Trends in Contraceptive Security

CS Index 2003–2009

Trends in Contraceptive Security

CS Index 2003–2009

USAID | DELIVER PROJECT, Task Order 1

The USAID | DELIVER PROJECT, Task Order 1, is funded by the U.S. Agency for International Development under contract no. GPO-I-01-06-00007-00, beginning September 29, 2006. Task Order 1 is implemented by John Snow, Inc., in collaboration with PATH; Crown Agents Consultancy, Inc.; Abt Associates; Fuel Logistics Group (Pty) Ltd.; UPS Supply Chain Solutions; The Manoff Group; and 3i Infotech. The project improves essential health commodity supply chains by strengthening logistics management information systems, streamlining distribution systems, identifying financial resources for procurement and supply chain operations, and enhancing forecasting and procurement planning. The project also encourages policymakers and donors to support logistics as a critical factor in the overall success of their health care mandates.

Abstract

A primary goal of reproductive health (RH) and family planning (FP) programs is to ensure that people can choose, obtain, and use a wide range of high-quality, affordable contraceptive methods including condoms for sexually transmitted infection/human immunodeficiency virus (STI/HIV) prevention. To plan effective interventions to reach this goal, policymakers, program managers, and international donor agencies need to know if and how their programs are progressing toward achieving contraceptive security (CS). The *Contraceptive Security Index* (*CS Index*) is a tool that was developed to measure a country's level of contraceptive security and to monitor CS over time. *CS Index* wall charts have been published for 2003, 2006, and 2009. This paper presents an analysis of the data over time so that readers may study the trends in CS, including the progress and the challenges, using the three sets of data spanning a six-year period.

Cover photo: A field worker delivers contraceptives to a client's home in Bangladesh.

CONTENTS

Tables

Acronyms

AIDS	acquired immune deficiency syndrome
CPR	contraceptive prevalence rates
CS	contraceptive security
EECA	East Europe and Central Asia
FP	family planning
GNI	gross national income
H&SE	Health and Social Environment
HIV	human immunodeficiency virus
LAC	Latin America and the Caribbean
MENA	Middle East and North Africa
RH	reproductive health
SPARHCS	Strategic Pathway to Reproductive Health Commodity Security
SSA	sub-Saharan Africa
STI/HIV	sexually transmitted infection/human immunodeficiency virus

Introduction

A primary goal of reproductive health (RH) and family planning (FP) programs is to ensure that people can choose, obtain, and use a wide range of high-quality, affordable contraceptive methods including condoms for sexually transmitted infection/human immunodeficiency virus (STI/HIV) prevention. Achieving this goal, which is referred to as *contraceptive security* (CS), requires sustainable strategies that will ensure and maintain access to and availability of supplies.

Financing for RH and FP programs has not been keeping pace with demand, and donor and national resources are more constrained than ever. Despite investments in service delivery and logistics systems, such systems remain inadequate in many countries. At the same time, increased demand—coupled with the impact of the HIV and AIDS pandemic, health sector reforms, limited national and international funding, and the brain drain—leaves many countries unable to meet the RH needs of all their populations. It remains critical that stakeholders and program managers focus attention on long-term CS.

To plan effective interventions to reach this goal, policymakers, program managers, and international donor agencies need to know if and how their programs are progressing toward achieving CS. The *Contraceptive Security Index* (*CS Index*) is a tool that was developed to measure a country's level of contraceptive security and to monitor CS over time. To measure the level of CS in countries, the *CS Index* uses a set of indicators that cover the primary CS components. The indicators can be used separately to monitor progress in each component. The indicators can also be aggregated to establish a composite index, which can be used to compare countries at a point in time or to monitor progress, over time, within a country.

CS Index wall charts have been published for 2003, 2006, and 2009.

Each wall chart presents the raw data for each of the 17 indicators collected, which are organized into five key CS components: Supply Chain, Finance, Health and Social Environment (H&SE), Access, and Utilization from 57 countries in 2003, 63 in 2006, and 64 in 2009.[1] Background information, a description of the methodology, definitions of all indicators, and other information on the *CS Index* can be found on each of the *CS Index* wall charts or booklets, as well as in the *CS Index Technical Manual*.[2] The wall charts also present the component scores by country and region, as well as the ranking of countries in each year by total index score.

This paper will present an analysis of the data over time so that readers may study the trends in CS, including the progress and the challenges, using the three sets of data spanning a six-year period. At the global level, total weighted scores have increased over time. Figure 1 shows that the range of scores has increased from 28.1 to 68.1 (2003) to 37.4 to 74.1 in 2009. Using a paired t-test, the 2009 overall average scores represent a statistically significant increase from 2003, which indicates general improvement over this time period.

Figure 1. Range of *CS Index* Total Scores (2003, 2009)
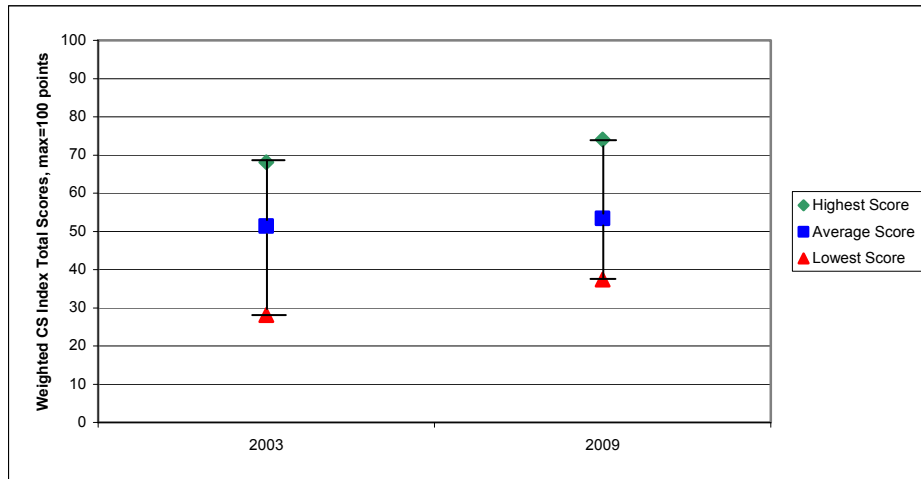
Figures 2 and 3 (also presented in the *CS Index 2009*) show the summary total scores for each *CS Index* by component and by region for each of the three years for the 50 countries that were scored in all three of the indices. Although global average scores for all components increased from 2003 to 2009, absolute changes were relatively small, and the increases were statistically significant only for Finance, H&SE, and Access (see figure 2).

Figure 2. *CS Index* Total Scores by Component (2003, 2006, 2009)
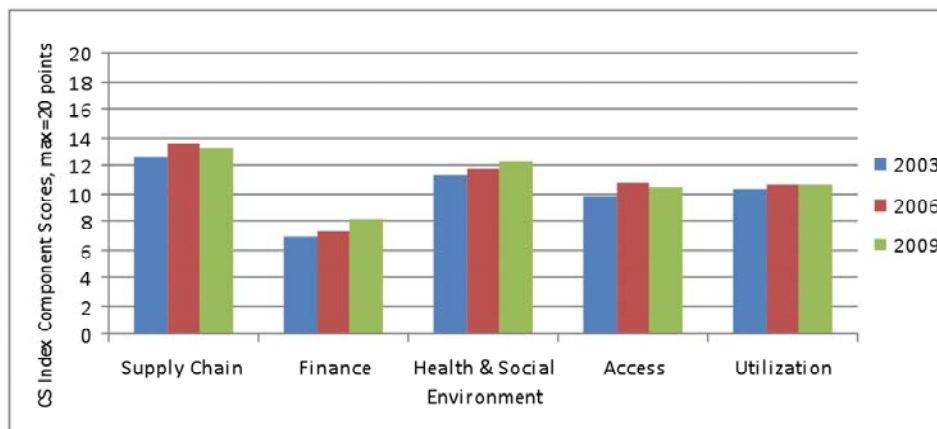
Figure 3 compares total *CS Index* scores averaged by region. The observed increases in the total index score from 2003 to 2009 are significant only in Latin America and the Caribbean (LAC) and in sub-Saharan Africa (SSA). It is important to note that the other three regions had too few countries included in this analysis to show significance. However, the 2009 overall average scores across all countries still represent a statistically significant increase from the 2003 scores.

Figure 3. *CS Index* Total Scores by Region (2003, 2006, 2009)
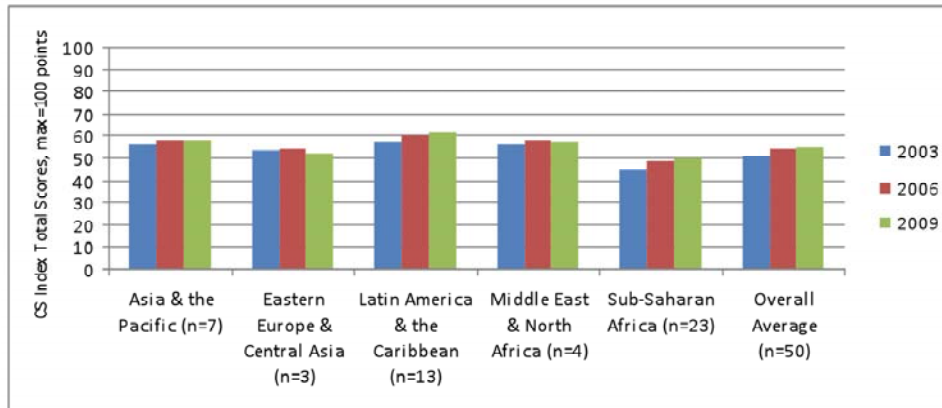
Similar increases were also evident at the country level. A comparison of total scores from 2003 and 2009 for the 50 countries scored in both years also demonstrates the upward trend in scores. The vast majority (76 percent) of the 50 countries showed an increase in their total scores, with an average increase of 6 points, while total scores fell in only 12 countries (24 percent) between 2003 and 2009.

The graphs in figures 2 and 3 show the summary results at an aggregated level. To understand more fully some of the significant drivers of change over time by region and by component, however, this paper will endeavor to dig deeper into the *CS Index* scores to analyze trends over time in the results compiled for each consecutive index.

x

CS Index Component Scores by Region

The graphs in figures 4–8 further disaggregate the results shown in figures 2 and 3 to better illustrate the trends by component for each of the five regions for each *CS Index* year: 2003, 2006, and 2009. This disaggregation allows readers (a) to better understand which CS components are strongest and which are weakest in each region and (b) to monitor how the average scores have changed over time. For this analysis, only the 50 countries found in all three of the CS indices were used to allow for monitoring trends over the period. For figures 4–8, each component is presented individually by region.

Asia and the Pacific

In Asia and the Pacific (seven countries), there were very slight improvements each year in Finance, H&SE, and Utilization (see figure 4), with statistically significant improvements in Finance and H&SE. The Supply Chain component was the strongest component in this region although Supply Chain scores were relatively flat from 2003 to 2009. In comparison with other regions, by 2009, the Asia and the Pacific region had the highest Supply Chain score (15). Access was the only component that showed a decline between 2006 (11.7) and 2009 (10.8), but Asia and the Pacific still had the second highest Access score among all regions for all three years.

Figure 4. Average Component Scores: Asia and the Pacific (2003–2009)
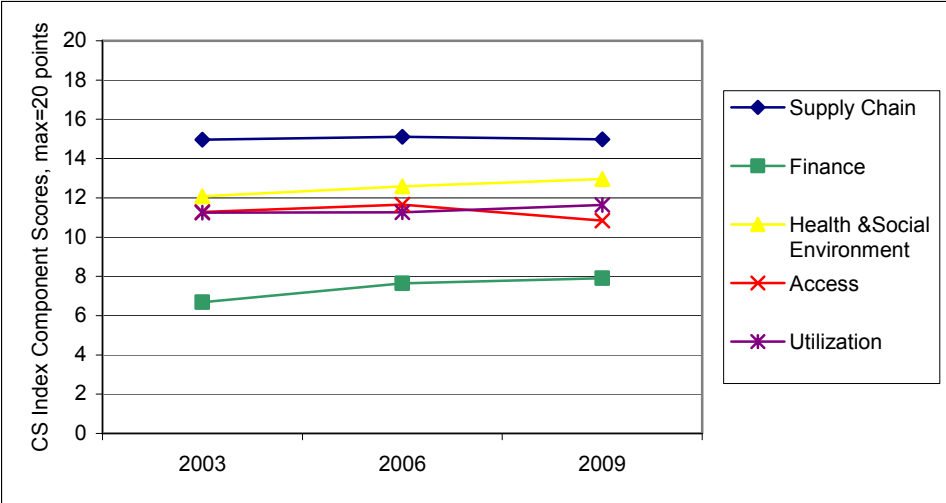
Eastern Europe and Central Asia

The strongest CS component in the Eastern Europe and Central Asia (EECA) region (represented by only three countries: Azerbaijan, Kyrgyzstan, and Turkey) was H&SE, with average scores increasing every year (see figure 5). Finance also showed strong improvements over the six-year period, giving EECA one of the highest average Finance scores (9.4) among all regions in 2009. The average EECA Utilization score stayed nearly flat, while the average EECA Access score showed marginal improvement in 2006, but then declined from 2006 to 2009. In contrast to the strides made in Finance scores, the average EECA Supply Chain score fell notably between each *CS Index;* by 2009, Supply Chain was the region's weakest CS component. With only three countries represented in the analysis, such averages are not necessarily representative of all changes in the entire EECA region; nonetheless, the three EECA countries shown here observed significant drops in Supply Chain scores from 2003 to 2009.

Figure 5. Average Component Scores: Eastern Europe and Central Asia (2003–2009)
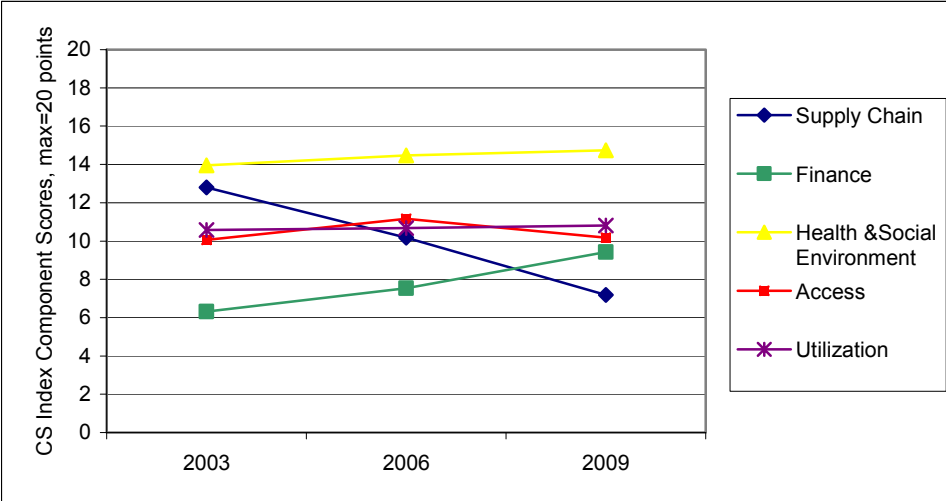
Latin America and the Caribbean

Each of the component scores in the LAC region (13 countries) showed improvement on average between 2003 and 2009, with one exception: the Access component, which declined very slightly during the period (see figure 6). On average, the H&SE, Supply Chain, and Utilization component scores were very similar over the period, although only the increases in H&SE and Utilization scores during this period were statistically significant. The LAC region had the highest average Finance scores among all regions in 2003 and 2006 and had one of the highest average scores (9.3) in 2009. This result is not surprising, because the LAC region had the highest average government expenditures on health, and its average gross national income (GNI) rates ranked among the top two highest for all regions in 2009.

Figure 6. Average Component Scores: Latin America and the Caribbean (2003–2009)
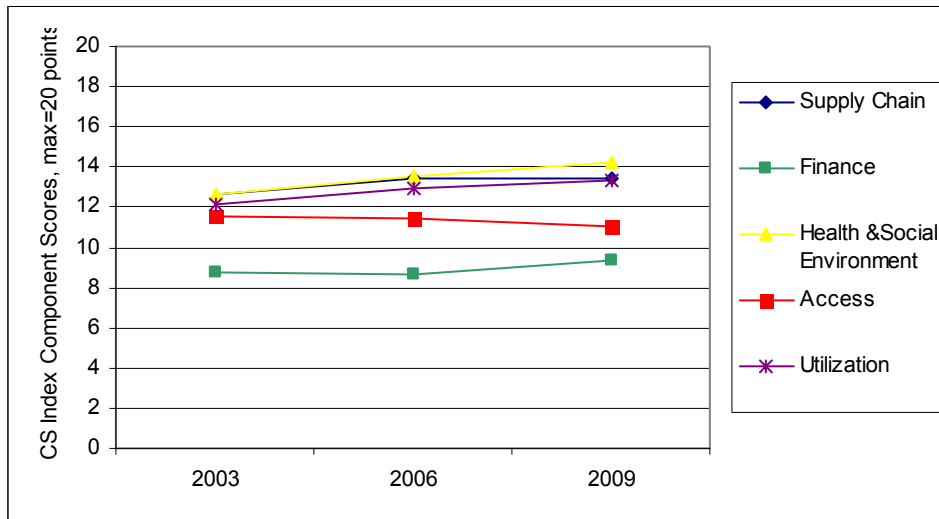
Middle East and North Africa

The Middle East and North Africa (MENA) region (four countries) experienced a noticeable decline in its average Supply Chain score from 15.6 in 2006 to 13.2 in 2009 (see figure 7). Nevertheless, for the 2003 and 2006 indices, Supply Chain was the highest scoring component in the MENA region, which also had the highest average Supply Chain scores of all regions for both years. However, by 2009, the average Supply Chain score in the MENA region had fallen notably in all four MENA countries. Access, Utilization, and H&SE component scores reached a plateau from 2006 to 2009, showing either very small increases or no increases in those three areas. Average Finance component scores were the only scores with any notable improvement from 2003 to 2009; Finance scores increased almost 20 percent on average in the MENA region, with the greatest increase from 2006 to 2009.

Figure 7. Average Component Scores: Middle East and North Africa (2003–2009)
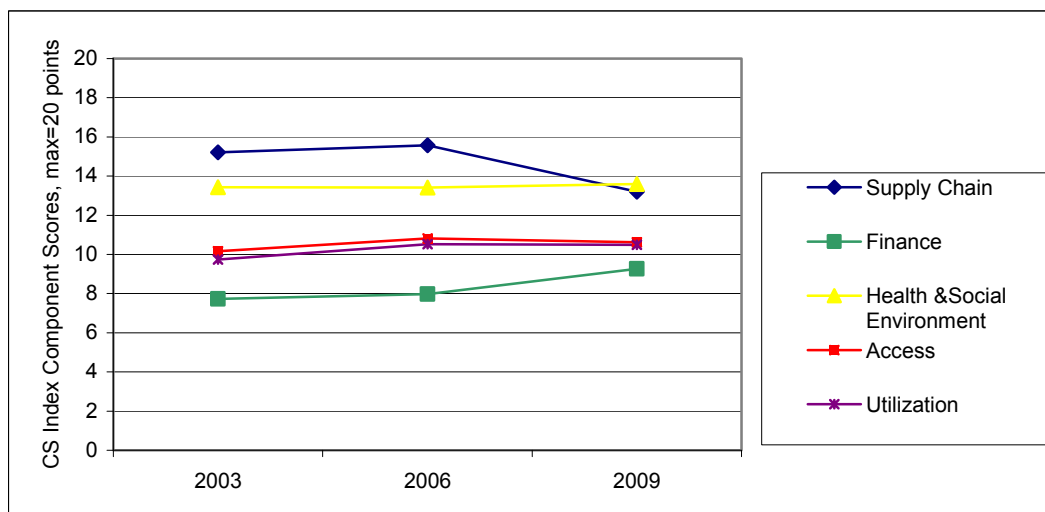
Sub-Saharan Africa

Each of the *CS Index* average component scores for the SSA region (23 countries) showed statistically significant improvements between 2003 and 2009, with one exception: the Utilization component, which declined very slightly during the period (see figure 8). This decline in Utilization corresponds with relatively flat contraceptive prevalence rates (CPR) in the SSA region during this period. Supply Chain was the best performing component; average Supply Chain scores increased from 11.5 in 2003 to 13.4 in 2009, with most of that increase occurring between 2003 and 2006.

Figure 8. Average Component Scores: Sub-Saharan Africa (2003–2009)

To summarize: In four of the five regions, the Supply Chain component had either the highest average scores (Asia and the Pacific, MENA, SSA) or the second highest average score (LAC) from 2003 to 2009. In nearly every *CS Index* year, the component receiving the lowest average scores was Finance.
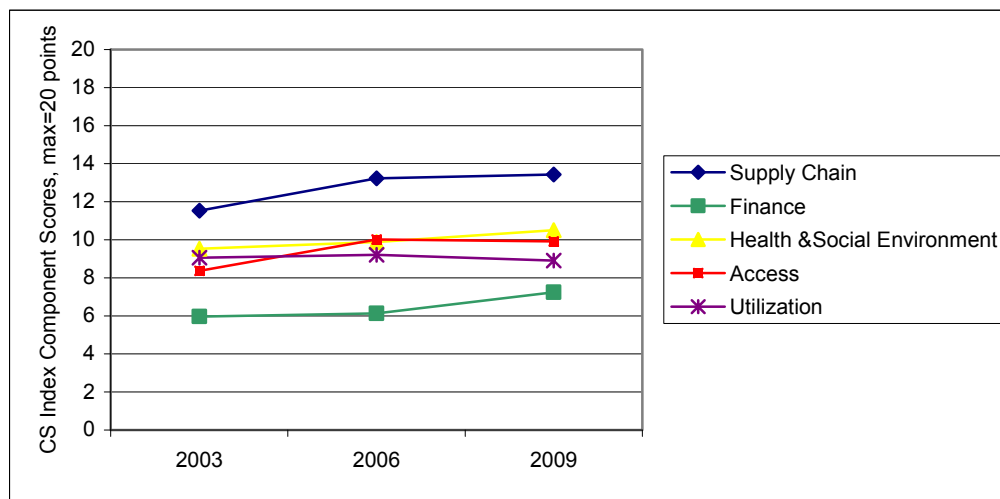
Of the five *CS Index* components, Supply Chain is the one most directly affected by targeted technical assistance from partners. Supply Chain consists of indicators that directly reflect the processes and systems used to manage contraceptive supplies. Because Supply Chain represents outputs at the program level, it is therefore possible that Supply Chain may show the most notable changes over time. The other components consist primarily of outcome indicators, representing results at the population level, most of which require long-term inputs to produce changes over time—much longer than the six-year period represented here.

In particular, the finance indicators—government expenditure on health, per capita GNI, and poverty level—are understandably low for many of the 50 countries studied here, representing some of the world's poorest countries, where changes in finance indicators can take a very long time. As noted on the *CS Index* wall charts (see the section entitled *Definitions* on the *CS Index* wall chart), the finance indicators included in the *CS Index* have their limitations and only indirectly reflect CS. For example, it was not possible to obtain a direct measure of financing for contraceptives or family planning programs overall; government expenditures on health were therefore used as a proxy measure to represent a government's general commitment to financing public health programs in a country. Increased government financing for public health programs in general represents more potential resources for family planning programs.

However, to strengthen CS in the 50 countries, improvements will have to be made in *all* components and among *all* indicators, because all components and indicators play a critical role in achieving contraceptive security.

Countries in Each Region, Classified by Clusters

For the following analysis, the overlapping 50 countries that were scored in the *CS Index* for 2003, 2006, and 2009 are divided into three clusters of countries: top, middle, and bottom. Each cluster contains an equal number of countries on the basis of ranking countries in each consecutive year by total index scores (e.g., the top cluster includes the 17 top-ranked countries in each year). This grouping of countries by cluster allows for a comparison between regions to demonstrate where the countries within each region fall in terms of highest, middle, and lowest scorers, as well as the progression of regional shifts by cluster.

Most of the seven Asia and the Pacific countries included in this analysis were classified in the top cluster in both 2003 and 2006, with the rest in the middle cluster. This proportion shifted somewhat in 2009, when three countries (45 percent) fell into the top cluster and the remaining four (55 percent) went into the middle cluster. No countries from Asia and the Pacific were classified in the bottom cluster in any of the three years.

For the EECA region, only three countries were included in this analysis (i.e., included in all three indices). In 2003, one EECA country (33 percent) was in the top cluster, with two countries (67 percent) classified in the middle cluster. In 2006, EECA countries were evenly split across the clusters, with one in each cluster; by 2009, the countries shifted back upward, with one in the top cluster and two in the middle cluster.

Figure 9. Percentage of Countries in Each Region by Clusters (2003)
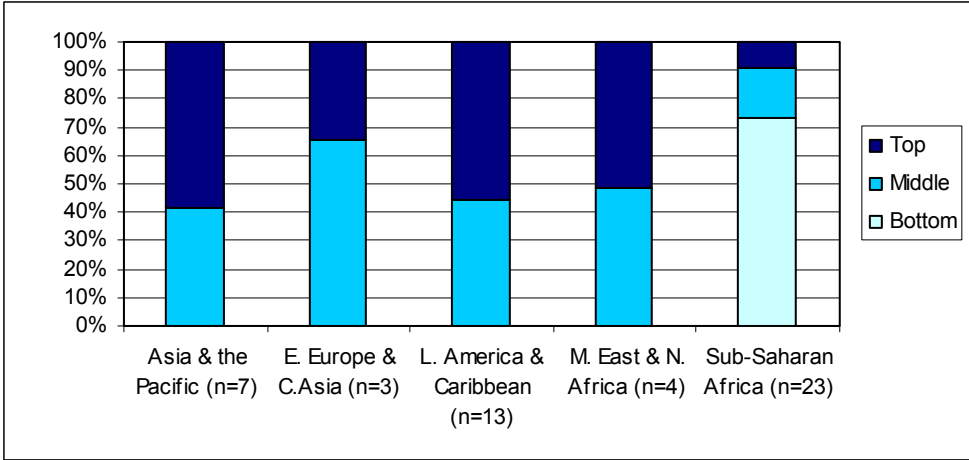
Figure 10. Percentage of Countries in Each Region by Clusters (2006)
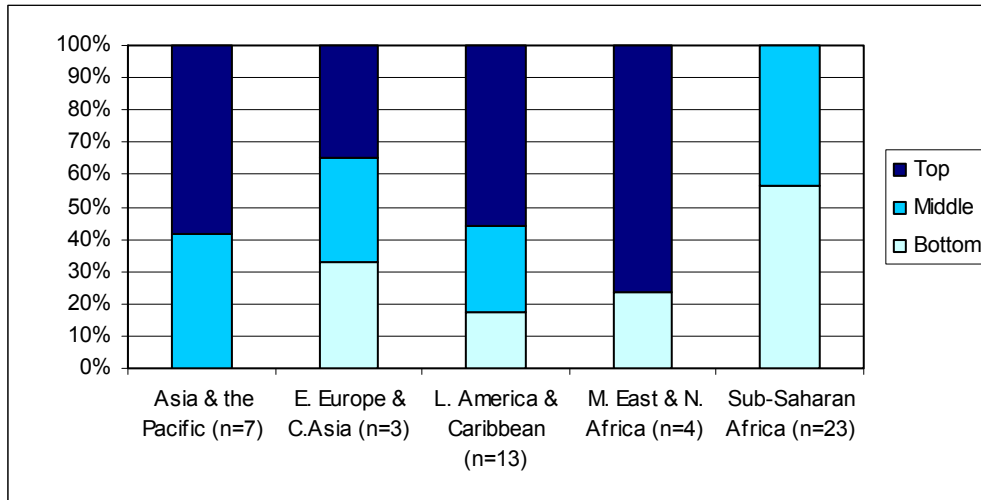
Figure 11. Percentage of Countries in Each Region by Clusters (2009)
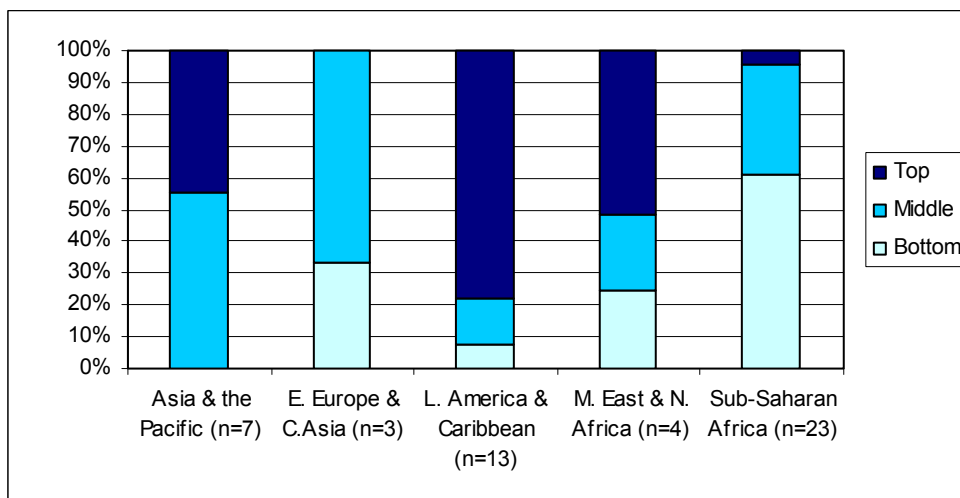
In 2003, LAC countries were evenly split between the top and middle clusters. Two LAC countries fell into the bottom cluster in 2006, but the same percentage of countries remained in the top cluster, indicating that the countries fell from the middle cluster into the bottom cluster. By 2009, around 80 percent of the LAC countries were classified in the top cluster, with a few countries still in the middle and bottom clusters. Nonetheless, the LAC countries clearly made progress in their total *CS Index* scores over this period.

Similar to LAC countries, the four countries in the MENA region included in this analysis were evenly split between the top and middle clusters in 2003. In 2006, three MENA countries were classified in the top cluster, and one of them fell into the bottom cluster. By 2009, half of the countries (two) remained in the top cluster, while one fell into the middle cluster and one remained in the bottom cluster.

In 2003, the bottom cluster consisted entirely of countries from SSA. Most of the 23 SSA countries in this analysis were in the bottom cluster of all countries in 2003. Four SSA countries were in the

middle cluster, with only two countries (Namibia and South Africa) in the top cluster. While more than half of the SSA countries remained in the bottom cluster, other countries made sufficient progress in their total *CS Index* scores to move into the middle cluster classification by 2006 and 2009.

In summary, although the SSA countries were largely grouped at the bottom cluster in terms of total scores for all three years, SSA countries did show progress by making improvements in total scores, as a number of countries gradually shifted out of the bottom cluster and into the middle cluster. And, although countries in three regions— Asia and the Pacific, MENA, and especially LAC— largely dominated the top cluster for all three years, over time there were shifts all around. Some countries lost ground in the rankings, while lower-scoring countries made more notable progress, edging their scores upward and bumping countries from the other regions down in the rankings. The results show that the lowest-scoring countries had the most potential to improve their scores, and many countries did, in fact, increase their scores. Conversely, the scores of top-performing countries may simply have leveled off, because it is often more difficult to demonstrate progress when performance is already relatively high.

Average Changes in Total Scores

For the next two sections, the clusters are grouped according to countries' total 2003 *CS Index* scores, again including only the 50 countries included in all three indices (see Annex 2 for a list of countries in each cluster). The three 2003 cluster cohorts are maintained in 2006 and 2009 to allow for tracking changes in the total scores in the lowest, middle, and top clusters from 2003 until 2009.

Of those countries in the top cluster in 2003, the average total scores had increased by only 1.75 percent by 2009. However, of those countries in the bottom cluster in 2003, the average total scores increased by 17.57 percent, or an increase 10 times that of the top-cluster countries. Thus, the bottom cohort of countries made the most progress in *CS Index* average total scores, while the top countries' average scores stayed relatively flat from 2003 to 2006 and from 2006 to 2009. However, it is important to note that average changes from 2006 to 2009 were relatively flat for all clusters; the largest gains were observed from 2003 to 2006.

Table 1. Average Percentage Change by Cluster and by Region

	2003–2006	2006–2009	2003–2009
Top*	1.12%	0.80%	1.75%
Middle*	4.95%	1.62%	6.36%
Bottom*	13.91%	3.39%	17.57%
Asia & Pacific	3.66%	0.35%	3.87%
E. Europe & C. Asia	0.31%	−3.06%	−2.76%
L. America & Caribbean	4.35%	2.67%	6.79%
M. East & N. Africa	3.49%	−1.66%	1.73%
SS Africa	10.50%	3.34%	13.95%
Average Total Scores	**5.8%**	**1.6%**	**7.6%**

* Using the 2003 clustering for the 50 countries included in all 3 indices only.

For the average percentage change by region, the largest increases were observed among SSA countries, particularly from 2003 to 2006 and with a cumulative increase of 14 percent across the entire period (2003–2009). This result also supports the finding that the lowest-performing countries made the most significant improvements in CS, because this group consists largely of SSA countries. Conversely, the EECA and MENA regions had decreases in average scores from 2006 to 2009, although only the EECA region showed a decrease in average scores across the entire period from 2003 to 2009.

Figure 12 presents the trends in average total scores by cluster over time. The top-performing countries' scores increased only modestly, with an average score of 61 across time, indicating minimal progress for those countries. Conversely, the lower-performing countries showed significant improvement, with their scores increasing 17.6 percent from an average score of 41 in 2003 to 48 in 2009 (see table 1 for percentage of changes).

Figure 12. Trends in Total Scores by 2003 Clusters
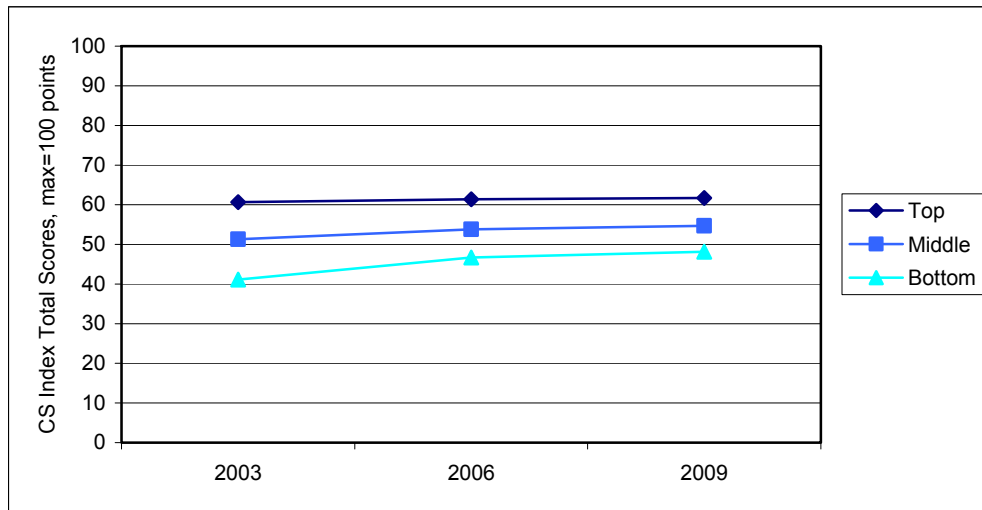
Figure 12 again demonstrates that the lowest-performing countries have made the most significant improvements in CS. This suggests that a "ceiling" may exist for top-performing countries at around two-thirds of the total possible score of 100. This trend is witnessed among other family planning indicators as well. For example, most countries in the top cluster in the 2009 *CS Index* also have the highest CPR with rates of approximately 50 to 70 percent. Such rates are close to the top of the scale globally, and significant increases are less frequent at the top of the scale. Conversely, the countries in the lowest cluster in 2009 had the lowest CPR of between 2 to 15 percent, which is considered the bottom of the CPR scale globally.

Low-ranking countries certainly have the most room for improvement; even small programmatic and financial inputs could have a great impact on both CPR and overall CS. It is also important to note that the countries in the *CS Index* with the highest CPR are mostly from LAC, with some from Asia and the Pacific and the MENA region, while the countries with the lowest CPR are all from the SSA region.

Component Scores by Clusters

The graphs in figures 13 and 14 show two examples of the clusters—again grouped according to the total scores from the 2003 *CS Index*, presenting the lowest- and highest-scoring components in the 2003, 2006, and 2009 indices. The Finance component consistently had the lowest average scores across all three years for all three clusters, with the bottom cluster averaging six points and the top cluster averaging around nine points.
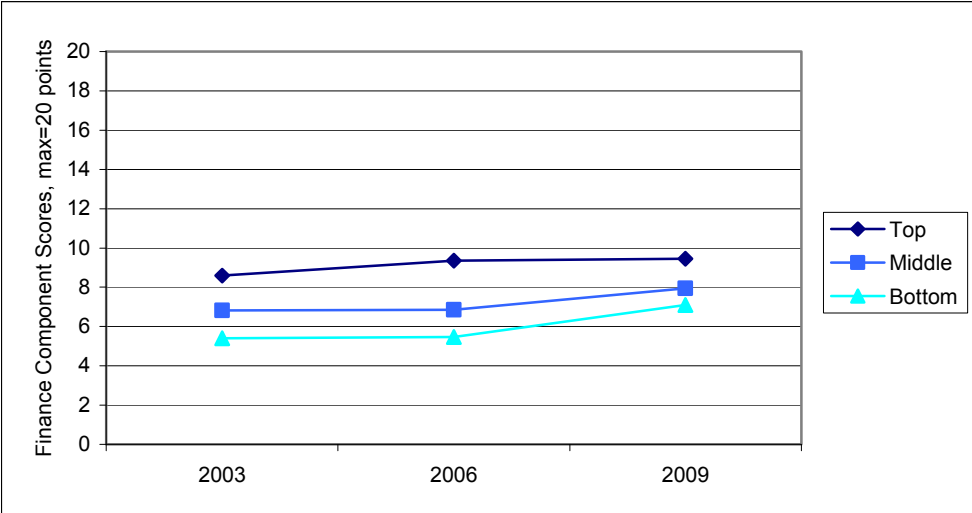
Figure 13. Trends in Finance Component Scores by 2003 Clusters

The Supply Chain component (along with H&SE) consistently had the highest average scores, as noted earlier. However, it is interesting to note that, in 2003, the top and bottom clusters had about an average four-point spread that, by 2006 and 2009, had converged to the same average score in all three clusters. The bottom cluster improved its Supply Chain scores the most over time to equal the average component score for the top and middle clusters.

The findings from the cluster analysis again reflect the likelihood that certain components, such as Supply Chain, may be more directly influenced by specific interventions in the shorter term and may, therefore, have played a greater role in increasing countries total scores over time, especially for the lowest-scoring countries in the bottom cluster. Conversely, other components, such as Finance, are more difficult to change in the short term; progress in Finance happens very slowly over a longer period, whether countries are high performers or low performers.

Figure 14. Trends in Supply Chain Component Scores by 2003 Clusters
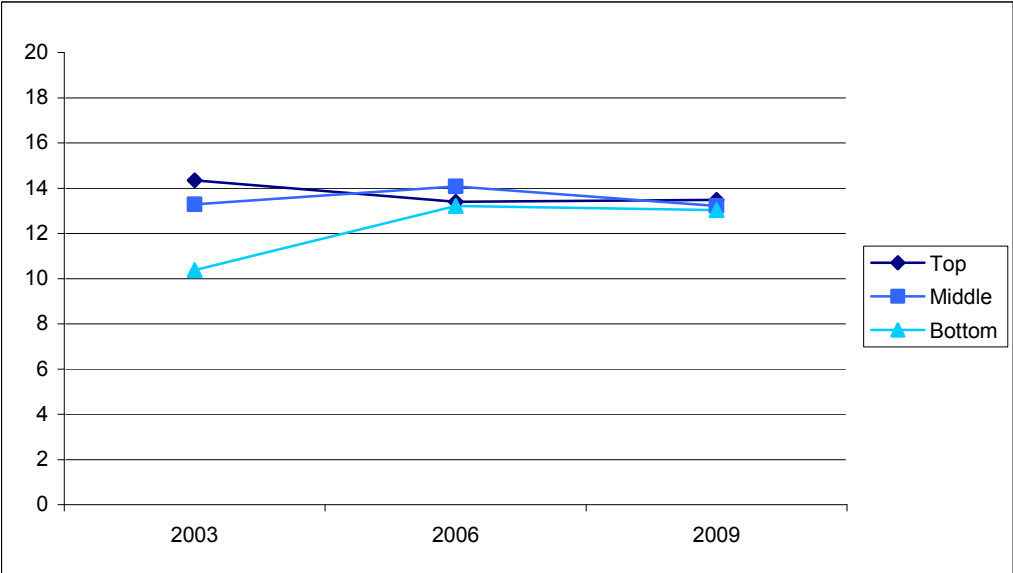
A Tale of Two Countries

This section highlights two West African countries, Côte d'Ivoire and Senegal, and looks more closely at how the *CS Index* data can be used (a) to monitor progress toward CS over time at the national level and (b) to determine which CS components require more attention and resources. This example also demonstrates why it is important to look at component scores and even at individual indicator scores—not just at total index scores—to fully understand the CS situation in a country.

Figure 15 shows a comparison of the component scores for both countries from 2003 to 2009 and demonstrates how each has progressed over this period. By 2009, Côte d'Ivoire had the lowest total score (37.9) for the West Africa sub region, while Senegal had the highest total score (54.9) for the same region. In terms of the clustering shown earlier, Côte d'Ivoire was in the bottom cluster from 2003 to 2009 while Senegal was a middle-cluster country. Both countries showed progress overall over the years, with Côte d'Ivoire's score increasing by 35 percent from 2003 and 2009 and Senegal's score achieving with a more modest improvement of 11 percent.

Figure 15. Component Scores for Côte d'Ivoire and Senegal (2003--2009)
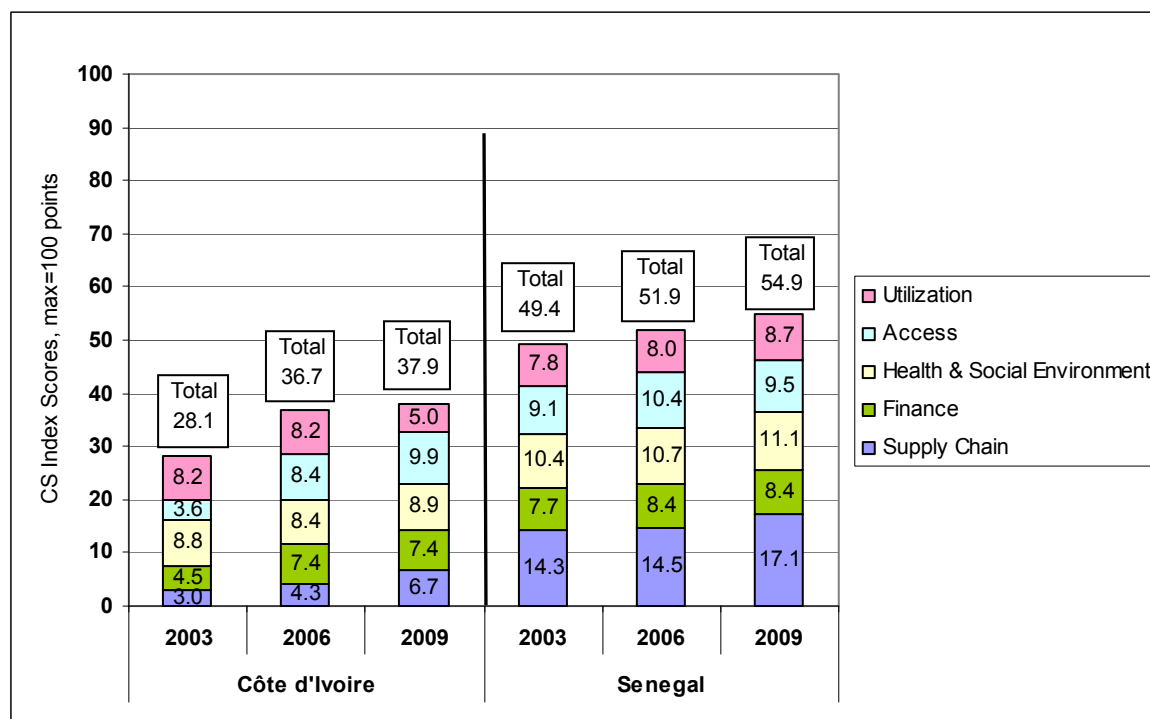
For the Supply Chain component, both countries made progress; however, Côte d'Ivoire made much stronger improvement in this component than Senegal did. The Finance component had the lowest scores on average across all countries and for all years; however, it was not the weakest component in Côte d'Ivoire. Both countries' Finance scores stagnated after 2006. Utilization scores

for both countries were similar in 2003 and 2006, although Côte d'Ivoire's score dropped drastically in 2009. This drop illustrates how two countries can have similar scores in certain components despite having significantly different total index scores.

Côte d'Ivoire's most significant increase came between 2003 and 2006 in the Access component, which more than doubled from 3.6 to 8.4, and which then rose again to 9.9 in 2009. In contrast, there was a significant drop in Côte d'Ivoire's Utilization component from 8.2 to 5.0 from 2006 to 2009, respectively, suggesting that other barriers to utilization may exist that are unrelated to access.

With all these changes, the gap in total scores between Senegal and Côte d'Ivoire has shrunk, showing promise not only that CS is improving in the West Africa sub region, but also that disparities related to CS between countries may be decreasing in the SSA region.

Conclusions

Progress toward achieving CS is critical for the success of family planning programs to achieve their objectives and desired results. The *CS Index* provides one method for monitoring this progress across developing countries, using the *SPARHCS* framework[3] as a conceptual guide. Improvements across all components and among all indicators are critical for improvements in contraceptive security.

This paper has presented an in-depth analysis of the trends in the *CS Index* results from 2003 to 2009. Overall, progress toward achieving CS is evident in the findings. Most countries' total scores did increase over this period, with aggregate improvement in all components and in most regions, as described in this paper and as presented in figure 16. The range of possible total scores on the weighted *CS Index* is 0 to 100, although actual scores in 2003 ranged from 28.1 to 68.1. In 2006, the range of scores was from 35.5 to 73.2; by 2009, the range of scores shifted even higher, to 37.4 to 74.1.

Figure 16. Range of Highest and Lowest Total *CS Index* Scores (2003–2009)
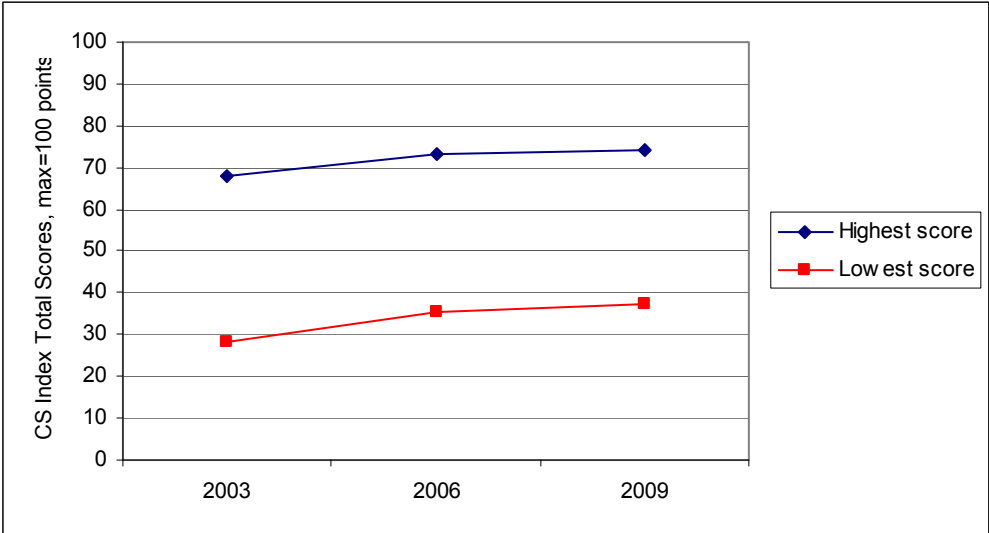
When one analyzes the trends by cluster, it becomes clear that the lowest-scoring countries have made the most significant progress. Because the bottom cluster is made up largely of SSA countries, the SSA region has clearly shown the most improvement. The highest-scoring countries showed more modest, gradual progress, suggesting that it may be more difficult to demonstrate improvements in CS for countries that have already reached a certain elevated level on the scale.

In terms of component scores, Supply Chain primarily had the highest average scores across the five regions, while Finance most often had the lowest average scores. A cluster analysis of the components showed that countries in the bottom cluster made the most significant progress in the

Supply Chain component, an improvement that, therefore, played a greater role in increasing their total scores over time.

Conversely, changes in the Finance component were less pronounced; changes in Finance indicators may witness more gradual changes over a longer period. It is important to note that countries can have similar scores overall but can still have strengths or weaknesses in different components. Such distinctions underscore the importance of reviewing the results within the broader context of a country, including aspects not captured in the *CS Index* because of data limitations.

Equally important, significant donor investments in supply chain management and contraceptive procurement, including targeted technical assistance from partners, have paid off in improving CS overall, particularly in countries where CS is weakest. This improvement is most apparent in the lower-scoring SSA countries, where donor inputs have been significant and where average Supply Chain component scores jumped almost 17 percent in just six years, from 2003 to 2009. Conversely, Finance component indicators appear to be most responsible for holding countries back from making gains in overall CS. Such indicators are more difficult to change in the short term. Furthermore, such outcome indicators represent results at the national or population level, which require long-term inputs to produce changes over time.

The *CS Index* and the analysis presented here will help national and international stakeholders to emphasize the importance of CS for better family planning program outcomes and to monitor trends in progress (a) among regions and specific countries and (b) among the components and specific indicators included in the *CS Index*. The *CS Index* can be a powerful tool for raising awareness about CS and the interrelationships between different program components. The results of this analysis can be used to set priorities and to advocate for more rational resource allocation by country governments and global donors to achieve a secure supply of high-quality contraceptives.

Notes

1. John Snow, Inc./DELIVER and Futures Group/POLICY Project. 2003. *Contraceptive Security Index 2003: A Tool for Priority Setting and Planning.* Arlington, VA: DELIVER for the U.S. Agency for International Development.

DELIVER and Task Order 1 of the USAID | Health Policy Initiative. 2006. *Contraceptive Security Index 2006: A Tool for Priority Setting and Planning.* Arlington, VA: DELIVER for the U.S. Agency for International Development.

USAID | DELIVER PROJECT, Task Order 1. 2009. *Contraceptive Security Index 2009: A Tool for Priority Setting and Planning. Arlington*, VA: USAID | DELIVER PROJECT, Task Order 1.

2. USAID | DELIVER PROJECT, Task Order 1. 2009. *Contraceptive Security Index Technical Manual.* Arlington, Va.: USAID | DELIVER PROJECT, Task Order 1.

3. Hare, L., C. Hart, S. Scribner, C. Shepherd, T. Pandit (ed.), and A. Bornbusch (ed.). 2004. *SPARHCS: Strategic Pathway to Reproductive Health Commodity Security:. A Tool for Assessment, Planning, and Implementation*. Baltimore, MD: Information and Knowledge for Optimal Health (INFO) Project/Center for Communications Programs, Johns Hopkins Bloomberg School of Public Health.

Annex I

Total Scores by Region and Country: 2003–2009

	2003	2006	2009
Asia & The Pacific			
Bangladesh	56.38	62.66	58.04
Cambodia	48.86	51.06	54.15
India	57.2	54.58	56.56
Indonesia	59.1	57.1	61.72
Nepal	55.12	60.16	59.37
Philippines	58.85	59.24	53.49
Viet Nam	58.14	62.87	64.78
Regional Average	**56.2**	**58.8**	**57.9**
Eastern Europe & Central Asia			
Azerbaijan	45.97	42.75	41.82
Kyrgyzstan	54.9	60.72	58.95
Turkey	60.21	58.61	56.22
Regional Average	**54.4**	**56.3**	**53.9**
Latin America & The Caribbean			
Bolivia	51.12	59.85	57.94
Colombia	65.52	65.2	60.42
Dominican Republic	60.83	54.6	59.04
Ecuador	54.96	62.29	64.11
El Salvador	57.62	66.91	66.82
Guatemala	51.41	57.21	59.66
Guyana	56.33	51.88	55.49
Haiti	48.26	47.02	46.06
Honduras	55.4	49.53	61.52
Mexico	66.85	73.22	74.06
Nicaragua	57.15	66.31	65.31
Paraguay	58.39	63.12	67.21
Peru	65.64	63.56	60.27

	2003	2006	2009
Regional Average	**58.5**	**60.8**	**61.4**
Middle East & North Africa			
Egypt	56.54	60.02	59.59
Jordan	65.04	65.82	64.15
Morocco	57.67	61.31	58.33
Yemen	45.9	46.04	46.71
Regional Average	**56.3**	**58.3**	**57.2**
Sub-Saharan Africa			
Benin	43.8	48.83	47.68
Burkina Faso	39.5	49.93	53.19
Cameroon	38.49	48.83	48.02
Côte d'Ivoire	28.13	36.73	37.91
Eritrea	42.77	41.51	47.41
Ethiopia	38.04	38.85	38.87
Ghana	48.55	54.59	51.76
Guinea	44.23	44.59	48.25
Kenya	50.75	51.17	50.14
Madagascar	39.72	47.08	50.82
Malawi	45.31	49.61	47.69
Mali	44.2	46.42	50.59
Mozambique	42.4	44.72	46.61
Namibia	62.8	55.07	54.79
Nigeria	42.31	48.62	48.38
Rwanda	39.44	48.1	54.65
Senegal	49.37	51.9	54.87
South Africa	63.65	56.41	66.67
Tanzania	47.45	52.37	53.89
Togo	45.83	53.83	49.53
Uganda	39.15	48.47	46.05
Zambia	41.22	44.41	50.42
Zimbabwe	45.29	52.89	52.1
Regional Average	**44.4**	**47.6**	**48.1**
Overall Average	**51.4**	**54.1**	**53.4**

Note: This list includes only countries found in all three *CS Indices*.

Annex 2

Top, Middle, and Bottom Clusters Based on 2003 Total *CS Index* Scores

Country	Region	2003 Total Score
Top Cluster		
Colombia	L. America & Caribbean	65.5
Dominican Rep.	L. America & Caribbean	60.8
El Salvador	L. America & Caribbean	57.6
India	Asia & Pacific	57.2
Indonesia	Asia & Pacific	59.1
Jordan	M. East & N. Africa	65.0
Mexico	L. America & Caribbean	66.9
Morocco	M. East & N. Africa	57.7
Namibia	SS Africa	62.8
Nicaragua	L. America & Caribbean	57.2
Paraguay	L. America & Caribbean	58.4
Peru	L. America & Caribbean	65.6
Philippines	Asia & Pacific	58.9
South Africa	SS Africa	63.7
Turkey	E. Europe & C. Asia	60.2
Viet Nam	Asia & Pacific	58.1
Middle Cluster		
Azerbaijan	E. Europe & C. Asia	46.0
Bangladesh	Asia & Pacific	56.4
Bolivia	L. America & Caribbean	51.1
Cambodia	Asia & Pacific	48.9
Ecuador	L. America & Caribbean	55.0
Egypt	M. East & N. Africa	56.5
Ghana	SS Africa	48.6
Guatemala	L. America & Caribbean	51.4

Country	Region	2003 Total Score
Guyana	L. America & Caribbean	56.3
Haiti	L. America & Caribbean	48.3
Honduras	L. America & Caribbean	55.4
Kenya	SS Africa	50.8
Kyrgyzstan	E. Europe & C. Asia	54.9
Nepal	Asia & Pacific	55.1
Senegal	SS Africa	49.4
Tanzania	SS Africa	47.5
Yemen	M. East & N. Africa	45.9
Bottom Cluster		
Benin	SS Africa	43.8
Burkina Faso	SS Africa	39.5
Cameroon	SS Africa	38.5
Côte d'Ivoire	SS Africa	28.1
Eritrea	SS Africa	42.8
Ethiopia	SS Africa	38.0
Guinea	SS Africa	44.2
Madagascar	SS Africa	39.7
Malawi	SS Africa	45.3
Mali	SS Africa	44.2
Mozambique	SS Africa	42.4
Nigeria	SS Africa	42.3
Rwanda	SS Africa	39.4
Togo	SS Africa	45.8
Uganda	SS Africa	39.2
Zambia	SS Africa	41.2
Zimbabwe	SS Africa	45.3

Note: This list includes only countries found in all three *CS Indices*.

For more information, please visit deliver.jsi.com.