**
Rwanda*	0.42	-0.05	-0.07	0.95	-0.09	-0.07	-0.01	-0.06	1.01**
Sao Tome & Principe*	0.35	-0.21	-0.10	0.68	-0.12	-0.39	-0.29	-0.37	-0.44
Senegal*	0.45	-0.01	-0.08	0.81	-0.24	-0.74	-0.08	-0.04	0.06
Sierra Leone	0.35	-0.02	-0.16	0.75	-0.17	-0.61	-0.05	-0.20	-0.12
Solomon Islands	0.25	-0.08	-0.07	0.75	-0.58	-0.18	-0.03	-0.15	-0.09
Sudan	0.25	-0.06	-0.05	0.00	-0.02	-0.11	-0.08	-0.24	-0.31
Tajikistan	0.28	-0.09	-0.03	0.93	-0.07	-0.06	-0.09	-0.14	0.73**
Tanzania*	0.42	-0.04	-0.04	0.86	-0.14	-0.16	-0.08	-0.26	0.56**
Togo	0.33	-0.08	-0.27	0.80	-0.58	-0.48	-0.05	-0.04	-0.36
Uganda*	0.47	-0.04	-0.11	0.85	-0.15	-0.15	-0.04	-0.31	0.53**
Uzbekistan	0.19	-0.02	-0.01	0.74	-0.15	-0.05	-0.05	-0.30	0.33
Viet Nam	0.39	-0.07	-0.02	0.72	-0.11	-0.04	-0.15	-0.15	0.56**
Yemen	0.38	-0.02	-0.10	0.86	-0.04	-0.14	-0.17	-0.08	0.70**
Zambia*	0.41	-0.03	-0.03	0.81	-0.08	-0.24	-0.04	-0.29	0.51**
Zimbabwe	0.04	-0.14	-0.46	0.57	-0.06	-0.90	-0.05	-0.13	-1.13

* Denotes MCC funding in 2009

** Denotes pass (total score greater than sum median score)

Table 4.13

Mean Standardized Scores from Model III for the Encouraging Economic Freedom Index for Low Middle-income Countries in 2009

Sum Median Score = 0.75

Country	Regulatory Quality	Time of Business	Cost of Business	Trade Policy	Time of Registering	Cost of Registering	Fiscal Policy	Inflation	Total Score
Albania*	0.56	-0.01	-0.03	0.86	-0.08	-0.12	-0.13	-0.05	1.00**
Algeria	0.31	-0.03	-0.01	0.78	-0.10	-0.27	-0.09	-0.12	0.46
Angola	0.30	-0.10	-0.21	0.81	-0.65	-0.41	-0.08	-0.30	-0.64
Armenia*	0.57	-0.03	0.00	0.98	-0.01	-0.01	-0.13	-0.08	1.29**
Azerbaijan	0.44	-0.01	0.00	0.89	-0.02	-0.01	-0.12	-0.03	1.13**
Belarus	0.25	-0.04	-0.01	0.76	-0.04	-0.19	-0.01	-0.28	0.45
Bhutan	0.29	-0.07	-0.01	0.48	-0.12	-0.26	-0.04	-0.19	0.07
Bosnia and Herzegovina	0.49	-0.09	-0.03	0.87	-0.25	-0.26	-0.10	-0.01	0.62
Cape Verde*	0.51	-0.07	-0.04	0.74	-0.14	-0.28	-0.11	-0.02	0.59
China	0.46	-0.06	-0.01	0.81	-0.06	-0.13	-0.05	-0.01	0.94**
Colombia	0.55	-0.05	-0.02	0.82	-0.04	-0.09	-0.04	-0.09	1.03**
Dominican Rep	0.47	-0.03	-0.02	0.83	-0.12	-0.14	-0.06	-0.03	0.90**
Ecuador	0.23	-0.09	-0.04	0.82	-0.03	-0.08	-0.07	-0.11	0.62
Egypt	0.47	-0.01	-0.02	0.72	-0.14	-0.03	-0.12	-0.35	0.52
El Salvador*	0.58	-0.02	-0.05	0.93	-0.06	-0.13	-0.09	-0.01	1.13**
Fiji	0.31	-0.07	-0.03	0.79	-0.13	-0.07	-0.09	-0.12	0.59
Georgia*	0.62	0.00	0.00	0.91	-0.01	-0.26	-0.11	-0.04	1.10**
Guatemala	0.49	-0.05	-0.06	0.89	-0.06	-0.04	-0.05	-0.04	1.08**
Honduras*	0.44	-0.04	-0.07	0.58	-0.09	-0.27	-0.16	-0.24	0.16
Indonesia*	0.15	-0.04	0.00	0.65	-0.07	-0.38	-0.02	-0.23	0.06
Iran	0.29	-0.11	-0.16	0.00	-0.10	-0.23	-0.38	-0.05	-0.74
Jamaica	0.57	-0.02	-0.06	0.89	-0.04	-0.36	-0.15	-0.01	0.82**

* Denotes MCC funding in 2009

** Denotes pass (total score greater than sum median score)

Table 4.13

Cont'd

Sum Median Score = 0.75

Country	Regulatory Quality	Time of Business	Cost of Business	Trade Policy	Time of Registering	Cost of Registering	Fiscal Policy	Inflation	Total Score
Jordan*	0.47	-0.04	-0.04	0.81	-0.12	-0.15	-0.09	-0.23	0.60
Kiribati	0.43	-0.02	-0.01	0.99	-0.02	-0.14	-0.02	-0.15	1.06**
Macedonia	0.41	-0.01	-0.01	0.82	-0.14	-0.27	-0.05	-0.19	0.55
Maldives	0.41	-0.04	-0.11	0.83	-0.06	-0.73	-0.06	-0.05	0.21
Marshall Islands	0.37	-0.03	-0.04	0.86	-0.10	-0.19	-0.09	-0.05	0.74
Micronesia	0.47	-0.02	-0.01	0.92	-0.09	-0.03	-0.11	0.00	1.13**
Morocco*	0.44	-0.04	-0.02	0.83	-0.08	-0.46	-0.09	-0.07	0.50
Namibia*	0.34	-0.04	-0.06	0.71	-0.01	-0.23	-0.05	-0.27	0.39
Paraguay*	0.58	-0.09	-0.03	0.90	-0.06	-0.12	-0.03	-0.06	1.08**
Peru*	0.50	-0.08	-0.03	0.89	-0.06	-0.15	-0.06	-0.07	0.93**
Philippines*	0.43	-0.02	-0.12	0.69	-0.61	-0.02	0.00	-0.22	0.12
Sri Lanka	0.44	-0.05	-0.01	0.80	-0.16	-0.18	-0.17	-0.07	0.60
Suriname	0.37	-1.00	-0.13	0.73	-0.38	-0.50	-0.05	0.00	-0.96
Swaziland	0.40	-0.09	-0.04	0.81	-0.09	-0.25	-0.11	-0.16	0.47
Syria	0.29	-0.02	-0.02	0.61	-0.04	-1.00	-0.05	-0.06	-0.29
Thailand	0.57	-0.05	-0.01	0.86	0.00	-0.04	-0.05	-0.02	1.26**
Timor-Leste*	0.27	-0.12	-0.01	0.83	-0.15	-0.26	-0.16	0.00	0.39
Tonga	0.38	-0.04	-0.01	0.63	-0.21	-0.36	-0.05	-0.07	0.27
Tunisia	0.52	-0.02	-0.01	0.60	-0.08	-0.22	-0.03	-0.08	0.70
Turkmenistan	0.09	0.00	-0.09	0.90	-0.15	-0.26	-0.13	-0.06	0.29
Ukraine*	0.39	-0.04	-0.01	0.95	-0.18	-0.15	-0.11	-0.34	0.51
Vanuatu*	0.36	-0.06	-0.06	0.71	-0.37	-0.25	-0.01	-0.09	0.23

* Denotes MCC funding in 2009

** Denotes pass (total score greater than sum median score)

4. Summary

While Model I attempted to replicate how the MCC makes funding decisions Model II used the same scoring mechanism and passing requirements (at least half of the indicators in the Ruling Justly (3/6) and Encouraging Economic Freedom (3/6), and passed least three of the five indicators in the Investing in People category (3/5)) and simply simulated all of the data which made up the mean scores used in Model I. Thus Model II could be seen as a "check for robustness" in the scores for model I. That is, if a country passed an indicator in Model II 97% of the time or only 3% of the time the indicator would seem to be robust. However; if a country passed an indicator 43% of the time (Egypt Table 4.7) then more on the ground information could be sequestered by the MCC. That is, through the simulation process in Model II it would appear that the on the ground reports about a country like Egypt seem to be even spilt and that before a funding decision can me made judiciously more information is likely needed.

Model III uses the same indicators as Model's I and II but provides equal weighting to each indicator. Model's I and II were simply a counting exercise to see how many indicators a country passed with no regard to the degree on which the passed or failed. Model III standardized all the indicators (so they could be compared) and then summed up the standardized score for ALL indicators. The difference between Model III and Models I and II is that Model III takes into account each indicator (even those a country failed). The rationale being that a difference between a marginal pass and a marginal fail is just that, marginal. However, Model I and II treat that marginal difference as an absolute difference where Model III compares it as a marginal difference. That is, a country who passes an indicator 100% of the time is rewarded more than a country who passes the same indicator 51% of the time,

whereas Model's I and II would treat them the same, simply as a pass. Model III appears to be an improvement over what the MCC is currently using in the sense it is more holistic. That is, it rewards a country who is improving in all facets of development (even marginally) more so than a country who is very good at half of the development indicators and who is poor at the other half.

V. CONCLUSION

A. Summary

This study set out to replicate, simulate, and suggest improvements to the current funding criteria used by the MCC. Building any indicator is a challenge and one which so many lives depend upon is an even more daunting task. This study attempted had three distinct objectives. First, to use empirical data from the ten different sources used by the MCC to make their funding decisions and replicate that decision making process as defined by the MCC. Second, given that the MCC uses a mean score for each indicator which is a function of many on the ground scores the thesis used those score distributions to simulate passage rates from the defined MCC funding criteria. Third, the study presents an alternative holistic scoring criterion which encompasses all the indicators not simply counting the numbers of "pass" or "fails" like the MCC currently does.

The study presents three separate but related models. Model I is set up so that it mimics the scoring criterion of the current MCC funding paradigm. That is, it uses all of the indicators the MCC and segregates countries into low and low-middle income countries as defined by the World Bank. From this, Model I then calculates the median score for each indicator for each income group and compares each country to see if it is above or below the median, again like the current MCC funding criterion. Model I then follows the MCC scoring system of passing a country where they were above the income class median for at least half of the indicators in the Ruling Justly (3/6) and Encouraging Economic Freedom (3/6), and passed least three of the five indicators in the Investing in People category (3/5).

Model II uses the same methodology and scoring criteria as Model I with the exception that it simulates a range of scores instead of using countries mean score. That is,

since the MCC solicits many scores for the same indicators and simply takes the mean there is an associated distribution of scores for each indicator and each country. If there is one really low or really high score the mean value (which the MCC uses) may be misleading and could artificially punish or benefit a country. Since the mean score is a function of all the on the ground reports if those report scores are skewed then the mean score may actually be misleading. By simulating and then pulling random pulls from the actual distribution for each indicator Model II can assess how stable an indicator is. It also indicates the robustness of the indicator, that is the closer to 0 and 100% (either always failing or always passing) the more robust an indicator is, the closer to 50% the less robust an indicator becomes. Methodologies such as Model II could serve as a great tool for the MCC or other funding agencies to see where more on the ground reports are needed. That is, if a country passes an indicator 47% of the time (which according to Model I and the MCC is a "fail") this could be a signal that more on the ground estimates are needed for said country. Idealistically you would like an indicator to be robust, close to passing 0 or 100% in terms of model II. What Model I and Model II fail to take into account is the holistic nature of an index. That is, is a passage rate of 51% the same as passing 100% of the time? Conversely and perhaps more importantly, is passing 0% of the time equivalent to passing 48% of the time. In the eyes of the MCC and Model's I and II these passage rates are equivalent. From these concerns Model III was developed.

Model III was created as an alternative to Model's I and II and aggregated all scores into one; therefore countries that marginally fail some indicators but are well above the median for others are rewarded for the later and not punished as much for the former. The rationale being that a difference between a marginal pass and a marginal fail is just that, marginal. However, Model I and II treat that marginal difference as an absolute difference

where Model III compares it as a marginal difference. Model III uses the same indicators as the MCC, and in Model's I and II, but instead of having to pass X out of Y indicators a country must score above a single value for each index. That is, Model III jettisons the three of six rule for Ruling Justly and sums all the standardized scores for each indicator for Ruling Justly into one score and compares that score to the median of either LIC or LIMCs

As was expected there are large differences between the results in Model's I and II and those in Model III. Therefore, the hypothesis of this study is rejected. Those countries like Ethiopia who marginal failed nearly ever indicator were punished as such in Model I where it failed. However; in Model III where all scores are analyzed it passed. Conversely, a country like Paraguay that passed the necessary half of the indicators in the Ruling Justly (3/6) and Encouraging Economic Freedom (3/6), and passed least three of the five indicators in the Investing in People category (3/5) in Model I failed Model III. This was due to the fact that model III is holistic and those indicators that Paraguay failed in Model I they failed badly, and as such those "bad" fails were punished more than the multiple marginal fails of Ethiopia. Model III finds a host of anomalies such as this. As such, it may be a more appropriate measure to make funding decisions in that it looks at ALL of the indicators is not simply a counting exercise on how many of them you passed. That is, which is better, a country(A) which scores 100% on three indictors and 0% on three indicators (which would pass the MCC's current criteria) or a country (B) who passes 48% of the time on all six indicators (which would fail the MCC's current criteria)? Model I would reward country A and Model III would reward country B. It would appear from the extensive development literature that development is holistic and in some cases you are only as strong as your weakest link. If this is true than Model III may be more appropriate for the MCC to use as a funding decision tool.

It was also found in Model's I and II that some countries who failed the Control of Corruption indicator actually were funded by the MCC. This is a talking point in that the MCC states that Control of Corruption is the only hard hurdle to funding, meaning if you are below the median for your income group you automatically are disqualified. The MCC states that while they use a quantitative index they do have some "subjective flexibility" which seems to express itself in emerging democracies and political allies.

These results are useful not only for the MCC, but also for all policy makers who rely on subjective indicators when making funding decisions.

B. Limitations of Study

Although this study found some useful tools for development agencies, there are three main limitations and shortcomings. First of all, this study only focused on countries' scores in 2009 because of limitation of time. Some interesting results could be found while applying models over time. Second, the study did not estimate how countries' changes from LIC to LMIC or vice versa could affect the median of income grouping, thus help or hurt other countries. Third, the study did not estimate which indicator should not be considered and which new ones should be included by the MCC.

C. Future Research

There are several areas on which future studies should focus. First, a study can be extended on the income effect on countries' scores. Second, a research can be extended on the effect of external findings on countries' scores over the time. Third, a further research could be addressed to identify what variables need to be captured when considering experts' perceptions on governance indicators. Fourth, a future research is needed to take into considerations domestic experts and firms' perceptions on governance indicators. Fifth, due to

the fact that there are many critics about governance's indicators, a further study is needed to find relevant and credible datasets which determine quality indicators widely-accepted. Finally, a future research could address a new methodology that can balance both facts and perceptions-based indicators into the scoring system.

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VII. APPENDIX

Table 7.1
Countries That Legal Prohibitions Prohibit Assistance from the United States Government

Countries	2004	2005	2006	2007	2008	2009	2010	2011
Low Income	Burma	Burma	Burma	Burma	Burma	Burma	Burma	Burma
	Burundi	Burundi	Burundi	Cambodia	Côte d'Ivoire	Côte d'Ivoire	Côte d'Ivoire	Côte d'Ivoire
	Cambodia	Cambodia	Cambodia	Côte d'Ivoire	Cuba	Iraq	Madagascar	Madagascar
	Central African Rep.	Central African Rep.	Central African Rep.	Cuba	Sudan	Sudan	Sudan	Sudan
	Côte d'Ivoire	Côte d'Ivoire	Côte d'Ivoire	Somalia	North Korea	Mauritania	North Korea	North Korea
	Liberia	Liberia	Liberia	Sudan	Uzbekistan	North Korea	Uzbekistan	Uzbekistan
	Guinea-Bissau	Guinea-Bissau	Guinea-Bissau	North Korea	Zimbabwe	Uzbekistan	Zimbabwe	Zimbabwe
	Somalia	Somalia	Somalia	Uzbekistan	Syria	Zimbabwe		
	Sudan	Sudan	Sudan	Zimbabwe		Syria		
	Uzbekistan	Uzbekistan	Uzbekistan	Syria				
	Zimbabwe	Zimbabwe	Zimbabwe					
		Cuba	Cuba					
			Iran					
			Korea					
			Serbia					
Low Middle-Income	Syria	Syria	Bosnia and Herzegovina	Bosnia and Herzegovina	Bosnia and Herzegovina	China	China	China
			Iran	China	China	Iran	Iran	Iraq
			Syria	Iran	Iran		Iraq	Syria
				Serbia	Fiji		Syria	
					Thailand			

Source: MCC (2004-2011).

Table 7.2

2009 WGI Control of Corruption, Rule of Law, Government Effectiveness, Voice and Accountability, and Regulatory Quality Scores

	Control of Corruption			Rule of Law			Government Effectiveness			Voice Accountability			Regulatory Quality		
Country	Est.*	S.E**	N.***	Est.	S.E	N.	Est.	S.E	N.	Est.	S.E	N.	Est.	S.E	N.
Afghanistan	-1.57	0.2	9	-2.04	0.18	11	-1.56	0.22	8	-1.39	0.13	10	-1.78	0.19	7
Albania	-0.4	0.14	12	-0.52	0.14	14	-0.2	0.19	10	0.16	0.14	12	0.28	0.17	11
Algeria	-0.49	0.17	12	-0.73	0.14	15	-0.59	0.17	10	-1.04	0.11	15	-0.94	0.17	10
Angola	-1.34	0.18	12	-1.19	0.14	15	-0.92	0.18	10	-1.14	0.12	14	-1	0.16	10
Armenia	-0.59	0.14	15	-0.4	0.14	17	0.07	0.19	11	-0.82	0.12	13	0.34	0.16	12
Azerbaijan	-1.1	0.14	15	-0.81	0.13	17	-0.63	0.18	11	-1.2	0.12	15	-0.28	0.16	12
Bangladesh	-0.96	0.17	13	-0.72	0.14	16	-0.99	0.18	11	-0.37	0.12	14	-0.79	0.16	11
Belarus	-0.78	0.15	11	-0.94	0.15	13	-1.1	0.21	8	-1.54	0.14	10	-1.23	0.18	9
Benin	-0.65	0.16	10	-0.69	0.14	13	-0.48	0.18	10	0.31	0.13	13	-0.36	0.17	9
Bhutan	0.84	0.21	8	0.16	0.17	10	0.4	0.22	7	-0.63	0.13	8	-1.06	0.18	8
Bolivia	-0.71	0.17	14	-1.22	0.14	16	-0.72	0.18	11	-0.08	0.12	15	-0.98	0.17	10
Bosnia & Herzegovina	-0.31	0.14	12	-0.39	0.14	14	-0.65	0.2	9	-0.05	0.14	12	-0.06	0.18	10
Burkina Faso	-0.44	0.15	13	-0.28	0.14	16	-0.65	0.17	12	-0.25	0.11	16	-0.13	0.16	11
Burundi	-1.12	0.18	10	-1.2	0.15	13	-1.11	0.18	9	-0.73	0.14	12	-1.15	0.17	9
Cambodia	-1.18	0.15	14	-1.05	0.14	15	-0.74	0.19	10	-0.88	0.12	13	-0.37	0.17	10
Cameroon	-0.92	0.16	13	-1.07	0.14	15	-0.81	0.17	11	-1.03	0.12	15	-0.69	0.16	11
Cape Verde	0.7	0.2	6	0.47	0.16	8	0	0.21	6	0.85	0.16	8	0.04	0.2	6
Central African Rep	-0.82	0.2	7	-1.32	0.15	10	-1.41	0.2	7	-0.98	0.13	10	-1.12	0.18	7
Chad	-1.39	0.18	9	-1.53	0.15	12	-1.48	0.18	9	-1.4	0.13	13	-1.08	0.17	9
China	-0.53	0.14	13	-0.35	0.14	16	0.12	0.17	11	-1.65	0.12	14	-0.2	0.17	11
Colombia	-0.29	0.15	16	-0.44	0.13	18	0.04	0.17	12	-0.21	0.12	17	0.24	0.17	11

Source: WGI (2011).*****Denotes mean value **Denotes Standard Error ***Denotes Number of observations

Table 7.2

Cont'd

	Control of Corruption			Rule of Law			Government Effectiveness			Voice Accountability			Regulatory Quality		
Country	Est.*	S.E**	N.***	Est.	S.E	N.	Est.	S.E	N.	Est.	S.E	N.	Est.	S.E	N.
Congo, Dem Rep	-1.42	0.18	11	-1.7	0.14	14	-1.72	0.18	10	-1.45	0.12	14	-1.62	0.16	10
Côte d'Ivoire	-1.16	0.17	12	-1.33	0.14	15	-1.21	0.17	11	-1.16	0.12	14	-0.97	0.16	11
Cuba	0.29	0.2	6	-0.65	0.17	10	-0.48	0.22	7	-1.71	0.14	9	-1.6	0.2	7
Djibouti	-0.26	0.23	6	-0.65	0.17	9	-0.91	0.22	6	-1.11	0.16	9	-0.6	0.2	6
Dominican Rep	-0.68	0.17	13	-0.72	0.14	15	-0.44	0.18	11	0.12	0.13	14	-0.15	0.17	10
Ecuador	-0.92	0.17	14	-1.28	0.14	17	-0.84	0.18	11	-0.26	0.12	16	-1.36	0.17	10
Egypt	-0.41	0.17	13	-0.03	0.14	16	-0.3	0.17	11	-1.12	0.11	16	-0.14	0.16	11
El Salvador	-0.17	0.18	13	-0.78	0.15	15	-0.04	0.19	10	0.08	0.12	14	0.38	0.18	9
Eritrea	-0.33	0.21	7	-1.24	0.16	10	-1.41	0.21	6	-2.16	0.13	10	-2.27	0.18	7
Ethiopia	-0.71	0.17	12	-0.77	0.14	15	-0.41	0.17	10	-1.26	0.12	15	-0.98	0.16	10
Fiji	-0.74	0.3	3	-0.76	0.22	6	-0.96	0.28	3	-0.72	0.17	7	-0.95	0.26	4
Gambia	-0.56	0.2	7	-0.43	0.16	10	-0.66	0.19	7	-1.05	0.15	10	-0.3	0.19	8
Georgia	-0.23	0.14	14	-0.17	0.14	16	0.22	0.2	10	-0.18	0.12	13	0.6	0.17	11
Ghana	0.06	0.15	15	-0.11	0.13	17	0.06	0.17	12	0.5	0.11	17	0.12	0.16	11
Guatemala	-0.6	0.17	14	-1.12	0.14	16	-0.69	0.18	11	-0.33	0.12	15	-0.07	0.17	10
Guinea	-1.23	0.19	9	-1.61	0.16	12	-1.29	0.19	9	-1.43	0.14	11	-1.18	0.17	9
Guinea-Bissau	-1.12	0.26	5	-1.38	0.19	8	-1.07	0.22	5	-0.76	0.16	8	-1.19	0.21	6
Guyana	-0.54	0.2	8	-0.59	0.16	11	-0.21	0.21	7	0.11	0.14	10	-0.61	0.21	7
Haiti	-1.12	0.19	10	-1.34	0.15	12	-1.43	0.2	8	-0.6	0.12	12	-0.83	0.18	8
Honduras	-0.89	0.17	13	-0.87	0.14	16	-0.71	0.18	11	-0.46	0.12	15	-0.24	0.17	10
India	-0.33	0.14	14	0.05	0.14	15	-0.01	0.17	11	0.47	0.13	14	-0.28	0.17	11

Source: WGI (2011).*****Denotes mean value **Denotes Standard Error ***Denotes Number of observations

Table 7.2

Cont'd

	Control of Corruption			Rule of Law			Government Effectiveness			Voice Accountability			Regulatory Quality		
Country	Est.*	S.E**	N.***	Est.	S.E	N.	Est.	S.E	N.	Est.	S.E	N.	Est.	S.E	N.
Iran	-0.83	0.19	9	-0.9	0.15	12	-0.74	0.2	8	-1.49	0.12	11	-1.74	0.18	8
Iraq	-1.38	0.21	9	-1.83	0.19	10	-1.26	0.22	7	-1.17	0.14	11	-1.04	0.22	6
Jamaica	-0.44	0.19	9	-0.49	0.16	12	0.13	0.2	8	0.53	0.14	11	0.31	0.19	8
Jordan	0.27	0.16	12	0.38	0.14	15	0.28	0.18	10	-0.85	0.12	15	0.36	0.17	10
Kenya	-1.11	0.15	15	-1.07	0.13	17	-0.66	0.17	12	-0.32	0.11	17	-0.17	0.16	11
Kiribati	-0.11	0.29	4	0.18	0.22	7	-0.72	0.27	4	0.73	0.22	4	-1.26	0.23	5
Kyrgyzstan	-1.22	0.14	13	-1.29	0.14	16	-0.98	0.2	10	-0.96	0.12	13	-0.36	0.17	11
Laos	-1.14	0.19	10	-0.94	0.15	13	-1.03	0.2	9	-1.71	0.13	10	-1.05	0.18	9
Lesotho	0.14	0.17	9	-0.26	0.15	12	-0.26	0.18	9	-0.14	0.14	10	-0.58	0.17	9
Liberia	-0.56	0.18	12	-1.09	0.15	14	-1.17	0.19	9	-0.32	0.12	15	-1.21	0.17	8
Macedonia	-0.03	0.15	11	-0.22	0.14	13	-0.14	0.21	8	0.13	0.14	11	0.32	0.18	9
Madagascar	-0.25	0.16	12	-0.74	0.14	15	-0.64	0.17	12	-0.62	0.13	14	-0.47	0.16	11
Malawi	-0.47	0.16	13	-0.19	0.14	16	-0.52	0.17	11	-0.22	0.12	16	-0.53	0.17	10
Maldives	-0.69	0.29	4	-0.09	0.22	7	-0.37	0.27	4	-0.14	0.21	5	-0.41	0.23	5
Mali	-0.69	0.16	12	-0.41	0.14	15	-0.77	0.17	12	0.15	0.13	14	-0.43	0.16	11
Marshall Islands	-0.37	0.39	3	-0.32	0.31	4	-1.44	0.39	3	1.11	0.24	3	-1.01	0.29	3
Mauritania	-0.66	0.17	11	-0.84	0.14	14	-0.9	0.18	10	-1.01	0.12	13	-0.66	0.17	10
Micronesia	-0.11	0.48	2	0.09	0.22	6	-0.59	0.29	3	1.05	0.22	3	-0.88	0.25	4

Source: WGI (2011).*****Denotes mean value **Denotes Standard Error ***Denotes Number of observations

Table 7.2

Cont'd

	Control of Corruption			Rule of Law			Government Effectiveness			Voice Accountability			Regulatory Quality		
Country	Est.*	S.E**	N.***	Est.	S.E	N.	Est.	S.E	N.	Est.	S.E	N.	Est.	S.E	N.
Mongolia	-0.77	0.17	14	-0.39	0.14	16	-0.81	0.18	12	-0.05	0.13	13	-0.35	0.15	13
Morocco	-0.23	0.16	14	-0.16	0.14	16	-0.11	0.17	11	-0.79	0.11	16	-0.01	0.16	11
Mozambique	-0.41	0.15	14	-0.58	0.13	17	-0.34	0.17	12	-0.07	0.11	16	-0.32	0.16	11
Namibia	0.23	0.16	12	0.26	0.14	15	0.19	0.17	12	0.3	0.12	15	0.08	0.16	11
Nepal	-0.75	0.17	12	-0.96	0.14	15	-0.95	0.19	10	-0.58	0.12	13	-0.78	0.17	10
Nicaragua	-0.76	0.17	14	-0.83	0.14	17	-1.04	0.18	11	-0.49	0.12	16	-0.39	0.17	10
Niger	-0.66	0.18	10	-0.64	0.15	13	-0.75	0.18	10	-0.7	0.13	13	-0.47	0.16	10
Nigeria	-1.07	0.15	15	-1.22	0.13	17	-1.24	0.17	12	-0.85	0.11	17	-0.7	0.16	11
Pakistan	-1.1	0.17	14	-0.93	0.14	16	-0.93	0.18	11	-1	0.12	14	-0.5	0.16	11
Papua New Guinea	-1.39	0.2	8	-0.97	0.16	11	-0.84	0.21	8	0.11	0.14	9	-0.53	0.17	9
Paraguay	-0.88	0.17	12	-0.98	0.14	15	-0.93	0.18	10	-0.24	0.12	14	-0.41	0.18	9
Peru	-0.36	0.15	16	-0.66	0.13	18	-0.36	0.17	12	0.04	0.12	17	0.41	0.17	11
Philippines	-0.71	0.14	15	-0.53	0.14	16	-0.14	0.17	11	-0.12	0.12	15	0.02	0.17	11
Rwanda	0.13	0.21	9	-0.51	0.16	12	-0.18	0.21	7	-1.29	0.12	13	-0.34	0.18	7
Sao Tome & Principe	-0.4	0.24	4	-0.73	0.17	6	-0.68	0.23	4	0.17	0.17	6	-0.76	0.22	5
Senegal	-0.53	0.15	13	-0.31	0.14	15	-0.4	0.17	12	-0.31	0.12	14	-0.26	0.16	11
Sierra Leone	-0.98	0.19	12	-0.97	0.15	14	-1.18	0.19	9	-0.26	0.12	13	-0.76	0.17	9
Solomon Islands	-0.37	0.29	4	-0.67	0.22	6	-1	0.27	4	0.19	0.22	4	-1.25	0.23	5
Sri Lanka	-0.36	0.17	13	-0.07	0.14	16	-0.17	0.18	11	-0.5	0.12	14	-0.28	0.16	11
Sudan	-1.24	0.18	10	-1.34	0.15	12	-1.32	0.18	10	-1.59	0.13	13	-1.25	0.17	9

Source: WGI (2011).*****Denotes mean value **Denotes Standard Error ***Denotes Number of observations

Table 7.2

Cont'd

	Control of Corruption			Rule of Law			Government Effectiveness			Voice Accountability			Regulatory Quality		
Country	Est.*	S.E**	N.***	Est.	S.E	N.	Est.	S.E	N.	Est.	S.E	N.	Est.	S.E	N.
Suriname	-0.33	0.22	5	-0.13	0.18	8	-0.01	0.22	5	0.41	0.17	8	-0.65	0.23	6
Swaziland	-0.27	0.22	7	-0.63	0.16	10	-0.7	0.21	6	-1.21	0.15	8	-0.52	0.2	7
Syria	-0.96	0.17	11	-0.47	0.14	14	-0.61	0.18	10	-1.63	0.12	13	-1.07	0.17	10
Tajikistan	-1.11	0.14	13	-1.22	0.14	16	-1.11	0.2	10	-1.33	0.13	12	-1.08	0.17	11
Tanzania	-0.42	0.15	14	-0.44	0.13	17	-0.42	0.17	12	-0.14	0.11	17	-0.38	0.16	11
Thailand	-0.23	0.14	15	-0.13	0.14	16	0.15	0.17	11	-0.4	0.12	15	0.37	0.17	11
Timor-Leste	-0.99	0.21	8	-1.25	0.16	11	-1.13	0.22	6	0.09	0.14	9	-1.16	0.2	7
Togo	-1.08	0.19	9	-0.9	0.15	12	-1.36	0.19	9	-1.04	0.13	11	-0.83	0.17	9
Tonga	-0.7	0.29	4	-0.03	0.22	6	-0.36	0.27	4	-0.05	0.22	4	-0.6	0.23	5
Tunisia	0.02	0.17	12	0.22	0.14	15	0.41	0.17	11	-1.27	0.12	14	0.1	0.16	11
Turkmenistan	-1.43	0.16	6	-1.37	0.15	9	-1.34	0.23	5	-2.06	0.15	7	-2.07	0.19	7
Uganda	-0.87	0.15	15	-0.43	0.13	17	-0.63	0.17	12	-0.49	0.11	17	-0.17	0.16	11
Ukraine	-0.9	0.13	15	-0.73	0.13	17	-0.77	0.18	11	-0.06	0.12	15	-0.54	0.16	12
Uzbekistan	-1.26	0.15	11	-1.22	0.14	14	-0.72	0.21	9	-1.93	0.12	10	-1.55	0.17	10
Vanuatu	0.4	0.31	4	0.4	0.21	6	-0.27	0.29	3	0.58	0.21	4	-0.71	0.25	4
Viet Nam	-0.52	0.15	15	-0.43	0.14	16	-0.26	0.18	11	-1.52	0.12	14	-0.56	0.16	11
Yemen	-1.03	0.18	11	-1.15	0.15	14	-1.12	0.2	9	-1.27	0.12	14	-0.6	0.18	9
Zambia	-0.51	0.15	14	-0.48	0.14	16	-0.67	0.17	12	-0.27	0.11	16	-0.45	0.16	11
Zimbabwe	-1.49	0.17	13	-1.91	0.14	16	-1.67	0.17	11	-1.55	0.12	15	-2.29	0.16	11

Source: WGI (2011).*****Denotes mean value **Denotes Standard Error ***Denotes Number of observations

Table 7.3

2009 World Bank Per Capita GNI, Freedom House Civil Liberties and Political Rights, UNESCO Primary Education and Girls' Education Scores.

Country	per capita GNI (2009 USD)	Civil Liberties	Political Rights	Primary Education (%)	Girls' Education (%)
Afghanistan	$370	6	5	...*	…*
Albania	$3,840	3	3	...*	88.81
Algeria	$3,620	5	6	...*	91.45
Angola	$3,450	5	6	...*	...*
Armenia	$3,350	4	6	3.53	...*
Azerbaijan	$3,830	5	6	2.94	91.43
Bangladesh	$520	4	4	...*	63.2
Belarus	$3,380	6	7	4.42	...*
Benin	$690	2	2	4.24	53.16
Bhutan	$1,900	5	4	...*	92.44
Bolivia	$1,460	3	3	...*	...*
Bosnia & Herzegovina	$3,580	3	4	...*	...*
Burkina Faso	$480	3	5	...*	39.6
Burundi	$140	5	4	7.07	50.67
Cambodia	$600	5	6	...*	...*
Cameroon	$1,150	6	6	2.99	67.23
Cape Verde	$3,130	1	1	5.25	86.55
Central African Rep	$410	5	5	1.22	28.84
Chad	$530	6	7	2.29	24.39
China	$2,770	6	7	...*	...*
Colombia	$3,250	4	3	3.94	116.76

Sources: World Bank, Freedom House and UNESCO (2011*).*

*Denotes no scores

Table 7.3

Cont'd

Country	per capita GNI (2009 USD)	Civil Liberties	Political Rights	Primary Education (%)	Girls' Education (%)
Comoros	$750	4	3	...*	...*
Congo, Dem Rep	$150	6	6	...*	45.65
Côte d'Ivoire	$980	5	6	...*	38.67
Cuba	...*	6	7	...*	98.23
Djibouti	$1,130	5	5	...*	33.82
Dominican Rep	$3,550	2	2	...*	89.44
Ecuador	$3,640	3	3	...*	...*
Egypt	$1,800	5	6	...*	94.5
El Salvador	$3,480	3	2	...*	...*
Eritrea	$300	6	7	...*	43.18
Ethiopia	$280	5	5	...*	53.24
Fiji	$3,300	4	6	...*	...*
Gambia	$390	4	5	2.51	79.34
Georgia	$2,470	4	4	...*	104.44
Ghana	$670	2	1	...*	80.78
Guatemala	$2,680	4	3	...*	...*
Guinea	$390	5	7	...*	52.56
Guinea-Bissau	$250	4	4	...*	...*
Guyana	$1,420	3	2	3.09	108.78
Haiti	$660	5	4	...*	...*
Honduras	$1,800	3	3	...*	...*
India	$1,070	3	2	...*	...*

Sources: World Bank, Freedom House and UNESCO (2011).

*Denotes no scores

Table 7.3

Cont'd

Country	per capita GNI (2009 USD)	Civil Liberties	Political Rights	Primary Education (%)	Girls' Education (%)
Indonesia	$2,010	3	2	...*	109.66
Iran	$3,540	6	6	4.04	100.86
Iraq	...*	6	6	...*	...*
Jamaica	$3,480	3	2	...*	...*
Jordan	$3,310	5	5	...*	...*
Kenya	$770	3	4	...*	...*
Kiribati	$2,000	1	1	...*	...*
Kyrgyzstan	$740	4	5	...*	94.59
Laos	$750	6	7	...*	...*
Lesotho	$1,080	3	2	...*	79.37
Liberia	$170	4	3	...*	...*
Macedonia	$3,460	3	3	...*	...*
Madagascar	$410	3	4	2.63	79.05
Malawi	$290	4	4	...*	60.47
Maldives	$3,630	4	4	...*	111.86
Mali	$580	3	2	3.31	51.54
Marshall Islands	$3,270	1	1	...*	94.07
Mauritania	$840	5	6	...*	...*
Micronesia	$2,340	1	1	...*	...*

Sources: World Bank, Freedom House and UNESCO (2011*).*

*Denotes no scores

Table 7.3

Cont'd

Country	per capita GNI (2009 USD)	Civil Liberties	Political Rights	Primary Education (%)	Girls' Education (%)
Moldova	$1,470	4	4	8.48	91.47
Mongolia	$1,680	2	2	...*	...*
Morocco	$2,580	4	5	...*	77.02
Mozambique	$370	3	3	...*	50.56
Namibia	$3,360	2	2	...*	91.2
Nepal	$400	4	4	4.19	...*
Nicaragua	$1,080	3	4	...*	...*
Niger	$330	4	3	3.62	33.58
Nigeria	$1,160	4	5	...*	...*
Pakistan	$980	5	4	1.92	53.9
Papua New Guinea	$1,010	3	4	...*	...*
Paraguay	$2,180	3	3	...*	94.67
Peru	$3,450	3	2	2.09	...*
Philippines	$1,890	3	4	...*	...*
Rwanda	$410	5	6	...*	...*
Sao Tome & Principe	$1,020	2	2	...*	...*
Senegal	$970	3	3	5.47	57.32
Sierra Leone	$320	3	3	3.42	...*
Solomon Islands	$1,180	3	4	...*	...*
Sri Lanka	$1,790	4	4	...*	97.91
Sudan	$1,130	7	7	...*	...*

Sources: World Bank, Freedom House and UNESCO (2011).

*Denotes no scores

Table 7.3

Cont'd

Country	per capita GNI (2009 USD)	Civil Liberties	Political Rights	Primary Education (%)	Girls' Education (%)
Suriname	$3,200	2	2	...*	...*
Swaziland	$2,520	5	7	...*	...*
Syria	$2,090	6	7	...*	111.48
Tajikistan	$600	5	6	...*	...*
Tanzania	$430	3	4	...*	102.44
Thailand	$2,840	4	5	4.08	...*
Timor-Leste	$2,460	4	3	...*	...*
Togo	$400	5	5	4.46	51.95
Tonga	$2,560	3	5	...*	...*
Tunisia	$3,290	5	7	...*	92.05
Turkmenistan	$2,840	7	7	...*	...*
Uganda	$420	4	5	2.96	72.76
Ukraine	$3,210	2	3	...*	95.78
Uzbekistan	$910	7	7	...*	90.61
Vanuatu	$2,330	2	2	4.8	82.76
Viet Nam	$890	5	7	...*	...*
Yemen	$950	5	5	...*	...*
Zambia	$950	3	3	...*	82.3
Zimbabwe	$340	6	7	...*	...*

Sources: World Bank, Freedom House and UNESCO (2011*).*

*Denotes no scores

Table 7.4

2009 CIESIN and YCLEP Child Mortality, Improved Sanitation, Improved Water, and Ecoregion Protection Scores.

Country	Child Mortality	Improved Sanitation (%)	Improved Water (%)	Ecoregion Protection (%)
Afghanistan	34.1	30	22	4.1
Albania	98.9	97	97	96.3
Algeria	98.4	94	85	63.1
Angola	29.6	50	51	98.4
Armenia	1	91	98	73.8
Azerbaijan	93	80	78	67.6
Bangladesh	90.8	36	80	18
Belarus	98.1	93	100	70.1
Benin	72.4	30	65	98.9
Bhutan	85.6	52	81	100
Bolivia	88.9	43	86	100
Bosnia & Herzegovina	98.7	95	99	3.8
Burkina Faso	40.7	13	72	100
Burundi	46.8	41	71	51.5
Cambodia	80.1	28	65	100
Cameroon	55.9	51	70	81.7
Cape Verde	96.4	--*	--*	24.9
Central African Rep	41.1	31	66	100
Chad	34.3	9	48	73.5
China	95.4	65	88	85.7
Colombia	95	78	93	95.1

Sources: CIESIN and YCLEP (2011).

*Denotes no scores

Table 7.4

Cont'd

Country	Child Mortality	Improved Sanitation (%)	Improved Water (%)	Ecoregion Protection (%)
Comoros	89.3	35	85	0
Congo, Dem Rep	35	31	46	99.9
Côte d'Ivoire	71.8	24	81	100
Cuba	98.2	98	91	65.9
Djibouti	68.9	67	92	0
Dominican Rep	97.4	79	95	80.5
Ecuador	96.7	84	95	93.8
Egypt	95.7	66	98	59
El Salvador	96.8	86	84	23.9
Eritrea	84.6	5	60	48.1
Ethiopia	60	11	42	99.9
Fiji	96.6	71	47	18.5
Gambia	69.5	52	86	14.6
Georgia	98.7	93	99	35.2
Ghana	66.7	10	80	99.4
Guatemala	93.3	84	96	90.9
Guinea	61.3	19	70	67.6
Guinea-Bissau	34.2	33	57	100
Guyana	89.5	81	93	30.9
Haiti	83	19	58	2.7
Honduras	91.7	66	84	97.5
India	79.8	28	89	45.2

Sources: CIESIN and YCLEP (2011).

*Denotes no scores

Table 7.4

Cont'd

Country	Child Mortality	Improved Sanitation (%)	Improved Water (%)	Ecoregion Protection (%)
Indonesia	96.2	52	80	100
Iran	96.7	--*	--*	68.5
Iraq	94.6	76	77	0
Jamaica	96.5	83	93	100
Jordan	98.3	85	98	88.5
Kenya	69.9	42	57	86.7
Kiribati	--*	33	65	100
Kyrgyzstan	93.9	93	89	34.4
Laos	88.7	48	60	100
Lesotho	73.8	36	78	2.2
Liberia	64.7	32	64	99.2
Macedonia	--*	--*	--*	--*
Madagascar	73.5	12	47	30.5
Malawi	71.2	60	76	97.3
Maldives	96.8	59	83	0
Mali	33.2	45	60	24.3
Marshall Islands	--*	--*	--*	18.1
Mauritania	63.6	24	60	5.4
Micronesia	--*	--*	--*	--*

Sources: CIESIN and YCLEP (2011).

*Denotes no scores

Table 7.4

Cont'd

Country	Child Mortality	Improved Sanitation (%)	Improved Water (%)	Ecoregion Protection (%)
Moldova	96.2	79	90	12.8
Mongolia	98.3	50	72	80.7
Morocco	95.8	72	83	31.8
Mozambique	50.8	31	42	97.5
Namibia	87.8	35	93	98.1
Nepal	91.6	27	89	79.6
Nicaragua	96.9	48	79	77.9
Niger	34.7	7	42	68.9
Nigeria	38.1	30	47	99.3
Pakistan	80.8	58	90	92.8
Papua New Guinea	86.5	45	40	21.3
Paraguay	95.4	70	77	53
Peru	91.5	72	84	86.3
Philippines	97	78	93	100
Rwanda	56.4	23	65	85
Sao Tome & Principe	82.9	24	86	0
Senegal	53.8	28	77	99.6
Sierra Leone	65.3	11	53	49.4
Solomon Islands	90.9	32	70	0.9
Sri Lanka	97.2	86	82	94
Sudan	68.1	35	70	38.6

Sources: CIESIN and YCLEP (2011).

*Denotes no scores

Table 7.4

Cont'd

Country	Child Mortality	Improved Sanitation (%)	Improved Water (%)	Ecoregion Protection (%)
Suriname	93.7	82	92	95.4
Swaziland	72.7	50	60	30.1
Syria	98.3	92	89	6.4
Tajikistan	86.5	92	67	38.1
Tanzania	68.9	33	55	100
Thailand	97.5	96	98	94.4
Timor-Leste	--*	--*	--*	--*
Togo	79.8	12	59	100
Tonga	97	96	100	100
Tunisia	98.2	85	94	12.6
Turkmenistan	89.7	--*	--*	30.4
Uganda	62.9	33	64	100
Ukraine	97.8	93	97	34.3
Uzbekistan	92.7	96	88	21.8
Vanuatu	95.8	--*	--*	41.8
Viet Nam	97.3	65	92	56
Yemen	84.8	46	66	0
Zambia	48.6	52	58	100
Zimbabwe	72.5	46	81	100

Sources: CIESIN and YCLEP (2011).

*Denotes no scores

Table 7.5

2009 WHO MCV, DTP3, Health Expenditures and WEO/IMF Fiscal Policy and Inflation Scores

Country	MCV (%)	DPT3 (%)	Health Expenditures (%)	Fiscal Policy (%)	Inflation (%)
Afghanistan	76	83	3.7	-1.57	-12.24
Albania	97	98	8.4	-7.41	2.22
Algeria	88	93	9.2	-5.43	5.74
Angola	77	73	8.4	-4.9	13.72
Armenia	96	93	6.6	-7.69	3.54
Azerbaijan	67	73	3.7	6.77	1.5
Bangladesh	89	94	7.9	-3.68	5.43
Belarus	99	96	8.8	-0.42	12.95
Benin	72	83	8.5	-3.3	2.16
Bhutan	98	96	13.3	2.27	8.59
Bolivia	86	85	8	0.61	3.35
Bosnia & Herzegovina	93	90	15.1	-5.64	-0.38
Burkina Faso	75	82	16.3	-5.34	2.6
Burundi	91	92	11.8	58.48	10.66
Cambodia	92	94	7.5	-4.08	-0.66
Cameroon	74	80	8.2	-0.05	3.04
Cape Verde	96	99	10.2	-6.26	0.99
Central African Rep	62	54	11	-0.12	3.52
Chad	23	23	13.8	-9.92	10.1
China	94	97	10.3	-3.09	-0.68
Colombia	95	92	17.9	-2.53	4.2

Sources: WHO and WEO/IMF (2011).
*Denotes no scores

Table 7.5

Cont'd

Country	MCV (%)	DPT3 (%)	Health Expenditures (%)	Fiscal Policy (%)	Inflation (%)
Comoros	79	83	8	2.7	4.79
Congo, Dem Rep	76	77	1.7	-5.17	46.22
Côte d'Ivoire	67	81	5.1	-1.57	1.01
Cuba	96	96	14.7	--*	--*
Djibouti	73	89	13.9	-4.58	1.67
Dominican Rep	79	82	12.4	-3.49	1.44
Ecuador	66	75	8.4	-4.29	5.16
Egypt	95	97	5.9	-6.9	16.24
El Salvador	95	91	12.3	-5.55	0.43
Eritrea	95	99	3.1	-14.73	33
Ethiopia	75	79	11.4	-0.94	36.4
Fiji	94	99	9.1	-5.07	5.53
Gambia	96	98	11.6	-2.43	4.55
Georgia	83	88	7.5	-6.54	1.73
Ghana	93	94	12.8	-5.82	19.25
Guatemala	92	92	15.9	-3.15	1.86
Guinea	51	57	4.3	-7.25	7.9
Guinea-Bissau	76	68	4	2.85	-1.64
Guyana	97	98	14.5	-3.52	2.95
Haiti	59	59	9.5	-4.41	3.43
Honduras	99	98	13.2	-4.67	8.67
India	71	66	4.1	-9.09	10.88

Sources: WHO and WEO/IMF (2011).
*Denotes no scores

Table 7.5

Cont'd

Country	MCV (%)	DPT3 (%)	Health Expenditures (%)	Fiscal Policy (%)	Inflation (%)
Indonesia	82	82	6.9	-1.76	4.81
Iran	99	99	8.7	1.04	10.8
Iraq	69	65	3.1	-22.08	-2.19
Jamaica	88	90	5.6	-10.93	9.57
Jordan	95	98	16.1	-8.5	-0.67
Kenya	74	75	5.4	-5.51	10.55
Kiribati	82	86	8.7	-12.64	8.76
Kyrgyzstan	99	95	11.7	-1.27	6.85
Laos	59	57	3.8	-6.54	0.03
Lesotho	85	83	8.2	-3.86	5.85
Liberia	64	64	17.2	-11.97	7.43
Macedonia	--*	--*	--*	-2.65	-1.64
Madagascar	64	78	15.1	-3.07	8.96
Malawi	92	93	12.1	-5.4	8.43
Maldives	98	98	7.5	-20.83	4
Mali	71	74	9.3	-3.27	2.22
Marshall Islands	94	93	20	--*	--*
Mauritania	59	64	4.9	-5.13	2.22
Micronesia	86	91	20.6	--*	--*

Sources: WHO and WEO/IMF (2011).

*Denotes no scores

Table 7.5

Cont'd

Country	MCV (%)	DPT3 (%)	Health Expenditures (%)	Fiscal Policy (%)	Inflation (%)
Moldova	90	85	14.1	-6.35	0.01
Mongolia	94	95	10.5	-4.99	6.27
Morocco	98	99	7	-2.21	0.97
Mozambique	77	76	14.2	-5.51	3.26
Namibia	76	83	12.1	-1.67	8.78
Nepal	79	82	8.6	-2.99	12.63
Nicaragua	99	98	17.9	-1.89	3.69
Niger	73	70	14.5	-5.46	1.14
Nigeria	41	42	6.4	-10.19	12.54
Pakistan	80	85	3.6	-5.18	20.78
Papua New Guinea	58	64	8	-9.64	6.92
Paraguay	91	92	12.3	0.53	2.59
Peru	91	93	15.3	-1.87	2.94
Philippines	88	87	7.2	-3.69	3.25
Rwanda	92	97	16.8	0.28	10.35
Sao Tome & Principe	90	98	13.2	-16.95	16.96
Senegal	79	86	11.6	-4.95	-1.71
Sierra Leone	71	75	6.4	-3.2	9.25
Solomon Islands	60	81	16.8	1.59	7.06
Sri Lanka	96	97	7.3	-9.85	3.42
Sudan	82	84	9.8	-4.84	11.26

Sources: WHO and WEO/IMF (2011).

*Denotes no scores

Table 7.5

Cont'd

Country	MCV (%)	DPT3 (%)	Health Expenditures (%)	Fiscal Policy (%)	Inflation (%)
Suriname	88	87	12.6	-2.98	-0.14
Swaziland	95	95	9.3	-6.43	7.45
Syria	81	80	4.6	-2.9	2.8
Tajikistan	89	93	6.4	-5.23	6.51
Tanzania	91	85	18.1	-4.81	11.83
Thailand	98	99	14	-3.18	-0.85
Timor-Leste	70	72	9.8	239.27	0.06
Togo	84	89	6.4	-2.82	1.94
Tonga	99	99	14.5	-2.66	3.43
Tunisia	98	99	10.4	-1.48	3.53
Turkmenistan	99	96	7	7.61	-2.67
Uganda	68	64	11.6	-2.38	14.2
Ukraine	94	90	8.6	-6.26	15.9
Uzbekistan	95	98	9.6	3.14	14.08
Vanuatu	52	68	12.2	-0.75	4.28
Viet Nam	97	96	8.9	-8.99	6.72
Yemen	58	66	4.3	-10.21	3.68
Zambia	85	81	15.7	-2.59	13.39
Zimbabwe	76	73	--*	-2.9	6.22

Sources: WHO and WEO/IMF (2011).

*Denotes no scores

Table 7.6

2009 IFC Days and Cost of Starting Business, IFC/IFAD Days and Cost of Registering Property, and Heritage Foundation Trade Policy Scores

Country	Days to Start	Cost of Starting (%)	Days to Register	Cost of Registering (%)	Trade Policy
Afghanistan	9	59.5	250	7	--*
Albania	8	25.8	42	3.4	75.8
Algeria	24	10.8	51	7.5	68.6
Angola	68	196.8	334	11.6	72
Armenia	18	3.6	4	0.3	86.4
Azerbaijan	10	3.2	11	0.3	78.4
Bangladesh	73	25.7	245	10.4	40.2
Belarus	31	7.8	21	5.2	67.2
Benin	31	196	120	11.9	67.4
Bhutan	46	8.5	64	0	42
Bolivia	50	112.4	92	4.9	81.8
Bosnia & Herzegovina	60	30.8	128	0	77.2
Burkina Faso	16	62.3	136	13.4	70.4
Burundi	32	215	94	7.7	63
Cambodia	85	151.7	56	4.4	63.4
Cameroon	38	138	93	19.2	56
Cape Verde	52	35.7	73	7.7	65.4
Central African Rep	22	237.6	75	18.6	50.4
Chad	75	253.1	44	18.7	58.4
China	41	8.4	29	3.7	71.4
Colombia	36	14.9	23	2.4	72.4

Sources: IFC, IFAD, and Heritage Foundation (2011).
*Denotes no scores

Table 7.6

Cont'd

Country	Days to Start	Cost of Starting (%)	Days to Register	Cost of Registering (%)	Trade Policy
Comoros	24	188.6	24	20.8	27.2
Congo, Dem Rep	133	935.4	54	9.2	62.2
Côte d'Ivoire	40	135.1	62	13.9	70.4
Cuba	--*	--*	--*	--*	64.4
Djibouti	37	200.2	40	13.2	31.8
Dominican Rep	19	19.4	60	3.8	73
Ecuador	65	35.3	16	2.2	72.6
Egypt	7	18.3	72	0.9	63.4
El Salvador	17	49.6	31	3.7	81.8
Eritrea	84	102.2	78	9.2	69.2
Ethiopia	16	29.8	43	3.1	68.6
Fiji	46	25.2	68	2	69.6
Gambia	27	254.9	66	7.6	59.6
Georgia	3	4	3	0	80.6
Ghana	13	30.7	34	1.2	63
Guatemala	34	53.4	30	1.1	78.4
Guinea	41	135.7	104	13.9	59.6
Guinea-Bissau	259	465.7	211	5.4	66.8
Guyana	40	68.4	34	4.5	72.6
Haiti	195	266	405	6.4	79.4
Honduras	20	52.6	23	5.6	78
India	30	70.1	44	7.5	51

Sources: IFC, IFAD, and Heritage Foundation (2011).
*Denotes no scores

Table 7.6

Cont'd

Country	Days to Start	Cost of Starting (%)	Days to Register	Cost of Registering (%)	Trade Policy
Indonesia	76	77.9	39	10.7	76.4
Iran	28	4.6	36	10.6	57.4
Iraq	77	150.7	51	6.5	--*
Jamaica	8	7.9	55	11	70.6
Jordan	14	60.4	21	10	78.8
Kenya	30	39.7	64	4.1	71.8
Kiribati	21	64.6	513	0.1	55
Kyrgyzstan	15	7.4	8	3.9	87.6
Laos	100	14	135	4.1	66.4
Lesotho	40	37.9	101	8.2	57
Liberia	31	61.6	50	13.3	53.8
Macedonia	9	3.8	66	3.4	81.6
Madagascar	7	11	74	7.5	72.6
Malawi	39	125.9	88	3.3	68.8
Maldives	9	11.5	--*	--*	44
Mali	25	103.2	29	20.3	73
Marshall Islands	17	17.3	--*	--*	--*
Mauritania	19	33.9	49	5.2	75.6
Micronesia	16	137.5	--*	--*	81

Sources: IFC, IFAD, and Heritage Foundation (2011).
*Denotes no scores

Table 7.6

Cont'd

Country	Days to Start	Cost of Starting (%)	Days to Register	Cost of Registering (%)	Trade Policy
Moldova	15	8.9	48	0.8	81.6
Mongolia	13	4	11	2.1	81.2
Morocco	12	20	47	4.9	68
Mozambique	26	22.9	42	12.9	73.4
Namibia	66	22.1	23	9.9	88.4
Nepal	31	60.2	5	6.3	63.2
Nicaragua	39	121	124	3.5	79.2
Niger	19	170.1	35	11.1	70.4
Nigeria	31	90.1	82	20.9	61.8
Pakistan	24	12.6	50	7.3	65.6
Papua New Guinea	51	21.7	72	5.1	87.2
Paraguay	35	67.9	46	2	83.6
Peru	65	25.7	33	3.3	79.4
Philippines	53	30.4	33	4.3	78.6
Rwanda	14	108.9	315	0.6	61.2
Sao Tome & Principe	144	88.9	62	10.9	60
Senegal	8	72.7	124	20.6	71.2
Sierra Leone	17	145.8	86	17	66
Solomon Islands	57	63.6	297	5.1	66.4
Sri Lanka	38	7.1	83	5.1	71
Sudan	39	50.8	9	3.1	--*

Sources: IFC, IFAD, and Heritage Foundation (2011).
*Denotes no scores

Table 7.6

Cont'd

Country	Days to Start	Cost of Starting (%)	Days to Register	Cost of Registering (%)	Trade Policy
Suriname	694	125.2	193	13.9	64.2
Swaziland	60	35.1	44	7.1	71.6
Syria	16	18.2	19	28	54
Tajikistan	62	27.6	37	1.8	82.6
Tanzania	29	41.5	73	4.4	75.6
Thailand	33	4.9	2	1.1	75.6
Timor-Leste	83	6.6	--*	--*	73
Togo	53	251.3	295	13.4	70.6
Tonga	25	9.6	108	10.2	56
Tunisia	11	7.9	39	6.1	53
Turkmenistan	--*	--*	--*	--*	79.2
Uganda	25	100.7	77	4.1	75.2
Ukraine	27	5.5	93	4.3	84
Uzbekistan	15	10.3	78	1.5	65.4
Vanuatu	39	54.8	188	7	63
Viet Nam	50	16.8	57	1.2	63.4
Yemen	13	93	19	3.8	76.2
Zambia	18	28.6	39	6.6	71.2
Zimbabwe	97	432.7	30	25.1	50.4

Sources: IFC, IFAD, and Heritage Foundation (2011).
*Denotes no scores

Table 7.7

MCC's Compact Programs to Date

Year	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Countries	Nicaragua	Armenia	Lesotho	Tanzania	Senegal	Philippines	Malawi
	Madagascar	Benin	Mongolia	Namibia		Moldova	
	Honduras	El Salvador	Morocco	Burkina Faso		Jordan	
	Cape Verde	Ghana	Mozambique				
	Georgia	Mali					
		Vanuatu					

Source: MCC (2011b).

Table 7.8

MCC's Threshold Programs to Date

Year	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Countries	Burkina Faso	Tanzania	Kenya	Niger		Liberia
	Malawi	Zambia	Uganda	Rwanda	Paraguay II	Timor-Leste
		Albania	Sao-Tome and Principle	Albania II		
		Ukraine	Guyana	Kyrgyz Republic		
		Moldova		Peru		
		Philippines				
		Indonesia				
		Paraguay				
		Jordan				

Source: MCC (2011b).