



**IDA14**

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**IDA13 Results-Measurement System:**

**Spring 2004 Update**

**International Development Association  
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## **IDA13 Results-Measurement System: Spring 2004 Update**

### **I. Introduction**

1. The introduction of a results-based framework into the compact between donors and recipient countries and between donors and the International Development Association (IDA) was an innovation of the IDA13 replenishment. IDA Deputies adopted an interim system to monitor results at both the country and the institutional levels during the IDA13 period and recommended that a more robust system be developed to measure results in IDA14 and beyond.<sup>1</sup>
2. The IDA13 results-measurement system, which has been in place since July 2002, tracks results on two levels. On the institutional level, input indicators capture the performance of the Bank in terms of selected pieces of analytic work that underpin IDA's dialogue with governments about the proper use of public resources and other key aspects of development effectiveness: Country Financial Accountability Assessments (CFAAs), Country Procurement Assessment Reviews (CPARs), Public Expenditure Reviews (PERs), Investment Climate Assessments (ICAs), and Poverty Analysis (PA). On the country level, outcome indicators capture the performance of all development partners, including IDA and country governments, in achieving desired development goals in areas that are critical for growth and poverty reduction: education (primary completion rate), health (measles immunization rate) and private sector development (time and cost of business start-up).
3. Targets were established for both the input and the outcome indicators, and additional donor contributions have been linked to the achievement of these targets.<sup>2</sup> In April 2003, Deputies assessed the first set of input targets and found progress to be satisfactory; they also reviewed preliminary estimates of progress on the outcome indicators. This paper assesses progress towards the second set of IDA13 targets which includes both input and outcome indicators.

### **II. Summary Findings**

4. Both the input and the outcome targets for spring 2004 have been met. This result reflects progress made by the Bank in scaling up the delivery of critical analytical work in IDA countries as well as progress made by IDA countries in creating healthier investment climates, better quality primary schools and better health delivery systems.
5. The experience of measuring progress against the IDA13 outcome targets has brought to the fore two major issues. First, as was highlighted in the initial discussions of the results-measurement system during the IDA13 negotiations, data inadequacies such as lack of country coverage, infrequent data reporting, and routine data revision make it difficult to track straight forward indicators. This paper and the accompanying technical annexes include a rich

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<sup>1</sup> A separate paper, *IDA Results Measurement System: Proposals for IDA14*, is being prepared for the July 10-11, 2004 IDA Deputies' meeting. This paper will make recommendations on the design of the IDA14 results-measurement system and the selection of outcome indicators based on further data analysis and the experience of the IDA13 interim system.

<sup>2</sup> See *Additions to IDA Resources: Thirteenth Replenishment: Supporting Poverty Reduction Strategies* (IDA/SecM2002-0488), September 17, 2002. For a complete list of the IDA13 targets, see Annex I.

discussion of these issues, and the IDA13 experience clearly demonstrates the need for more and better data in IDA countries and the need for IDA's involvement in statistical capacity building.

6. Second, the experience with the outcome indicators and targets underscores the need to use caution when attributing aggregate progress to IDA. The difficulties associated with attributing changes in country-level outcome indicators, especially in the aggregate, specifically to IDA's interventions were discussed by Deputies at the time the IDA13 results-measurement system was established, and have been confirmed by this experience. As the paper illustrates, part of the change observed in the outcome indicators is due to data revision and improved methodologies for calculating indicators or for estimating values for nonexistent data. Another part of the observed change is due to broader movements in economic growth and country efforts to improve policies. IDA certainly plays an important role in facilitating overall growth and in improving the quality of country policies, but to varying degrees depending on the country, on the activities of other development partners, and on developments in the global economy. While it is important for IDA Management and donors to keep a vigilant eye on the movement of key development outcome indicators across the group of IDA borrowers and to continuously test and improve the links between IDA interventions and country-specific outcomes, progress in these aggregate outcomes cannot be rightly attributed to IDA alone.

### III. IDA Inputs

7. As of April 1, 2004, analytic work completed for IDA countries, beginning in FY01, includes 51 CFAAs, 42 CPARs, 42 PERs, and 16 ICAs.<sup>3</sup> As such, the numerical input targets for Spring 2004 have been met. In fact, the number of CFAAs far exceeds the target. This result can be attributed to two factors: first, over the past several years, the Bank has undertaken to strengthen the fiduciary underpinnings of its programmatic and adjustment lending; and second, the financial management area has moved relatively faster in collaborating with other partners in the production of CFAAs, and this has allowed for a more efficient use of resources. In addition, in 2002, Management made a commitment to the Board to fill the gaps in the core diagnostics in all active borrowers by the end of FY04 (see Box 1), and this increased management attention has contributed to achieving and surpassing the overall targets for the three core diagnostic products in IDA countries.<sup>4</sup>

**Table 1. Status of Analytical Inputs as of April 1, 2004**

<i>Input</i>	<i>Completed FY01 to date</i>	<i>Target for Spring 2004</i>
<b>CFAAs</b>	<b>51</b>	<b>40</b>
o/w Africa	21	20
<b>CPARs<sup>5</sup></b>	<b>42</b>	<b>38</b>
o/w Africa	19	19
<b>PERs</b>	<b>42</b>	<b>40</b>
o/w Africa	20	20
<b>ICAs<sup>6</sup></b>	<b>16</b>	<b>14</b>

<sup>3</sup> For a full list of CFAAs, CPARs, PERs and ICAs produced since the beginning of FY01, see Annex II.

<sup>4</sup> Core diagnostic reports are: Poverty Assessments (PAs), Country Economic Memoranda (CEMs), Public Expenditure Reviews (PERs), Country Financial Accountability Assessments (CFAAs), and Country Procurement Assessment Reports (CPARs)

<sup>5</sup> In the case of CPARs, the tally is based on the number of products delivered as of April 30, 2004.

8. In addition to the numerical input targets, the IDA13 results-measurement system includes the following goal: to underpin every CAS with current poverty analysis,<sup>7</sup> and where this analysis is incomplete or unavailable, to identify the gaps in the CAS and to lay out a plan for their completion.<sup>8</sup> Out of the 27 IDA CASs that were presented to the Board between July, 2002 and April, 2004, 21 are underpinned by current poverty analysis, either in the form of a formal Poverty Assessment, analysis conducted by government in connection with PRSP preparation, or a more comprehensive Bank report that includes a diagnosis of the poverty situation in the country. In the remaining six CASs, thorough poverty analysis was impeded due to lack of household survey data. In each of these cases, the gap in data and analysis is identified, the CAS includes a plan for addressing the issue, and data collection or poverty analysis is currently underway.

9. ***Africa Share of Analytical Inputs.*** In addition to the overall targets for the analytical products, Management was asked to ensure that half of the targeted figures for CFAAs, CPARs and PERs be produced for African countries. As of April 22, 2004, 21 CFAAs, 19 CPARs and 20 PERs were delivered in the Africa Region, thereby meeting this target.

10. ***Ensuring the Quality of Analytical Work.*** Efforts to expand the coverage of analytical work should not compromise the quality of individual products or the Bank's ability to respond to individual country priorities. Regional guidelines are in place for the production of Economic and Sector Work (ESW) to ensure that the Bank delivers high-quality analytical and advisory work to its clients. The task leader, who is typically a sector specialist located in the Region, is aided by several quality-enhancement processes, including upstream support and peer reviews. Quality standards for the major ESW products (including those that form the IDA13 targets) are set and maintained by the Bank's Sector Boards. Before an ESW piece is delivered to the client, the Sector Board formally certifies that the product complies with the guidelines that have been established.<sup>9</sup> Sector Boards also provide support to the task teams as needed, drawing upon the technical expertise in the relevant network.

11. Each year the Bank's Quality Assurance Group (QAG) evaluates a random sample of ESW products along four quality dimensions: strategic relevance and timeliness; internal quality; dialogue and dissemination; and likely impact. The QAG review process strengthens the accountability of staff and managers responsible for ESW, and the associated synthesis report shared with Management and the Board enhances learning and helps to identify best practices that can catalyze changes in ESW policies, programs and procedures.<sup>10</sup>

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<sup>6</sup> In the case of ICAs, the tally is based on the number of products delivered as of April 15, 2004.

<sup>7</sup> Current is defined as having been produced within the last five years.

<sup>8</sup> This goal applies to IDA CASs prepared beginning in July, 2002.

<sup>9</sup> The Sector Board often designates the regional Board representative to assume responsibility for certification.

<sup>10</sup> See Annex III for more details on the Bank's quality assurance processes for ESW.

**Box 1: The Important Role Played by Analytic Work**

Country and sector knowledge is critical in reducing uncertainty and risks and in enhancing project design, thereby improving overall operational outcomes and the effectiveness of IDA's assistance. Economic and Sector Work (ESW) has been found to have a key strategic role in shaping Country Assistance Strategies (CASs), in building the analytical base needed for the successful design and implementation of projects, and in guiding policy dialogue. Evaluation evidence from the Operations Evaluation Department (OED) suggests that high-quality and timely ESW has frequently made a substantial contribution to successful Bank assistance outcomes, and that in cases where ESW did not succeed in having a satisfactory impact on country dialogue, Bank assistance outcomes were found to be on average unsatisfactory<sup>11</sup>.

Research indicates that ESW has not only had a significant positive impact on various measures of quality of Bank projects, but that there was also clear evidence of underinvestment in ESW in the late 1990s.<sup>12</sup> Over the last several years, the Bank has increased spending on and production of ESW outputs. Both spending and delivery of core diagnostic reports<sup>13</sup> doubled between FY98 and FY03. At the same time, ESW has become increasingly participatory, and its quality has notably increased across the board. The Quality Assurance Group's (QAG) last review of ESW<sup>14</sup> rated overall quality as being satisfactory or better in 98% of the FY02 cohort considered for IDA countries and found that 93% of these ESW products were satisfactory or better in terms of the likelihood of achieving their intended impact.<sup>15</sup>

In recognition of the important role played by ESW in laying the analytical foundation for increased programmatic lending, Management undertook to strengthen coverage and update the production of analytical work in key areas underpinning the Bank's assistance to client countries. In 2002 Management set a goal for all active countries to have in place by the end of FY04 a current Poverty Assessment, Country Economic Memorandum or Development Policy Review, Public Expenditure Review, Country Financial Accountability Assessment, and Country Procurement Assessment Report, or their functional equivalents.<sup>16</sup> In parallel, as part of the IDA13 replenishment arrangement, targets were established for the completion of CFAAs, CPARs, PERs, and poverty analysis in IDA countries. The renewed effort of the last two years has produced a stock of analytical work that is substantially more up-to-date and broader in coverage and is contributing to better designed and more relevant operations.

#### IV. Country Outcomes

12. In addition to the analytical inputs, the IDA13 results-measurement system includes a set of country-level outcome indicators and progress targets for Spring 2004. The indicators measure progress in areas that are critical to growth and poverty reduction: education (primary school completion), health (measles immunization coverage), and private sector development (time and cost of business start-up). In selecting these indicators, Deputies took into account their link to development effectiveness and poverty reduction as well as the relative reliability, accessibility, and comparability of the data across countries and over time.

<sup>11</sup> OED (2004). *Annual Review of Development Effectiveness 2003: The Effectiveness of Bank Support for Policy Reforms*.

<sup>12</sup> Deininger, Klaus, Lyn Squire, and Swati Basu. "Does Economic Analysis Improve the Quality of Foreign Assistance?" *World Bank Economic Review*, (Sep 1998).

<sup>13</sup> Core ESW diagnostic reports are: Poverty Assessments (PAs), Country Economic Memoranda (CEMs), Public Expenditure Reviews (PERs), Country Financial Accountability Assessments (CFAAs), and Country Procurement Assessment Reports (CPARs)

<sup>14</sup> QAG (2003). *Quality of ESW in FY02: A QAG Assessment*.

<sup>15</sup> Defined in terms of dollar cost.

<sup>16</sup> See forthcoming report to the Board on the coverage of core ESW products (end-FY04).

13. **Primary Completion Rate (PCR).** The Primary Completion Rate was selected as an indicator for the IDA13 results-measurement system because it is the most direct measure of national progress towards universal primary education, which is one of the Millennium Development Goals. Since this indicator measures both education system coverage and student attainment, it is believed to be a more accurate indicator of human capital formation and school system quality and efficiency than either gross or net enrollment ratios.<sup>17</sup> The data source for this indicator is mostly the grade-specific enrollment and repeater information collected and published by the UNESCO Institute for Statistics (UIS), supplemented by completion or enrollment data collected directly from national education systems by World Bank task teams.

14. As Deputies and Management discussed during the initial development of the IDA13 results-measurement system, all outcome indicators are subject to revision as part of the normal process of compilation and validation of statistical data, and there are weaknesses associated with every indicator in terms of reliability, frequency of reporting, country coverage and comparability over time. In the case of the PCR, which is a relatively new indicator, systems for collecting and standardizing the data from IDA countries are not yet in place, and the database has many gaps, particularly for small countries and earlier years.<sup>18</sup> In addition, different methods of computation have been used in the derivation of the indicator. As a result, the comparability of this indicator across countries or over time is compromised, and extensive revisions are needed in order to correct for anomalies and suspect estimates.<sup>19</sup>

15. Two targets were set to gauge progress in primary school completion over a two-year period, essentially from 2000<sup>20</sup> (the latest year for which data was available at the time the targets were set) to 2002 (the latest year for which data is now available).<sup>21</sup> The targets are: (i) increase the population-weighted average primary completion rate to 69% with a substantial number of countries reaching a higher rate; and (ii) increase the number of countries with positive growth rates in primary completion rates to 38 countries.

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<sup>17</sup> Net Primary Enrollment is one of the indicators chosen to measure the MDG of universal primary completion. Primary Completion Rate has been proposed as an additional MDG indicator for the reasons mentioned above, but it has not yet been adopted.

<sup>18</sup> For the 81 IDA countries, the maximum number of countries with an observation in any single year before 2000 is 37 and there are on average 12 observations per year before 2000.

<sup>19</sup> For more details on the data issues involved in calculating PCR estimates, see Annex IV.

<sup>20</sup> The 2000 baseline for PCR was composed of the latest year of data available as of Spring 2002 which consisted of data points mainly around 1999/2000, but in some cases reached as far back as 1993.

<sup>21</sup> The target period for both the Primary Completion Rate and the Measles Immunization Coverage Rate was defined in terms of the points in time at which Deputies would consider the data, e.g. from Spring 2002 to Spring 2004, rather than in terms of the years in which the data is reported.

**Table 2: Primary Completion Rate  
(Original Methodology and Updated Data)**

	<b>Target</b>	<b>Result</b>	<b>Implicit Change from Baseline<sup>22</sup></b>	<b>Actual Change from Revised Baseline<sup>23</sup></b>
<b>Population-Weighted Average</b>	69%	70%	1.5%	1.7%
<b># of Countries with Positive PCR Growth (Relative to 1990)</b>	38	45	6 additional countries	2 additional countries

16. As shown in Table 2, both of the IDA13 targets have been met. The population-weighted PCR for the 69 IDA countries included in the original baseline set has risen to 70%, and the number of countries showing positive growth rates in their PCRs, relative to 1990, has risen to 45. However, because the PCR data have been updated since the targets were set two years ago, the revised baseline figures for the two indicators have changed substantially.<sup>24</sup> As such, it is useful to compare the actual progress made between 2000 and 2002 to the rate of improvement implied by the original baseline and targets. As the table shows, the rate of improvement in the weighted average PCR over the two-year period is 1.7%, which is slightly greater than the 1.5% rate of change implied by the original baseline and target. For the second indicator, the number of countries showing positive growth rates in PCR relative to 1990, the new data indicate that the change has been in the right direction, albeit somewhat lower. This can be expected given that the revised 2000 baseline (43 countries) is considerably higher than the 2000 baseline that had been estimated on the information available when the target was set (32 countries).

17. A number of factors contribute to making it difficult to interpret change in the second indicator. One factor is the phenomenon created when countries have PCRs above 100%.<sup>25</sup> Because the PCR is calculated by dividing the number of primary school completers (regardless of age) by the population within the relevant age group, the numerator can be higher than the denominator due to children completing the course late or entering early. Usually, a PCR above 100% indicates that there are a number of over-age children who have repeated one or more grades of primary school but are now graduating successfully. As the internal efficiency of the primary education system improves in these countries, their PCRs should not exceed 100%. As such, a negative growth rate in the PCR in these instances could reflect positive developments in the primary school system, and caution is needed when interpreting an aggregate change in this indicator.<sup>26</sup>

<sup>22</sup> This figure reflects the marginal change needed to reach the target from the 2000 baseline as it was estimated when the targets were set. See *Additions to IDA Resources: Thirteenth Replenishment: Supporting Poverty Reduction Strategies* (IDA/SecM2002-0488), September 17, 2002, Action Plan (Annex III).

<sup>23</sup> This figure reflects the actual marginal change between the revised baseline estimate for 2000 (based on updated data) and the latest data available for 2002.

<sup>24</sup> Annex IV shows the revised data for 2000 – 2002 and the original baseline estimates.

<sup>25</sup> Five of the countries in this set have PCRs above 100% in 1990.

<sup>26</sup> For example, Albania's PCR rose from 101% in 1990 to 107% in 2000 and then dropped to 100.3% in 2002, causing it to move out of the group of countries being counted towards achievement of the "Number of countries with positive growth" indicator even though the country had universal primary completion at each of these points in time and no substantive negative change had taken place.

18. In addition to the issue described above, another factor makes this indicator difficult to interpret. Because progress is being measured relative to 1990 levels, improvement in countries between 2000 and 2002 is not captured unless the 2002 level is higher than the 1990 level. This is particularly relevant given that the IDA countries fall into two distinct groups over the 1990s, one which has experienced positive PCR growth between 1990 and 2000 and one which has experience no growth over this period. Analysis shows that the countries belonging to the first category have made impressive progress in the 1990s as well as in the 2000-2002 period, but they started from a low base (average of 42% PCR). Countries belonging to the second category experienced a decline in the 1990s from a much higher starting point (average of 65% PCR), but have reversed the decline decisively over the last two years. Because of the way this target was set (measuring growth since 1990), countries in this second group have not been counted as showing positive growth despite the fact that they have improved recently. This experience demonstrates the importance of taking into consideration the difference in growth potential in Primary Completion Rate among the various IDA countries when establishing a target for improvement.<sup>27</sup>

19. **Most-Recent-Trend Methodology.** The results described above are based on the methodology that was used to calculate the original baseline in which, for cases where no data were available for a specific year, the most recent observation from a previous period was brought forward to the calculation year with no other adjustment.<sup>28</sup> While this methodology is widely used and is appropriate in certain cases, especially when looking at change over a long period, it may not be the best way to measure the short-term progress of an indicator with infrequent observations, such as the primary completion rate. A natural alternative is to take the most recent trend of the indicator value into account in imputing the missing figures. The essential assumption of this most-recent-trend method is that the trend of an indicator remains the same unless a new observation indicates otherwise.<sup>29</sup> This approach can give a more accurate picture of progress on the ground over the short time period under examination. The results generated by this methodology are presented below.

**Table 3. Primary Completion Rate  
(Most-Recent-Trend Methodology and Updated Data)**

	<b>Target</b>	<b>Result</b>	<b>Implicit Change from Baseline</b>	<b>Actual Change from Revised Baseline</b>
<b>Population-Weighted Average</b>	69%	73%	1.5%	4%
<b># of Countries with Positive PCR Growth Relative to 1990</b>	38	43	6 additional countries	3 additional countries

20. According to the most-recent-trend methodology, progress on the aggregate PCR has been much greater over the two-year period under consideration, and the population-weighted

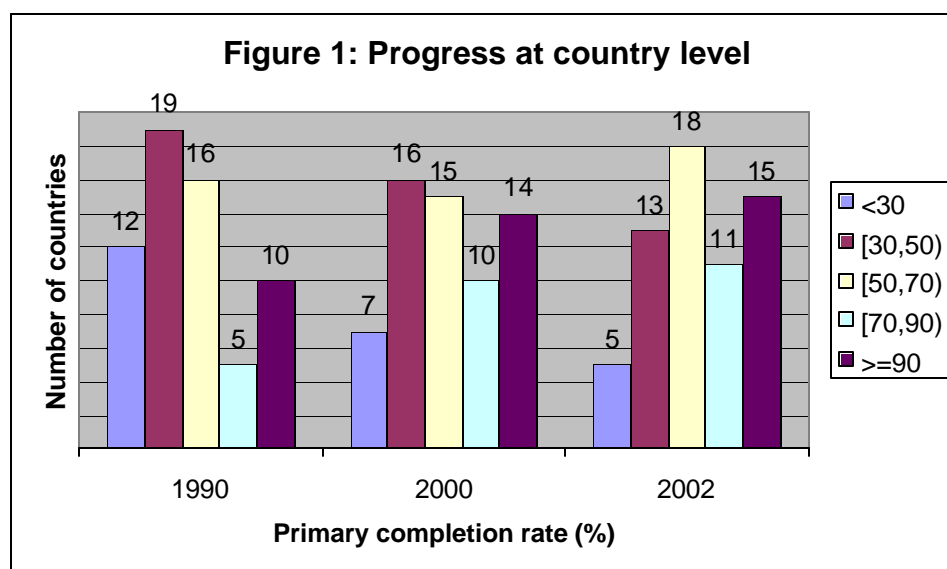
<sup>27</sup> For more details on this analysis, see Annex IV.

<sup>28</sup> The most-recent-year methodology was also used to report on preliminary first-year results in April 2003. See *IDA Results Measurement System: Progress and Proposals and Technical Annexes* (IDA/SecM2003-0159), April 7, 2003.

<sup>29</sup> Annex IV includes an in-depth discussion of the differences between the most-recent-year and the most-recent-trend methodologies.

average stands considerably above the target, at 73%.<sup>30</sup> According to this approach, the number of countries showing positive growth in their PCRs (43) is lower than the number suggested by the original methodology (45), but is still higher than the targeted figure (38). As was the case when the original methodology was applied, the actual change in the “number of countries” indicator is somewhat lower than what had been anticipated based on the assumption of a much lower starting point. Again, it is important to recognize the difficulties presented by this indicator, especially in terms of failing to capture the progress made by the majority of countries which have either surpassed their 1990 value at the beginning of the measurement period and stayed above this level during the period, or have not surpassed their 1990 value at the end point but are on the way to breakthrough.<sup>31</sup>

21. A more comprehensive way to assess progress at the individual country level is to examine the change over time in the distribution of countries according to their PCR levels. Figure 1 presents this “density analysis” for the 62 countries for which at least two data points are available beginning in 1990. This graph shows that progress has been made across the board – the number of countries belonging to the lowest two categories (with PCRs below 50%) has decreased steadily, from 12 in 1990 to 5 in 2002 for the lowest category, and from 19 to 13 for the second lowest category. At the same time, the other three categories include an increasing number of countries during this period.



22. The density analysis is also useful in examining the role played by country size when countries are grouped together to calculate a population-weighted average. The formulation of the population-weighted average targets for measles and primary completion rates includes the goal for a substantial number of countries to reach a PCR higher than 69%. While 34 countries

<sup>30</sup> Pairwise comparison of PCRs for the years 2000, 2001 and 2002 shows that these changes are not merely an artifact of the most-recent-trend methodology. For more details, see Annex IV.

<sup>31</sup> For a more complete discussion of these issues, see Annex IV.

(out of 70) reached a PCR above 69% by 2002, it may be more useful to examine how different groups of countries have moved up the spectrum towards universal primary completion over the course of the period, as reflected in Figure 1.

23. In sum, according to both the original methodology and the most-recent-trend methodology, the improvement in the population-weighted PCR from 2000 to 2002 meets or exceeds the target, both in absolute terms and relative to the revised baseline figures. With regard to the second indicator, the number of countries with positive growth in PCR relative to 1990, the absolute target has been surpassed, but the degree of change has been less than what was envisioned based on the data available two years ago. This is due to the fact that the actual 2000 baseline is considerably higher than what had been estimated when the targets were set (and thus a smaller degree of improvement can be expected) and to the fact that the target fails to capture the progress achieved over the last two years in a substantial number of countries whose PCR levels dropped between 1990 and 2000 and, while improving, have not yet once again surpassed their 1990 levels. In the future, it is recommended that the number of countries with positive PCR growth not be used to assess progress in this area for the reasons described above and elaborated more fully in Annex IV.

24. ***Measles Immunization Coverage Rate.*** The coverage rate of Measles immunization was selected as an outcome indicator for the IDA13 results-measurement system because of its relationship to child mortality and poverty and because of the high degree of data availability and the high average frequency of reporting (1 – 2 years). This indicator provides a proxy measure of the coverage and quality of the child health care system in a country, and while measles is only one cause of child mortality, it is clearly related to the Millennium Development Goal of reducing under-five mortality. The indicator is estimated annually by the World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF) for almost all countries. WHO/UNICEF revise previous observations when new observations estimated from survey or administrative data become available, and numerous retroactive revisions are found in the most recent update.<sup>32</sup>

25. In parallel to the targets established for Primary Completion Rate, two targets were also set to gauge progress in Measles Immunization Coverage: (i) an increase in the population-weighted coverage rate of measles immunization to 60% with a substantial number of countries reaching a higher rate; and (ii) an increase in the number of countries with 80% coverage of measles vaccination<sup>33</sup> to 29 countries.

26. Since the time the IDA13 targets were agreed upon, WHO intensified its data collection efforts, and the time lag for the measles data has been shortened from three to two years. The availability of more recent revised data on this indicator has two implications. First, because of the methodology adopted by WHO/UNICEF, previous observations are likely to be revised when new observations estimated from surveys or administrative data become available.<sup>34</sup> Second, the

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<sup>32</sup> For more details, see Annex IV.

<sup>33</sup> At the time the targets were set, 80% was believed to be the threshold beyond which measles could be contained. Currently, UNICEF estimates that an immunization coverage rate of 90% is the target level for containment.

<sup>34</sup> For more details on this methodology, see Annex IV.

most recent available observations relate to the year 2002, expanding the set of relevant data to a three-year period (1999 – 2002) instead of the originally envisioned two-year period (1999 – 2001).<sup>35</sup> In order to present results that relate to the intended time frame upon which the IDA13 targets were set, it is important to assess progress over the 1999 – 2001 period.

**Table 4. Measles Immunization Coverage Rate**  
(Updated Data)

	Target	Result (2001)	Result (2002)	Implicit Change from Baseline <sup>36</sup> (99 – 01)	Actual Change from Revised Baseline <sup>37</sup> (99 – 01)
<b>Population-Weighted Average</b>	60%	61%	65%	8%	9%
<b># of Countries with 80% Coverage</b>	29	27	29	2 additional countries	3 additional countries <sup>38</sup>

27. Based on the revised data available today, the population-weighted average target was met by 2001, and the rate of progress over the 1999 – 2001 period was greater than that implied by the original baseline and target. For the second indicator, the number of countries with 80% coverage rates, the revised data show that the 1999 baseline had been overestimated by a substantial margin when the targets were set, and that instead of 27 countries, only 24 countries had reached this level of coverage by that point in time. As such, while the absolute target of 29 countries was not yet reached in 2001, the actual improvement that took place from the lower baseline was substantially greater than the progress that had originally been envisioned at the time the targets were established.

28. The additional year of data that is now available (2002) provides a better sense of progress to date. This data show that additional progress has been made since 2001, bringing the population-weighted average up to 65% and increasing the number of countries with 80% coverage rates to 29, the targeted figure for this indicator under IDA13.

29. The results presented above are based on the same set of 71 IDA countries that was used to form the baseline in spring 2002. Since the time that the targets were set, the data coverage of measles immunization has expanded, and data is now available for 79 IDA countries. The impact on the overall coverage rate of including the additional countries is small however – the population-weighted average for 2002 remains at 65%. The impact on the second indicator is

<sup>35</sup> The IDA13 targets for measles immunization were set using 1999 data as the baseline because that was the latest year for which data was available at that time.

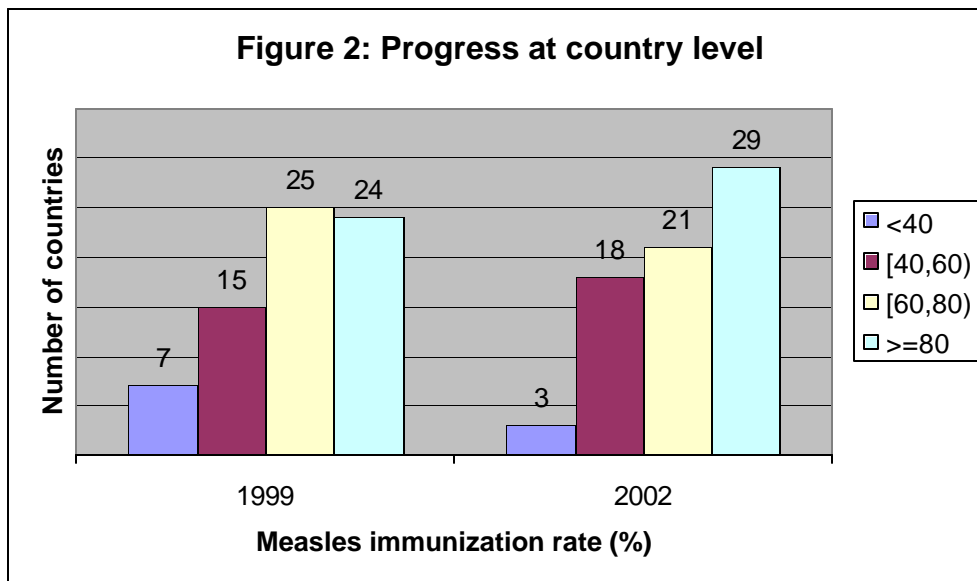
<sup>36</sup> This figure reflects the marginal change needed to reach the target from the 1999 baseline as it was estimated when the targets were set. See *Additions to IDA Resources: Thirteenth Replenishment: Supporting Poverty Reduction Strategies* (IDA/SecM2002-0488), September 17, 2002, Action Plan (Annex III).

<sup>37</sup> This figure reflects the actual marginal change between the revised baseline estimate for 1999 (based on updated data) and the latest data available for 2001.

<sup>38</sup> The revised baseline for this indicator is 24 countries in 1999.

larger, increasing the total number of countries with 80% coverage rates to 31 in 2002.<sup>39</sup> As with all outcome indicators, data can be expected to undergo periodic revision as they become more precise, but the current estimates suggest a very substantial improvement in the coverage rate of measles immunization in a large majority of IDA countries since 1999. This progress is largely due to significant improvement in some countries such as India, Ethiopia and Democratic Republic of Congo, which reflects renewed effort in immunization with significant support from international partners. WHO/UNICEF estimates that through concerted efforts in 2000–2002, 220 million children were vaccinated against measles in 21 priority countries, including nine undergoing emergencies, preventing an estimated 255,000 measles deaths.

30. An additional observation can be made with regard to the “substantial number of countries reaching a higher rate [of measles immunization coverage]” which is part of the formulation of the measles target for IDA13. Of the 71 IDA countries that make up the baseline set, 50 have measles immunization coverage rates equal to or above the population-weighted average target of 60%, and 29 have rates equal to or higher than 80% in the year 2002. While this observation shows that the improvement in the measles coverage indicator has not been generated solely by a small number of densely populated countries, it is also useful to look at the change in the number of countries at different levels of immunization coverage over the three-year period.



31. Figure 2 shows that between 1999 and 2002 IDA countries at different levels of immunization coverage have been moving steadily up towards a sustainable level of coverage, and that progress has been made in both the low immunization rate countries as well as the high immunization rate countries.

32. In sum, according to the most recent data available, both measles immunization targets have been met, and the rate of improvement experienced by the IDA countries between 1999 and

<sup>39</sup> See Annex IV for data covering all 79 countries.

2001 exceeds the rate of progress implied by the original baseline and targets for the two-year period. In fact, it is worth noting that estimates for future improvement in these indicators should be made with caution, given the considerable upward movement suggested by the revised data for the past few years.

33. **Time and Cost of Business Start-Up.** Under the IDA13 results-measurement framework, two indicators were selected to measure progress in the area of private sector development: the time and formal cost required to register a new business. These indicators were chosen on the basis of their ability to reflect the general health of the investment climate, their close correlation with poor economic outcomes such as corruption and the share of the informal sector in GDP, their measurability, and their sensitivity to policy change within a short time frame. The data are produced as part of the Doing Business Project in the Private Sector Vice Presidency of the Bank, by tracking the process for a standardized hypothetical company to complete all of the necessary regulatory requirements to register a business formally. The indicators are built through a combination of desk research and expert assessment, and data are reconciled through an iterative process involving several rounds of verification and a sample of 5 – 6 respondents (usually business incorporation lawyers), each of whom deals with hundreds of business registrations per year. The data cover only the mandatory official procedures and costs and therefore exclude voluntary procedures and delays as well as informal payments.<sup>40</sup>

34. For each of the indicators, a single target was set: a reduction in the population-weighted average of 7% between end-2001 and end-2003. As shown in Table 5 below, both of the targets have been exceeded by a substantial margin: the number of days required to start a business has fallen by 12% over the two-year period, and the cost to start a business has declined by 19%.

**Table 5. Time and Cost of Business Start-Up**  
(Updated Data)

	<b>Targeted Change</b>	<b>End-2001</b>	<b>End-2003</b>	<b>Actual Change</b>
<b>Days to Register a Business (Population-Weighted Average)</b>	-7%	85	75	-12%
<b>Cost to Register a Business as Percent of GNI per Capita (Population-Weighted Average)</b>	-7%	90.2% <sup>41</sup>	72.9%	-19%

35. Twenty-seven countries reported a decline of 10% or more in the time for business start-up, and over the two-year period, many countries reformed to the level of IDA “good practice” which is 30 days or less.

36. On the cost indicator, 18 countries reported a decline of 10% or more in the cost of business start-up as a percentage of GNI per capita. Cost data has two components: cost in local currency units and GNI per capita. Growth in income per capita, especially in 2003, was a major

<sup>40</sup> For more details on the methodology, see Annex V.

<sup>41</sup> This figure reflects data revisions since Spring 2003 (on both nominal local costs and on GNI per capita estimates).

force behind the observed decline in cost. On average, nominal GNI per capita increased by 22.3% between end-2001 and end-2003<sup>42</sup> while the nominal cost of business start-up increased on average by 7%. In fact, nominal costs of business registration (in local currency units) declined in only seven countries.

37. Because the IDA13 targets are population weighted, the larger countries contributed the most to meeting the target. On the time indicator, India, Pakistan, and Indonesia together accounted for almost 60% of the fall in population-weighted days to start a business. Ethiopia alone surpassed the cost target for the entire IDA group, accounting for an 11% decline in the population-weighted average cost, or almost three quarters of the total change in weighted cost for all IDA countries in the set. Nonetheless, the targets would still have been met if a simple arithmetic average had been used. Using a simple average, the time to start a business would have been cut by 22%, and the cost to start a business would have been reduced by 11%.

38. A variety of approaches were used by the reforming countries to reduce the time and cost of business start-up during the 2001 – 2003 period, but several patterns have emerged as examples of successful reforms. They range from simplifying procedures by reducing their number, to making procedures more efficient through standardization and computerization, to undertaking comprehensive legal reforms. In some cases, such as in Ethiopia, reforms were supported by Bank policy dialogue and programs. Following the advice of Bank staff, in 2003, the Government of Ethiopia eliminated the requirement to publish public notices of incorporation in two newspapers. This reform cut the total cost of business start-up from 447% of GNI per capita to 78% of GNI per capita.<sup>43</sup>

39. In sum, the targets for both the time and cost of business start-up were clearly met. The inclusion of these indicators in the IDA13 results-measurement framework increased Bank Management's and client governments' focus on reducing the administrative barriers to entry, and in some cases led to reforms in this area. Nevertheless, it is important to ensure that these indicators are used to generate dialogue on broader improvement of the investment climate and not to focus solely on the narrow issue of business registration.

## **V. Lessons Learned**

40. According to data available today, IDA countries have made considerable progress on all three groups of outcome indicators targeted for IDA13: primary completion rate; measles immunization rate; and the time and cost of business start-up. The targets that were established for IDA13 have been met and in some cases exceeded, but it is worth making several observations about the lessons learned through this process.

41. Measuring progress against the IDA13 outcome targets has demonstrated the difficulty of assessing progress against a given target when the baseline value needs to be periodically revised due to improved data collection, routine data revision, or when an improved methodology is used. For many indicators, unquantified measurement error combined with the need to

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<sup>42</sup> Note that 2003 GNI estimates are currently unavailable for Benin, Madagascar, Tanzania and Zambia and that for Zimbabwe verified GNI data is unavailable for both 2002 and 2003. As such, Zimbabwe has been excluded from the cost calculation, and the latest available GNI data have been used for the other countries mentioned.

<sup>43</sup> For more details on the lessons learned from the reformers, see Annex V.

interpolate and extrapolate low frequency data to a common year for aggregate assessment introduces considerable uncertainty in comparing values or measuring trends over short periods of time. Under these circumstances target values are likely to fall within plausible but unknown margins of error. Given the uncertainty around the estimates, a longer period than two years would improve the confidence level around interpreting change in the indicators. Comparisons over time are further confounded by changes in definitions and methods which, although intended to improve the quality of the resulting statistics, have caused breaks in the continuity of time series data. Over the long term these can be reconciled or smoothed.

42. This experience also demonstrates the need to establish clear principles (including time frame, expected rates of progress, rationale behind this expected progress, and links to policy change) behind any results-measurement system going forward. In this way, the observed changes in aggregate monitoring indicators can better contribute to a meaningful discussion about successful (or unsuccessful) government policy actions and contributions made by other development partners in order to guide future action.

43. Finally, it is clearly important to monitor progress across IDA countries along a range of outcome indicators in order to focus IDA programs on contributing to the achievement of key development outcomes. However, establishing targets at this level is not necessarily the most effective instrument for recipient countries or for the Bank, especially if the given time frame is only two years or so. While the global monitoring of key development outcomes may encourage governments to focus on important issues, borrowers are likely to respond more to changes in country-specific indicators, and their performance can be more accurately measured in terms of their policy actions today than the outcomes of policies that were implemented years earlier. With regard to the Bank, depending on the country and on the indicator, it is difficult to define the precise influence of the Bank's contribution on the final outcome given that so many other factors are involved. The forthcoming paper, *IDA Results-Measurement System: Proposals for IDA14*, gives further consideration to the attribution issue and makes a number of recommendations in this regard for IDA14.

44. **Conclusions.** Both the input and the outcome targets for spring 2004 have been met. This result reflects progress made by the Bank in scaling up the delivery of critical analytical work in IDA countries as well as progress made by IDA countries in creating healthier investment climates, better quality primary schools, and better health delivery systems. The experience of collecting and reporting on the input and outcome data has been a useful one, albeit not without complications, and will provide an good foundation for informing choices about the results-measurement system for IDA14 and beyond.

## **IDA13 Results-Measurement System**

### **Progress by Spring 2003**

#### **Inputs**

- A total of 30 Country Financial Accountability Assessment (CFAAs) completed, of which at least 50% for African countries.
- A total of 24 Country Procurement Assessment Review (CPARs) completed, of which at least 50percent for African countries.
- A total of 29 Public Expenditure Review (PERs) completed, of which at least 50% for African countries.
- All Country Assistance Strategies (CASs) prepared since July 2002 underpinned by current poverty analysis.
- A total of 7 Investment Climate Assessments (ICAs) completed.
- Initiation of performance measurement system, including outline of approach, baseline data, outcome indicators, and progress targets.

### **Progress by Spring 2004**

#### **A. Inputs**

- A total of 40 Country Financial Accountability Assessments completed, of which at least 50% for African countries.
- A total of 38 Country Procurement Assessment Reviews completed, of which at least 50% for African countries.
- A total of 40 Public Expenditure Reviews completed, of which at least 50% for African countries.
- All Country Assistance Strategies prepared since July 2002 underpinned by current poverty analysis.
- A total of 14 Investment Climate Assessments completed.

## **B. Country Outcomes**

### *Education*

- Increase population-weighted average primary completion rate to 69% with a substantial number of countries reaching a higher rate.
- Increase number of countries with positive growth rates in primary completion rates to 38 countries.

### *Health*

- Increase overall coverage rate (population-weighted) of measles immunization to 60%, with a substantial number of countries reaching a higher rate.
- Increase number of countries with 80% coverage of measles vaccination to 29 countries.

### *Private Sector Development*

- Reduce time required for business start-up (in number of business days) by 7% from end-2001.
- Reduce formal cost of business start-up (in percent of GDP per capita) by 7% from end-2001.

Country Financial Accountability Assessments

Region	Country	Delivery Date	FY01	FY02	FY03	FY04
AFR	Burkina Faso	01/15/2002		1		
	Benin	07/02/2001		1		
	Cameroon	07/02/2002			1	
	Cape Verde	06/30/2003			1	
	Ethiopia	11/18/2002			1	
	Ghana	06/01/2001	1			
	Gambia, The	06/20/2003			1	
	Guinea	06/30/2003			1	
	Kenya	10/10/2001		1		
	Madagascar	06/06/2003			1	
	Mali	03/31/2003			1	
	Mauritania	03/27/2003			1	
	Malawi	04/18/2002		1		
	Mozambique	12/27/2001		1		
	Nigeria	10/30/2000	1			
	Nigeria	11/21/2003				1
	Sierra Leone	04/04/2002		1		
	Senegal	06/02/2003			1	
	Tanzania	05/25/2001	1			
	Uganda	10/18/2000	1			
Zambia	06/20/2003			1		
EAP	Cambodia	05/19/2003			1	
	Indonesia	08/31/2000	1			
	Lao PDR	02/28/2002		1		
	Mongolia	11/13/2002			1	
	Timor-Leste	03/29/2002		1		
	Vietnam	10/15/2001		1		
SAR	Bangladesh	02/05/2001	1			
	Bhutan	11/07/2001		1		
	India	06/17/2003			1	
	India	06/24/2003			1	
	Sri Lanka	12/11/2002			1	
	Maldives	07/05/2000	1			
	Nepal	06/04/2002		1		
	Pakistan	06/29/2001	1			
	Pakistan	06/05/2003			1	
ECA	Albania	05/01/2002		1		
	Armenia	07/10/2003				1
	Azerbaijan	01/15/2003			1	
	Bosnia-Herzegovina	06/17/2003			1	
	Georgia	06/27/2003			1	
	Kyrgyz Republic	05/02/2003			1	
	Moldova	04/29/2003			1	
	Tajikistan	06/25/2003			1	
	Serbia and Montenegro	06/28/2002		1		
MNA	Djibouti	03/11/2004				1

**Country Financial Accountability Assessments**

<b>Region</b>	<b>Country</b>	<b>Delivery Date</b>	<b>FY01</b>	<b>FY02</b>	<b>FY03</b>	<b>FY04</b>
<b>LCR</b>	OECS Countries	12/12/2002			1	
	Dominica	06/25/2003			1	
	Guyana	04/19/2002		1		
	Honduras	06/27/2003			1	
	Nicaragua	06/25/2003			1	
<b>Total</b>			<b>8</b>	<b>14</b>	<b>26</b>	<b>3</b>

**Country Procurement Assessment Reviews**

<b>Region</b>	<b>Country</b>	<b>Delivery Date</b>	<b>FY01</b>	<b>FY02</b>	<b>FY03</b>	<b>FY04</b>
<b>AFR</b>	Angola	11/08/2002			1	
	Burkina Faso	11/03/2000	1			
	Cameroon	01/29/2001	1			
	Congo, Dem. Rep.	4/30/2004				1
	Eritrea	07/05/2002			1	
	Ethiopia	07/01/2002			1	
	Ghana	06/30/2003			1	
	Guinea	06/18/2002		1		
	Madagascar	06/02/2003			1	
	Mauritania	06/24/2002		1		
	Malawi	03/04/2004				1
	Mozambique	05/16/2002		1		
	Nigeria	01/09/2004				1
	Senegal	03/31/2003			1	
	Chad	09/11/2000	1			
	Togo	11/03/2003				1
	Tanzania	05/07/2003			1	
	Uganda	05/08/2001	1			
Zambia	10/31/2002			1		
<b>EAP</b>	Indonesia	08/14/2000	1			
	Lao PDR	05/03/2002		1		
	Mongolia	03/03/2003			1	
	Timor-Leste	05/23/2003			1	
	Vietnam	04/30/2002		1		
	Sri Lanka	05/02/2003			1	
<b>SAR</b>	India	05/01/2003			1	
	Nepal	06/22/2001	1			
<b>ECA</b>	Albania	01/31/2001	1			
	Armenia	05/15/2003			1	
	Azerbaijan	06/28/2002		1		
	Bosnia-Herzegovina	05/30/2002		1		
	Georgia	06/29/2001	1			
	Kyrgyz Republic	11/15/2002			1	
	Moldova	04/30/2003			1	
	Tajikistan	06/23/2003			1	
	Uzbekistan	06/28/2002		1		
	Serbia and Montenegro	06/03/2002		1		
<b>MNA</b>	Djibouti	12/01/2003				1
	Yemen, Republic of	12/29/2000	1			
<b>LCR</b>	Bolivia	05/30/2001	1			
	Dominica	06/27/2003			1	
	Nicaragua	06/13/2003			1	
<b>Total</b>			<b>10</b>	<b>9</b>	<b>18</b>	<b>5</b>

**Public Expenditure Reviews**

<b>Region</b>	<b>Country</b>	<b>Delivery Date</b>	<b>FY01</b>	<b>FY02</b>	<b>FY03</b>	<b>FY04</b>
<b>AFR</b>	Cote d'Ivoire	10/31/2003				1
	Cape Verde	12/22/2003				1
	Ethiopia	11/07/2001		1		
	Ethiopia	12/01/2003				1
	Guinea	12/16/2003				1
	Guinea-Bissau	11/05/2003				1
	Malawi	06/29/2001	1			
	Mozambique	12/28/2001		1		
	Mozambique	06/04/2003			1	
	Nigeria	07/24/2002			1	
	Chad	07/15/2002			1	
	Rwanda	07/09/2002			1	
	Tanzania	04/10/2001	1			
	Tanzania	04/29/2002		1		
	Tanzania	05/02/2003			1	
	Tanzania	06/18/2003			1	
	Uganda	05/21/2002		1		
	Uganda	05/20/2003			1	
	Zambia	09/27/2001		1		
Zambia	06/20/2003			1		
<b>EAP</b>	Indonesia	12/30/2002			1	
	Indonesia	03/31/2003			1	
	Cambodia	05/19/2003			1	
	Lao PDR	02/28/2002		1		
	Mongolia	06/28/2002		1		
	Papua New Guinea	06/30/2003			1	
<b>SAR</b>	Bangladesh	06/24/2002		1		
	Maldives	05/31/2002		1		
	Pakistan	09/28/2000	1			
	Pakistan	05/03/2003			1	
<b>ECA</b>	Albania	02/22/2001	1			
	Armenia	06/27/2002		1		
	Azerbaijan	12/27/2002			1	
	Bosnia-Herzegovina	06/28/2002		1		
	Georgia	06/18/2002		1		
	Kyrgyz Republic	03/04/2003			1	
	Moldova	06/27/2002		1		
	Serbia and Montenegro	07/22/2002			1	
<b>LCR</b>	Dominica	02/12/2004				1
	Guyana	11/01/2002			1	
	Honduras	04/16/2001	1			
	Nicaragua	11/08/2001		1		
<b>Total</b>			<b>5</b>	<b>14</b>	<b>17</b>	<b>6</b>

**Investment Climate Assessments**

<b>Region</b>	<b>Country</b>	<b>Delivery Date</b>	<b>FY01</b>	<b>FY02</b>	<b>FY03</b>	<b>FY04</b>
<b>AFR</b>	Eritrea	11/01/2002			1	
	Ethiopia	4/15/2004				1
	Mozambique	05/01/2003			1	
	Nigeria	04/15/2002		1		
	Uganda	03/31/2004				1
	Zambia	03/31/2004				1
<b>EAP</b>	Cambodia	02/11/2004				1
<b>SAR</b>	Bangladesh	04/07/2003			1	
	Bhutan	06/14/2002		1		
	India	03/14/2002		1		
	Nepal	01/31/2001	1			
	Pakistan	04/04/2003			1	
<b>ECA</b>	Moldova	09/30/2003				1
<b>LCR</b>	Bolivia	10/18/2001		1		
	Honduras	02/21/2004				1
	Nicaragua	02/21/2004				1
<b>Total</b>			<b>1</b>	<b>4</b>	<b>4</b>	<b>7</b>

## Quality Assurance and Enhancement Mechanisms for ESW

1. **Processing Arrangements.** Individual regional managers are responsible for the quality of Country Financial Accountability Assessments (CFAAs), Country Procurement Assessment Reports (CPARs), Public Expenditure Reviews (PERs), Poverty Assessments (PAs), and Investment Climate Assessments (ICAs), and other ESW produced by the Bank. Regional operations staff-Country Directors have final sign-off authority on each report, while Regional Sector Managers/Directors are accountable for the quality of ESW (for ESW managed and produced by Network Anchor staff, the relevant Unit Manager/Director is responsible for the quality of the final output). Quality assurance is also provided by Bank-wide Sector Boards, which include Sector Managers from each of the Bank's six Regions. Sector Boards are responsible for the overall development of ESW tools as diagnostic products, the monitoring of quality, and identifying actions needed to improve product quality. Before a diagnostic ESW product is delivered to the client, the Sector Board, or its designate charged with responsibility for the product, formally certifies that adequate compliance with the guidelines that have been issued for the product. Upstream support is provided to the Sector Boards by Network Anchor units which review Concept Papers, or Initiating Concept Memoranda, provide peer review assistance and, in limited cases, participate directly in the production of specific ESW products. When necessary, Network Anchor staff also provide general advice to task teams on public financial accountability, poverty, and private sector development issues, and on the application of guidelines which govern the processing and production of each task. A description of the complementary roles of Bank units in the quality assurance process is presented in Box 1.

2. **Ex-Post Assessment.** Like all ESW, CFAAs, CPARs, PERs, PAs and ICAs are subject to ex-post review by the Bank's Quality Assurance Group (QAG) which every year evaluates a random sample of ESW tasks along four broad criteria: strategic relevance and timeliness, internal quality, dialogue and dissemination, and likely impact. Core diagnostic ESW such as the PER and PA has historically shown exceptionally strong overall quality performance (93% satisfactory or better for ESW delivered during FY01 and FY02). A first-time QAG assessment of CFAAs and CPARs was also conducted during 2002 at the request of the Procurement and Financial Management Sector Boards, in order to learn how to best design and apply these relatively new analytical products. Following up on the recommendations from QAG, (and, in the case of CFAAs and CPARs, the financial management community's own reviews of fiduciary ESW), Sector Boards have issued guidelines which have led to changes in the contents of the reports including broader and deeper analysis, an increased emphasis on decisions made at the concept stage and during the draft report review, and a greater level of involvement by regional quality teams.

### Key Participants in the Quality Enhancement Process

**Regions.** Each of the six Regional Vice Presidencies has in place guidelines which govern the processing arrangements for ESW products, and detail quality assurance procedures to be followed by task teams in the preparation of these tasks. Quality enhancement mechanisms are periodically reviewed and, when necessary, updated pursuant to recommendations by the relevant Office of the Regional Chief Economist, or by Operational Policy and Country Services (OPCS) and/or QAG staff. Currently, regional quality requirements include the following key steps:

- **Concept Review.** A Concept Paper or Initiating Concept Memorandum is prepared for each task estimated to cost more than \$50,000, and is circulated to internal staff (both inside and outside the Region-and in many cases also to the IFC Regional Economist and the relevant IMF Division Chief. The Concept Paper covers the context, relevance and timeliness of the task; the content, objectives and scope of the task; participatory processes to be followed during preparation of the product; the expected impact of the work; the financial and human resources needed to deliver a high-quality product, and the timetable for delivery. A Concept Paper review meeting is usually chaired by the Country Director or a designated staff from the country team in order to provide guidance to the team concerning the scope, focus, and the analytic framework of the proposed work and to resolve any particular problems affecting the implementation of the work.
- **Decision Draft Review.** A decision draft of the intended report is circulated to all recipients of the Concept Paper, and to other interested parties within the Bank for written comment. Based on the nature of the comments received, a meeting may be held to discuss the suitability and readiness of the draft report for discussion with country officials and other stakeholders subject to agreed revisions.
- **Peer review.** The key documents prepared which lead to the delivery of the final ESW product are the Concept Paper and the draft report described above. Both documents are subject to a mandatory peer-review process involving experienced staff from within the Bank and external participants selected jointly by the Regions, relevant Network Anchors, and the Development Economics unit to enhance the quality of the end product and provide the valuable input and insight of others who are not members of the assessment team. Peer reviewers are selected from within the Region, from sectors that are related to public financial management and from development partners that have an interest in the product. The peer-review process offers the task team leader a broader range of professional skills on the assessment team.

**Network Anchors.** Network Anchors enhance the quality of ESW by supporting operational staff through the dissemination of best practice analytical work and useful tools for operational analysis. Network Anchors themselves have in place action plans which lay out specific measure for quality support to Regions, and Network Anchor staff work closely together with regional and other staff on a demand-driven basis. One example of support is the Quality Enhancement Review, which usually consists of a one-day workshop with the task team and a panel of 3-4 experts coming from inside and outside the Bank.

**Sector Boards.** The Bank's Sector Boards serve as focal points for debating strategic, policy and technical, procedural, human resource and financial aspects of the Bank's operational work, and provide key inputs into the institutional work program. Sector Boards have prepared toolkits for CFAAs, CPARs, PERs, PAs and ICAs that are designed to help task teams produce high-quality outputs. Whereas the Sector Boards propose the operating standards that would strengthen institution-wide efforts to improve quality, the responsibility for implementing the agreed operating standards rests with the Regions.

## Technical Note for IDA13 Results-Measurement System Spring 2004 Update on Primary Completion Rate and Measles Immunization Coverage Rate

### Summary Findings

1. The IDA-eligible countries<sup>44</sup> are making significant progress on both indicators according to the most recent data as of April 1, 2004, both as a whole and individually:

- 65% of children under age one in IDA countries have received the measles immunization vaccine, up from 56% in 1999 and greatly surpassing the target of 60%. Among seventy one countries studied,<sup>45</sup> 29 have reached an immunization rate equal to or higher than 80% in 2002, up by five from 1999.
- The overall primary completion rate (PCR) for the 69 IDA countries in the original baseline set has increased to 70% as of 2002, up from 69% in 2000 (based on the most-recent-year methodology). Using the most-recent-trend methodology and expanding the country set to the 70 countries with adequate data, the overall primary completion rate has increased to 73%, up from 70% in 2000.<sup>46</sup> Among countries with a 1990 PCR value, 45 out of 63 have seen positive growth from their 1990 level (according to the original methodology). Based on the new methodology, 43 out of 55 IDA countries with sufficient data have seen positive growth from their 1990 level.

2. In short, the spring 2004 targets set for these two indicators have been met. The following two sections discuss various data and methodological issues as well as their impact on the above results in detail for the two indicators. The appendices provide values of the two indicators by country and by year as well as the weighting variables used in the aggregation.

### Measles Immunization Coverage Rate

3. The proportion of one year-old children immunized against measles is the percentage of children aged 12-23 months who have received at least one dose of measles vaccine before the age of 12 months. This indicator provides a measure of the coverage and the quality of the child health care system in the country. Among the vaccine-preventable diseases of childhood, measles is the leading cause of child mortality. Measles immunization is therefore an essential component for reducing under-five mortality.

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<sup>44</sup> As of April 1, 2004, there are 81 countries eligible for IDA. Timor-Leste was excluded from the original set of countries because it only became independent in 2002. Therefore, much of the discussion will refer to 80 IDA countries.

<sup>45</sup> The 71 countries studied here are the same as those included in the original baseline set for which the targets were established and estimates calculated.

<sup>46</sup> The most-recent-trend methodology is recommended over the most-recent-year methodology for analyzing trends over a short time period. This analysis is based on 70 countries, representing 97% of the total population in 80 IDA-eligible countries. The countries are not the exact same as those included in the most-recent-year analysis. For details see the section on the primary completion rate.

4. This indicator is estimated annually by WHO/UNICEF for almost all countries. The update simply involves obtaining the most recent round of estimates—2002 at the present time.<sup>47</sup> However, WHO/UNICEF revises the previous observations when new observations estimated from survey or administrative data become available.<sup>48</sup> Revisions are found for a dozen countries<sup>49</sup> in the most recent update. Among the 71 countries included in the previous baseline and progress estimate, which represent 96% of children under age one in 2002, 1999 immunization rates were revised for three countries; 2000 rates for nine countries; and 2001 rates for 11 countries. While most changes are minor, some can be significant. For example, the immunization rate of Indonesia was estimated to be 56% and 59% for 2000 and 2001 respectively in the spring 2003, but the most recent estimates are 71% and 76% for those two years. The immunization rates of Mozambique for 2000 and 2001 have been significantly revised downward, from over 90% to under 60%.

5. The aggregate results are given in Table 1. The first section, “Preliminary Estimates and Target”, lists the targets that were adopted in the spring of 2002 and the preliminary estimates that were reported in spring 2003. The second section, “Comparable Spring 2004 Results”, gives the updated results for 1999-2001 and the latest estimates for 2002. These results are strictly comparable to the previous results because only the countries<sup>50</sup> included in the “Preliminary Estimates and Target” are included here. The third section, “Full Spring 2004 Results”, displays the results when all IDA countries for which data are now available are included.

**Table 1: Measles immunization coverage rate: progress in 1999-2002**

	Preliminary Estimates and Target <sup>1</sup>				Comparable Spring 2004 Results <sup>2</sup>				Full Spring 2004 Results <sup>3</sup>			
	1999 <sup>a</sup>	2000 <sup>b</sup>	2001 <sup>b</sup>	target <sup>a</sup>	1999	2000	2001	2002	1999	2000	2001	2002
# of countries with observations	71	71	71		71				79			
# of countries with 80% coverage	27	28	28	29	24	26	27	29	28	31	29	31
# of countries included in the aggregation	70	70	70		70				79			
Overall weighted coverage rate %	56 <sup>4</sup>	59.3	60.1	60	55.6	60.0	60.7	65.2	55.7	59.8	60.5	64.9

Notes:

1. Preliminary estimates and target are reported in: for (a) *Performance Management in IDA* (April 2002); for (b) *IDA Results Measurement System: Progress and Proposals, Technical Annexes* (April 2003).

<sup>47</sup> The currently available data for this indicator only lags two years, one year less than when the baseline was estimated in 2002.

<sup>48</sup> For more detail on the methodology see *WHO vaccine-preventable diseases: monitoring system, 2003 global summary*.

<sup>49</sup> Three observations (Central African Republic, Mozambique, Pakistan) are in 1999; nine observations are in 2000 (Angola, Central African Republic, Eritrea, Indonesia, Kenya, Lesotho, Malawi, Mozambique, Pakistan); eleven observations are in 2001 (Central African Republic, Congo Dem. Rep., Eritrea, Indonesia, Kenya, Lesotho, Mozambique, Pakistan, Rwanda, Sao Tome and Principe, Sierra Leone).

<sup>50</sup> Macedonia is no longer an IDA country, but is included in the Comparable Spring 2004 Results because it was included in the previous 2002 and 2003 estimates.

2. Comparable Spring 2004 Result is based on the same set of IDA eligible countries using updated data.

3. Full Spring 2004 Result is based on all qualified IDA countries using updated data.

4. During the initial development of the IDA13 results measurement system, only IDA countries in the top three CPIA performance quintiles were included. Following the advice of Deputies, all IDA eligible countries with data were included later. As such, the 1999 baseline was revised from 58% to 56%.

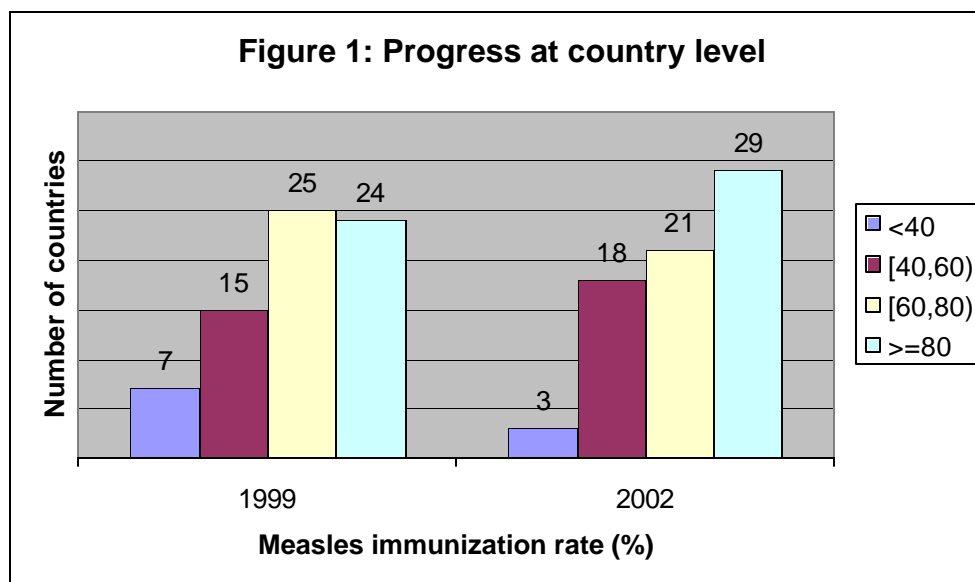
6. The updated results for 1999-2001 in the “Comparable Spring 2004 Results” section demonstrates the impact of data revisions on the overall results. Despite these changes, the targets set for 2002<sup>51</sup> are met in both cases. The overall immunization rate is 65%, well above the target of 60%; 29 countries have reached an immunization rate of 80% or higher by 2002.

7. The extraordinary progress on the measles immunization rate is largely due to significant improvement in some countries such as India, Ethiopia and Congo Democratic Republic, which reflects the donors’ renewed effort in immunization campaigns. WHO/UNICEF estimates that through concerted efforts in 2000–2002, 220 million children were vaccinated against measles in 21 priority countries, including nine undergoing emergencies, preventing an estimated 255,000 measles deaths.

8. The increase in the number of countries reaching a measles immunization rate of 80% or higher is certainly informative, but it does not tell us whether or not the poor performing countries are making progress if not reaching the threshold level yet. Figure 1 shows that progress has been made in both the low immunization rate countries as well as the high immunization rate countries. The 71 countries are grouped into four categories depending on whether their immunization rates are less than 40%, or between 40% and 60%, or between 60% and 80%, or 80% or higher. Four countries (Chad, Congo Democratic Republic, Ethiopia and Niger) have moved out of the lowest category since 1999, and five countries (Cape Verde, Ghana, Sao Tome and Principe, Tajikistan, Tanzania) have moved into the higher category during the same period.

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<sup>51</sup> The targets were originally set for a two-year period. The progress in this three-year period is clearly strong enough to meet the targets in both 1999-2001 or 2000-2002 periods.



9. The “Full Spring 2004 Result” which includes 79 IDA countries<sup>52</sup> confirms the significant progress observed in the 71 countries. The additional countries were not available in the previous WHO/UNICEF database, and their measles immunization rates are likely to be revised in the future. It is clear that the impact of the additional countries on the overall coverage rate is negligible. The overall immunization rate is 64.9%, and 31 countries have reached an immunization rate of 80% or higher.

### Primary Completion Rate

10. Primary completion rate is the ratio of the total number of students successfully completing (or graduating from) the last year of primary school in a given year to the total number of children of official graduation age in the population. This indicator monitors both education coverage and student progression and is intended to measure human capital formation and school system quality and efficiency. It directly addresses one of eight Millennium Development Goals — achieving universal primary education.

11. This indicator is relatively new, so a regular and systematic data collection mechanism is not yet in place. The previous data compilation was undertaken by the education department of the Human Development Network (HDN) in 2002-03. The effort produced three sets of observations, one around 1990, another around 1995 and another for the most recent year (1999/2000 in most cases). The data source is mostly the grade-specific enrollment and repeater information collected and published by the UNESCO Institute for Statistics (UIS), supplemented by completion or enrollment data collected directly from national education systems by World Bank task teams.

<sup>52</sup> All IDA countries but Liberia are included. Liberia has no data in 1999. Macedonia is excluded, while nine additional countries (Afghanistan, Kiribati, Myanmar, Papua New Guinea, Samoa, Solomon Islands, Somalia, Tonga, Vanuatu) are included.

12. There are two major data issues. First, the database has many gaps, particularly for small countries and earlier years. For the 80 IDA-eligible countries, the maximum number of countries with an observation in any single year before 2000 is 37, and there are on average 12 observations per year before 2000. Among the 69 countries included in the previous baseline estimates, only 29 countries have an observation in 2000 and only six have an observation in 2001. Secondly, different methods of computation have been used in the derivation of the indicator. As a result, the comparability of this indicator across countries or over time is compromised<sup>53</sup>.

13. The true numerator should be the number of students who actually complete the last grade of primary school, but this information is often not available. In the majority of observations in the current database, a proxy primary completion rate<sup>54</sup> is calculated as the ratio of the total number of students in the final year of primary school minus the number of students who repeat the last grade in a typical year, to the total number of the children of official graduation age in the population.<sup>55</sup> Due to omission of students who drop out during the year, this proxy completion rate may overstate the true primary completion rate. In some cases when the number of repeaters was not available, the enrollment in the last grade of the primary school was used as the numerator to calculate the completion rate. In these cases, the calculated completion rate further overstates the true value.

14. Since the fall of 2003, the Development Economics Data Group (DECDG) and the education department of HDN have collaborated in collecting and standardizing the data of the three most recent years (2000-02) required for calculation of primary completion rates. To improve comparability across countries and over time, it was decided to use only the proxy method even though the number of primary school completers or graduates is available for some countries. Two factors were considered in the decision: measurability and consistency with previous observations. The numerator information required by the proxy method is routinely collected by national education ministries and reported to UIS. The cost involved in producing the proxy primary completion rate is reasonably low. Further, the proxy method was used in the majority of the available observations around 1990. For example, nearly three quarters of the available observations around 1990 for the IDA countries were estimated using the proxy method, with the rest based on enrollment only. Therefore, the upward bias is less of a concern than the actual completion rate in the measurement of progress for 2000 and forward against the 1990 level. As a result of this recent data collection effort, there is a great improvement in the

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<sup>53</sup> Another two factors complicating the international comparability are different durations of primary education cycles and different systems of graduation (exams, diplomas, automatic promotion) across countries. The primary completion rates in 2000-02 are estimated using the same cycles as for the 1990 estimates in all but a few countries. The exceptions are mostly due to change of national primary education cycle, and the 1990 values cannot be re-estimated.

<sup>54</sup> The UIS refers to this as the gross intake rate at the last grade of primary.

<sup>55</sup> For the three most recent years, the age-specific population projections maintained by the World Bank Health, Nutrition, and Population (HNP) department are used for the denominator. The target population age is calculated as the starting age plus the official primary cycle minus one. For example, if children start to go to primary school at six and the primary education consists of six grades, then the target population is the children at age eleven. The current World Bank population projections are consistent across countries and over time, so they are the best available age-specific estimates.

data availability. Currently there are 57 and 59 new observations for 2000 and 2001, respectively, and 23 observations in 2002.

15. Where new observations for 2000 and 2001 were available, they were used to replace all previous observations. For 11 countries<sup>56</sup>, there were no new observations to replace the previous observations of 2000 and 2001. Since our main objective is to measure the progress, the consistency over time is considered to be more important than the comparability across countries. In order to keep as many countries as possible, the completion rates of these eleven countries were checked to make sure the computation method has been consistent for each over time. When it is possible, either the 2000 and 2001 observations or the earlier observations were re-estimated so that the same computation method was used for all years. In all 11 cases, the computation methods can be reconciled. Therefore, all previous 2000 and 2001 observations were kept, with some being revised.<sup>57</sup>

16. The numerator in the primary completion rate counts all children completing the final grade of primary school, including those who are beyond the official graduation age of primary school due to either late school entry or repetition in any grades (Bruns et al. 2003). Therefore, the number of children who are graduating successfully is sometimes larger than the number of children at the official graduation age. Indeed, out of 69 countries included in the preliminary baseline result estimated in 2002, five have a primary completion rate over 100% in 1990. The existence of over-100-percent primary completion rates complicates our measurement of progress. It is not necessarily negative when a country's primary completion rate declines from a baseline level over 100% because it may mean less repetition or more on-time entry.

17. One methodological issue is the imputation of missing figures. Because there are only a small number of countries with full observations during the measurement period, the resulting aggregate value using those countries may not be representative of the larger set of countries. Therefore, imputation or filling of the data gaps is necessary so that the coverage is sufficient for the aggregate value to be representative.

18. There are many established methods for imputing missing data (Tim Holt, 2003). The most-recent-year approach (MRY) adopted in the spring 2003 report has been used widely. The MRY method essentially assumes that the indicator value observed at a date closest to the date of the missing one can best approximate the missing figure. It works reasonably well to estimate the change if the two points being compared are reasonably far apart in time so that each country can have two observations. However, it is not the most appropriate method in measuring the short-term progress of an indicator with infrequent observations, such as the primary completion rate. For example, there were only six actual observations for 2001 in the spring of 2003. If data for 2000 are used to fill in the missing values for 2001, then the observations in 2001 will be virtually the same as those of 2000. As a result, there will be little change between the two years.

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<sup>56</sup> Angola, Central African Republic, Congo Dem. Rep, Guinea, Guinea-Bissau, Nigeria, Pakistan, Serbia and Montenegro, Sierra Leone, St. Lucia, Sudan.

<sup>57</sup> DECDG is planning to re-estimate all previous estimates consistently using the proxy computation method in collaboration with the education department of HDN and UIS.

19. Because this method fails to take properly into account the distance between the year of missing data and the year of most recent value used to replace the missing data, the measured change can be severely biased. For example, if we are trying to measure the change between 2000 and 2001, for a country that has two observations, one for 1995 and another for 2001, the 1995 observation would replace the missing data for 2000 by the MRY method. If from these two observations it is clear that this country is making strong progress, then the MRY method will credit all the change to 2001 and greatly overestimate the annual progress because the improvement actually occurs along the interval between 2001 and 1995, the year of the most recent value.

20. A natural alternative is to take the most recent trend of the indicator value into account in imputing the missing figures. The essential assumption of this method is that the trend of an indicator remains the same unless a new observation indicates otherwise. If an indicator moves slowly and smoothly, then we expect to estimate the data gaps using the previously observed trend relatively well. This method is capable of dealing with both situations mentioned above.<sup>58</sup> However, as for the MRY method, imputation errors are introduced into the aggregate value of the indicator, and the errors cannot be quantified.

21. Two restrictions are imposed to minimize the potential imputation error. The first is that countries with insufficient data points are excluded from the aggregation. Only IDA countries with either at least one observation in 1988-99 and at least one in 2000-02, or at least two observations in 2000-02 are included. This procedure filters out countries with only one observation or multiple observations but none for the measurement period. The second restriction is to cap the imputed values at the maximum observation value for each country or at 100%, in accordance with whichever is larger. This procedure essentially eliminates the possibility that the imputed values are out of a reasonable range. This step is important given that a large number of extrapolations are needed for 2002.

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<sup>58</sup> Other imputation methods are mostly regression based. However, the primary completion rate usually has only two or three observations over time, so the time series approach does not fit here. The cross-sectional approach using covariates, such as gross enrollment rates and education expenditure, is not established yet.

**Table 2: Primary Completion Rate: Progress in 2000-02**

	Preliminary Estimates and Target <sup>1</sup>				Comparable Spring 2004 Result <sup>2</sup>				New Spring 2004 Result <sup>3</sup>			
	2000 <sup>a</sup>	2000 <sup>b</sup>	2001 <sup>b</sup>	target <sup>a</sup>	1999	2000	2001	2002	1999	2000	2001	2002
# of countries included	69	68	69		69				70			
Overall weighted primary completion rate (%)	68	67.5	68.7	69	65.9	69.1	70.1	70.3	68.8	70.0	71.6	72.7
# of countries with 1990 value	63				63				55			
# of countries with positive growth relative to 1990	32	35	35	38	32	43	46	45	38	40	43	43

Note:

1. Preliminary estimates and target are reported in: for (a) *Performance Management in IDA* (April 2002); for (b) *IDA Results Measurement System: Progress and Proposals, Technical Annexes* (April 2003).

2. Comparable Spring 2004 Result is derived with the previous method on the same set of IDA countries using expanded dataset as of April 2004.

3. New Spring 2004 Result is derived with an improved imputation method on all qualified IDA countries using the expanded dataset.

22. Table 2 gives the two sets of results along with the preliminary results presented in the spring 2003 report. The first section “Preliminary Estimates and Target” lists the results that were estimated in the spring of 2002 and 2003 as well as the target adopted. The next section “Comparable Spring 2004 Results” gives the corresponding results on the same set of IDA countries as in the “Spring 2003 Results” if the same MRY method<sup>59</sup> is applied on the currently available data as of April 1, 2004. The overall completion rates estimated for 2000 (67.5%) and 2001 (68.7%) in the spring 2003 report are underestimated considerably compared to the new estimates of 69.1% and 70.1% for 2000 and 2001 respectively. This is not surprising because by replacing missing figures for the year under study with most recent values, the MRY method relies on an implicit assumption that there is no change between the year under study and the year with most recent value. Because in these two years a large number of values were taken from previous years, some as early as 1993, and the majority of those most recent values are lower than the actual primary completion rates observed now, the overall rate is almost certainly

<sup>59</sup> Three rules were applied under the MRY method:

1. Only countries with at least one observation between 1988 and 2001 are included.
2. If 2000 or 2001 values are missing, for countries with one observation, the observation is taken forward to approximate the missing figure, and the baseline value is set to be “N/A”; for countries with two or more observations, the observation prior to the missing figure is taken forward and the earliest observation is taken to be the baseline value.
3. The weighting variable (population of last grade of primary) is carried along with the most recent value. Following the recommendations of the CCSA report “Aggregation of National Data to Regional and Global Estimates”, the rule 3 is amended and a new rule is added:
3. The latest year weighting variable (population of last grade of primary) is used and remains constant for the period under measurement.
4. The aggregate values are based on the same sets of countries.

lower than what it should be. Therefore, the overall rate of 2002 (70.3%) is likely to be underestimated as well since there are also a large number of substitutions for missing data for that year.

23. In addition, the progress between 1999 and 2000 is greatly overstated using the MRY method. The 4 percentage point improvement clearly illustrates the potential bias of the MRY method when applied to the measurement of progress during a short period. Fifty-two among the 69 countries have no observations in 1999 and use most recent values from previous years, while only nine countries need to use most recent values in 2000. As a result, all the progress made along the way between 2000 and the years of most recent values are now credited to a single year, which generates a strong upward bias in this case.

24. The last section “New Spring 2004 Results” displays the results if the improved gap-filling method<sup>60</sup> is applied to the currently available data. Six countries on the previous list are excluded from the aggregation because the new method applies a stricter criterion in data requirement, and seven additional countries are included.<sup>61</sup> The impact from the change of countries is expected to be very small because the common 63 countries represent 97% of the graduation age population in the 69 countries included in the previous estimates and 98% of graduation age population of the current result. The overall completion rates for 2000 and 2001 are higher than the MRY estimates for two reasons. The principal one is the downward bias caused by using earlier values when there are actually positive changes for a small number of countries with no observations for the two years. The secondary reason is that different countries are included in the set. The six countries included in the MRY aggregation but excluded in the current aggregation tend to have relatively lower completion rates, while the seven newly added countries tend to have relatively higher completion rates.

25. The significant difference between this set of results and the previous ones is the progress made during the three years. While the MRY method suggests that there was good progress made in 2001 against the 2000 value, but little progress in the next year, the improved method suggests that there was equally impressive progress made in both years. Actually, the total 2.7 percentage point increase from the new baseline of 70% is very strong - enough to dwarf the targeted one percentage point increase from the original baseline of 68%. Table 3 clearly indicates the significant improvement for both 2001 and 2002.

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<sup>60</sup> The improved method has five rules:

1. Only IDA-eligible countries with either at least one observation in 1988-99 and at least one in 2000-02, or at least two observations in 2000-02 are included.
2. For countries with data gaps in 2000-02, the missing value is imputed according to the most recent trend: for the missing value bounded by one observation on each side, the most recent trend is calculated using the two bounding observations; for the missing value bounded only at left side (i.e. only previous observations are available), the most recent trend is calculated using the nearest two observations;
3. The trend is calculated using the exponential growth function-- $\ln(X_t - X_s)/(t-s)$ .
4. The imputed values are bounded by the country's maximum observation value or 100, whichever is larger.
5. A constant weight is used for aggregation for all years (Population of last grade of primary in 2002). The missing 1990 value is imputed using the same rules listed above (2-4) for countries with at least one observation during 1988-96.

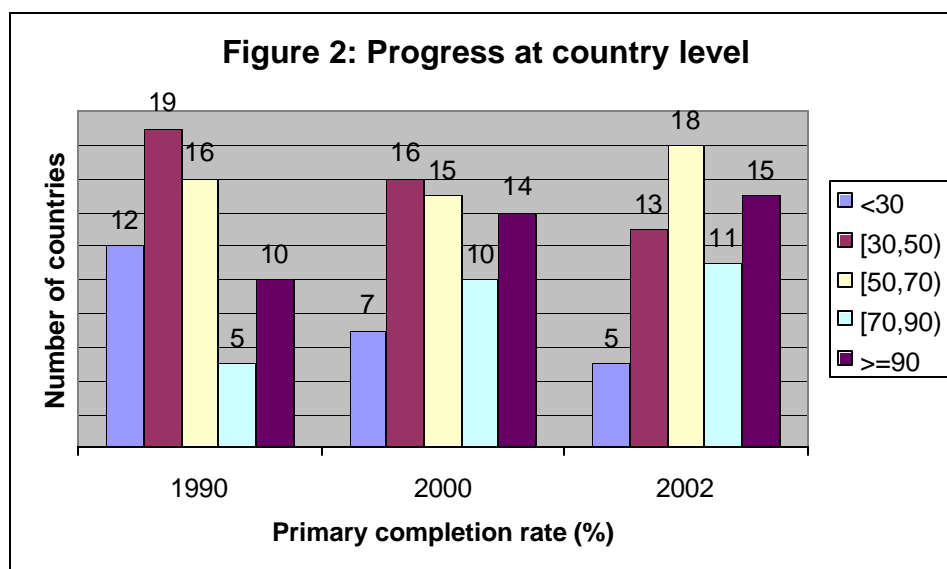
<sup>61</sup> Six countries included in the baseline estimate of 2002 are excluded due to insufficient data: Afghanistan, Angola, Haiti, Sierra Leone, Solomon Islands and Zimbabwe. Seven countries are added due to newly available data: Dominica, Maldives, Myanmar, Papua New Guinea, Samoa, Sao Tome and Principe, Tonga.

**Table 3: Progress in PCR by matched pairs of countries**

	<u>Comparison 1</u>		<u>Comparison 2</u>		<u>Comparison 3</u>	
	2000	2001	2001	2002	2000	2002
# of countries used in comparison	53		22		22	
% of total graduation age population	40%		20%		19%	
Overall weighted primary completion rate %	69.0	71.0	69.5	70.1	68.0	70.4
# of countries with improving PCR	32		16		17	

Note: only countries with observations in both years of the comparison are included in the calculation.

26. Table 3 compares the aggregate values for any two of the three years using only the countries with both observations available in both years. Because there is no imputation involved, the progress measured here reflects only the observed values. However, the aggregate values may not be representative of all IDA-eligible countries because of the small subset of countries included, especially in the comparisons of 2002 with two earlier years. There are 53 countries with both observations available in 2000 and 2001. The overall completion rate is 71% in 2001, up from 69% in 2000. The overall rate for the 22 IDA countries whose primary completion rates in both 2001 and 2002 are available is 70.1%, up from 69.5% in 2001. The results indicate that among a limited number of IDA countries for which we have observations for both years in comparison, there is an improvement in the overall completion rate and a positive growth in the majority of countries included in both years.



27. With regard to the second PCR indicator, the number of countries with a positive growth rate since 1990, changes in this measure can only partially reflect the improvement made in the IDA countries during the 2000 – 2002 period. This indicator does not inform us about how many countries are making progress in this period and how far these countries are from the goal of universal primary education. For example, the fact that two thirds of the IDA countries have

made positive growth since 2000 seems to be at least as informative and relevant as the target of 38 countries showing a positive PCR growth rate between 1990 and 2002. Figure 2 shows that progress has been made across the board. Countries<sup>62</sup> are grouped into five categories depending on whether their completion rates were less than 30%, or between 30% and 50%, or between 50% and 70%, or between 70% and 90%, or 90% or higher. The distribution of the number of countries among the five categories is plotted for the three benchmark years — 1990, 2000 and 2002. The number of countries belonging to the lowest two categories has decreased steadily, from 12 in 1990 to five in 2002 for the lowest categories and from 19 to 13 for the second lowest category class. At the same time, the other three categories see an increasing number of members during this period.

28. Table 4 presents the progress in a more dynamic way. Countries are grouped according to the classifications of both their 1990 primary completion rates and their 2002 PCRs. Each row shows the 2002 distribution out of a group of countries with a specific classification in 1990, while each column shows the 1990 distribution out of a group of countries with a specific classification in 2002. So the cells on the right of the diagonal cells represent improvement in the completion rate classification, while the cells below the diagonal cells represent a deterioration. Altogether there are 29 countries that have improved, and only five that have moved down. These five countries are Burundi, Central African Republic, Democratic Republic of Congo, Nigeria, and Zambia, all in the Sub-Saharan Africa.

**Table 4: Change in distribution**

1990 value	Total	2002 value				
		<30	[30,50)	[50,70)	[70,90)	>=90
<30	12	3	7	2	0	0
[30,50)	19	2	5	6	3	3
[50,70)	16	0	1	8	5	2
[70,90)	5	0	0	1	3	1
>=90	10	0	0	1	0	9

29. Another limitation of the target for the number of countries with positive growth relative to 1990 is that it does not tell us whether the “performing” countries (countries with positive growth relative to 1990 value in 2000) have kept on making progress after 2000, and it does not tell us whether the “non-performing” countries (countries with no positive growth relative to 1990 value in 2000) have made progress after 2000. It would be interesting to see whether the two groups have been following a similar growth path, both before and after 2000.

<sup>62</sup> The seven countries whose 1990 values exceed 100 percent are included in Figure 2 and Table 4.

**Table 5: Different growth experience for IDA countries<sup>63</sup>**

	Average completion rate (not weighted)					
	1990	1995	1999	2000	2001	2002
If countries grouped by:						
2000 value >1990 value	42	51	57	60	61	63
2000 value <= 1990 value	65	55	53	53	55	56
If countries grouped by:						
1990 value <70%	42	47	52	53	55	57
1990 value >=70%	85	81	82	85	85	84

30. Table 5 strongly suggests two different growth paths for the IDA countries. The “performing” countries, as defined above, have made impressive progress in the 90s as well as in the 2000-02 period, but from a low starting point. The “non-performing” countries, on the contrary, have experienced a decline in the 90s from a much higher starting point, but reversed the decline decisively in the recent years. There are 15 “non-performing” countries<sup>64</sup>, with a primary completion rate in 1990 ranging from 34% (Rwanda) to 92% (Zambia). Three “non-performing” countries (Cambodia, Cameroon and Guyana) have surpassed their 1990 values in the 2001-02 period. Even if the two groups are defined based on whether the 1990 value is greater than 70% or not, the difference in their growth paths remains. The countries with 1990 values less than 70% have made progress continuously in the 1990s, and similar improvement in the 2000-02 period. But most countries whose 1990 values are equal to or greater than 70%<sup>65</sup> have seen their primary completion rates fluctuating around their 1990 values since 1990.

31. This experience demonstrates that the difference in growth potential in primary completion rates among IDA countries is an important consideration in evaluating progress in this indicator. Countries with different initial levels of completion rates may face very different policy options, and the impact of similar policy inputs is likely to vary from country to country.

## Conclusion

32. IDA countries have made significant progress on both measles immunization coverage rate and primary completion rate by 2002. The targets for both indicators have been met.

33. One lesson that can be drawn from this experience is that the presence of clear assumptions and principles underpinning a results-measurement system can facilitate the assessment of progress, especially when data values are revised or when a different set of countries have to be included due to data availability constraints. Also, when clear links cannot be made between policy interventions and progress, we cannot say what has worked and what has not worked at the country level.

<sup>63</sup> The seven countries whose 1990 values exceed 100 percent are excluded here.

<sup>64</sup> Armenia, Burundi, Cambodia, Cameroon, Central African Republic, Congo Dem. Rep., Congo Rep., Ghana, Guyana, Kenya, Nigeria, Rwanda, Sudan, Vanuatu, Zambia.

<sup>65</sup> Armenia, Georgia, Guyana, Indonesia, Nigeria, Vanuatu, Serbia and Montenegro, Zambia.

34. Another lesson is that a results-measurement framework needs to be comprehensive, allowing a straightforward interpretation of progress, and intended to measure progress during a relevant period. The PCR indicator of the number of countries with positive growth relative to 1990 should be reassessed in any future results-measurement system. The change in the number of countries with positive PCR growth relative to 1990 fails to capture the progress made by the majority of countries which either have surpassed their 1990 value at the beginning of the measurement period and stayed above their 1990 value during the period, or have not surpassed their 1990 value at the ending point but are on the way to breakthrough. Therefore, the benchmark of 1990 value used should be replaced with one that is comparable across countries and more relevant for the MDG target—universal primary education.

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Appendix A

Measles Immunization Coverage Rates

Country Name	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total crude births, 2002 (thousands)	Include?
Afghanistan	20	19	22	25	40	41	42	48	40	40	35	46	44	1274	No
Albania	88	80	87	76	90	91	92	95	89	85	95	95	96	53	Yes
Angola	38	39	39	47	44	46	62	78	65	46	41	72	74	619	Yes
Armenia	..	..	93	95	95	96	89	92	94	92	92	93	91	31	Yes
Azerbaijan	..	..	66	28	91	97	99	97	98	98	99	99	97	121	Yes
Bangladesh	65	68	69	74	78	79	69	72	72	76	76	76	77	3669	Yes
Benin	79	60	70	67	78	65	60	66	66	75	68	65	78	243	Yes
Bhutan	93	89	86	84	81	85	85	84	71	76	76	78	78	30	Yes
Bolivia	53	54	57	57	64	58	61	51	50	79	79	79	79	261	Yes
Bosnia and Herzegovina	..	..	52	48	57	53	70	86	84	83	80	92	89	48	Yes
Burkina Faso	79	69	60	50	45	43	40	41	46	46	46	46	46	496	Yes
Burundi	74	78	70	62	43	80	79	77	76	75	75	75	75	272	Yes
Cambodia	34	38	33	37	50	62	56	50	52	55	65	59	52	361	Yes
Cameroon	56	48	41	40	43	46	49	52	57	62	62	62	62	559	Yes
Cape Verde	79	76	82	88	83	66	66	82	66	61	80	72	85	15	Yes
Central African Republic	83	62	31	41	51	46	46	46	39	37	36	35	35	134	Yes
Chad	32	28	25	19	24	26	22	30	30	30	42	36	55	354	Yes
Comoros	87	40	51	56	59	69	43	49	67	69	70	70	71	18	Yes
Congo, Dem. Rep.	38	17	25	33	39	27	21	20	20	15	46	37	45	2234	Yes
Congo, Rep.	75	64	60	55	47	38	42	18	21	23	34	35	37	152	Yes
Cote d'Ivoire	56	57	54	52	55	57	65	68	66	62	73	61	56	586	Yes
Djibouti	85	53	41	41	42	41	41	31	21	23	50	49	62	25	Yes
Dominica	91	98	99	99	92	96	99	99	98	99	99	99	98	1	No

Country Name	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total crude births, 2002 (thousands)	Include?
Eritrea	..	..	18	34	51	58	66	73	81	88	86	84	84	160	Yes
Ethiopia	38	17	12	22	54	38	54	49	46	27	52	52	52	2765	Yes
Gambia, The	86	87	83	87	89	91	94	92	92	88	85	90	90	51	Yes
Georgia	..	..	16	61	63	61	65	69	73	73	73	73	73	47	Yes
Ghana	61	63	64	66	68	70	71	73	73	73	84	81	81	588	Yes
Grenada	85	99	73	99	93	88	85	92	97	94	92	96	94	2	Yes
Guinea	35	42	52	55	58	61	61	56	52	52	52	52	54	289	Yes
Guinea-Bissau	53	52	60	68	68	45	49	51	61	70	59	48	47	67	Yes
Guyana	77	81	73	80	83	84	91	82	93	87	86	92	95	17	Yes
Haiti	31	35	39	44	48	49	50	52	53	54	54	53	53	263	Yes
Honduras	90	86	89	94	93	89	91	99	98	98	98	95	97	200	Yes
India	56	43	51	59	67	72	66	55	51	50	56	56	67	26414	Yes
Indonesia	58	59	61	62	62	63	71	71	71	71	73	76	76	4538	Yes
Kenya	78	81	84	84	84	83	81	79	78	76	77	78	78	1053	Yes
Kiribati	75	62	77	89	70	47	64	82	77	62	80	76	88	3	No
Kyrgyz Republic	..	..	94	93	88	97	98	98	98	99	98	99	98	98	Yes
Lao PDR	32	47	46	46	73	68	73	67	71	71	42	50	55	195	Yes
Lesotho	80	80	80	81	81	83	82	80	78	77	74	70	70	59	Yes
Liberia	..	..	..	..	..	..	..	..	..	..	52	78	57	138	No
Madagascar	47	54	54	54	63	55	46	46	46	55	55	55	61	621	Yes
Malawi	81	85	91	87	83	90	90	87	90	83	73	82	69	474	Yes
Maldives	96	97	98	86	97	96	95	96	98	97	99	99	99	8	Yes
Mali	43	42	40	51	51	54	55	57	54	52	49	37	33	509	Yes
Mauritania	38	32	43	49	53	67	66	64	62	56	62	58	81	98	Yes
Moldova	..	..	92	92	95	99	98	99	99	99	87	81	94	39	Yes
Mongolia	92	82	84	84	80	85	88	91	93	93	94	95	98	53	Yes

Country Name	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total crude births, 2002 (thousands)	Include?	
Mozambique	59	55	56	62	65	71	58	58	58	58	58	58	58	708	Yes	
Myanmar	90	85	84	88	77	82	86	88	85	85	84	73	75	1189	No	
Nepal	57	57	58	58	58	56	65	73	72	72	71	71	71	760	Yes	
Nicaragua	82	54	73	83	73	81	90	94	99	99	99	99	98	152	Yes	
Niger	25	28	21	19	19	40	38	35	35	36	34	51	48	537	Yes	
Nigeria	54	57	43	40	41	44	38	69	40	40	40	40	40	5076	Yes	
Pakistan	50	51	52	52	53	47	50	52	55	56	56	57	57	4695	Yes	
Papua New Guinea	67	69	70	72	73	75	46	41	59	57	68	58	71	169	No	
Rwanda	83	89	82	74	25	84	76	66	78	78	74	69	69	339	Yes	
Samoa	89	77	90	92	94	96	96	99	99	91	93	92	99	5	No	
Sao Tome and Principe	71	77	52	57	65	74	57	60	59	64	69	75	85	5	Yes	
Senegal	51	54	57	58	59	80	70	65	62	60	48	48	54	353	Yes	
Sierra Leone	..	..	..	..	..	..	..	..	..	..	62	37	53	60	226	Yes
Solomon Islands	70	76	70	64	60	68	90	68	64	96	87	78	78	16	No	
Somalia	30	30	32	33	35	34	33	25	47	38	38	36	45	445	No	
Sri Lanka	80	79	82	86	84	87	89	94	94	95	99	99	99	332	Yes	
St. Lucia	83	87	72	94	94	94	95	95	90	95	95	89	97	3	Yes	
St. Vincent and the Grenadines	96	99	99	99	99	99	99	99	99	87	96	98	99	2	Yes	
Sudan	57	57	52	49	48	51	59	58	49	53	47	67	49	1069	Yes	
Tajikistan	..	..	84	92	90	88	86	83	81	79	87	86	84	118	Yes	
Tanzania	80	79	81	77	79	78	78	73	78	72	78	83	89	1314	Yes	
Togo	73	69	64	60	57	53	48	43	50	57	58	58	58	173	Yes	
Tonga	86	90	87	87	86	94	95	97	96	97	95	93	90	3	No	
Uganda	52	54	56	57	59	57	55	54	53	57	56	61	77	1070	Yes	
Uzbekistan	..	..	84	82	71	91	95	88	96	96	99	99	97	542	Yes	
Vanuatu	66	63	66	74	53	60	61	65	94	94	94	94	44	6	No	

Country Name	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total crude births, 2002 (thousands)	Include?
Vietnam	85	88	90	93	96	96	96	96	96	93	97	97	96	1492	Yes
Yemen, Rep.	69	53	46	51	31	46	47	46	66	74	71	79	65	700	Yes
Serbia and Montenegro	83	76	82	85	81	86	90	92	88	84	89	90	92	128	Yes
Zambia	90	80	85	91	96	86	86	86	85	85	85	85	85	395	Yes
Zimbabwe	87	87	86	86	87	87	88	84	79	79	70	68	58	380	Yes
Macedonia, FYR	..	..	..	98	86	97	91	98	96	98	97	92	98	27	Yes

Source: WHO/UNICEF (<http://www-nt.who.int/vaccines/globalsummary/timeseries/TScoverageMCV.htm>)

Appendix B

Primary Completion Rate

Country Name	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	include	Official graduation age population, 2002
Afghanistan	..	22.0	..	..	..	26.2	..	..	..	..	..	8.1	..	..	..	No	..
Albania	..	..	101.4	..	..	..	..	91.2	..	..	..	..	106.7	106.1	100.3	Yes	61000
Angola	..	..	..	..	..	..	..	..	..	..	..	..	28.3	..	..	No	..
Armenia	..	..	..	..	..	..	..	..	82.4	..	..	..	78.3	77.6	74.4	Yes	61000
Azerbaijan	..	..	..	..	47.2	..	..	..	110.1	..	100.2	..	103.9	102.9	100.2	Yes	162000
Bangladesh	..	50.3	..	..	..	..	..	..	..	..	..	..	72.5	75.0	76.8	Yes	3041000
Benin	..	..	22.9	..	..	..	..	..	36.6	..	38.5	..	43.0	45.3	..	Yes	180000
Bhutan	6.6	..	..	..	..	..	23.1	..	..	..	..	..	41.8	40.7	..	Yes	20000
Bolivia	..	..	55.0	..	..	..	..	..	..	..	..	..	82.4	85.1	89.1	Yes	200000
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	88.1	80.7	76.6	76.7	Yes	61000
Burkina Faso	..	..	19.1	..	..	..	..	24.4	..	..	25.0	..	28.2	28.1	29.3	Yes	313000
Burundi	..	..	45.9	..	29.5	..	..	..	..	..	43.1	..	26.7	26.7	..	Yes	193000
Cambodia	71.4	..	..	..	..	..	..	..	..	39.5	..	..	55.5	64.6	70.8	Yes	328000
Cameroon	..	..	56.6	..	..	..	..	..	..	..	..	42.5	55.3	57.0	..	Yes	412000
Cape Verde	..	55.5	..	..	..	..	..	..	..	117.1	..	..	95.2	96.6	..	Yes	13000
Central African Republic	..	..	47.0	..	..	..	..	..	..	..	..	..	19.2	..	..	Yes	101000
Chad	..	..	19.1	..	..	..	..	..	15.2	..	..	..	21.0	22.0	..	Yes	248000
Comoros	..	..	..	35.2	..	32.7	..	..	..	..	..	..	53.5	53.7	54.2	Yes	16000
Congo, Dem. Rep.	..	..	51.6	..	..	..	..	..	..	..	..	..	39.8	..	..	Yes	1469000
Congo, Rep.	..	..	61.4	..	..	..	..	54.1	..	..	..	..	56.1	57.8	..	Yes	83000
Cote d'Ivoire	..	..	43.7	..	..	..	..	..	42.3	..	..	40.5	44.7	48.0	..	Yes	443000
Djibouti	..	..	32.2	..	..	..	..	..	27.6	..	..	29.9	32.7	39.2	..	Yes	18000
Dominica	..	..	..	..	..	..	..	..	..	..	..	..	73.2	73.2	..	Yes	2000
Eritrea	..	..	..	21.6	..	..	..	..	36.3	..	..	35.4	..	33.4	..	Yes	114000
Ethiopia	..	21.6	..	..	..	..	..	..	17.1	..	..	24.1	27.0	30.5	..	Yes	1763000
Gambia, The	..	..	..	39.8	..	..	..	54.7	..	..	..	..	70.6	68.6	..	Yes	31000

Georgia	..	..	..	..	..	..	..	82.6..	81.7..	96.9	91.5..	Yes	77000		
Ghana	..	..	62.6..	..	..	..	..	..	..	63.6	57.1	58.6..	Yes	584000	
Grenada	..	..	..	..	..	..	..	..	..	..	118.8..	..	No	..	
Guinea	..	..	22.6..	..	..	..	..	28.1..	..	34.0..	..	..	Yes	207000	
Guinea-Bissau	16.0..	..	..	..	..	..	..	..	..	31.4..	..	..	Yes	30000	
Guyana	..	..	91.6..	..	..	..	..	79.2..	..	85.7	89.6..	..	Yes	17000	
Haiti	..	..	27.8..	..	..	..	..	..	39.9	69.9..	..	..	No	..	
Honduras	..	..	..	65.6..	..	..	70.1..	..	..	..	69.7	69.5..	Yes	169000	
India	..	..	69.5..	78.2..	..	..	73.3..	..	..	76.1	77.5..	..	Yes	2.2E+07	
Indonesia	..	..	91.6..	..	..	..	..	91.5..	..	..	103.7	106.7..	Yes	3912000	
Kenya	..	..	63.1..	..	..	..	57.6..	..	..	..	42.4	52.3	56.1	Yes	857000
Kiribati	..	..	..	..	..	..	..	..	..	..	..	..	No	..	
Kyrgyz Republic	..	..	..	..	..	..	105.1..	..	..	99.5..	93.3	94.5..	Yes	117000	
Lao PDR	..	44.2..	..	..	..	..	56.1..	64.5..	..	..	71.9	73.2..	Yes	145000	
Lesotho	..	..	63.7..	..	..	..	..	68.9..	..	..	63.9	64.8	64.8	Yes	50000
Liberia	..	..	..	..	..	..	..	..	..	..	..	..	No	..	
Madagascar	..	..	33.9..	..	..	..	29.9..	..	26.4..	35.0	36.1	40.9	Yes	438000	
Malawi	..	..	30.0..	..	..	..	50.5..	..	..	..	52.6	54.8..	Yes	261000	
Maldives	..	..	..	111.3	111.7..	..	..	..	..	..	130.2..	150.4	Yes	8000	
Mali	..	..	11.4..	..	..	..	22.8..	23.5..	34.9	36.2	39.3	..	Yes	290000	
Mauritania	..	..	34.0..	..	..	..	38.5..	45.8..	47.0	44.2..	..	..	Yes	68000	
Moldova	..	..	..	66.7..	..	..	..	95.0..	..	78.8	80.5	80.2..	Yes	67000	
Mongolia	..	..	..	..	..	..	..	75.0..	82.4..	101.9	107.3..	..	Yes	57000	
Mozambique	..	..	29.6..	..	..	..	21.3..	..	36.1..	37.9	43.6..	..	Yes	464000	
Myanmar	..	..	..	..	..	..	..	..	..	..	71.3	70.6..	Yes	1075000	
Nepal	48.6..	..	..	51.0..	..	..	..	..	56.8..	69.9	74.7	72.8	Yes	611000	
Nicaragua	45.0..	..	..	..	..	..	..	..	57.6..	..	69.6	68.8	74.7	Yes	132000
Niger	..	..	18.3..	..	..	..	..	19.0..	19.6..	20.0	21.5	20.7	Yes	293000	
Nigeria	..	..	72.2..	..	..	73.6..	..	..	..	..	66.7..	..	Yes	3418000	
Pakistan	..	43.7..	..	..	..	..	..	..	..	..	55.0..	..	Yes	3834000	
Papua New Guinea	..	..	53.4..	..	..	..	58.6..	..	..	..	59.8	59.1..	Yes	122000	
Rwanda	..	..	33.9..	..	..	..	..	..	..	..	20.0	24.7..	Yes	284000	

Samoa	..	..	..	..	..	..	..	..	..	98.5	..	105.9	105.1	..	Yes	4000
Sao Tome and Principe	..	..	..	..	..	..	..	..	..	..	..	91.7	94.3	..	Yes	4000
Senegal	..	45.5	..	..	..	..	..	..	..	47.6	..	46.2	48.0	48.6	Yes	260000
Sierra Leone	..	..	..	..	..	..	..	..	..	..	..	32.0	..	..	No	..
Solomon Islands	..	..	64.9	..	..	65.6	..	..	..	..	..	..	..	..	No	..
Somalia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	No	..
Sri Lanka	..	..	100.4	..	..	..	..	100.0	..	..	..	..	108.1	..	Yes	326000
St. Lucia	..	..	111.6	..	..	..	..	108.1	..	..	..	..	96.6	..	Yes	4000
St. Vincent and the Grenadines	..	..	..	..	140.0	..	..	..	..	..	..	125.6	126.2	..	Yes	2000
Sudan	..	..	59.3	..	..	..	..	42.3	..	..	..	49.9	..	..	Yes	733000
Tajikistan	..	..	..	..	..	..	..	77.0	..	95.2	..	99.9	99.5	..	Yes	167000
Tanzania	..	45.6	..	..	..	..	..	..	59.0	..	56.4	48.7	53.7	57.7	Yes	907000
Togo	..	..	40.9	..	..	..	52.7	..	..	..	62.5	..	83.7	..	Yes	124000
Tonga	..	..	..	..	..	..	..	..	..	..	..	130.3	128.7	..	Yes	2000
Uganda	..	..	49.0	..	..	..	50.0	..	..	..	..	61.0	65.1	67.3	Yes	627000
Uzbekistan	..	..	..	..	..	97.4	..	..	..	..	..	91.9	97.7	..	Yes	618000
Vanuatu	..	89.5	..	86.3	..	..	..	..	..	..	..	86.0	83.3	..	Yes	6000
Vietnam	..	..	..	..	..	..	..	..	..	..	..	107.3	103.6	97.1	Yes	1851000
Yemen, Rep.	..	..	..	..	..	..	..	..	..	..	..	65.2	63.1	68.2	Yes	517000
Serbia and Montenegro	..	..	72.8	..	..	..	..	70.1	..	..	..	96.1	..	..	Yes	156000
Zambia	97.4	..	..	..	..	..	80.3	..	..	63.2	..	..	57.9	59.1	Yes	276000
Zimbabwe	..	..	97.4	..	..	..	..	..	113.4	..	..	..	..	..	No	..

Source: World Bank estimates as of April 2004, subject to revision.

## Technical Note for IDA13 Results-Measurement System Spring 2004 Update on the Time and Cost of Business Start-Up

### Introduction.

1. As a part of the IDA13 results-measurement framework, IDA Deputies set targets for improvement in two indicators of the environment for private sector development:

- *Time required for business start-up*, which measures the calendar days for a firm to obtain all necessary permits, and to notify and file with all requisite authorities, in order to legally operate a business.
- *Formal cost of business start-up*, which measures the official payments required to fulfill all the necessary requirements for business registration, scaled as a percentage of income per capita.

2. The population weighted target improvement in these measures is 7% from end-calendar year 2001 to end calendar year 2003. These targets were exceeded. Between end-2001 and end-2003, the population-weighted time of business start-up declined by 11.9% and the population-weighted cost of business start-up declined by 19.2%.

### Background: Rationale and Methodology

3. **Rationale.** When an entrepreneur wants to start a business, he or she first needs to register the firm in order to operate legally. In Australia, this takes two days and costs less than 2% of income per capita. In most IDA countries, it takes months and costs almost the average annual income of the entrepreneur. Cumbersome business start-up procedures are associated with poor economic outcomes such as corruption and a higher share of the informal sector in GDP (see Figure 1). Time delays in registration are a major impediment to formal entry of private firms. Delays deter participation in the formal economy and increase the potential for corruption. The cost of registration is a major barrier to entry in poor countries, deterring participation in the formal economy.

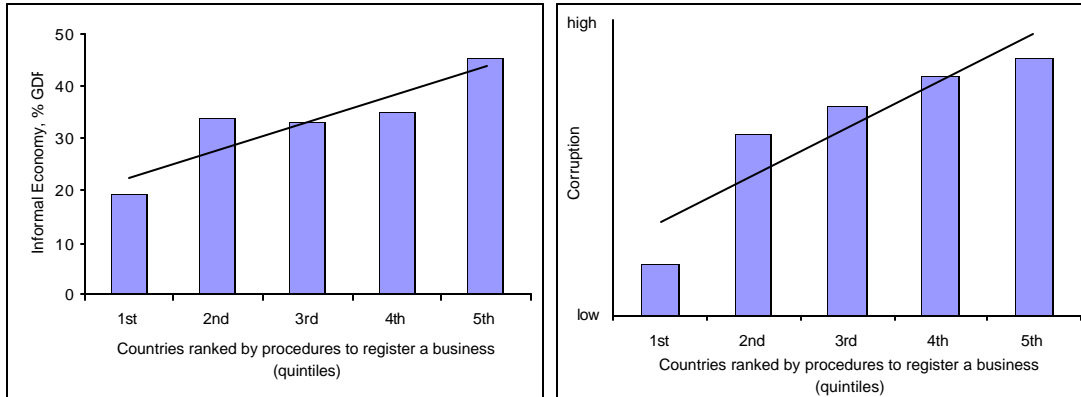
4. Recent research shows that reforming a business start-up in the average developing economy can add between a quarter and half a percentage point to growth.<sup>1</sup> Moreover, heavier entry regulation is not associated with better consumer protection, environmental standards or

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<sup>1</sup> Klapper, Laeven and Rajan (2004).

health outcomes.<sup>2</sup> It is, however, associated with other indicators of a weaker investment climate, including in the areas of labor regulation, credit markets, contract enforcement and bankruptcy.

**Figure 1: Heavy entry regulation is associated with informality and corruption**



Source: Doing Business in 2004. Note: Figures show the partial relationship controlling for per capita income.

5. **Methodology.** The time and cost of business start-up indicators are produced as a part of the Doing Business project in the Private Sector Vice Presidency of the World Bank Group. The indicators are built through a combination of desk research and expert assessment. The project team starts by studying the laws and regulations in force on business regulations, as well as reviewing publicly available summaries and descriptions of the business registration process. From this research, a detailed list of the steps, time and cost for business registration are compiled. This list is then sent to business registration experts (usually incorporation lawyers) in the country who are asked to verify the data, identify any missing steps/data, and make any corrections. The average respondent typically deals with hundreds of business registrations, so the sample represents an extensive number of transactions. If there are any differences in their answers the project staff go back to the respondents until the data can be reconciled. In 2004 the data collection included several rounds of verification and an expanded sample of respondents to ensure robustness and comparability of both the baseline and endline data.

6. In order to be comparable across countries, the indicators measure the time and cost for business start up under specific assumptions about the company size, industry, legal identity, and location, as well as the procedures followed. The data cover only the generic entry requirements and do not capture industry specific licenses or utility hookups. They cover only mandatory official procedures and costs, and therefore exclude voluntary procedures and delays as well as informal payments. Actual start up time and cost for individual firms may vary from the indicators to the extent that a firm does not match the assumptions in the standardized case.

<sup>2</sup> Djankov, La Porta, Lopez de Silanes, and Shleifer (2002); Doing Business in 2004.

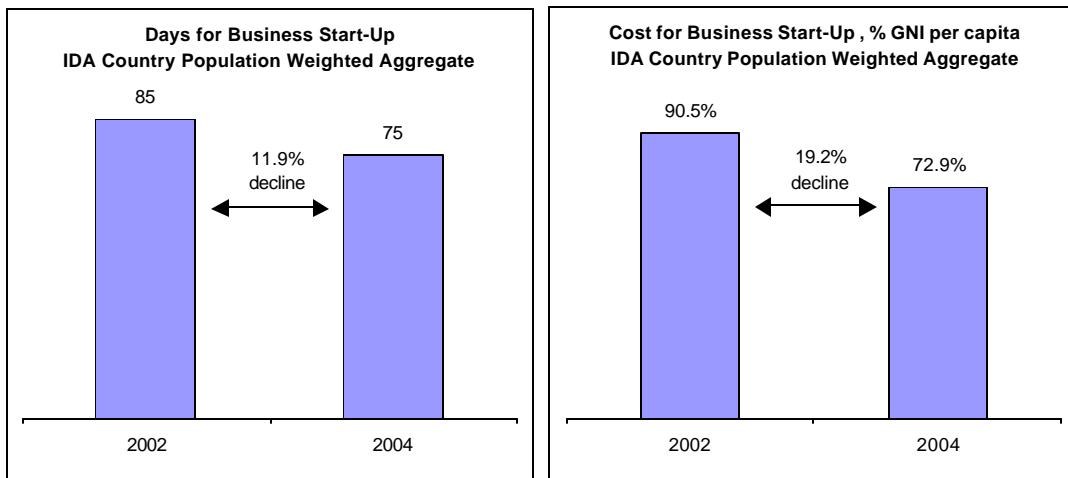
7. These indicators offer several advantages for results management. They are updated annually and available within 3 months of the end of the measurement period. The methodology is transparent, developed with academics and implemented with local experts. Most importantly, the indicators are directly linked to policy action. A policymaker can review the list of procedures, identify specific bottlenecks and know what to change.

8. The subsequent analysis for the IDA13 round is based upon the 39 IDA countries that were included in the Doing Business project sample as at end-2001. In 2004 the dataset was expanded to include 60 IDA countries.

### Assessment of Progress

9. Between end-calendar year 2001 and end-calendar year 2003:

- The population-weighted time for business start-up declined **from 85 to 75 days (11.9% decline)**.
- The population-weighted cost for business start-up declined from **90.2% of GNI per capita to 72.9% of GNI per capita (19.2% decline)**.



10. Twenty-seven countries reported a decline of 10% or more in time for business start-up. The top performer was Armenia, where time was cut from 79 to 25 days, or 68.4%. Dramatic improvements were also made in Pakistan (-54.7%), Honduras (-51.9%), Georgia (-49.7%) and Benin (-49.2%). Many countries reformed to IDA 'good practice' levels of 30 days or less.

11. Eighteen countries reported a decline of 10% or more in cost for business start-up as a percentage of GNI per capita. Cost data has two components: cost in local currency units, and GNI per capita. Growth in income per capita was a major factor behind the decline in costs. On average, nominal GNI per capita increased by 22.3% between 2002 and 2004 – or 10.6% average annual increase for this set of countries.<sup>3</sup> By contrast, nominal costs of business start-up in local currency units increased on average by 7%. Nominal costs in local currency units declined in only seven countries: Albania (-20.4%), Bosnia and Herzegovina (-2.3%), Cote d'Ivoire (-6.5%), Ethiopia (-82.5%), Georgia (-41.2%), Pakistan (-15.0%) and Zambia (-17.9%).

12. A few countries became less efficient in business start-up. The time indicators increased in Azerbaijan (18.1%) and Uzbekistan (6.1%). Cost rose in eight countries: Benin (23.3%), Honduras (13.1%), Madagascar (23.3%), Malawi (34.3%), Mozambique (5.0%), Nigeria (27.0%), and Sri Lanka (14.4%).

13. Because the IDA13 targets are population-weighted, the larger countries contributed the most to meeting the target. On the time indicator, India, Pakistan, and Indonesia together accounted for almost 60% of the fall in population-weighted days to start a business. Ethiopia alone exceeded the cost targets for the entire IDA group, accounting for an 11% decline in the population weighted average cost, or almost three quarters of the total change in weighted cost for all IDA countries.

14. Nevertheless, even if the results had not been weighted by population, the targets would have been met. Using a simple arithmetic average, IDA countries cut the time to start a business by 21.7% and cut the cost to start a business by 10.9%.

### **Lessons from the Reformers**

15. Reformers varied in their approaches to reducing barriers to entry, adapting to country-specific situations. Armenia, Ethiopia and Pakistan were among the three countries with the most dramatic reduction in time or cost to start a business – all approaching IDA best practice levels.

- At the end of 2001, it took about two and a half months to start a company in *Armenia*. With the introduction of standardized articles of incorporation and statutory time limits for the approval of new registration applications, by the end of 2003, entrepreneurs were able to begin operations in 25 days.

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<sup>3</sup> Note that 2003 GNI estimates are currently unavailable for Benin, Madagascar, Tanzania and Zambia and that for Zimbabwe verified GNI data is unavailable for both 2002 and 2003. As such, Zimbabwe has been excluded from the cost calculation, and the latest available GNI data have been used for the other countries mentioned.

- *Ethiopia* undertook Bank-supported reforms affecting only one procedure — the requirement to publish a public notice, which accounted for over 3 times average annual income. In 2003, the requirement to publish public notices of incorporation in two newspapers was eliminated. The reform cut total cost of business start-up from 447% of GNI per capita to 77.7% GNI per capita.
- In *Pakistan*, regulatory reforms in 2002 and 2003 contributed to an overall improvement from 53 to 24 days and 50.2% to 36.0% GNI per capita. Company Registration Offices were created in eight cities for easier access. The company registration process itself was automated and made more efficient through measures such as the introduction of one electronically generated company identification number used for all company related documents, same-day document authentication at the CFOs, and specific time limits for data entry and application processing not exceeding three days (see chart in Appendix B to this Annex).

16. In spite of the different approaches, several patterns emerged as examples for successful reforms, ranging from simplified procedures by reducing their number or making them more efficient through standardized forms or computerization to comprehensive legal reforms.

17. Many countries *simplified* the registration process by cutting or consolidating certain procedures (Serbia and Montenegro, Honduras, Mozambique). Others did not essentially change the process itself, but cut time and cost by improving inter-agency coordination through improved information flow (Georgia) or a reduced number of standardized forms (Cote d'Ivoire) to be used. Zambia simply reduced the registration fee, and Albania eliminated some registration fees, cutting cost (as expressed in % of GNI/capita) almost by one-third.

18. Several other countries simplified the process through the introduction of so-called *one-stop shops*. In Benin, entrepreneurs are now able to complete more than half of all formalities at one single counter, cutting time in half. Nicaragua also recently established a pilot one-stop shop in Managua in August 2003.

19. Other countries achieved a reduction in time and cost by using new *technologies and computerizing* registration procedures. Examples include Moldova (faster filing with State Registration Chamber through a new electronic system including use of electronic signatures), Malawi, and Sri Lanka.

20. Thanks to *stricter time limits*, entrepreneurs in Honduras can now obtain the required operational permit within 30 days instead of 75. Honduras also eliminated the requirement to go through judicial passing altogether, saving entrepreneurs more than two weeks. Bosnia and Herzegovina shortened the time limit on court registration from almost one month to two weeks.

## **Implications for the Future**

- The use of business start-up indicators in IDA13 increased WBG and client government focus on business start-up, leading to several reforms.
- WBG country dialogue should incorporate IDA targets at an earlier stage. Unlike other IDA13 outcome indicators, business start-up targets can be achieved by policy action during the measurement period.
- Ensure the targets are used to generate dialogue on broader improvement of the investment climate, not just focus on the more narrow issue of business entry.
- For large countries, consider creating business start-up indicators in several of the major cities.
- Weighting the indicators by population places enormous emphasis on large countries. Other definitions of the targets, such as the proportion of countries reaching good practice, would encourage broader reform.

Appendix A

Table 1: IDA PSD Triggers: Time and Cost of Business Start-up January 2002 - January 2004  
Update May 2nd 2004

Country	Region	LCU GNI per capita 2001	LCU GNI per capita 2003 (estimate)	2002 Cost (LCU)	2004 Cost (LCU)	2002 Cost (% of GNI per capita)	2004 Cost (% of GNI per capita)	% change Cost as % of GNIpc	2002 Days	2004 Days	% change Days	Pop. weighted days 02	Pop. weighted days 04	Pop. weighted cost 02	Pop. weighted cost 04
1 Albania	ECA	201.061	241.880	98000	78000	48.7%	32.2%	-33.8%	62	47	-24.2%	0.09	0.07	0.1%	0.0%
2 Armenia	ECA	392.337	552.858	34258	38500	8.7%	7.0%	-20.2%	79	25	-68.4%	0.11	0.03	0.0%	0.0%
3 Azerbaijan	ECA	3,084,037	3,983,827	587000	585000	19.0%	14.7%	-22.8%	104	123	18.3%	0.38	0.45	0.1%	0.1%
4 Bangladesh	SAR	19.677	22.781	20288	20606	103.1%	90.5%	-12.3%	36	35	-2.8%	2.18	2.13	6.2%	5.5%
5 Benin **	AFR	269.797	284,035	455000	590500	168.6%	207.9%	23.3%	63	32	-49.2%	0.18	0.09	0.5%	0.6%
6 Bolivia	LAC	6,061	6,527	10395	11413	171.5%	174.9%	2.0%	79	59	-25.3%	0.31	0.23	0.7%	0.7%
7 Bosnia and Herzegovina	ECA	2,834	3,066	1457	1423	51.4%	46.4%	-9.7%	74	54	-27.0%	0.14	0.10	0.1%	0.1%
8 Burkina Faso	AFR	178,150	200,548	266915	306444	149.8%	152.8%	2.0%	135	135	0.0%	0.71	0.72	0.8%	0.8%
9 Cameroon	AFR	375,677	431,118	775835	786924	206.5%	182.5%	-11.6%	39	37	-5.1%	0.27	0.26	1.4%	1.3%
10 Cote d'Ivoire	AFR	456,364	449,925	642464	601025	140.8%	133.6%	-5.1%	96	58	-39.6%	0.71	0.43	1.0%	1.0%
11 Ethiopia	AFR	817	820	3653	638	447.0%	77.7%	-82.6%	44	32	-27.3%	1.32	0.97	13.4%	2.3%
12 Georgia	ECA	1,452	1,835	432	254	29.8%	13.8%	-53.5%	48	25	-47.9%	0.11	0.06	0.1%	0.0%
13 Ghana	AFR	1,871,296	3,186,502	2456733	2789325	131.3%	87.5%	-33.3%	129	85	-34.1%	1.17	0.77	1.2%	0.8%
14 Honduras	LAC	14,702	16,741	9326	12011	63.4%	71.7%	13.1%	129	62	-51.9%	0.39	0.19	0.2%	0.2%
15 India	SAR	21,987	25,662	11991	12709	54.5%	49.5%	-9.2%	94	89	-5.3%	44.10	41.67	25.6%	23.2%
16 Indonesia	EAP	6,657,635	7,959,417	10210000	10400000	153.4%	130.7%	-14.8%	168	151	-10.1%	15.95	14.25	14.6%	12.3%
17 Kenya	AFR	28,347	31,287	15507	17011	54.7%	54.4%	-0.6%	69	47	-31.9%	0.96	0.66	0.8%	0.8%
18 Kivrazv Republic	ECA	14,271	15,830	1786	1826	12.5%	11.5%	-7.8%	26	21	-19.2%	0.06	0.05	0.0%	0.0%
19 Madagascar **	AFR	1,843,499	1,800,375	1040100	1252575	56.4%	69.6%	23.3%	68	44	-35.3%	0.49	0.33	0.4%	0.5%
20 Malawi	AFR	11,351	14,750	11844	20669	104.3%	140.1%	34.3%	56	35	-37.5%	0.27	0.17	0.5%	0.7%
21 Mali	AFR	162,659	207,337	388500	388500	238.8%	187.4%	-21.5%	42	42	0.0%	0.21	0.22	1.2%	1.0%
22 Moldova	ECA	5,591	8,785	1604	1633	28.7%	18.6%	-35.2%	42	30	-28.6%	0.07	0.05	0.0%	0.0%
23 Mongolia	EAP	467,213	549,015	60500	62500	12.9%	11.4%	-12.1%	31	20	-35.5%	0.03	0.02	0.0%	0.0%
24 Mozambique	AFR	3,586,352	5,185,756	3272135	4968489	91.2%	95.8%	5.0%	214	153	-28.5%	1.76	1.26	0.7%	0.8%
25 Nepal	SAR	17,424	18,078	13610	13610	78.1%	75.3%	-3.6%	27	21	-22.2%	0.29	0.23	0.8%	0.8%
26 Nicaragua	LAC	9,518	10,783	15728	16989	165.2%	157.6%	-4.6%	69	45	-34.8%	0.16	0.11	0.4%	0.4%
27 Niger	AFR	127,659	134,288	525532	532358	411.7%	396.4%	-3.7%	27	27	0.0%	0.14	0.14	2.1%	2.1%
28 Nioeria	AFR	34,414	42,073	25802	40061	75.0%	95.2%	27.0%	54	44	-18.5%	3.19	2.63	4.4%	5.7%
29 Pakistan	SAR	23,841	28,286	11977	10183	50.2%	36.0%	-28.3%	53	24	-54.7%	3.41	1.57	3.2%	2.4%
30 Senegal	AFR	339,411	369,751	417305	417333	122.9%	112.9%	-8.2%	58	57	-1.7%	0.26	0.25	0.5%	0.5%
31 Serbia-Montenegro	ECA	92,484	142,323	11895	12815	12.9%	9.0%	-30.0%	59	51	-13.6%	0.29	0.18	0.1%	0.0%
32 Sri Lanka	SAR	73,861	91,982	6912	9845	9.4%	10.7%	14.4%	76	50	-34.2%	0.65	0.42	0.1%	0.1%
33 Tanzania **	AFR	235,113	268,401	527641	536244	224.4%	199.8%	-11.0%	36	35	-2.8%	0.56	0.55	3.5%	3.2%
34 Uganda	AFR	414,302	448,526	591215	592926	142.7%	132.2%	-7.4%	39	36	-7.7%	0.42	0.40	1.6%	1.5%
35 Uzbekistan	ECA	193,726	371,579	44817	63264	23.1%	17.0%	-26.4%	33	35	6.1%	0.37	0.39	0.3%	0.2%
36 Vietnam	EAP	5,973,608	7,446,332	2094000	2129000	35.1%	28.6%	-18.4%	64	56	-12.5%	2.31	2.00	1.3%	1.0%
37 Yemen, Rep.	MNA	82,734	96,084	218539	258350	264.1%	268.9%	1.8%	81	63	-22.2%	0.66	0.53	2.2%	2.3%
38 Zambia **	AFR	1,243,703	1,520,755	521006	427500	41.9%	28.1%	-32.9%	40	35	-12.5%	0.18	0.16	0.2%	0.1%
39 Zimbabwe +	AFR			5317	115000				95	95	0.0%	0.55	0.55		
<b>Average</b>						<b>109.09%</b>	<b>112.13%</b>	<b>24.68%</b>	<b>70.21</b>	<b>54.23</b>	<b>-21.74%</b>	<b>85</b>	<b>75</b>	<b>90.2%</b>	<b>72.9%</b>

\*\* 2003 GNI estimates are unavailable, Latest available GNI data is reported instead

+ Verified GNI data is unavailable for Zimbabwe

**CHANGE IN WEIGHTED AGGREGATE**

**-11.9%**

**-19.2%**

Appendix B

