Millennium Challenge Corporation

Fiscal Year 2008 Country Selection Data Notes

November 2007

Fiscal Year 2008 (FY08) Data Notes

Political Rights

Freedom House publishes a 1-7 scale (where 7 is "least free" and 1 is "most free") for Political Rights. Since its *Freedom in the World 2006* report, Freedom House has also released data using a 0–40 scale for Political Rights (where 0 is "least free" and 40 is "most free"). The Political Rights indicator is based on a 10 question checklist grouped into the three subcategories: Electoral Process (3 questions), Political Pluralism and Participation (4 questions), and Functioning of Government (3 questions). Points are awarded to each question on a scale of 0 to 4, where 0 points represents the fewest rights and 4 represents the most rights. The only exception to the addition of 0 to 4 points per checklist item is Additional Discretionary Question B in the Political Rights Checklist, for which 1 to 4 points are *subtracted* depending on the severity of the situation. 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). Freedom House has released these re-scaled data for the period 2002-2006. Table 1 illustrates how the 1-7 scale used prior to Fiscal Year 2007 (FY07) corresponds to the new 0-40 scale.

Table 1: Political Rights

New Scale	Old Scale
36-40	1
30-35	2
24-29	3
18-23	4
12-17	5
6-11	6
0-5	7

FY08 Political Rights data corresponds to data from 2006 as reported in Freedom House's Freedom in the World 2007 report.

Civil Liberties

Freedom House publishes a 1–7 scale (where 7 is "least free" and 1 is "most free") for Civil Liberties. Since its *Freedom in the World 2006* report, Freedom House has also released data using a 0–60 scale (where 0 is "least free" and 60 is "most free") for Civil Liberties. The Civil Liberties indicator is based on a 15 question checklist grouped into four subcategories: Freedom of Expression and Belief (4 questions), Associational and Organizational Rights (3 questions), Rule of Law (4 questions), and Personal Autonomy and Individual Rights (4 questions). Points are awarded to each question on a scale of 0 to 4, where 0 points represents the fewest liberties and 4 represents the most liberties. 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). Freedom House has released these re-scaled data for the period 2002-2006. Table 2 illustrates how the 1–7 scale used prior to FY07 corresponds to the new 0–60 scale.

Table 2: Civil Liberties

New Scale	Old Scale
53-60	1
44-52	2
35-43	3
26-34	4
17-25	5
8-16	6
0-7	7

Before FY07, the years displayed on the x-axis of the MCA Country Scorecards corresponded to the year of the Freedom House publication. For example, data from the *Freedom in the World 2005* publication was treated as "2005" data. This led to a significant amount of confusion since the *Freedom in the World* publications evaluate country performance in the previous year. To address this issue, MCC has adjusted 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, FY08 data comes from *Freedom in the World 2007* and is treated as 2006 data on the scorecard.

Control of Corruption, Government Effectiveness, Rule of Law, Voice & Accountability, and Regulatory Quality

For ease of interpretation, MCC has adjusted the median for LIC and LMIC countries to zero for all World Bank Institute indicators. Country scores are calculated by taking the difference between actual scores and the median. For example, the unadjusted median for Low Income Countries (LIC) on Voice and Accountability median is -.6986. In order to set the median at zero, we simply add .6986 to each country's score. Therefore, Benin's Voice and Accountability score, which was originally -.3303, has been adjusted to 1.0289.

The FY08 scores come from the *Governance Matters VI* dataset and reflect performance in calendar year 2006. Since the release of *Governance Matters V*, the World Bank Institute has updated all of it governance indicators annually.[1] Each year, the World Bank Institute also makes minor backward revisions to its historical data.

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1   Prior to 2006, the World Bank Institute released data every two years (1996, 1998, 2000, 2002 and 2004). With the release of *Governance Matters V* dataset in 2006, the World Bank Institute moved to an annual reporting cycle and provided additional historical data for 2003 and 2005.

Health Expenditure

MCC relies on the World Health Organization (WHO) for data on public health expenditure. The WHO estimates general government health expenditure (GGHE)—the sum of outlays by government entities to purchase health care services and goods—in million national currency units (million NCU) and in current prices. GDP data are primarily drawn from the United Nations National Accounts statistics. Countries receive an FY08 score only if 2005 expenditure data were available to the WHO.[2] As better data become available, the WHO makes backward revisions to its historical data.

Primary Education Expenditure

MCC relies on the United Nations Educational, Scientific and Cultural Organization (UNESCO) as its primary source, and self-reported data from national governments as its secondary source.[3] UNESCO data are always treated as the preferred source of information. If UNESCO data are not available for a particular country, MCC relies on the most recent data reported by national governments. Due to gaps in the historical time-series data, countries only receive an FY08 score if a value was reported by UNESCO or the government for 2006, 2005, or 2004   In its data request to Candidate Countries, MCC requests inclusion of all government expenditures, including sub-national expenditures (both current and capital) and the consolidated public sector (i.e. state-owned enterprises and semi-autonomous institutions), but exclusion of donor funds unless it is not possible to disaggregate them. All data are requested in current local currency (not a constant base year, nor US dollars). As better data become available, UNESCO and MCC make backward revisions to historical data.

Immunization Rates

MCC relies on official WHO/UNICEF estimates for all immunization data. MCC uses the simple average of the 2006 DPT3 coverage rate and the 2006 measles coverage rate to calculate FY08 country scores. If a country is missing data for either DPT3 or Measles, it does not receive an index value. The same rule is applied to historical data. As better data become available, the WHO makes backward revisions to its historical data.

Girls' Primary Education Completion Rates

MCC draws on the United Nations Educational, Scientific and Cultural Organization (UNESCO) as its exclusive source of data. To receive an FY08 score, countries must have either a 2006, 2005, or 2004 UNESCO value. MCC uses the most recent year available. As better data become available, UNESCO makes backward revisions to its historical data.

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2   2005 is currently the most recent year for which data are available from the World Health Organization.

3   Efforts are currently underway at UNESCO to improve country coverage, and MCC hopes to discontinue its use of self-reported country data as coverage expands.

Data limitations preclude adjusting the girls' primary education completion rate for students who drop out during the final year of primary school. Therefore, UNESCO's estimates should be taken as an upper-bound estimate of the actual female primary completion rate. The numerator may also include late entrants and over-age children who have repeated one or more grades of primary school but are now graduating as well as children who entered school early. The denominator is the number of female children of official graduation age; because the numerator may include children of other ages (e.g. older girls), it is possible for the primary completion rate to exceed 100 percent.

Natural Resource Management

In creating the index used for the FY08 data, Columbia University's Center for International Earth Science Information Network (CIESIN) and the Yale Center for Environmental Law and Policy (YCELP) relied on 2007 eco-region protection data, 2006 (1-4) child mortality data, 2004 water access data, and 2004 sanitation access data. Country scores are reported on the MCA Country Scorecards as 2007 data. As better data become available, CIESIN and YCELP make backward revisions to historical data.

Fiscal Policy

This indicator is measured as a three-year average of the annual fiscal balance (government revenues minus government expenditures) as a share of GDP. The FY08 score averages the annual fiscal balance of 2004, 2005 and 2006. U.S. Embassies typically collect such data through a Candidate Country's Ministry of Finance. In calculating the fiscal balance, donor funds are included in total expenditures and both revenues and expenditures include the consolidated public sector (i.e. state-owned enterprises and semi-autonomous institutions). If general government balance data were not available, MCC relied on central government balance data. All of these data were then cross-checked with IMF sources—in particular, the World Economic Outlook (WEO)—to ensure their accuracy. As better data become available, backward revisions are made to historical data.

Inflation

MCC relies exclusively on the IMF's World Economic Outlook (WEO) database for inflation data. WEO inflation data reflect annual percentage change averages for the year, not end-of-period data. FY08 data refer to the 2006 inflation rate. As better data become available, the IMF makes backward revisions to its historical data.

Trade Policy

In 2006, the Heritage Foundation re-scaled the trade policy component of its *Index of Economic Freedom* to provide greater differentiation among countries. The new scale ranges from 0 to 100, where 0 represents the highest level of protectionism and 100 represents the lowest level of protectionism. FY08 data come from the *2007 Index of Economic Freedom* and are treated as 2007 values on the scorecard. As better data become available, the Heritage Foundation makes backward revisions to its historical data.

The equation used to convert tariff rates and non-tariff barriers (NTB) into the 0–100 scale is presented below:

$$\text{Trade Policy}_i = (\text{Tariff}_{max} - \text{Tariff}_i)/(\text{Tariff}_{max} - \text{Tariff}_{min}) - \text{NTB}_i$$

Trade Policy$_i$ represents the trade freedom in country i, Tariff$_{max}$ and Tariff$_{min}$ represent the upper and lower bounds (50 and 0 percent respectively), and Tariff$_i$ represents the weighted average tariff rate in country i. The result is multiplied by 100 to convert it to a percentage. If applicable to country i, a NTB penalty of 20 percentage points is then subtracted from the base score.

Business Start-Up

The Business Start-Up index is calculated as the average of two indicators from the IFC's Doing Business survey:

- *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.

- *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.

Since the two sub-components of the Business Start-Up index have different scales, MCC normalizes the indicators to create a common scale for each of the. Each indicator is transformed using a simple formula:

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

For example, to calculate Armenia's normalized score on the IFC Days to Start a Business indicator, we would first subtract Armenia's raw score (18) from the maximum observed value (694). We would then divide the difference between those two numbers (676) by the difference between the maximum observed value (694) and the minimum observed value (2). This yields a normalized "days to start a business" score of .9769. After both of the two sub-components were transformed into a common scale, MCC calculated the Business Start-Up Index using the following formula:

$$\text{Business Start-Up} = .5(\text{IFC Days to Start a Business}) + .5(\text{IFC Cost of Starting a Business})$$

In Armenia's case, its normalized Days to Start a Business score (.9769) is given a 50% weight and its Cost of Starting a Business score is given a 50% weight (.9955). This yields a Business Start-Up index value of .9862.

FY08 data refer to the 2007 values reported in the IFC's *Doing Business 2008* report. As better data become available, the IFC makes backward revisions to its historical data.

Land Rights and Access

This index draws on 2004–2006 "Access to Land" data from the International Fund for Agricultural Development (IFAD) and 2004-2007 data from the International Finance Corporation (IFC) on the time and cost of property registration. Country scores are reported on the MCA Country Scorecards as 2007 data.

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. Countries that received a "no practice" score on the IFC's 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.[4]

Since each of the three sub-components of this index have different scales, MCC created a common scale for each of the indicators by normalizing them. Each indicator was transformed using a simple formula: [5]

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

For example, to calculate Namibia's normalized score on the IFC Days to Register Property indicator, we would first subtract the maximum observed value (514) from Namibia's raw score (23). We would then divide the difference between those two numbers (491) by the difference between the maximum observed value (514) and the minimum observed value (2). This yields a normalized "days to register property" score of .9590. After each of the three sub-components was transformed into a common scale, MCC calculated the Land Rights and Access Index using the following formula:

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

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4   As described in the *Doing Business in 2007* report, "[w]hen 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. This puts it at the bottom of the ranking" (World Bank 2006: 74).

5   Due to the fact that high scores on the IFC indicators represent *low* levels of performance and high scores on the IFAD indicator represents *high* levels of performance, it was also necessary to invert either the IFAD normalized scale or the IFC normalized scales. MCC chose to chose to invert the IFAD scale by subtracting each country's normalized value from 1. As such, Namibia's original normalized IFAD score was .6667 [(5.4-3)/(5.4-1.8)] and its inverted normalized IFAD score was .3333 (1-.6667).

In Namibia's case, its normalized IFAD score (.3333) is given a 50% weight, its IFC Time to Register Property score is given a 25% weight (.9590), and its IFC Cost of Registering Property score (.6598) is given a 25% weight. This yields a Land Rights and Access index value of .5714.

FY08 data on the time and cost of registering property are drawn from the 2007 data in the IFC's *Doing Business 2008* Report. FY08 index values also rely upon the most recent year available from IFAD's 2004, 2005 and 2006 "Access to Land" data. Historical time series data was constructed using a lag structure that assigns an index value to a country only if that country has data from both IFAD and IFC for the year of interest or a prior year.[6] No index value is assigned if data from one source exists for a given year, but data from the other source exists only for years after the year of interest. For instance, if a country has data availability according to Table 3, that country would receive index values for 2007, 2006 and 2005. However, it would not receive an index value for 2004 since no "Access to Land" score exists for 2004 or any prior years.

Table 3: Lag structure for Land Rights and Access' historical time series

	2004	2005	2006	2007
Access to Land (IFAD)		x	x	
Time to Register a Property (IFC)	x	x	x	x
Cost of Registering a Property (IFC)	x	x	x	x

x=available data

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6   As better data become available, the IFC makes backward revisions to its historical data.