Center for Global Development

Qualifying for the Millennium Challenge Account

Steve Radelet

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In his speech proposing the Millennium Challenge Account (MCA), President Bush proposed that the USG allocate substantial new foreign assistance to low-income countries that are "ruling justly, investing in their people, and encouraging economic freedom."[1] On November 25th, the administration announced more details on the procedure that they propose to use to determine which countries are meeting these three broad criteria. The proposed methodology is one way to address several key issues central to the MCA, including:

- the income levels that will determine the broad set of countries to be considered,
- the specific indicators that will be used to show commitment in the three broad areas,
- the passing grades on each indicator, and
- the method of aggregating across the indicators to determine the list of qualifying countries.

This paper examines the administration's proposed methodology in detail, exploring the judgements required and examining some alternative methods. There is no clear right or wrong technique, since there are multiple ways to choose eligible countries that meet the very broad guidelines provided by the President.[2] The administration's proposal is a reasonable approach, but there ways in which it could be improved.

This is a long and detailed paper, done so out of necessity rather than desire. Many readers will wish to read some sections and not others depending on specific interests. Section I reviews the main points of the administration's proposal. Section II examines the three country groups that the administration has proposed to be eligible to compete for MCA funding during the first three years. Section III discusses some of the ideal characteristics desired in the indicators and some specific challenges in undertaking a numerical-based rating system. The fourth (and longest) section explores each of the proposed 16 indicators in depth along with some alternatives measures. Section V examines different methods of aggregating the 16 indicators to determine which countries ultimately qualify. Section VI lists the countries that are most likely to qualify for the MCA during the first three years, based on the best available data today (which will change before the administration makes any final judgments about qualification. The final section offers some conclusions and issues for further consideration.

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[1] The President's speech is available at www.whitehouse.gov/news/releases/2002/03/20020314-7.html.
[2] For an alternative methodology for choosing the MCA countries written well before the administration may its recent proposals, see Nancy Birdsall, Ruth Levine, Sarah Lucas, and Sonal Shah, "On Eligibility Criteria for the Millennium Challenge Account," www.cgdev.org/nv/features_MCA.html.

I. THE ADMINISTRATION'S PROPOSAL

There are five key parts to the new proposal related to the qualification process.[3] First, the administration proposes rapidly expanding during the first three years of the program the group of low-income countries that would be eligible for consideration for the MCA. Specifically, during the first year (FY '04), countries eligible to compete for funding are those with per capita incomes below $1,435 that are eligible to borrow from the World Bank's concessional lending window, the International Development Association (IDA). There are 74 such countries, which include all but 7 of the 81 IDA-eligible countries.[4] In the second year, the IDA-eligible criteria will be dropped, increasing the group to include all 87 countries with per capita income below $1,435. In the third year, the group of eligible countries will expand to include all 28 countries with per capita incomes between $1,435 and $2,975, which corresponds with the World Bank's definition of "lower-middle income." Thus, by the third year there will be 115 countries eligible to compete for MCA funding. The increase in the number of eligible countries is designed to correspond with the proposed increase in available MCA funds, which will ramp up to $5 billion between the FY '04 and FY '06 budgets. The administration has not yet determined the level of funding it will seek for the MCA in "04 and '05, although the USAID website suggests indicative levels of funding of $1.7 billion and $3.3 billion, respectively.

Second, 16 indicators will be used to assess country commitment to "ruling justly, investing in their people, and establishing economic freedom." We examine these 16 in detail below. Six indicators are used for "ruling justly," four for "investing in people," and six for "establishing economic freedom."

Third, to aggregate scores across indicators, the administration proposes to use a "hurdles approach" in which countries must score higher than the median score (relative to other countries in its income group) to get credit on any indicator. To qualify for the MCA, a country must score above the median on half the indicators in each of the three categories. That is, it must be above the median on three of the six "ruling justly" indicators, two of the four "investing in people indicators," and three of the six "establishing economic freedom" indicators. In addition, to qualify a country MUST be above the median on the corruption indicator. That is, in the extreme, if a country makes the hurdles on 15 of the 16 indicators but falls just below the median score on corruption, it will not qualify.

Fourth, the list of countries eligible to compete will be split into two groups for scoring on the indicators. Countries with per capita incomes below $1435 will compete against each other separately from those with incomes between $1435 and $2975. This step is

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[3] We do not discuss in this paper the proposal to establish a new corporation to oversee the MCA. The administration's fact sheet on the new proposal is available at www.cgdev.org/nv/MCA_FactSheetNov.doc
[4] The countries include Dominica, Grenada, St. Lucia, St. Vincent, Samoa, Tonga, and the Maldives, which are part of a group of ten "small island exceptions" that are deemed eligible for IDA credits even though their incomes exceed the current operational cutoff of $875. For more on IDA eligibility requirements, see the World Bank's IDA website.

meant to partially correct for the fact that on almost any indicator countries with higher incomes will score better than those with lower incomes. If the countries all competed against each other, countries from the lower-middle income group would be more likely to score above the median on any indicator which would effectively eliminate many low-income countries from qualification.

Finally, this process will not automatically determine the final list of eligible countries, but rather will be the main input used by the Millennium Challenge Corporation (MCC) Board of Directors in its recommendations to the President. The Board, which will be composed of Cabinet level officials, will be guided by the indicators, but in making final recommendations it will be "empowered to take account of data gaps, lags, trends, or other material information, including leadership, related to economic growth and poverty reduction." This last step introduces an element of subjectivity that probably is necessary given the weaknesses in the data. However, care must be taken that this discretion is used very carefully and in only a very limited set of circumstances to guard against too much political influence in the selection process.

II. INCOME LEVELS FOR BROAD ELIGIBILITY

There are several different ways to define "low-income," and thus the universe of countries from which the MCA countries will be chosen. The administration has chosen three of the most common definitions, all drawn from the World Bank and based on the Bank's definitions of IDA-eligibility, IDA's operational cutoff, and lower-middle income countries. These choices have the important advantage of being internationally recognized categories; a disadvantage is the Bank management decisions about these definitions will determine some countries' eligibility for the MCA.

The IDA-eligible countries with incomes below $1,435 are a sensible starting point for the first stage of the MCA.[5] These 74 countries have the most extensive poverty and the greatest development needs, and including them is appropriate and generally non-controversial.[6] In stage two, the income limit is raised to $1,435, adding 13 countries to the competition. There is a clear trade-off in adding these countries. On the one hand, as more countries are added, fewer funds will be available for the poorest countries. Of course, in the second year of the MCA when these countries become eligible, MCA funding will grow from approximately $1.7 billion to $3.3 billion, so none of the original countries would actually receive less funding. Nevertheless, fewer funds will be available to the first group than otherwise would have been the case if the second group

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[5] All of these classifications use per capita incomes converted to US dollars with current exchange rates. An alternative would be to compare incomes based on purchasing power parity (PPP). While this latter techniques is widely acknowledged by economists as the superior methodology, in practice there are controversies about the accuracy of the underlying data and conversions in specific countries. These data are also not available for many low-income countries. As these data improve in the coming years, they will offer a more sound basis for comparisons of income across countries.
[6] Although some analysts might argue against including the 8 countries in this group with per capita incomes above the IDA operational cut-off of $875: Albania, Bolivia, Bosnia and Herzegovina, Cape Verde, Djibouti, Honduras, Vanuatu, and Yugoslavia

(and later the third group) were not part of the MCA. Moreover, the second-stage countries will tend to score higher on most indicators and will thus drive up the median scores and crowd out some of the first group that would have been above the median if they were judged only against other IDA-eligible countries. Thus, in all likelihood, by including the second group, fewer of the poorest countries will qualify and there will be fewer funds available for them to use. On the other hand, most of the second stage countries have extensive poverty, and many have a sufficiently strong policy and institutional environment that they can put the MCA funds to good use. Moreover, since moving from stage one to stage two increases the number of eligible countries from 74 to 87, these concerns about the larger eligibility pool are not enormous.

Adding the third group of 28 countries with income between $1,435 and $2,975 changes the calculus further. Because they will be scored on the indicators separately from the first two groups, the third group will not affect the median scores and will not directly crowd out countries by pushing them below the median. The main argument in favor of adding these countries is that, although their average incomes are higher than the poorest countries, they are by no means rich and they have extensive poverty. However, there are three strong arguments against including these countries:

- First, by adding these countries, fewer funds will be available for the poorest countries. Although the lower-middle income countries are poor, they are far better off than the poorest countries. The top half of Table 1 compares several development indicators for the three groups. The lower-middle income group (column 3) is more than four times richer than the combined low-income group (column 2). They also have substantially lower illiteracy rates, higher life expectancy, and lower infant mortality. In each case, the differences are quite large.

- Second, the lower-middle income countries have significantly larger alternative sources of financing available to them than do the low-income countries. One purpose for the MCA is to help prepare poor countries to be able to access private capital markets and generate additional domestic resources, and most of the lower-middle income countries already have achieved progress in these areas. The bottom half of Table 1 shows that while the lower-middle income countries (appropriately) receive much less aid, they receive larger flows of international private capital, generate much greater tax revenue, and have significantly higher domestic saving rates than the low-income countries.

- Third, and more subtly, adding these countries increases the risk that decisions about the allocation of MCA funds will be determined to a greater extent by political and strategic criteria rather than the announced MCA criteria. Political considerations can never be separated totally from the MCA allocation process, but the lower-middle income group of countries contains several countries for which it will be especially difficult for the U.S. to override political and strategic concerns in favor of aid effectiveness. These countries include Columbia, Egypt, Jordan, Turkey, and Russia, among others. Strategic considerations could affect decisions on country qualification (especially for marginal cases), the amounts of money that qualifying countries receive, and on losing funding as a result of poor performance. One can't help but wonder if the surprise decision to include these countries was at least partly motivated by a desire on the part of some officials to have MCA funds available for

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strategic reasons when necessary. Of course, it is perfectly legitimate to use foreign assistance funds for strategic reasons, but it would be far better to use funds outside of the MCA for these purposes and keep the MCA focused on increasing the effectiveness of U.S. assistance in supporting development. An increased influence over time of strategic considerations in MCA decisions could ultimately undermine the effectiveness of MCA resources in combating poverty, which could eventually lead to a loss of support for the program (as has happened with many aid programs in the past).

Adding the lower-middle income countries raises another issue. How will MCA funds be allocated between these countries and the lower-income group? There are two basic choices: (1) establish two pools of money, with a fixed amount of funding allocated to each group every year, or (2) rely on a single pool of money, with the quality of proposals across countries determining funding allocations. The second choice has merits, and I am generally in favor of competing proposals. However, the institutional capacity and human resource skills are so much greater in the lower-middle income group that it would dominate the proposal process. They are more likely to show stronger results, since they face fewer constraints than the low-income countries (which is one reason they receive larger private capital flows). For these reasons, if the administration sticks with the proposal to include the lower-middle income countries, it would be preferable to allocate some share of the MCA funds (up to a maximum of $1 billion/year) to the lower-middle income countries, with the remainder to be used in the lower income group.

III. IDEAL CHARACTERISTICS OF THE INDICATORS

Transforming the President's three criteria into specific indicators that can be used the separate eligible from ineligible countries is far from straight forward. There are a large number of indicators from which to choose, each with particular advantages and disadvantages. In choosing between different indicators, there are certain attributes of the data that should help guide the choice.[7] The indictors should be:

- *Simple, transparent, and publicly available, with good country coverage*.
- *Moderate in number.* Too many indicators can make the selection process overly cumbersome and opaque; too few could give a misleading perspective on a country's commitment to development. The administration has chosen 16 indicators; one could consider adding a few more if they provided additional important information.
- *Measures of policies rather than outcomes.* The indicators should focus on policy variables and institutional changes that are within the control of government officials, rather than outcomes that will only change over time and may be influenced by exogenous factors.
- *Indicative of broader policies.* Since they are moderate in number, the chosen indicators should capture related policies that are not directly measured. For

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[7] For a similar discussion, see Birdsall, et al., "On Eligibility Criteria for the Millennium Challenge Account," www.cgdev.org/nv/features_MCA.html.

example, the inflation rate gives a direct perspective on monetary policy, but is also indicative of a country's overall macroeconomic management, and is related to fiscal and exchange rate policies.

- *Associated with desired development outcomes.* The indicators should be demonstrably empirically related to critical desired outcomes, such as faster economic growth, decreased infant mortality, and increased literacy.
- *Accurate.* All indicators are to some extent simply estimates of the true value, and the more accurate the estimate the better. Indictors estimated with smaller margins of error (and aggregation techniques that minimize rather than multiply those errors) should be preferred over those with larger measurement errors.
- *Updated frequently with short time lags.*
- *Not easily subject to targeting or manipulation.* Recipient governments will take great interest in the specific indicators used to determine MCA eligibility, and will naturally try to make sure those indicators are as favorable as possible. Choosing indicators that are less easily manipulated, or choosing a larger set of indicators, would help reduce this problem.
- *Objective rather than subjective.* To the extent possible, indicators should be objective (based on measurable quantities rather than personal judgments) and measured in absolute terms rather than subjective and measured in relative terms. However, many indicators, such as the level of corruption, cannot be measured in absolute terms.

In choosing the indicators, it will not be possible to meet all of these criteria. For example, it will be difficult to find indicators that are simultaneously simple, indicative of broader policies, and reliably accurate over time. As a result, some tradeoffs are inevitable, and any indicator will be stronger on some attributes and weaker on others. The designers of the MCA need to be cognizant of these tradeoffs, and be willing to revise the methodology over time as data become more refined, problems in aggregation methods appear, or improved techniques and indicators are developed.

IV. CHOOSING THE INDICATORS

In this section we describe the 16 indicators proposed by the administration with reference to the ideal characteristics described above. We also briefly discuss other possible indicators that might be considered.

Basic information on the 16 indicators is summarized in Table 2, including the number of countries covered by the indicator, the source of the data, and the frequency with which the indicator is updated. The table also shows the results of some very simple statistical tests on the association between each of the indicators and three important development outcomes: per capita income growth, infant mortality, and literacy. In each case, we

show the results of correlation tests after controlling for the initial level of income.[8] We first show whether the correlation has the "correct" sign, in the sense of a better score on an indicator being positively associated with economic growth, negatively associated with infant mortality, and positively associated with higher literacy. (We do not actually show the direction of the sign, positive or negative, since for some indicators a higher score is a better outcome, while for others a higher score is a worse outcome, and thus showing the sign could lead to some confusion.) We then show the level of statistical significance of the correlation: either less than 1% (highly statistically significant), between 1% and 5% (shown as 5%), between 5% and 10% (shown as 10%) or not statistically significant at conventional levels (blank).

Ruling Justly

Control of Corruption. Corruption is the exercise of public power for private gain. It undermines the rules that govern interactions between public servants and the citizenry, adversely affects business decisions, and can be especially detrimental to the poor. There are many different surveys that measure various aspects of corruption, including DRI/McGraw Hill, Transparency International, the Economist Intelligence Unit, and the Political Risk Services Group. These surveys draw both on specialists in individual countries and/or experts with knowledge across many countries. They explore many dimensions of corruption, including the frequency of making additional payments, the effectiveness of anti-corruption measures, and the impact of corruption on foreign investment.

The administration draws its corruption indicator from a governance database compiled by Dani Kaufmann and Aart Kraay at the World Bank Institute and Pablo Zoido-Lobatón of Stanford University (hereafter KKZ).[9] We describe the methodology and sources used for this database in an appendix. In short, the authors draw on nearly 200 indicators from 17 different sources to construct six aggregate indicators of different dimensions of governance. The KKZ "control of corruption" indicator draws on surveys by DRI/McGraw Hill, the Economist Intelligence Unit, the World Bank's business surveys,

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[8] Specifically, we regress average per capita income growth from 1990-2000 (*g*) on the initial level of income in 1990 (*Y*) and the average value of each indicator from 1990-2000 (*i*) as follows:

$$g \ = \ \alpha_0 \ + \ \alpha_1 {*} Y \ + \ \alpha_2 {*} i \ + \ \varepsilon$$

where α_0 is a constant, α_1 and α_2 are the estimated coefficients on the initial income level and the indicator, respectively, and ε is an error term. We then repeat the process, substituting infant mortality and literacy for income growth as the left-hand-side variable. Our focus of attention is on α_2, the estimated coefficient for each indicator. The results in Table 2 show both the sign and the statistical significance of the estimate for α_2. Data for the regressions are drawn from all countries in the world where data are available. Note that this process is not meant to demonstrate causality from the indicator to the outcome, only the correlation after controlling for the level of income.

[9] The KKZ indicators can be downloaded from the WBI website, along with three key papers that describe the data and methodology: "Aggregating Governance Indicators," "Governance Matters," "Governance Matters II," written by Daniel Kaufmann, Aart Kraay, and Pablo Zoido-Lobatón. See www.worldbank.org/wbi/governance/. Kaufmann and Kraay have added a brief note dedicated to data issues in the MCA entitled "Governance Indicators, Aid Allocation, and the Millennium Challenge Account," which can be found at **http://www.worldbank.org/wbi/governance/mca.htm**

Political Risk Services, and others. It does not draw directly on Transparency International's (TI) well-known corruption indicator, as TI is itself a compilation of other surveys rather than an original source. The KKZ indicator is preferable to TI because KKZ draws on all the surveys contained in the TI index, plus several others.

As shown in Table 2, the KKZ control of corruption index contains data for 94 of the 115 countries with incomes below $2,975 in 2000. This index performs fairly well statistically: it shows a modestly strong correlation (controlling for initial income) with faster economic growth, and a very strong relationship with reduced infant mortality. It is also correlated with improved literacy, although the controlled correlation is not statistically significant at conventional levels.

Rule of Law. For economic development to proceed, societies need fair and predictable rules to govern economic and social interactions. Ideally, these rules should govern the enforceability of contracts, dispute settlement, criminal behavior, procedures for the judiciary, the protection of property rights (including intellectual property rights), the extent of tax evasion, and the extent of black market activity as an impediment to business development. There are several sources that touch on these issues, including DRI/McGraw Hill, the Economist Intelligence Unit, Heritage Foundation/Wall Street Journal, and others. The administration uses the KKZ index on rule of law, which compiles information from each of these sources, and includes coverage for 102 of the 115 countries in 2000. As shown in Table 2, this index shows a strong and statistically significant correlation with faster economic growth and lower infant mortality in the 1990s. It is positively associated with higher literacy, but the controlled correlation is not statistically significant.

Voice and Accountability. Ruling justly requires institutions that protect civil liberties; ensure that governments are held accountable for their actions; and allow citizens to participate in the political process, choose and replace their leaders, and freely voice their opinions. Countries with free and fair elections, representative legislatures, fair legal systems, a free press, and a small role for the military in elections are more likely to be responsive and accountable to their people. Similarly, governments must respect basic freedoms of speech, assembly, and religion. There are several surveys that focus on these issues, most importantly by Freedom House. In addition, the Economist Intelligence Unit and Political Risk Services include questions that touch on these topics, as do several other surveys. The KKZ indicator on "Voice and Accountability" incorporates measures from all of these sources, with coverage for 108 of the 115 MCA countries in 2000. This measure is positively correlated with economic growth, although the correlation is not statistically significant. The relationships with infant mortality and literacy are both very strong and highly statistically significant.

Quality and Effectiveness of Government Institutions. Good governance requires effective public institutions. A poor quality civil service, red tape, ineffective bureaucracies, and weak management all impede the ability of the government to deliver basic public services and serve the general public. Drawing form the same broad set of sources, the KKZ indicator on "Government Effectiveness" compiles data on these and

related issues for 93 of the 115 MCA countries in 2000. This measure shows a moderately significant relationship with economic growth, and a strong relationship with reduced infant mortality. It is also positively associated with literacy, but the relationship is not statistically significant.

Civil Liberties. The Freedom House civil liberties and political rights indices evaluate the rights and freedoms enjoyed by individuals in countries and territories around the world. Freedom House does not rate governments per se, but rather the extent to which citizens enjoy basic rights. The civil liberties index focuses on the freedoms for citizens to develop independent views, institutions, and personal autonomy apart for the state. It is a relatively subjective index, based on the judgments of the 14 members of the Freedom House survey team, with scores based on a relatively narrow range of 1-7 (whole numbers only). The fact that there are only seven possible scores for a country raises a statistical problem for the MCA. Since many countries are assigned exactly the same score (e.g., a "4" or "5"), they are bunched together around the median score, which is where the administration draws the line between passing or failing on a particular indicator. In this case, there is a big difference between the administration's proposal that scores *greater* the median are given a passing grade, versus the alternative of a *score greater than or equal to* the median given a passing grade. For example, of the 87 countries eligible for the MCA in the second year, 19 countries have the median score of "5" on the civil liberties index. An index with a more differentiated scale would be preferable. The decision as the whether these countries should be given a passing grade on this indicator could make a significant difference in the final list of eligible countries. We return to this issue later in the paper.

The 20001-02 Freedom House survey contains information on 192 countries, including 112 of the 115 MCA countries. As mentioned earlier, this information is also included in the KKZ "voice and accountability" indicator, so the Freedom House information is actually counted twice in the MCA process. Using our simple statistical analysis, better civil liberties scores are associated with faster growth, although the correlation is not statistically significant. Better scores are strongly associated with both lower infant mortality and higher literacy.

Political Rights. According to Freedom House, political rights "enable people to participate freely in the political process, which is the system by which the polity chooses authoritative policy makers and attempts to make binding decisions affecting the national, regional or local community." These rights allow all adults to vote and run for elected office, and for elected officials to have decisive votes on public policies. As with the civil liberties index, political rights are measured on a 1-7 scale, raising the same issue about median scores. As with the civil liberties indicator, the political rights indicator has a positive but insignificant correlation with growth, and a very strong relationship to reduced infant mortality and higher rates of literacy.

Investing in People

Immunization rate. Immunizations are among the most effective means to prevent the spread of infectious diseases and ensure the basic health of the population. Countries with higher immunization rates against diphtheria, pertussis (or whooping cough), and tetanus (DPT) and measles tend to have lower rates of infant mortality and longer life expectancy. Moreover, immunization rates are a policy within the control of the government, and can be expanded in most countries where governments make the commitment to do so. They also are a good indication of broader health policies and strategies: governments that establish systems that provide broad-based immunizations tend to also take other steps to improve basic health. The UN has adopted the measles immunization rates as one indicator of progress towards achieving the Millenium Development Goal on reducing the under-five mortality rate by two-thirds between 1990 and 2015.[10] The World Health Organization provides data on the share of children under one year of age that received immunizations for DPT (3 doses) and measles (one dose). The administration uses the average of the two for its indicator. The data are a little uneven, at times varying from year-to-year within one country by wide margins. It is available for 94 of the 115 MCA countries, although in some cases the data are three or even four years old. As shown in Table 2, this variable is very strongly related to lower infant mortality (not surprisingly), and has an equally strong relationship with increased literacy rates. It also shows a moderately positive association with economic growth.

Primary school completion rate. Primary school *enrolment* rates have long been used as a basic indicator of education policy. However, enrolment rates provide little information on achievement of basic standards of competence. Attending just a year or two of school reaps little benefit: evidence suggests that students must complete 5-6 years of school in order to achieve basic competencies in literacy and numeration. Thus, *completion* rates for primary school are a stronger indicator of student achievement of minimum skill levels than are enrollment rates. One of the 13 Millennium Development Goals adopted by the United Nations is to "ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling." The World Bank defines the primary completion rate as "the total number of students successfully completing (or graduating from) the last year of primary school in a given year, divided by the total number of children of official graduation age in the population." The best source of primary school completion rates is the database compiled Barbara Bruns, Alain Mingat, and Ramahatra Rakotomalala.[11] This database is relatively new, as completion rates have only recently been a focus of attention, and as such, provides an excellent foundation to a stronger education database. However, there are several drawbacks to this indicator. First, completion rates will tend to increase noticeably only several years after governments initiate a firm commitment to improving primary education. Second, this indicator is either missing or is several years old for many countries. Only about half of the countries have data for 1999 or subsequent years. The authors are planning to

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[10] For more on the Millennium Development Goals, see http://www.developmentgoals.org/

[11] Barbara Bruns, Alain Mingat and Ramahatra Rakotomalala, <u>Achieving Universal Primary Education by 2015: A Chance for Every Child</u>, World Bank (forthcoming, February 2003)

strengthen this indicator in the future by expanding the number of countries covered and updating it on an annual basis. The school completion rate shows a very strong correlation with lower infant mortality and higher literacy. It also is positively correlated with economic growth, but the relationship is not statistically significant at conventional levels.

Public Primary Education Spending as Percent of GDP. Public sector spending on education is an important policy variable that is very much in the government's control. For most of the poorest countries, primary schools are the appropriate focus for government expenditure. At face value, public spending should be indicative of a broader government commitment to improving education. However, greater spending does not always translate into better schools or better outcomes if it is spent inefficiently or is poorly targeted. The pattern of expenditure (on books, salaries, building maintenance) is just as important, as is a focus on curriculum development and other aspects of the quality of education. The World Bank publishes data on overall spending on education and on primary school spending per student. We constructed the data on primary school spending as a share of GDP from data on spending per student, the number of students, and GDP. Unfortunately, this data are missing for many countries (data are available for just 83 of the 115 MCA countries) and is several years old in other countries. Moreover, this indicator is only weakly correlated with development outcomes. Higher primary education spending is correlated with lower infant mortality and higher literacy, but neither relationship is statistically significant. Higher spending has a slight *negative* association with economic growth, although the relationship is not statistically significant. Statistically speaking, this variable is one of the weakest of the 16 indicators.

Public Expenditures on Health as Percent of GDP. Public spending on health has many of the same characteristics as spending on primary education. It is a policy variable clearly in the government's control, and is likely to be indicative of broader health policies. However, more spending is not always associated with better health outcomes for the poor, such as if spending is focussed on urban cancer hospitals rather than rural clinics. This indicator is drawn from the World Bank's *World Development Indicators* database, which defines public health expenditure as "recurrent and capital spending from government (central and local) budgets, external borrowings and grants (including donations from international agencies and nongovernmental organizations), and social (or compulsory) health insurance funds." It is available for 87 of the 115 MCA countries, slightly more than the education spending indicator. Public expenditure on health is strongly correlated with lower infant mortality and very strongly associated with higher literacy. As with public spending on primary education, its correlation with economic growth is of the wrong sign and is not statistically significant.

Other possible indicators. There are several other variables that could be used as indicators for health and education policies. It was somewhat surprising that the administration proposed only four "investing in people" indicators--two each for health and education--while they proposed six each for "ruling justly" and "economic freedom." Although adding more indicators may not change appreciably the final list of countries, it

will make it more difficult for recipient countries to focus too narrowly and "target" one indictor rather than broader health and education policies. Other choices include:

- *Ratio of girls to boys in primary school*. This measure is indicative of both education policies and gender discrimination. It is widely available for most countries and updated regularly. This ratio is used as an indicator by the UN towards achieving the Millennium Development Goal of "promoting gender equality and empowering women." It is very strongly correlated with literacy rates, but not strongly correlated with other outcome variables.

- *Primary school enrollment rates*. This indicator measures the ratio of the number of children of primary school age who are actually enrolled in school to the corresponding population. It is similar to school completion rates, but is more widely available, and is easier for governments to influence in a short time period than completion rates. Focussing on enrollment rates alone would be mistaken, as discussed earlier, since enrollment in school does not ensure a quality education. But the combination of enrollment and completion rates provides more complete information about government policies than either indicator alone. However, net enrollment rates are available for just 82 of the 115 MCA countries. This indicator is strongly correlated with lower infant mortality and higher literacy, but is not strongly associated with economic growth.

- *Access to improved water sources*. This variable measures the share of the population that has reasonable access to water from an improved source, such as a household connection, public stand-pipe, borehole, protected well or spring, or rainwater collection. Access to clean water can improve a wide variety of health indicators. Moreover, government policy can directly impact the share of the population with access to water. The UN uses access to improved water sources as an indicator of progress towards one of the Millennium Development Goals. The obstacle to using this data is that it is available just once every ten years in the World Bank database, and even then is missing for many countries. Access to water is strongly correlated with lower infant mortality, but is not strongly associated with literacy or economic growth.

- *Access to essential drugs*. Every year the WHO Action Programme on Essential Drugs interviews relevant experts in each country about access by the population to essential drugs. The interviewees can choose from four levels: less than 50%; between 50-80%; 80-95%; and above 95%. This variable appears to be too subjective for use in the MCA, as it would be relatively easy for recipient governments to influence its measurement.

Establishing Economic Freedom

Country Credit Ratings. There are a large number of credit ratings and investor guides for many countries around the world. These ratings usually measure the risk of default on government or private sector debts, and as such, give a broad indication of the opinion of private creditors on the economic environment in a country. However, relatively few of these ratings agencies report regularly on the poorest countries in the world. One exception is Institutional Investor, which provides credit ratings based on the perceived risk of government default every six months for 145 countries around the world,

including 85 of the MCA countries.[12] Countries are ranked on a scale from 1 to 100 based on information provided by economists and sovereign risk analysts from banks and money management and securities firms. This indicator is strongly correlated with faster economic growth, and very strongly correlated with lower infant mortality. It is positively associated with higher literacy, but the relationship is not statistically significant.

Inflation. Higher rates of inflation make the environment for new investment more risky and tend to reduce the profitability of most businesses. High rates of inflation are especially harmful to the poor, who are least able to protect themselves from inflation. The administration measures inflation on a year-on year basis from the most recent 12 months available, based on data drawn from the International Monetary Fund's monthly publication *International Financial Statistics*. My understanding is that for inflation, the administration determines the "passing grade" differently than it does for any other variable. Whereas for other variables countries must be above the median score, for inflation countries must have inflation rates lower than 20% to receive a passing grade. Since the median rates of inflation are under 8% for each of the three country groups, the 20% standard is much easier to pass than the median. Presumably, this approach is taken because there is strong evidence that inflation rates greater than 20% are very harmful, but not much evidence that an 8% rate is necessary so superior to a 10% rate in developing countries. 87 of the 115 MCA eligible countries pass this hurdle. Lower inflation has a very strong and positive relationship with economic growth. However, lower inflation is also strongly correlated with *higher* infant mortality and *lower* rates of literacy, the opposite of what might be expected.

Regulatory Policies.   While some amount of regulation is necessary to make certain markets work better (such as financial markets), too much regulation, intervention, and government control can undermine the incentives for investment and job creation. Common types of burdensome regulations include wage and price controls; inadequate bank supervision; excessive controls on trade, investment, and business start-up; excessive restrictions on international capital flows; and ponderous legal restrictions on ownership and equity positions by non-residents; and other restrictions and "red tape." For its indicator on these issues, the administration uses the "Regulatory Quality" measure from the KKZ database, which is probably the most comprehensive measure available of these policies. Like the other KKZ measures, this indicator is a composite of the leading surveys and other data on regulatory issues. The KKZ indicator covers 100 of the 115 MCA countries. It has a modestly strong positive correlation with economic growth, and very strong and significant correlations with both lower infant mortality and high literacy. Other major sources of data on regulatory quality are the Heritage Foundation/Wall Street Journal Index, and the DRI/McGraw Hill data set. Each of these is incorporated into the KKZ data set, but individually each has less country coverage and larger standard errors in measurement than the KKZ composite index.

Budget deficit. The budget deficit is a key indicator for overall macroeconomic policy, with larger deficits tending to be associated with macroeconomic instability, inflation,

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[12] The data are available (for purchase) at www.institutionalinvestor.com/premium/rr/index.htm

and exchange rate depreciation. It is also the basic measure of a government's propensity to spend beyond its means. Of course, a lower budget deficit is not always better: there are times when running a slightly larger budget deficit is appropriate, especially as a counter-cyclical policy tool. Moreover, donor assistance to fund particular programs actually can increase the budget deficit (as conventionally measured) because of associated government spending, with donor funds entering the accounting as a below-the-line financing item. Problems can arise, however, when deficits become large, are not funded by grants or highly concessional loans, and persist over time. There are several different ways to measure budget deficits. In this context, perhaps the most appropriate measure would be the deficit remaining after donor receipts (grants and concessional loans), averaged over three years. In essence, this measure would capture the extent of government spending that is not financed by tax or aid receipts, and must be financed by resort to central bank financing or borrowing from domestic or international commercial markets. The biggest problem with this indicator is that budget data are surprisingly incomplete for most countries, especially for concessional loans that finance the budget. Thus, the administration uses the budget deficit after receipt of grants, but not concessional loans. Taking the average over three years allows variation in the year-to-year deficit for economic management purposes. The main public source for budget data is the International Monetary Fund's *Government Financial Statistics*, as reported in the World Bank's World Development Indicators.[13] The IMF also keeps a confidential database for a number of countries where the data cannot be made public. My understanding is that the administration is using this confidential database for this indicator, so there may be slightly different results from using the public data. The budget deficit data is available for 101 of the 115 MCA countries. Lower budget deficits are strongly positively associated with economic growth. Lower deficits are associated with lower rates of infant mortality, although the relationship is not statistically significant. There is no correlation between deficits and literacy rates.

Trade policy. Trade policy is one of the most important determinants of economic growth and poverty reduction. Almost all economists would agree that at least at a broad level, trade openness is good for growth and poverty reduction. Controversy abounds, however, on exactly what kind of trade policy is best for developing countries, and how to measure it. Many economists argue that lower tariff rates and quota coverage are essential to open trade and growth; some others argue that <u>modest</u> levels of import substitution in selected industries can be conducive to long-term growth. Overall tariff averages can be misleading because the composition of the items protected can matter a great deal: most economists would agree that modest levels of protection on simple consumer goods are much less harmful than protection on capital and intermediate goods. Moreover, other institutions and policies, such as export processing zones and directed credit to exporters, make statutory tariff rates less meaningful, making it difficult to summarize overall trade policy in a single index. Also, data on average tariffs and quota coverage are surprisingly sparse for most countries. My own sense is that if the data were available, the most appropriate indicators would be the average tariffs and quota coverage for capital and intermediate goods (and not consumer goods).

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[13] Since data are missing for many countries, in some cases we have augmented the data with information from the World Bank's Country-At-A-Glance Tables, available in the World Bank's website.

As a substitute, there are some surveys that include a trade policy component in an attempt to capture business and expert opinions on overall trade policy. The administration uses one of these as its indicator: the trade component of the Heritage Foundation/Wall Street Journal Index of Economic Freedom.[14] This index is subjective, with the authors assigning countries a rating from 1-5, basing their judgements primarily on tariff and quota rates where available. Missing entries are filled in with data that in some cases unfortunately may not be indicative of trade openness. For example, the authors use government tariff revenues as a share of imports as a substitute for tariffs. However, in many low-income countries, low tariff receipts are more indicative of corruption in the customs department than of open trade policy. Partly because of these issues, this indicator is only weakly correlated with development outcomes. A better score is positively associated with economic growth and higher literacy, but the relationships are not statistically significant. The index is strongly correlated with lower rates of infant mortality. This index also suffers from the same problem as the Freedom House indices when working around the median. Since there are only five possible scores that a country can receive, many countries receive the median score. Very few low-income countries receive a score of 1 or 2: of the 92 MCA-eligible countries with available data, 82 receive a score of 3, 4, or 5. In effect, this becomes a three-point scale, with countries either passing, at the median, or failing. This makes the judgements on whether a passing grade is *greater* than the median *or greater than or equal* to the median very important, since 33 of the 92 countries receive the median score of 4. It would be preferable to have much greater differentiation amongst countries in the scores. While this index might be the best available for trade policy at them moment, the administration should work towards identifying or creating a stronger index for the future based on actual tariff and quota rates, especially on capital and intermediate goods.

Days to Start a Business. The procedures, time, and costs of starting a new business can be serious detriments to entrepreneurial energies in many countries. The administration's indicator draws on data on the number of days to start a business as compiled by Simeon Djankov and his co-authors.[15] This database counts the number of days required for companies to complete all procedures necessary to legally start a new business. The time required is very high in most countries, especially in low-income countries. The average number of days required in low-income countries is 66, compared with 2 days in Canada. The authors find that heavy start-up regulations are not correlated with better social outcomes (such as lower pollution or fewer accidental deaths), but are correlated with higher levels of corruption (however, the latter relationship is not statistically significant in low-income countries). The major difficulty with this database is that it is available for only 110 countries world wide, and only 63 of the MCA countries. Since this database is relatively new, it has not been thoroughly tested over time and there is not yet a process in place to update it on an annual basis. Using our simple correlation controlling for level

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[14] The data are available at http://www.heritage.org/research/features/index/
[15] "The Regulation of Entry," Simeon Djankov, Rafael La Porta, Florencio Lopez de Silanes, and Andrei Shleifer, June 2001, Quarterly Journal of Economics, February 2002. A slightly older version of the oaoer can be downloaded from **http://econ.worldbank.org/files/2379_wps2661.pdf**. We received the most recent data directly from Mr. Djankov.

of income, there is no statistically significant relationship between this variable and economic growth, infant mortality, or literacy in the 1990s. Although this indicator has great merit in principle and the authors have done a commendable job of creating this relatively new indicator, more work is necessary to improve the coverage of the indicator and its relationship to growth. One possibility (suggested by the authors) is to combine this indicator with other measures of costs and procedures necessary to start a business (which are available in their database) to build a more comprehensive measure of barriers to start a new business. In the near future the authors also hope to expand the scope of their database to include bureaucratic harassment, protection of property rights, the quality of infrastructure services, and other related issues.

V. AGGREGATING THE INDICATORS

Once the indicators are chosen, there are several alternatives to determine the precise standards that countries should be expected to meet on each indictor, how much weight to give each indicator in the final determination of eligibility, and how to aggregate the indicators together into a final ranking of countries. In turn, the answers to these questions are related partly to the question of how many countries should qualify, since the final number will depend directly on how high or low the standards are set for each indicator. Does the US want the MCA to focus on the top 10 countries according to the President's criteria? The top 20? Or the top 30? Analytically, there is no precise right answer for how many countries should be chosen, since we do not have precise empirical evidence on the exact point at which policy and institutions becomes so weak that aid is not effective.[16] There are two broad methodologies for setting standards, aggregating the data, and choosing the final set of qualifying countries: establishing specific "hurdles" for each indicator, or adding together the scores (appropriately rescaled) for each indicator.

Hurdles Approach

In the hurdles approach, countries would be expected to meet a specific standard on each indicator. The administration's proposal uses this approach, as it requires that countries score above the median (the hurdle) on half of the indicators in each of the three groups of criteria. In addition, the administration adopted a "hard" hurdle for corruption: a country must be above the median on corruption to qualify, regardless of how well it does on the other indicators. Apparently the president insisted on a hard hurdle for corruption.

There are several advantages to this approach. First and foremost, countries do not have to do well on absolutely every indicator to qualify. For example, those who are concerned that the administration is insisting on a litmus test for free trade can rest easy: a country can have the highest tariff rates in the world and still qualify for the MCA as long as it makes enough of the other hurdles. Indeed a country can have both high trade barriers and a large budget deficit and still qualify, as long as it makes three of the remaining four "economic freedom" indicators. Second, it is transparent and easy to

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[16] See Michael Clemens and Steven Radelet, "The Millennium Challenge Account: How Much is Too Much, and How Long is Long Enough?" www.cgdev.org/nv/features_MCA.html

understand: all one needs to know about a country are its score on an indicator and the median. Third, it helps countries to quickly identify where they need to improve if they want to qualify since it is clear which indicators they have missed. Fourth, it helps partially alleviate the missing data problem. Presumably missing data counts as a missed hurdle, but since a country needs to only make half the hurdles, it can still qualify even if it is missing some data (yet incentives remain for countries to collect more data).

There is nothing particularly magic about the administration's choice of using the median as the hurdle, or on the requirement that a country must pass half the hurdles in each area, or on using the median corruption score as a hard hurdle. The hurdles could have been set at lower or higher levels (e.g., the 40% or 60% percentile) or at specific numbers such as a 70% immunization rate. The required number of hurdles could have differed as well. There are clear tradeoffs in making these decisions. The higher the standard on each indicator, or the more hurdles required, the fewer countries will qualify. Thus, these three variables must be decided jointly: the standard on each indicator, the number of hurdles requires, and the approximate number of desired qualifying countries.

Implicitly, the hurdles approach takes the view that there are critical values on each indicator that a country must surpass in order to achieve growth and development, or at least to make foreign aid effective. But whereas there is evidence that lower corruption or higher immunization rates are associated with better development outcomes, there is very little evidence on specific minimum levels that must be achieved for better outcomes. Perhaps the one exception is inflation, where there is strong evidence that inflation rates over 20% are particularly detrimental. As mentioned previously, my understanding is that the administration has adopted 20% as the inflation hurdle rather than the median.

One weakness of the hurdles approach is that it limits the incentives for countries to continue to improve on the indicators once they have passed the hurdle. A country either meets the hurdle or not – it does not receive additional credit for making the hurdle by a large margin, nor does it receive an extra penalty for missing by a large margin. Thus, once a country is above the hurdle, it does not need to improve to continue to be eligible (unless the hurdles rise over time). Moreover, countries well below the hurdle receive no credit until they actually pass it -- they receive no credit for improving, say, from the 10th percentile to the 40th. For some countries starting from a very poor, resource constrained situation (e.g., Mozambique or Rwanda), it may be many years before they are able to pass some of the hurdles, especially the "investing in people" indicators.

The choice of using the median as the hurdle raises the issues that the median will change over time (as would any hurdle based on a percentile ranking). Countries with an immunization rate that is too low in one year could pass in the next year if the median falls. Conversely, a country that meets the standard in one year could find that it does not meet it in the next year if the median rises. This suggests that the administration should set absolute standards for hurdles where possible (as they have done with inflation), perhaps determined by the median in the first year. Thus, if the median immunization rate in the first year were 70%, the hurdle in each subsequent year would be 70% (or as a

variant, a gradual increase could be required each year). While this approach has appeal for many of the indicators, it cannot be used for the subjective indicators that are always measured on a relative scale, such as corruption (at least as those indicators are currently measured). Nevertheless, moving towards absolute instead of relative hurdles where possible would make sense in the future.

Missing data poses a different issue for the hurdles approach. The administration counts missing data as below the hurdle in determining scores, which makes sense. But how should missing data be treated in calculating the median? Omitting these data assumes that the missing entries are normally distributed about the median – that is, the median would be the same whether the missing entries were included or not. But missing data tend to come from either very small countries where surveys are not completed, or from poorly performing countries. To the extent that most missing data come from poor performers (which is probably the case), omitting their low scores tends to increase the median. Thus, it is quite possible that a country whose score is just above the true median would end up below the median when poor scores are omitted because of missing data. In effect, this country is penalized (and could miss qualifying) because of missing data from other countries.

A final and important concern with the hurdles approach is errors in the data. Margins of error in estimating the indicators can be a significant problem, as highlighted in a recent paper by Daniel Kaufmann and Aart Kraay.[17] Many of the indicators are based on survey data, including all 6 of the "ruling justly" indicators and several of the "economic freedom" indicators (regulatory quality, credit risk, and even inflation, which is based on price surveys). Survey results are always estimated with margins of error. Indeed, even the non-survey based indicators are estimated with margins of error, albeit from different sources (e.g., immunization rates are estimated by vials of vaccine distributed, which is at best an imperfect gauge of actual immunizations). The problem is that for a country with an *observed* score just below the median on any indicator, we cannot have a high degree of confidence that the *actual* level is below the median. Margins of error in the estimation could be the difference between making a hurdle or not. By contrast, some countries that have observed scores above the hurdle may have actual levels below the hurdle, and thus receive passing grades when they are not warranted. The fact that countries need only make half the hurdles partly alleviates the concern over measurement errors.

The biggest concern with measurement errors is the hard hurdle for corruption: a country that scores below the median on corruption is eliminated from qualifying for the MCA, regardless of its scores on other indicators. As Kaufmann and Kraay point out, for many of the countries with estimated levels of corruption near the median, we can be only 90% certain that the actual level is somewhere between the 40th and 60th percentile. They examine the corruption indicator for the 61 countries where data are available and which will be eligible for the MCA in the first year. For 21 of these countries, there is a 75% or higher probability that the actual score is above the median, and for 17 countries there is

[17] Daniel Kaufmann and Aart Kraay, "Governance Indicators, Aid Allocation, and the Millennium Challenge Account," discussion draft of December 6, 2002
http://www.worldbank.org/wbi/governance/mca.htm

a 75% or higher probability that the actual score is below the median. But there are 23 intermediate cases in which there is much less certainty about whether they actually fall above or below the median. 13 of these countries have estimated scores that fall below the observed median and are therefore eliminated from the MCA, despite this uncertainty.

Although we have great sympathy for a high standard on corruption, the make-or-break requirement may unnecessarily eliminate some countries. One alternative would be to fully eliminate only the 17 countries with a 75% or higher probability of an actual corruption score below the median. Other countries would remain eligible for the competition, following the other rules as set out by the administration. Thus, if a country was not one of the 17 eliminated but scored just below the median on corruption, it would not get credit for the corruption hurdle, but could qualify for the MCA so long as it passed half the hurdles in each of the three categories. Changing this approach, however, is bound to be difficult, as no one will want to appear to be "soft" on corruption because of what may appear to be an arcane statistical problem.

Aggregate Ranking Approach

An alternative to the hurdles approach is to re-scale each indicator and then add the scores together to create a final tally. Countries can then be ranked from highest to lowest score, and the administration can choose, say, the top 15 or 20 to qualify for the MCA. The simplest way to do this is to re-scale each indicator so that the mean value is reassigned a value of zero, and the values that are one standard deviation above or below the mean are reassigned values of 1 and -1 respectively. All other scores are converted accordingly. This is a common statistical approach in aggregating numbers with naturally different scales. It is used, for example, in compiling the KKZ measures that are used for 5 of the 16 MCA indicators.

One advantage of this approach is that it avoids the need to establish (rather arbitrary) hurdles that a country either passes or fails. Also, countries are given more credit for a higher score on any indicator, so they continually have an incentive to improve even if they are above the hurdle. Moreover, all of the information available for a country's score on each indicator is used in calculating the final score, not just whether it passed a particular hurdle or not. This method eliminates questions about whether a score exactly equal to the median passes or not. It also significantly reduces (although it does not eliminate) the issues surrounding margins of error discussed previously, as it is of no concern if a country barely misses one or more hurdles. This method could be combined with the hard hurdle for corruption, if desired. That is, a country's final ranking would determine its MCA qualification, but if it scored too low on the corruption index, it could be eliminated, regardless of its overall ranking.

One drawback is that a particularly high or low score could significantly alter a country's overall score. Moreover, missing data are a concern in this approach, as it is not clear what value to add to a country's score. One approach would be to add the lowest score achieved by any other country. Another would be to give the country its average on other

indicators, so that the missing value does not affect its overall score. Both of these approaches, however, are problematic.

Once an overall ranking is tabulated, the administration would have to choose where to draw the line between the qualifiers and the non-qualifiers. This choice would be arbitrary, similar to the arbitrary choice of standards on each indicator in the hurdles approach. This approach requires only one line to be drawn, but it is an important line, and will be seen as obviously arbitrary. Thus, while this approach has the advantage of allowing a country to see exactly where it ranks vis-à-vis other countries, it could create diplomatic pressures on those administering the MCA. For example, if the top 15 countries were chosen to qualify, there would be immense pressure from the governments of the next several countries to include them and draw the line at 18 or 20 countries. It would be very difficult for the administration to defend the choice of 15 countries rather than 18 or 20 on analytic or technical grounds.

Moreover, this approach makes it difficult to compare country performance over time. By combining as described, this approach only measures a country's performance relative to its peers. It cannot show if all countries are getting better or worse over time. In other words, if a country moves up from 21st to 19th, is it because it is getting better or because the others got worse? This is a difficult issue for *both* the aggregate ranking and the hurdles approach (since the latter uses relative scores like medians as hurdles). When scores are measured relative to other countries, it is difficult to observe all scores rising so that more countries can qualify over time.

In sum, there is no perfect way to aggregate across indicators. Either method requires arbitrary judgements and raises some difficulties with measurement errors, relative rankings, and other issues. Either method will lead to some surprises; both in terms of countries that miss qualifying and some that qualify. The imperfections inherent in the underlying data are magnified when combing across such different indicators. The administration should continue to examine the data with *both* of the methodologies and improve them over time, even if only one method is the official procedure.

VI. Ranking the Countries

Based on the administration's proposed methodology, we can determine which countries would qualify for the MCA during each of the first three years (as the income level for broad eligibility rises) using the most recent data available today.

Before doing so, however, a disclaimer is necessary: these lists probably differ slightly from the administration's current lists of qualifying countries, and almost certainly will differ from the official lists that the administration will compile when the appropriate time comes starting next year. There are several reasons for these likely differences:
- First, the underlying data may differ slightly. While we have obtained our data from the public sources the administration outlined in its November 25th announcement, one data set may have more recent information than the other. We may have filled in missing data from secondary sources in a slightly different manner. On one indicator,

the budget deficit, my understanding is that the administration is using confidential data from the IMF to which we do not have access, so we use public IMF data, which may differ slightly.

- Second, the first round of MCA countries will not be chosen until FY '04 begins, which is many months away. Revised data will be available for almost every indicator by then, which will change both the medians and the qualifying countries. The process of choosing countries for the second and third round from the expanded set of countries is several years away, so the underlying data are likely to change significantly.

- Third, the administration has proposed that the MCA's Board of Directors can recommend to the President that the list of eligible countries be modified slightly to either remove some countries or add others under some circumstances. Specifically, the MCA fact sheet released by the administration says that in doing so, the Board can "take account of data gaps, lags, trends, or other material information, including leadership, related to economic growth and poverty reduction." Some discretion makes sense, given the weaknesses inherent in the data. Care must be taken, however, that this discretion is used very carefully and in only a very limited set of circumstances to guard against too much political influence in the selection process.

Possible Qualifying Countries in Year One

Table 3 lists the countries that are most likely to qualify for the MCA in the first year, based on data available today.[18] It shows the actual score for each of the 16 indicators for each country (note that the tables spills over onto a second page), along with the median score for each indicator at the bottom of the page. The scores shaded in gray are those that are below the median; the clear scores are above the median and are therefore passing grades. The 11 qualifying countries have scores above the median in half the indicators in each of the three broad areas, as well as having a corruption score above the median. Of these 11, three are from Africa (The Gambia, Malawi, and Senegal), 4 are from Asia (Bangladesh, Mongolia, Nepal, and Sri Lanka), 2 are from Latin America (Bolivia and Honduras) and 2 are from Eastern Europe/Central Asia (Albania and Georgia).

The table shows that 3 more countries (Ghana, Vietnam, and Guyana) would qualify if the administration slightly changed its criteria so that a score *equal* to the median counts as passing a hurdle.[19] Ghana and Guyana's trade policy score is equal to the median, as is Vietnam's corruption score, and each country needs to pass these hurdles to have enough to qualify. (Ghana would also qualify if its inflation rate dropped below 20%, which it is likely to do in 2002 before the official MCA qualifying list is determined). These countries are cases in which missing data in other countries, or adding or deleting countries from the sample, could change the median score and the country's qualification

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[18] Note that as a result of revised data received in the last two weeks this list differs slightly from a list that we had circulated earlier. See Steve Radelet, "Initial Reactions to the Announcement on the MCA," November 27, 2002, www.cgdev.org.

[19] The administration's fact sheet says that "a country would have to score above the median" to qualify on a hurdle.

status. In my opinion, given the uncertainties in the data, I would recommend counting median scores as passing grades.

The table also shows four countries that scored above the median on half the indicators in each area, but did not score above the median on corruption, and therefore are eliminated. Two of these countries (Lesotho and Benin) were eliminated because no data were available on corruption, so they are assumed to miss the hurdle. They are eliminated despite the fact that in both cases, they score equal to or above the median on every other "ruling justly" indicator where they have data available. Benin scores above the median on all five other ruling justly indicators, and Lesotho scores equal to or above the median on four others (it is also missing data for "government effectiveness"). Since the corruption scores are not compiled by governments, is seems hard to justify eliminating these countries on this basis. Fortunately, the KKZ governance scores are scheduled to be updated in February 2003 (long before the MCA countries are actually chosen) with expanded coverage that will include nearly all of the 115 MCA-eligible countries, including Benin and Lesotho. *Thus, in all likelihood, when these two countries are added, 13 countries will qualify in the first year.* The two other countries (Moldova and Nicaragua) both score just below the median on the corruption indicator. Both of these countries would qualify if the corruption rule were modified to eliminate only those countries where there is at least a 75% probability that the actual corruption score is below the median, as discussed previously.

Finally, this table also shows five countries that did not qualify because they missed one more hurdle than is allowed in the proposed procedure (all of these countries passed the corruption hurdle). Interestingly, all five countries fall short in the "investing in people" category, where they make 1 out of 4 hurdles. Three of the countries (India, Mali, Mozambique) fall just short of the hurdle on primary education spending. These countries could qualify as the data are updated or as they are motivated to pass the last needed hurdle. In the meantime, presumably many of them would be the target of special assistance mentioned in the administration's fact sheet.[20]

Possible Qualifying Countries in Year Two

Table 4 displays the same information for countries likely to qualify in FY '05, when the pool of eligible countries is expanded to include all 87 countries with per capita incomes under $1,435. As a result, although the group of eligible countries has expanded, the number of qualifying countries falls from 11 to 9. Five of the original qualifiers drop out (Albania, Bangladesh, The Gambia, Georgia, and Nepal) as the addition of the new countries raises the median score on most (but not all) of the hurdles. Three of these countries (Albania, The Gambia, and Georgia) drop into the group that would qualify if the administration counted median scores as passing grades. Two others (Bangladesh and Nepal) fall out because they now score below the median immunization rate, which

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[20] Specifically, the fact sheet proposes that the MCA Board be empowered to "identify for special transition support a small number of countries that barely miss the list of better performers. Regular development assistance can be made available to improve their chances in future competitions."

rose from 71.2 in the first year to 74.6 in the second. As a result, they now each pass only one of the four "investing in people" indicators.

How should the administration treat the countries that qualify in year one but not in year two? In my opinion, these countries should remain eligible in year two. It would make no sense for them to drop off the list simply because the medians moved slightly. This raises a much larger issue: once a country becomes eligible for the MCA, how long should it remain eligible? My understanding is that the administration is seriously considering a system in which an eligible country would write proposals for multi-year funding (probably around three years) and would continue to receive funding over the specified time period unless its performance dropped *precipitously*. At the end of the period, the country would have to re-qualify for the MCA to seek funding for a follow-on proposal. If this (or something like it) is the system ultimately adopted, then these five countries would not lose their eligibility in year two (however, they could lose it when the time comes to re-qualify).

Nevertheless, this outcome reveals a quirky characteristic of using median scores rather than absolute scores to determine eligibility. Scores that make the grade in one year (with the implication that the economic and institutional environment is of sufficiently high quality that foreign aid can be used effectively) might not make it in a different year. Conversely, scores that are not high enough in one year could be a passing grade in another. Ghana is an interesting case. In the first year, it *passed* all four of the "investing in people" hurdles, each by a small margin. In year two, median scores on each of these indicators increased, and Ghana *missed* all four. This illustrates the importance of shifting the hurdles from a relative score (the median) to an absolute score, at least for the indicators in which this change is possible. While the five countries that drop out between year one and year two can be accommodated by a multi-year funding process, the fact remains that for other countries that did not qualify in year one, the bar effectively will be raised in year two, making qualification more difficult.

Three new countries qualify in year two: Vietnam, China, and the Philippines. Vietnam failed to qualify in the first round because its corruption score was exactly equal to the median.   In round two, however, the median corruption scored actually *dropped* from -0.76 to –0.78, allowing Vietnam to qualify (again illustrating the problem of using median rather than absolute scores). China and the Philippines are among the 13 new countries added to the group of broadly eligible countries. China's qualification will certainly raise some eyebrows. Operationally, this probably will be of little consequence, as China is unlikely to seek MCA funding, and almost certainly would not be among the list of countries that the new Millennium Challenge Corporation Board would recommend to the President for final qualification. Nevertheless, it passes the indicator tests. China scores well in both "investing in people" and "establishing economic freedom." It also passes three of six of the "ruling justly" criterion, each by reasonably comfortable margins, including corruption, the rule of law, and government effectiveness. Since China's performance in economic growth and poverty reduction has been amongst the best in the world for 20 years, perhaps it should not be such a surprise that it meets the qualification requirements.

In the second year, there are six countries that did not qualify because they scored below the median on corruption. These include four countries in the same status in year one (Benin, Lesotho, Moldova, and Nicaragua), joined by Ecuador and Ukraine. *Once again, Benin and Lesotho are likely to join the list of qualifying countries in year two once corruption data become available, thus increasing the number of qualifiers from 9 to 11.*

In year two, there are seven countries that fall one hurdle short of qualifying (Mozambique, not shown in the table, would be an eighth if median scores counted as passing grades). Interestingly, as in year one, all seven of these countries fail to pass sufficient hurdles in the "investing in people" category. We return to this topic below.

Possible Qualifying Countries in Year Three

Recall that in administration's current proposal, countries with per capita incomes between $1,435 and $2,975 will become eligible to compete for funding in the third year (FY '06). This group of 28 countries would compete separately from countries with incomes less than $1,435, with different medians calculated independently for the two groups. Table 5 shows the countries that might qualify from this group, if the administration's proposal to include these countries is ultimately adopted: Bulgaria, Egypt, Namibia, Peru, and South Africa. The median scores are much higher on almost every indicator for this group, reflecting their much higher development status. For example, the median primary school completion rate is 92%, compared with 65% for the countries with incomes below $1,435. Similarly, the immunization rate is 86%, compared with 75% in the initial group. The Freedom House political rights median score is 2 (on a scale of 1-7, with 1 the top score) compared with 5 for the other group.

Two more countries (Jamaica and Jordan) would qualify in this group if median scores counted as passing grades. Interestingly, there are no countries from this group that fail solely because of their corruption score. Tunisia is the only country that fails to qualify because it misses one too many hurdles.

One fascinating outcome from this analysis is the similarity in the group of countries that miss qualifying by one hurdle. There are five such countries in year one, seven in year two (with some overlap form year one), and one in year three. *In every single case these countries fail to qualify because they make only one hurdle in the "investing in people" category*. Thus, these countries do relatively well in "ruling justly" and "establishing economic freedom" but fall a bit short on health and education. More analysis is required on this group of countries to better understand this outcome. For many countries, the outcome is a result of poverty itself and a shortage of financial resources. Mozambique is a good example. Its primary school completion rate in 1990 was a dismal 30%, not surprising considering the years of civil war that the country endured. By 1998, it had risen to 38%. It will be a very long time before Mozambique can reach the median score (for countries with incomes less than $1,435) of 65%, even with very strong commitment and leadership on the issue. This suggests expanding the number of "investing in people"

indicators and exploring ways to reward countries that display commitment through steady improvement in their scores, even if they fall short of the median.

VII. Conclusions and Recommendations:

The methodology proposed by the administration to choose countries to qualify for the MCA is a reasonable approach, by and large, with some important caveats. Any choice of indicators, income groups, and passing scores would have some deficiencies and would require tradeoffs. Clearly a significant amount of effort and analysis went into formulating this proposal, and the results represent a very good start to the process.

The biggest single concern is the inclusion of the countries with incomes between $1,435 and $2,975 in the group of eligible countries. Although some of these countries undeniably have many people living in poverty, their needs are not nearly as great as the lower income countries, and they have access to a much wider array of financial resources to address these problems. These countries should not be eligible for the MCA, and should continue to access traditional forms of US assistance as appropriate. Instead, the MCA eligible countries should be split into two groups in a different way. The first group would include all countries with per capita incomes of $900 or less, close to the World Bank's current operational cut off for IDA eligibility. This group would include the 67 poorest countries in the world. The second group would be comprised of 24 additional countries with per capita incomes between $900 and $1,700. Thus the 91 poorest countries in the world would be eligible for the MCA, rather than 115 in the current formulation. The two groups would compete separately for funding, as in the current proposal, with the vast majority of funds going to the lower income group. Alternatively, if the current income groups are retained, the administration should adopt a limit (up to a maximum of $1 billion/year) that would be available to the richer country group.

Another concern is the use of the median as the hurdle. The administration should move as quickly as possible to adopt absolute hurdles for as many indicators as possible, perhaps using the medians from the first year as a guide. This step could be taken quickly for the four "investing in people" indicators, inflation (already using an absolute standard of 20%), the budget deficit, and days to start a business. This step will be more difficult for the other indicators, but the administration could work with the suppliers of those data to explore ways in which these indicators can be adjusted to more of an absolute scale that could be compared over time. Also on the median scores, the administration should try to refine some of the indicators that measure on a very narrow scale with many countries bunched together near or at the median. The Heritage Foundation/Wall Street Journal trade policy index is the weakest indicator in this area, but the Freedom House civil liberties and political rights indices are also of concern on this issue. Once this step is taken, the administration can move to allow median scores to be a passing grade on each hurdle.

The proposal to eliminate all countries with corruption scores below the median regardless of their performance in other areas should be re-examined. The data used for this indicator (along with most other indicators) are not robust enough to have a high degree of confidence about the true level of corruption for countries with scores near the median. As an alternative, the administration could eliminate immediately the worst corruption offenders where the data indicate that there is a 75% chance or greater that the true score is below the median. Other countries would remain eligible, and could qualify if they meet half the hurdles in each of the three categories even if they miss on the corruption indicator.

The chosen indicators probably are about the best available at the moment to help choose countries for the MCA. However, these indicators can be improved over time, and the administration should consider exploring other indicators that could be used either in place of or in addition to existing indicators. For example, countries should be urged to make available data on tariff and non-tariff barriers to trade, with a breakdown for capital and intermediate goods. Budget data can be improved to refine the measure of the budget deficit and the most appropriate spending items for health and education. Data on days to start a business could be expanded to include information on other barriers to start new businesses. The set of indicators used for "investing in people" could be expanded to include the ratio of girls to boys in primary schools plus one other health indicator. In general, the MCA should be used to stimulate broader and deeper data collection efforts that will help guide effective development policies and foreign assistance programs in the future.

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Appendix: The World Bank Institute/KKZ Governance Indicators

The administration draws 5 of its 16 indicators from a governance database compiled by Dani Kaufmann and Art Kraay at the World Bank Institute and Pablo Zoido-Lobatón of Stanford University (hereafter KKZ).[21] To create this database, the authors compile nearly 194 different governance indicators from 17 different sources, include Freedom House, Gallup International, the Economist Intelligence Unit, DRI/McGraw Hill, the Heritage Foundation, the World Bank, and others. Drawing from these sources, the authors construct the most comprehensive composite measures of governance available, which they organize into six separate indicators. The administration uses four of these as "ruling justly" indicators (control of corruption, rule of law, voice and accountability, and government effectiveness) and one as an indicator of "economic freedom" (regulatory quality). It does not use the KKZ "political stability" variable as an indicator.

Since it draws from so many sources, the KKZ database covers a much larger set of countries than any individual source. Country coverage generally is very good, with data on between 93 and 108 countries out of the 115 countries with per capita incomes below $2,975. The authors hope that with the next update -- expected in February 2003 -- data will be available for nearly all of the 115 countries. Importantly, research with these indictors shows more than just an association with development indicators – it shows a strong *causal* relationship from these indicators to higher levels of income, lower rates of infant mortality, and higher rates of literacy. Moreover, the method of aggregation provides measures of the precision of the estimates, so users know the margin of error associated with any indicator. Most other survey sources do not even discuss the sampling error associated with their estimates, giving users a false sense of precision. In the aggregation process, the KKZ methodology gives greater weight to survey results with a smaller measurement error, and less weight to survey results with greater uncertainty.

There are some drawbacks to the KKZ database. As with most databases on corruption and other governance concepts, the KKZ database is primarily based on subjective perceptions of governance. As a result, a country's score is measured relative to other countries in an individual year.[22] When a country improves from one year to the next, it is impossible to tell the extent to which the country improved or everybody else got worse (this is a weakness of most governance related indicators). Also, the database has a short history, first compiled for 1997/98 and then more recently for 2000. Henceforth it

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[21] The KKZ indicators can be downloaded from the WBI website, along with three key papers that describe the data and methodology: "Aggregating Governance Indicators," "Governance Matters," "Governance Matters II," written by Daniel Kaufmann, Aart Kraay, and Pablo Zoido-Lobatón. See www.worldbank.org/wbi/governance/. Kaufmann and Kraay have added a brief note dedicated to data issues in the MCA entitled "Governance Indicators, Aid Allocation, and the Millennium Challenge Account," which can be found at **http://www.worldbank.org/wbi/governance/mca.htm**

[22] Specifically, the scores are scaled so that the mean value is set to equal zero, and the scores that are one standard deviation above and below the mean are set equal to +1 and -1, respectively. Thus, each variable is reported on a scale from approximately –2.3 to +2.3 (corresponding to 2.3 standard deviations below and above the mean, respectively).

will be compiled on an annual basis, and the authors are compiling data from the mid-1990s to produce earlier baseline values for each variable. Finally, the statistical methods used to combine various surveys to create the KKZ database are more complicated than the methodology for any individual survey, making the final scores somewhat less transparent than other measures. The gain from this method, however, is far more information from many data sources, with a better idea of the precision of the estimates. This accuracy and increased amount of information is well worth the price of some additional complexity. All in all, this is the most comprehensive and best quality database on governance indicators available.

Table 1. Development Status, Resources Flows and Financing
for Three MCA Country Groups (medians)

	IDA eligible countries with income less than $1435	Countries with income less than $1435	Countries with income between $1435-$2975
Development Status			
GNI per capita, 2001	$380	$460	$1965
Adult illiteracy rate, adult total, 2000 (%)	36	33	14
Life expectancy at birth, 2000 (years)	54	56	70
Mortality rate, infant, 2000 (per 1,000 live births)	75	69	27
Resources Flows and Financing			
Aid/GNI, 2000 (%)	10.8	8.5	1.4
Gross private capital flows/GDP (%)	6.9	8.7	10.3
Tax revenue/GDP (%)	11.7	12.6	21.8
Gross domestic savings/GDP, 2000 (%)	7.3	8.4	16.2
Number of Countries	74	87	28

Table 2. Characteristics of the Indicators

Indicators	Country Coverage	Source	Frequency	Correlation With					
				Growth		Log Infant Mortality		Log Literacy	
				Correct Sign	Significance	Correct Sign	Significance	Correct Sign	Significance
Ruling Justly									
Control of Corruption	94	World Bank Institute[i]	Annual	✓	10%	✓	1%	✓	
Rule of Law	101	World Bank Institute	Annual	✓	5%	✓	1%	✓	
Voice and Accountability	108	World Bank Institute	Annual	✓		✓	1%	✓	1%
Government Effectiveness	93	World Bank Institute	Annual	✓	10%	✓	1%	✓	
Civil Liberties	112	Freedom House[ii]	Annual	✓		✓	1%	✓	1%
Political Rights	112	Freedom House	Annual	✓		✓	1%	✓	1%
Investing in People									
Immunization Rate: DPT and Measles	94	World Bank[iii]	Annual	✓	10%	✓	1%	✓	1%
Primary Education Completion Rate	99	World Bank[iv]		✓		✓	1%	✓	1%
Public Primary Education Spending/GDP	83	WDI, World Bank	Annual			✓		✓	
Public Expenditure on Health/GDP	87	WDI, World Bank	Annual			✓	5%	✓	1%
Economic Freedom									
Country Credit Rating	85	Institutional Investor[v]	Semi-Annual	✓	5%	✓	1%	✓	
Inflation	65	IMF[vi]	Monthly	✓	1%		5%		1%
Regulatory Quality	100	World Bank Institute	Annual	✓	10%	✓	1%	✓	1%
3 - Year Budget Deficit	101	WDI, World Bank	Annual	✓	1%	✓			
Trade Policy	90	Heritage Foundation[vii]	Annual	✓		✓	1%	✓	
Days to Start a Business	63	World Bank				✓		✓	
Other Possible Indicators									
Political Stability	95	World Bank Institute	Annual	✓	5%	✓	1%	✓	10%
Access to Essential Drugs	106	World Health Organization		✓		✓	5%	✓	
Net Enrollment Rates	82	World Bank	Annual	✓		✓	5%	✓	1%
Access to Improved Water	96	World Bank	Decade	✓		✓	5%	✓	
Girls' Participation in Primary Education	85	World Bank	Annual	✓		✓		✓	1%

See footnotes on following page

[i] D. Kaufmann, A. Kraay and P. Zoido-Lobotan, <u>Governance Matters II: Updated Indicators for 2000/2001</u>, World Bank Policy Research Working Paper. (http://www.worldbank.org/wbi/governance/govdata2001.htm).

[ii] Freedom House, Freedom in the World, 2001-02 (http://www.freedomhouse.org/research/freeworld/FHSCORES.xls).

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[iv] Barbara Bruns, Alain Mingat and Ramahatra Rakotomalala Achieving Universal Primary Education by 2015:   A Chance for Every Child published by the World Bank, Washington DC (forthcoming in Feb. 2003)

[v] Institutional Investor, Country Credit Rankings, September 2002

[vi] International Financial Statistics 2002, International Monetary Fund.

[vii] Heritage Foundation, 2002 Index of Economic Freedom.

Table 3 (Part I). Possible Qualifying Countries, Year 1 (IDA eligible countries with per capita incomes below $1,435)

Note: Scores above the median are clear; shaded scores are below the median

Countries	Civil Liberties (1 to 7, 1 = best)	Political Rights	Voice and Accountability	Government Effectiveness	Rule of Law	Control of Corruption (-2.5 to 2.5, 2.5 = best)	Public Primary Education Spending as % of GDP (%)	Primary Education Completion Rate (%)	Immunization Rate: DPT and Measles (%)	Public Expenditure on Health as % of GDP (%)
QUALIFY										
1 Albania	4	3	0.01	-0.89	-0.71	-0.60	1.0	89	91.0	3.47
2 Bangladesh	4	3	-0.20	-0.54	-0.76	-0.64	0.9	70	71.5	1.71
3 Bolivia	3	1	0.27	-0.47	-0.41	-0.72	2.3	72	78.3	4.12
4 The Gambia	5	5	-0.73	0.41	0.00	0.13	1.6	70	NA	1.86
5 Georgia	4	4	-0.07	-0.72	-0.43	-0.69	0.3	82	85.0	0.89
6 Honduras	3	3	-0.04	-0.58	-1.06	-0.63	1.2	67	96.5	3.92
7 Malawi	3	4	-0.14	-0.77	-0.36	0.10	1.8	50	83.6	2.77
8 Mongolia	3	2	0.73	0.39	0.42	-0.19	2.4	82	93.5	NA
9 Nepal	4	3	-0.06	-1.04	-0.65	-0.31	1.2	65	74.5	1.28
10 Senegal	4	3	0.12	0.16	-0.13	-0.39	1.5	41	60.0	2.62
11 Sri Lanka	4	3	-0.23	-0.44	-0.31	0.00	NA	111	97.0	1.42
QUALIFY IF MEDIAN SCORE COUNTS TO PASS A HURDLE										
1 Ghana	3	2	0.02	-0.06	-0.08	-0.28	1.4	64	72.5	1.82
2 Vietnam	6	7	-1.29	-0.30	-0.57	-0.76	1.1	101	93.0	0.79
3 Guyana	2	2	0.94	0.02	0.13	-0.45	NA	89	85.0	4.54
ELIMINATED BY CORRUPTION										
1 Benin	2	3	0.47	0.12	-0.57	NA	1.6	39	79.0	1.61
2 Lesotho	4	4	-0.15	NA	-0.19	NA	3.2	69	81.3	NA
3 Moldova	4	2	0.12	-1.10	-0.42	-0.83	1.4	79	NA	4.29
4 Nicaragua	3	3	-0.06	-0.73	-0.79	-0.80	2.1	65	91.0	8.50
MISSED BY ONE INDICATOR										
1 Cambodia	6	6	-0.77	0.34	-0.38	0.34	0.9	70	52.1	0.58
2 Cote d'Ivoire	4	5	-1.19	-0.81	-0.54	-0.71	1.7	40	61.8	1.20
3 India	3	2	0.66	-0.17	0.23	-0.39	1.0	76	52.5	NA
4 Mali	3	2	0.32	-1.44	-0.66	-0.41	1.0	23	54.5	2.09
5 Mozambique	4	3	-0.22	-0.49	-0.32	0.10	1.0	36	59.0	2.81
MEDIAN	**4.5**	**5.0**	**-0.57**	**-0.76**	**-0.71**	**-0.76**	**1.2**	**59.3**	**71.2**	**1.8**

Table 3 (Part II). Possible Qualifying Countries, Year 1 (IDA eligible countries with per capita incomes below $1,435)

Note: Scores above the median are clear; shaded scores are below the median

	Countries	Country Credit Rating (1-100, 100 = best)	Inflation (%)	3- Year Budget Deficit (%)	Trade Policy (1 to 5, 1 = best)	Regulatory Quality -2.5 to 2.5, 2.5 = best)	Days to Start a Business	Ruling Justly	Investing in People	Economic Freedom
	QUALIFY									
1	Albania	15.9	3.5	-8.5	5	-0.21	62	5	3	3
2	Bangladesh	27.3	2.2	-2.8	5	0.01	29	5	2	5
3	Bolivia	30.9	0.9	-4.1	3	0.66	104	6	4	5
4	The Gambia	NA	3.5	-4.0	4	-0.01	NA	3	3	3
5	Georgia	15.4	3.4	-3.7	4	-0.75	62	6	2	3
6	Honduras	26.1	8.8	-7.5	3	-0.16	146	5	3	4
7	Malawi	19.6	6.9	-14.2	4	0.28	56	5	3	4
8	Mongolia	21.7	5.8	-9.5	2	0.16	31	6	3	5
9	Nepal	24.4	2.9	-3.9	5	-0.41	25	5	2	4
10	Senegal	27.8	4.0	-3.9	4	-0.38	58	6	2	5
11	Sri Lanka	33.6	10.8	-8.1	3	0.38	73	6	2	4
	QUALIFY IF MEDIAN SCORE COUNTS TO PASS A HURDLE									
1	Ghana	25.7	21.3	-9.6	4	0.24	126	6	4	3
2	Vietnam	32.3	0.5	-2.4	5	-0.50	68	3	2	3
3	Guyana	NA	8.1	-8.1	4	0.04	NA	6	3	3
	ELIMINATED BY CORRUPTION									
1	Benin	20.1	2.3	-3.2	4	0.07	63	5	2	4
2	Lesotho	26.8	7.1	-5.5	3	-0.17	NA	4	3	4
3	Moldova	15.7	6.4	-1.7	2	-1.11	41	4	3	4
4	Nicaragua	17.6	7.4	-1.0	2	-0.16	69	4	4	4
	MISSED BY ONE INDICATOR									
1	Cambodia	19.6	-0.3	-5.6	2	0.24	NA	3	1	4
2	Cote d'Ivoire	18.5	4.8	-0.7	4	-0.30	91	3	1	3
3	India	47.3	5.2	-5.5	5	-0.16	95	6	1	3
4	Mali	19.1	5.2	-8.8	3	0.27	61	5	1	5
5	Mozambique	19.1	9.0	-11.9	4	0.16	214	6	1	3
	MEDIAN	**18.5**	**20.0**	**-4.4**	**4.0**	**-0.39**	**63**			

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Table 4 (Part I). Possible Qualifying Countries, Year 2 (countries with per capita incomes below $1,435)

Note: Scores above the median are clear; shaded scores are below the median

	Countries	Civil Liberties	Political Rights	Voice and Accountability	Government Effectiveness	Rule of Law	Control of Corruption	Public Primary Education Spending as % of GDP	Primary Education Completion Rate	Immunization Rate: DPT and Measles	Public Expenditure on Health as % of GDP
		(1 to 7, 1 = best)			(-2.5 to 2.5, 2.5 = best)			(%)	(%)	(%)	(%)
	QUALIFY										
1	**Bolivia**	3	1	0.27	-0.47	-0.41	-0.72	2.30	72	78.3	4.1
2	**China**	6	7	-1.11	0.14	-0.19	-0.30	0.7	108	90.0	2.0
3	**Honduras**	3	3	-0.04	-0.58	-1.06	-0.63	1.20	67	96.5	3.9
4	**Malawi**	3	4	-0.14	-0.77	-0.36	0.10	1.80	50	83.6	2.8
5	**Mongolia**	3	2	0.73	0.39	0.42	-0.19	2.40	82	93.5	NA
6	**Philippines**	3	2	0.53	0.03	-0.49	-0.49	1.6	92	79.0	1.5
7	**Senegal**	4	3	0.12	0.16	-0.13	-0.39	1.50	41	60.0	2.6
8	**Sri Lanka**	4	3	-0.23	-0.44	-0.31	0.00	NA	111	97.0	1.4
9	**Vietnam**	6	7	-1.29	-0.30	-0.57	-0.76	1.10	101	93.0	0.8
	QUALIFY IF MEDIAN SCORE COUNTS TO PASS A HURDLE										
1	**Albania**	4	3	0.01	-0.89	-0.71	-0.60	1.00	89	91.0	3.5
2	**The Gambia**	5	5	-0.73	0.41	0.00	0.13	1.60	70	NA	1.9
3	**Georgia**	4	4	-0.07	-0.72	-0.43	-0.69	0.30	82	85.0	0.9
4	**Guyana**	2	2	0.94	0.02	0.13	-0.45	NA	89	85.0	4.5
	ELIMINATED BY CORRUPTION										
1	**Benin**	2	3	0.47	0.12	-0.57	NA	1.60	39	79.0	1.6
2	**Ecuador**	3	3	-0.14	-0.94	-0.76	-0.98	NA	96	89.5	1.7
3	**Lesotho**	4	4	-0.15	NA	-0.19	NA	3.20	69	81.3	NA
4	**Moldova**	4	2	0.12	-1.10	-0.42	-0.83	1.40	79	NA	4.3
5	**Nicaragua**	3	3	-0.06	-0.73	-0.79	-0.80	2.10	65	91.0	8.5
6	**Ukraine**	4	4	-0.31	-0.75	-0.63	-0.90	2.4	94	99.0	3.6
	MISSED BY ONE INDICATOR										
1	**Bangladesh**	4	3	-0.20	-0.54	-0.76	-0.64	0.90	70	71.5	1.7
2	**Cambodia**	6	6	-0.77	0.34	-0.38	0.34	0.90	70	52.1	0.6
3	**Cote d'Ivoire**	4	5	-1.19	-0.81	-0.54	-0.71	1.70	40	61.8	1.2
4	**India**	3	2	0.66	-0.17	0.23	-0.39	1.00	76	52.5	NA
5	**Mali**	3	2	0.32	-1.44	-0.66	-0.41	1.00	23	54.5	2.1
6	**Morocco**	5	5	-0.23	0.10	0.46	0.44	NA	55	90.5	1.2
7	**Nepal**	4	3	-0.06	-1.04	-0.65	-0.31	1.20	65	74.5	1.3
	MEDIAN	**5**	**5**	**-0.59**	**-0.76**	**-0.68**	**-0.78**	**1.4**	**64.6**	**74.6**	**1.9**

Table 4 (Part II). Possible Qualifying Countries, Year 2 (countries with per capita incomes below $1,435)

Note: Scores above the median are clear; shaded scores are below the median

Countries	Country Credit Rating (1-100, 100 = best)	Inflation (%)	3- Year Budget Deficit (%)	Trade Policy (1 to 5, 1 = best)	Regulatory Quality (-2.5 to 2.5, 2.5 = best)	Days to Start a Business	Number of Hurdles Passed		
							Ruling Justly	Investing in People	Economic Freedom
QUALIFY									
1 Bolivia	30.9	0.9	-4.1	3	0.66	104	6	4	4
2 China	58.9	0.7	-3.2	5	-0.13	55	3	3	5
3 Honduras	26.1	8.8	-7.5	3	-0.16	146	5	3	4
4 Malawi	19.6	6.9	-14.2	4	0.28	56	5	3	4
5 Mongolia	21.7	5.8	-9.5	2	0.16	31	6	3	5
6 Philippines	44.9	4.1	-3.9	2	0.21	62	6	3	4
7 Senegal	27.8	4.0	-3.9	4	-0.38	58	6	2	4
8 Sri Lanka	33.6	10.8	-8.1	3	0.38	73	6	2	4
9 Vietnam	32.3	0.5	-2.4	5	-0.50	68	3	2	3
QUALIFY IF MEDIAN SCORE COUNTS TO PASS A HURDLE									
1 Albania	15.9	3.5	-8.5	5	-0.21	62	4	3	3
2 The Gambia	NA	3.5	-4.0	4	-0.01	NA	5	3	3
3 Georgia	15.4	3.4	-3.7	4	-0.75	62	6	2	4
4 Guyana	NA	8.1	-8.1	4	0.04	NA	6	3	3
ELIMINATED BY CORRUPTION									
1 Benin	20.1	2.3	-3.2	4	0.07	63	5	2	4
2 Ecuador	22.5	22.4	0.3	4	0.00	90	3	2	3
3 Lesotho	26.8	7.1	-5.5	3	-0.17	NA	4	3	4
4 Moldova	15.7	6.4	-1.7	2	-1.11	41	4	2	4
5 Nicaragua	17.6	7.4	-1.0	2	-0.16	69	4	4	4
6 Ukraine	25.3	10.9	-1.4	3	-1.05	42	5	4	5
MISSED BY ONE INDICATOR									
1 Bangladesh	27.3	2.2	-2.8	5	0.01	29	5	1	5
2 Cambodia	19.6	-0.3	-5.6	2	0.24	NA	3	1	4
3 Cote d'Ivoire	18.5	4.8	-0.7	4	-0.30	91	3	1	3
4 India	47.3	5.2	-5.5	5	-0.16	95	6	1	3
5 Mali	19.1	5.2	-8.8	3	0.27	61	5	1	4
6 Morocco	48.2	1.7	-3.2	5	0.54	62	4	1	4
7 Nepal	24.4	2.9	-3.9	5	-0.41	25	5	1	3
MEDIAN	**19.2**	**20.0**	**-3.9**	**4.0**	**-0.40**	**62**			

Table 5 (Part I). Possible Qualifying Countries, Year 3 (countries with per capita incomes between $1,435 and $2,975)
   Note: Scores above the median are clear; shaded scores are below the median

Countries	Civil Liberties	Political Rights	Voice and Accountability	Government Effectiveness	Rule of Law	Control of Corruption	Public Primary Education Spending as %	Primary Education Completion Rate	Immunization Rate: DPT and Measles	Public Expendenditure on Health as %of GDP
	(1 to 7, 1 = best)		(-2.5 to 2.5, 2.5 = best)				(%)	(%)	(%)	(%)
QUALIFY										
1 Bulgaria	3	1	0.59	-0.26	0.02	-0.16	1.6	91.8	96.0	3.5
2 Egypt	6	6	-0.65	0.27	0.21	-0.16	NA	98.5	94.5	NA
3 Namibia	3	2	0.32	0.60	1.24	1.25	4.9	89.7	69.0	3.7
4 Peru	3	1	0.15	-0.35	-0.53	-0.04	0.8	97.6	93.0	2.4
5 South Africa	2	1	1.17	0.25	-0.05	0.35	NA	97.8	79.0	3.3
QUALIFY IF MEDIAN SCORE COUNTS TO PASS A HURDLE										
1 Jamaica	3	2	0.78	-0.30	-0.38	-0.06	1.6	94.3	90.0	3.1
2 Jordan	5	5	0.10	0.42	0.66	0.09	2.2	103.9	95.5	3.6
ELIMINATED BY CORRUPTION										
MISSED BY ONE INDICATOR										
1 Tunisia	5	6	-0.61	1.30	0.81	0.86	NA	91.3	90.0	2.2
MEDIAN	**3.0**	**2.0**	**0.10**	**-0.22**	**-0.25**	**-0.18**	**1.5**	**91.9**	**86.0**	**3.1**

Table 5 (Part II). Possible Qualifying Countries, Year 3 (countries with per capita incomes between $1,435 and $2,975)

Note: Scores above the median are clear; shaded scores are below the median

Countries	Country Credit Rating (1-100, 100 = best)	Inflation (%)	3- Year Budget Deficit (%)	Trade Policy (1 to 5, 1 = best)	Regulatory Quality (-2.5 to 2.5, 2.5 = best)	Days to Start a Business	Ruling Justly	Investing in People	Economic Freedom
QUALIFY									
1 Bulgaria	40.7	4.8	1.6	4	0.16	30	4	3	5
2 Egypt	45.5	2.5	-4.7	4	0.13	52	3	2	3
3 Namibia	40.8	8.3	-3.9	3	0.53	NA	4	2	4
4 Peru	38.3	-0.1	-2.3	4	0.36	114	3	2	3
5 South Africa	52.7	7.8	-2.0	3	0.07	32	6	2	5
QUALIFY IF MEDIAN SCORE COUNTS TO PASS A HURDLE									
1 Jamaica	28.9	8.8	-5.4	4	0.42	37	4	3	4
2 Jordan	38.7	3.9	-2.7	5	0.73	89	4	4	3
ELIMINATED BY CORRUPTION									
MISSED BY ONE INDICATOR									
1 Tunisia	53.7	2.9	-2.5	5	0.81	47	3	1	4
MEDIAN	**38.7**	**20.0**	**-2.4**	**4.0**	**0.10**	**48.5**			

Number of Hurdles Passed