

**Comparative Analysis of Program Effort for Family
Planning, Maternal Health, and HIV/AIDS,
30 Developing Countries**

John A. Ross

January 2003



MEASURE
Evaluation

Carolina Population Center
University of North Carolina
at Chapel Hill
123 W. Franklin Street
Chapel Hill, NC 27516
Phone: 919-966-7482
Fax: 919-966-2391
measure@unc.edu
www.cpc.unc.edu/measure

Collaborating Partners:

Macro International Inc.
11785 Beltsville Drive
Suite 300
Calverton, MD 20705-3119
Phone: 301-572-0200
Fax: 301-572-0999
measure@macroint.com

John Snow Research and Training
Institute
1616 N. Ft. Myer Drive
11th Floor
Arlington, VA 22209
Phone: 703-528-7474
Fax: 703-528-7480
measure_project@jsi.com

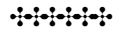
Tulane University
1440 Canal Street
Suite 2200
New Orleans, LA 70112
Phone: 504-584-3655
Fax: 504-584-3653
measure2@tulane.edu

Funding Agency:

Center for Population, Health
and Nutrition
U.S. Agency for
International Development
Washington, DC 20523-3600
Phone: 202-712-4959

WP-03-64

The research upon which this paper is based was sponsored by the MEASURE *Evaluation* Project with support from the United States Agency for International Development (USAID) under Contract No. HRN-A-00-97-00018-00.



The working paper series is made possible by support from USAID under the terms of Cooperative Agreement HRN-A-00-97-00018-00. The opinions expressed are those of the authors, and do not necessarily reflect the views of USAID.

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COMPARATIVE ANALYSIS OF PROGRAM EFFORT FOR FAMILY PLANNING,
MATERNAL HEALTH, AND HIV/AIDS, 30 DEVELOPING COUNTRIES.

by
John A. Ross
The Futures Group International
January 2003

CONTEXT: Many developing countries have mounted national programs for family planning, for maternal health, or for HIV/AIDS, but rather little is known about how closely these three programs parallel or support each other. Measures of program effort are now available for all three activities, collected in the 1999-2000 period, with common data on 30 countries that contain half of the developing world's population.

METHODS: All three studies used questionnaires completed by expert observers for each country. Experts from a variety of backgrounds and institutional affiliations were identified, with a different set of persons for each study since the field operations were entirely separate and done at different times. Each program was rated on a large number of features, and the ratings were all quantified as the percent of the maximum possible scores.

RESULTS: As an average, the strength of effort of these three programs is similar across the 30 countries, at slightly over half of the maximum scores. However the averages conceal sharp variations. In some countries the total scores are close for two or even all three of the programs, but in others there are large disparities. In addition, there is no correspondence across countries in the strength of the family planning and the HIV/AIDS programs, although both correlate appreciably with the maternal health programs. Policy scores are relatively high and vary rather little across the regions, but access to services shows substantial differences from one program to another; moreover Sub-Saharan Africa scores low on family planning and maternal health, but about as well on HIV/AIDS as do the other regions. Over time, countries with the weakest efforts have improved their scores more than countries with the strongest efforts have.

COMPARATIVE ANALYSIS OF PROGRAM EFFORT FOR FAMILY PLANNING, MATERNAL HEALTH, AND HIV/AIDS, 30 DEVELOPING COUNTRIES.¹

INTRODUCTION

In this paper we compare results from three studies of program effort at the national level: for family planning (FPE), for maternal health (MNPI), and for HIV/AIDS (API).² For each program an entirely separate study of numerous developing countries was implemented, in the period 1999-2000. Thirty countries were included in all three studies. Previous reports describe each program, the study methods, and the findings.³

The purpose here is to determine how closely the three programs overlap in the extent and types of effort. If programs follow parallel lines there are probably synergistic advantages. On the other hand, if they bear no apparent relation to each other, even though they are often placed in the same Ministry of Health, that must be inefficient and wasteful.

Historically, these three programs have acted somewhat independently of each other – they were created for different purposes and have not always evolved in similar directions. Countries differ in the ways the three programs overlap, or fail to do so. The API programs are weak in many countries with low HIV levels; FPE programs as such hardly exist in some countries, or they are absorbed in maternal health programs; and the maternal health programs vary greatly in the funding and staffing levels they command.

In these 30 countries we can look at cross-country comparisons, to see whether countries that are high on one program are also high on others, and we can look at the similarity of recent change patterns, but equally important is to identify within-country examples of how the three do or do not parallel each other. The 30 countries under investigation are not necessarily representative of the approximately 100 developing countries with populations over one million. However they encompass half (49.7%) of the developing world's total population, by including five of the eight largest countries

¹ This research was supported by funding to the Futures Group International from the MEASURE Evaluation Project of the Carolina Population Center, University of North Carolina, supported by the U.S. Agency for International Development. My thanks to John Stover for important suggestions for the analysis, and to Katharine Abel for research assistance, both of The Futures Group International.

² FPE: Family Planning Effort. MNPI: Maternal and Neonatal Program Effort Index. API: AIDS Program Effort Index.

³ For the API see: UNAIDS and the POLICY Project, "Measuring the Level of Effort in the National and International Response to HIV/AIDS: The AIDS Program Effort Index (API). February 2001.

For the MNPI see: (a) R. Bulatao and J. Ross, "Rating Maternal and Neonatal Health Services in Developing Countries," *Bulletin of the World Health Organization* 2002; 80:721-727. 2002. (b) J. Ross, O.M.R. Campbell, and R. Bulatao, "The Maternal and Neonatal Programme Effort Index (MNPI), *Tropical Medicine and International Health* 6(10):787-798. October 2001.

For the FPE see: J. Ross and J. Stover, The Family Planning Program Effort Index: 1999 Cycle, *International Family Planning Perspectives*, 27(3):119-129, September 2001.

(China, Indonesia, Brazil, Mexico, and Nigeria) as well as some of the next largest (Philippines, Vietnam, Ethiopia, and South Africa).

METHODOLOGY

All three studies used questionnaires completed by expert observers for each country. Experts from a variety of backgrounds and institutional affiliations were identified, with a different set of persons for each study since the field operations were entirely separate and done at different times. Each program was rated on a large number of features, and the ratings were all quantified as the percent of the maximum possible score.

The questionnaire items in each case were organized under a set of major components (**Appendix 1**). All MNPI and API items were scored from 0-5, but the FPE scores resulted from complex rules applied to various questionnaire items, and thirty scores resulted organized under four components. Here we use the component scores, as well as a total score, for each program. The API and MNPI total scores are simply the means of their various component scores (giving them equal weight), but the FPE total score is the sum of the 30 individual scores (which in effect gives different weights to its four components since they contain different numbers of items.)

There is considerable conceptual similarity across the three studies since major headings in the MNPI and API were created with some reference to the pre-existing FPE work. Also, each study seeks to produce an independent measure of program effort that can be compared to such outputs as contraceptive prevalence, maternal mortality, or HIV levels. The scores are also used to diagnose program strengths and weaknesses, to guide policy and management decisions, and to help donors understand what they can most usefully support.

RESULTS

The following analyses of the three programs proceed from the general to the specific, starting with the total score and proceeding to the score components.

For the total scores, taking all 30 countries together, the basic statistics are as follows:

	FPE	MNPI	API
Mean	55.8	56.4	56.2
Median	54.3	56.6	57.1
Minimum	36.7	41.4	45.6
Maximum	86.1	67.0	75.3
Range	49.4	25.6	29.6
St. Dev.	11.8	7.4	7.3

Interestingly, the three programs have the same central tendencies of effort, averaging 56% of maximum. However they differ in the score ranges; the FPE range is a large 49 points, compared to only 25 and 30 points for the MNPI and API. The minimum scores do not differ so much, but the maximum scores do, which explains most of the pattern: especially high-scorers appear for the FPE, and somewhat for the API, which has received very intensive attention in certain countries. Surprisingly, however, the top scorers for the MNPI fall well below, despite the long-standing presence of maternal health components in most Ministries of Health, which might reasonably have produced some very high scorers.

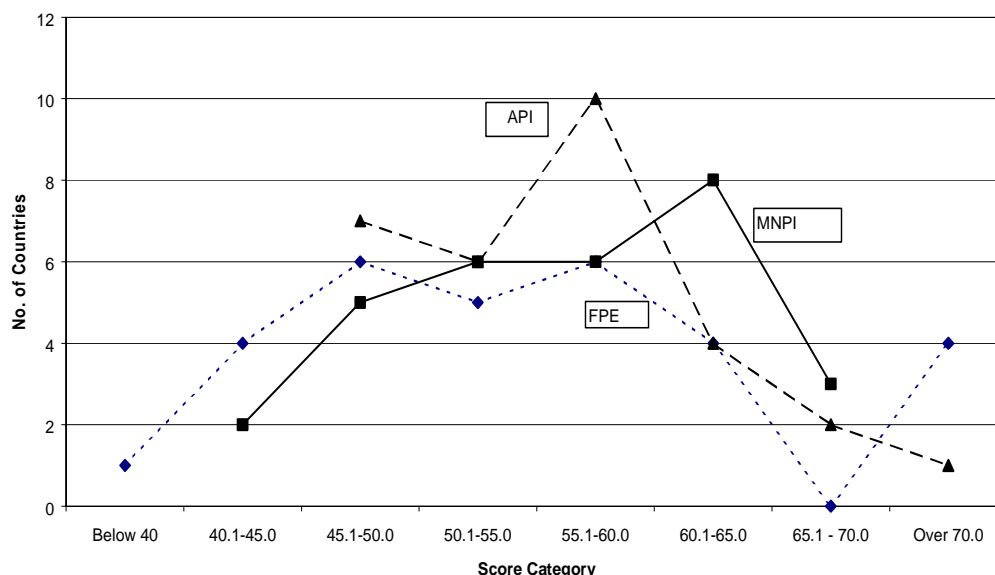
As **Figure 1** shows, most countries fall into the middle of the possible scores. The API scores are clustered somewhat more than the other two are, and the FPE distribution is broader, with a few more countries in the lowest categories. By region the averages do not differ much, with the single exception of the FPE score in Asia, which is considerably higher than the rest.

Total Scores by Region

	FPE	MNPI	API
Asia (6)	67.3	57.1	55.2
Latin America (9)	52.2	56.2	53.7
Anglophone SSA (11)	52.9	55.6	57.5
Francophone SSA (4)	54.9	57.5	59.4
All Countries	55.8	56.4	56.2

() No. of countries

Figure 1. Distributions of Total Scores for Three Programs



In more detail, how well do the three programs agree? Taking all three together, the diversity of effort is greatest in Asia (**Table 1**, column 5), where the average standard deviation across the three programs is a high 10.1, probably reflecting the greater stress historically there on family planning than on HIV/AIDS. In Latin America the diversity is less, at 7.0, and in the two African regions is only 4.9 and 5.2.

Looking at the two-way differences, the final columns use means based on the absolute differences, since one program may have either a higher or lower score than another. So a low mean indicates close agreement in the strength of the two programs being compared, and a large mean indicates poor agreement, or considerable diversity in either or both directions. The various two-way comparisons follow, with country examples, since the most relevant comparisons are within individual countries, where the context is the same.

The FPE and MNPI programs show greater diversity in Asia than elsewhere (12.3), less in Latin America (9.5), and least in the two African regions (6.5 and 7.3), where family planning has been especially merged into maternal health. In each region FPE is sometimes stronger and sometimes weaker than MNPI; however, overall 20 of the 30 comparisons favor the MNPI. Asia is different; there most countries favor family planning, Cambodia being the exception and the Philippines giving about equal attention to both.

The FPE and API programs differ markedly in Asia (18.8 mean) where FPE is dominant. However API is stronger in the Philippines, and in Cambodia, which has given considerable priority to combating HIV. In Latin America diversity averages only half of that in Asia (9.0), and there is very little difference between the two program strengths in five of the nine countries. However there are surprisingly large differences *within* each program: Brazil is a standout for API; it is nearly 30 points above the API in Nicaragua and El Salvador, while Mexico is exceptional for the FPE, nearly 40 points above Guatemala's FPE. For the MNPI, Peru is 24 points above Haiti. Finally, in the two African regions (6.8 and 8.2) nine of the 15 countries show close agreement between the two programs and the API clearly dominates in most of the others.

The MNPI and API programs show only moderate diversity on average. Fourteen of the 30 countries show close agreement and many of the others are within about 10 points. In Asia (8.1) two country differences are larger than that, but in Latin America (8.0) only one is, and in Africa (5.9 and 3.5) none are. In general the MNPI and API programs are about equally strong. The two all-country means are the same, and in half (16) of the 30 countries the MNPI is stronger and in half the API is stronger.

Looking at all three programs together, to see the extent of agreement among them, we may use the rule of agreement within five or ten points. In only three countries do all three scores lie within five points of each other, all in Anglophone Sub-Saharan

Table 2. Total Scores for Each of Three Programs, All Countries by Region

	FPE	MNPI	API	MEAN	ST DEV	MAX.	MIN.	RANGE	FPE-MNPI	FPE-API	MNPI-API
	TWO WAY DIFFERENCES										
ASIA											
Cambodia	45.8	51.9	57.0	51.6	5.6	57.0	45.8	11.2	(6.1)	(11.2)	(5.1)
China	86.1	67.0	50.5	67.9	17.8	86.1	50.5	35.6	19.2	35.6	16.5
Indonesia	82.2	60.8	47.6	63.5	17.5	82.2	47.6	34.6	21.4	34.6	13.1
Nepal	57.0	41.4	46.3	48.2	8.0	57.0	41.4	15.7	15.7	10.8	(4.9)
Philippines	56.5	56.9	65.4	59.6	5.0	65.4	56.5	8.8	(0.3)	(8.8)	(8.5)
Vietnam	76.0	64.8	64.5	68.4	6.6	76.0	64.5	11.5	11.2	11.5	0.3
Means	67.3	57.1	55.2	59.9	10.1	70.6	51.1	19.6	10.2	12.1	1.9
LATIN AMERICA											
Brazil	59.4	61.6	75.3	65.4	8.6	75.3	59.4	15.9	(2.2)	(15.9)	(13.7)
Dominican Republic	50.0	63.1	51.8	55.0	7.1	63.1	50.0	13.1	(13.1)	(1.8)	11.4
El Salvador	45.9	54.3	46.5	48.9	4.7	54.3	45.9	8.4	(8.4)	(0.6)	7.8
Guatemala	36.7	50.0	50.8	45.8	7.9	50.8	36.7	14.0	(13.2)	(14.0)	(0.8)
Haiti	51.4	42.1	49.3	47.6	4.9	51.4	42.1	9.3	9.3	2.1	(7.2)
Honduras	43.8	55.8	58.6	52.7	7.9	58.6	43.8	14.8	(12.0)	(14.8)	(2.8)
Mexico	74.6	59.1	48.5	60.7	13.1	74.6	48.5	26.1	15.6	26.1	10.6
Nicaragua	49.5	53.8	45.6	49.6	4.1	53.8	45.6	8.1	(4.3)	3.8	8.1
Peru	58.6	66.4	57.1	60.7	5.0	66.4	57.1	9.3	(7.8)	1.5	9.3
Means	52.2	56.2	53.7	54.0	7.0	60.9	47.7	13.2	(4.0)	(1.5)	2.5
ANGLOPHONE SSA											
Ethiopia	43.6	48.0	46.3	45.9	2.2	48.0	43.6	4.4	(4.4)	(2.7)	1.7
Ghana	63.5	66.7	58.8	63.0	4.0	66.7	58.8	7.9	(3.2)	4.7	7.9
Kenya	62.3	47.5	57.9	55.9	7.6	62.3	47.5	14.8	14.8	4.4	(10.4)
Malawi	50.3	64.1	67.3	60.5	9.0	67.3	50.3	17.0	(13.8)	(17.0)	(3.2)
Mozambique	42.7	51.5	60.6	51.6	9.0	60.6	42.7	18.0	(8.9)	(18.0)	(9.1)
Nigeria	45.1	48.6	57.9	50.5	6.6	57.9	45.1	12.8	(3.5)	(12.8)	(9.3)
South Africa	53.9	62.4	51.1	55.8	5.9	62.4	51.1	11.2	(8.5)	2.8	11.2
Tanzania	55.5	54.7	55.8	55.3	0.5	55.8	54.7	1.0	0.8	(0.3)	(1.0)
Uganda	53.7	58.5	59.9	57.4	3.2	59.9	53.7	6.2	(4.8)	(6.2)	(1.4)
Zambia	50.0	45.3	53.4	49.5	4.1	53.4	45.3	8.1	4.7	(3.4)	(8.1)
Zimbabwe	61.2	65.0	63.8	63.3	1.9	65.0	61.2	3.7	(3.7)	(2.5)	1.2
Means	52.9	55.6	57.5	55.3	4.9	59.9	50.4	9.6	(2.8)	(4.6)	(1.9)
FRANCOPHONE SSA											
Benin	44.7	56.4	59.8	53.6	7.9	59.8	44.7	15.0	(11.7)	(15.0)	(3.3)
Mali	58.3	63.6	59.1	60.3	2.8	63.6	58.3	5.3	(5.3)	(0.8)	4.5
Rwanda	62.1	52.6	54.6	56.4	5.0	62.1	52.6	9.5	9.5	7.5	(2.0)
Senegal	54.6	57.4	64.1	58.7	4.9	64.1	54.6	9.5	(2.8)	(9.5)	(6.7)
Means	54.9	57.5	59.4	57.3	5.2	62.4	52.6	9.8	(2.6)	(4.5)	(1.9)
Means, all	55.8	56.4	56.2	56.1	6.6	62.7	50.0	12.7	8.7*	10.0*	6.7*
Standard Dev.	11.8	7.4	7.3	6.4	4.0	9.0	6.7	7.9	10.4	13.8	8.1

*Mean of absolute differences

Africa (bold in **Table 1**, range column); however in 14 of the 30 countries all three scores lie within 10 points of each other, which suggests some commonality in effort.

Looking at the two-way comparisons, we note additional similarities. Scores that agree within 5 points are in bold in Table 1.

FPE and MNPI: Eleven countries have scores that agree within five points.

FPE and API: Surprisingly, 13 countries have scores that agree within five points. Seven of these are in Anglophone SSA, but none in Asia, where the FPE scores are high.

MNPI and API: Twelve countries have scores that agree within five points.

Thus in each of the two-way comparisons some 11-13 countries have close scores, but usually not the same countries from one comparison to another. This picture is one of many mixtures, again with countries tending to be special cases. Regionally, Asia shows the least agreement across programs, and Anglophone SSA shows the most. The other two regions fall between, in the extent of program agreement.

Note that the above results for diversity do not pertain to the levels at which they agree. Some agree well at lower levels and some at higher levels.

It must be stressed that special circumstances prevail in many countries. For example, Malawi is high on the API and MNPI but low on FPE, while Kenya is high on the FPE but low on the MNPI. In Francophone Sub-Saharan Africa, where the dominant pattern is for API effort to rank first and MNPI second or for the two to be close together, the Senegal API score is 10 points above its FPE score, while Rwanda reverses the pattern.

All this is to say that the rather similar regional averages must not be taken too seriously. While overall distributions are of some interest, the real focus should be within individual countries. The overall tendencies certainly exist, but to some extent each country is a special case. In addition, measurement error can never be discounted.

Sub-Saharan Africa Compared to Other Regions

How different is Sub-Saharan Africa (SSA) from the rest of the world? By region, the 30 countries fall conveniently into two groups, with 15 for Sub-Saharan Africa and 15 for the other countries in Latin America and Asia (Non-SSA). This division of halves strikes a rough balance between sample size and homogeneity, but the results must be regarded as quite approximate.

There are three two-way comparisons:

- For FPE and MNPI the relatively close overall correlation is preserved within each regional group: 0.43 for SSA and 0.55 for Non-SSA, with 0.49 for all countries.
- For FPE and API, the absence of a correlation generally persists: .025 for SSA and 0.16 for Non-SSA, with .0002 for all countries.
- For MNPI and API correlations are: 0.50 for SSA and 0.38 for Non-SSA, with 0.39 for all countries.

Thus, in general no marked differences appear to set off the SSA results from those of the other regions. Scattergrams (not shown) give greater detail but show no particular exceptions to this result.

The patterning of program components across countries is of some interest. That is, are countries similar in the *relative stress* they give to their program features? If so, the correlations among the four FPE components and with the total FPE score, for example, should be about equal and should be high. One program feature may have higher scores than another, but if it scores higher *consistently* across countries, that can make for a substantial correlation with another feature. For FPE in fact, the correlations are relatively high (**Appendix 2**); also, they are higher, and more similar to each other, for the Non-SSA countries than for the SSA countries. That suggests that the SSA efforts are uneven from one program feature to another – more so than the other countries, which appear to be more even-handed in their various efforts. This difference is plausible, since younger programs usually start with relatively few types of effort and add others as they go along.

The difference observed for FPE between the two regional groups is repeated in the API scores. It too shows stronger correlations in Non-SSA between the total score and six of the eight components than in the SSA group. In the case of the MNPI scores there is a standoff: the Non-SSA group has higher correlations between the total score and 5 of the 14 components.

In all three programs, bringing the low-effort features up to the levels of the others should produce better balanced activities and improve performance.

Changes in Scores According to Starting Levels

The question addressed here is whether greater improvement has occurred among countries starting at lower levels of effort than among those starting at higher levels. The former have more “room” for improvement than the others do. Also, countries at higher effort levels may have already run up against various limits and constraints. Indeed, a few are near ceiling levels (as with family planning) and may have already implemented whatever is feasible for them.

The data used are the total effort scores from all three programs, for each of two dates: 1994 and 1999 for FPE, 1996 and 1999 for MNPI, and 1998 and 2000 for API. Both dates were included in the same questionnaire in the MNPI study, and also in the API questionnaire; each respondent rated each item for the current date and also for the earlier date. However, the FPE information was collected in two entirely separate rounds.

For each of the three programs we asked whether those countries that showed poorer effort at the first date improved more than the better countries did. We divided the sample of countries in half as of the earlier date, to separate the lower and higher effort countries, and then noted how much each group improved over time.

The expectation of greater improvement by the lower-effort countries is confirmed in all three programs. For the FPE, the lower half of countries improved by 8 points, or 20%, while the better half (which were already high) fell slightly. For the MNPI the lower half improved by a full 14 points, vs. 10 points for the higher half. For the API the results matched those for the MNPI: 14 points and 10 points increase for the two groups. Overall, the low-effort countries are tending to catch up.

Earlier analyses for the FPE have already shown that the highest-effort countries in the full set of about 90 countries have been at the same elevated levels for many years, having plateaued at about 80-85% of maximum.⁴ So if that is par, the average performance of all countries looks better against that more realistic standard.

⁴ J. Ross and J. Stover. “The Family Planning Program Effort Index: 1999 Cycle.” *International Family Planning Perspectives* 27(3):119-129. Sept. 2001.

Change in Total Scores
by Top and Bottom Scoring Countries

	1994	1999	GAIN
FPE			
Bottom Half	42.1	50.4	8.3
Top Half	64.4	61.2	(3.2)
MNPI			
Bottom Half	37.0	51.2	14.2
Top Half	51.4	61.2	9.8
API			
Bottom Half	41.4	55.0	13.6
Top Half	54.4	64.0	9.6

Similarity of Component Scores

Each total score is made up of various components (**Appendix 1**), and we can explore how closely certain components agree in their effort levels. Two comparisons are of special interest: the high level *policies* of each program, and at the other extreme, the actual *access* of the population to services. **Table 2** gives the country scores for policy and for access, which are the basis of the correlations below.

Policy Agreement: First, regarding agreement for policies, one test uses the simple correlation (r value) between each pair of programs:

FPE/MNPI 0.44

FPE/API -0.003

MNPI/API 0.41

As with the total scores, family planning and maternal health policies parallel each other to some extent (whether they are both weak or both strong), and the same is true of maternal health and HIV/AIDS policies. But there is essentially no correspondence across these 30 countries in the strength of policies for family planning and HIV/AIDS.

Table 2. Scores for the Policy and Access Components, Three Programs

	Policy Component			Access Component		
	FPE	MNPI	API	FPE	MNPI	API
ASIA						
Cambodia	56.4	64.8	56.0	32.0	33.0	47.0
China	89.4	80.0	50.0	87.7	75.4	37.0
Indonesia	83.6	70.5	47.0	72.4	52.4	23.0
Nepal	61.1	60.7	48.0	48.9	16.9	15.0
Philippines	56.3	56.1	60.0	66.7	69.2	48.0
Vietnam	81.6	67.6	63.0	79.0	73.9	47.0
Means	71.4	66.6	54.0	64.5	53.4	36.2
LATIN AMERICA						
Brazil	50.0	62.3	70.0	100.0	64.1	73.0
Dominican Rep.	43.3	65.0	45.0	58.5	72.9	32.0
El Salvador	48.8	48.1	43.0	46.2	47.9	40.0
Guatemala	34.8	47.6	54.0	51.0	40.4	34.0
Haiti	58.9	44.5	53.0	51.0	31.6	28.0
Honduras	43.1	63.8	52.0	52.3	49.7	46.0
Mexico	79.0	47.5	46.0	90.4	66.1	40.0
Nicaragua	35.3	48.1	40.0	54.9	50.6	29.0
Peru	65.0	65.7	51.0	85.4	72.1	38.0
Means	50.9	54.7	50.4	65.5	55.0	40.0
ANGLOPHONE SSA						
Ethiopia	47.6	57.1	63.0	27.6	27.5	24.0
Ghana	68.0	85.4	65.0	58.0	56.6	23.0
Kenya	55.4	55.0	63.0	66.7	42.5	32.0
Malawi	57.3	76.1	71.0	22.6	53.9	48.0
Mozambique	49.4	69.3	63.0	40.1	42.2	39.0
Nigeria	46.6	56.6	62.0	38.2	40.4	28.0
South Africa	61.9	64.7	60.0	65.5	73.3	28.0
Tanzania	64.1	65.3	55.0	27.2	47.2	41.0
Uganda	61.6	68.7	66.0	33.5	40.3	31.0
Zambia	41.6	58.4	64.0	39.4	37.3	29.0
Zimbabwe	60.9	71.0	61.0	49.1	65.5	52.0
Means	55.8	66.2	63.0	42.5	47.9	34.1
FRANCOPHONE SSA						
Benin	46.3	66.1	51.0	30.4	48.9	34.0
Mali	55.2	73.8	64.0	30.8	42.4	37.0
Rwanda	77.0	67.9	59.0	43.6	44.3	37.0
Senegal	58.4	72.8	61.0	45.6	39.7	46.0
Means	59.2	70.1	58.8	37.6	43.8	38.5
Means, all	57.9	63.3	56.9	53.2	50.6	36.9

A more detailed comparison, for FPE and MNPI, uses four sub-items within the two Policy Components that are fairly comparable. The essential meanings are:

- Do high officials in the government speak out or issue favorable statements annually at least in support of the program?
- Is the program director placed at a high administrative level?
- Are multiple agencies in both the government and the private sector active in support of the program?
- Does the program actively use the mass media to educate the public?

While there is a positive correspondence between the MNPI and the FPE efforts for each of these four Policy topics the relations are rather weak. That is, countries that exert strong policy effort on the MNPI do not necessarily do so on the FPE, and vice versa. Similarly, those that are weak on one are not necessarily weak on the other. The correlation coefficients (r values) for the four topics, respectively, are 0.29, 0.23, 0.40, and 0.31. These coefficients are only modest, and suggest that for these four items, policies for maternal health and family planning are not closely coordinated in most countries.

Regarding the third topic above, for the use of multiple agencies in both the government and the private sector to support the program, the actual FPE scores are far higher than the MNPI ones, perhaps because national family planning programs tend to spread out into various helping ministries and NGOs, more than the ministries of health efforts do.

Further, concerning the scores themselves for the Policy component, **Table 2 and Figure 2** provide the comparisons. Asia shows the expected rank order, with family planning highest, then MNPI, and then API. In the other regions MNPI comes first. African policy positions compete well, being somewhat above those in Latin America.

Access Agreement. However, the access picture is quite different. “Access” is conceptualized as the proportion of the whole population for whom basic services are readily available. For family planning this pertains to the availability of five contraceptive methods and safe abortion. For maternal health it pertains to such services as postpartum hemorrhage at the time of delivery, the management of obstructed labor, treatment of abortion complications, and postpartum family planning services. For HIV/AIDS it pertains for example to condom supplies, STI treatment, safe blood supplies, and needle exchange programs for drug users.

Access for both FPE and MNPI is a good deal better in Asia and Latin America than in Africa (**Figure 3**). However API access follows a uniformly low level in all regions. Given the difficult circumstances in the African countries, it is important to notice that API does best there *relative to* the other two programs.

Access to most services is far poorer in rural areas than in urban ones, as **Figure 4** shows for the API. The capital cities are far ahead of the other urban and rural areas, and

the large rural populations weigh down the total scores. Similar differences exist for access to the MNPI services just mentioned: rural access is far worse than urban access.

Figure 2. Policy Component Scores, by Program and Region

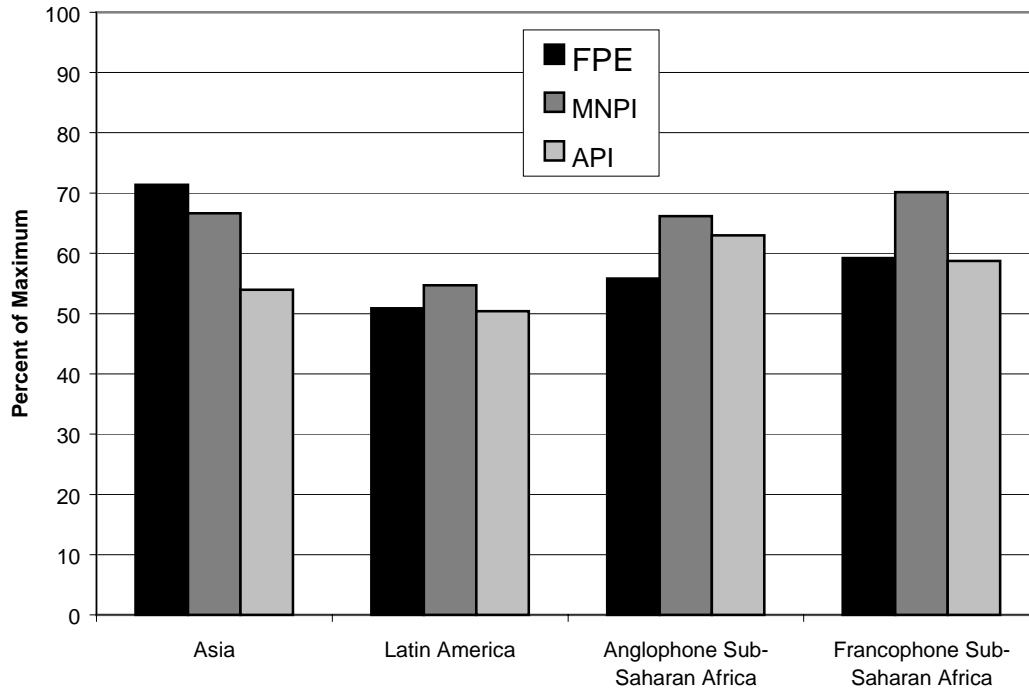
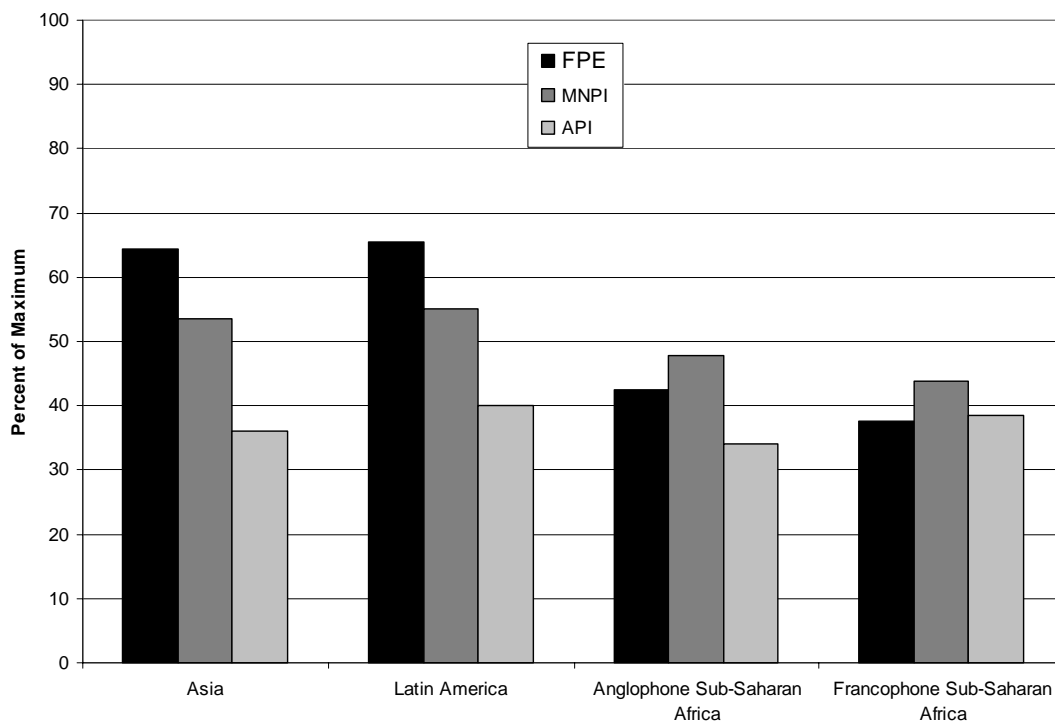


Figure 3. Access Component Scores, by Program and Region

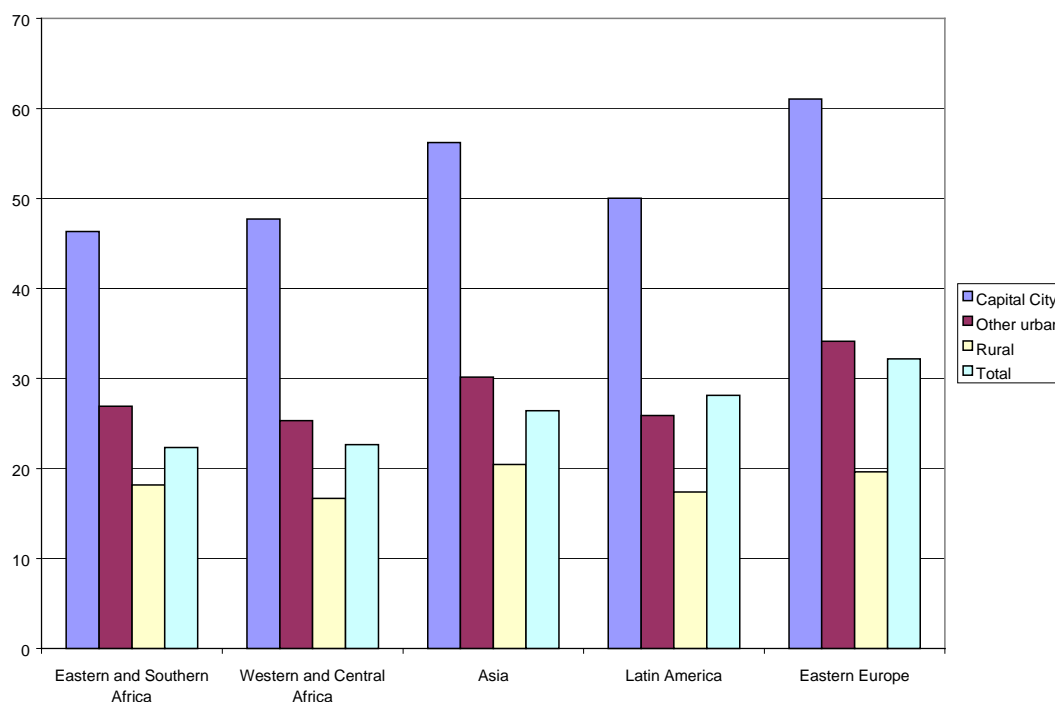


Access correlations in the matrix just below are appreciable for the FPE/MNPI comparison, and, interestingly, even for the FPE/API comparison (contrary to the near-zero relation for the total scores). Another unexpected result is that the MNPI and API do not correlate well on access, especially in rural areas. Generally, the infrastructures overlap that support family planning and maternal health, so those correlations are reasonable, and one would expect more overlap for HIV services with maternal health services, so the patterns for HIV services are puzzling.

Correlations for Access to Services for Three Programs

	FPE Access	MNPI Rural Access	MNPI Urban Access	MNPI Overall Access	API Access
FPE Access	1.00				
MNPI Rural Access	0.49	1.00			
MNPI Urban Access	0.47	0.82	1.00		
MNPI Overall Access	0.66	0.91	0.86	1.00	
API Access	0.41	0.18	0.28	0.32	1.00

Figure 4. Access to HIV/AIDS Services by Location and Region



(Regions are defined as in the source: “Measuring the level of effort in the national and international response to HIV/AIDS: The AIDS Program Effort Index (API).” Prepared by UNAIDS and the Futures Group POLICY Project, February 2001.

OTHER COMPONENT COMPARISONS

The above sections compare the three programs on the components of Policy and Access. We now turn to other comparisons. While there are too many components in all three programs to do an exhaustive set of comparisons, summary comments are possible on selected topics. These are drawn from patterns in the various matrices in **Appendix 3**.

(At a more detailed level, **Appendix 4** provides comparisons like these separately for Sub-Sahara vs. the other regions; however sampling error is greater both because of the smaller groups of countries and because the focus is on individual components rather than the total scores.)

The following comments are organized as above, using the three possible two-way comparisons: first for FPE/MNPI, then for FPE/API, and finally for MNPI/API.

FPE and MNPI

The highest correlations among the three programs occur between certain components of the FPE and MNPI. The total scores correlated at 0.49, and the two policy components correlated at 0.44, but some component combinations are at .60 or more.

Certain component scores in the FPE series and in the MNPI series tend to measure similar things, and higher correlations appear in those cases. For example, the correlations are relatively high between the FPE and the MNPI score for family planning services at the district level. These correlations (r values) between the MNPI score mentioned and the FPE scores are as follows, suggesting that countries that provide the district level services of family planning postpartum and postabortion, and IUD and sterilization services, also do well in the separate family planning study.

Correlations between family planning services at the district level (MNPI) and FPE scores:

	r values
FPE Total Score	0.75
FPE Policy Component	0.60
FPE Services Component	0.58
FPE Evaluation Component	0.63
FPE Availability Component	0.59

These figures are lower however for family planning in the more rural health centers – only 0.42 with the FPE total score and from 0.26 to 0.44 with the four FPE components. Thus the two programs correspond better in cities than in rural areas.

This works the other way however when FPE is correlated to access to maternal services for the rural and urban populations. (Note the distinction between population access to services here, vs. hospital traits above. Hospitals may be good, but so few that access to them is poor.) The FPE-rural correlations then run higher than the FPE-urban

correlations. For the FPE total score the two figures are 0.57 and 0.48 respectively, and the four FPE-rural access figures are each above those for the FPE-urban access ones.

The correspondence is also relatively good between the MNPI component for rural access to maternal services and the various FPE scores, though somewhat less so for urban access. The other FPE/ MNPI correlations are at indifferent levels, except that MNPI Policy and IEC components correlate fairly well with the FPE total score (0.37-0.42) and with the first three FPE components (not the Availability component).

Overall, this is a picture of a fair amount of agreement between MNPI effort and FPE effort, but mainly where services are concerned. It is a good sign that the actual availability of family planning services (FPE Availability) is related to rural and urban access to maternal services, and to MNPI family planning provision in district hospitals.

FPE and API

Briefly, the overriding pattern for the API and FPE components is the absence of relationships. The correlation for the two total scores was 0.00, and the correlations are not far from zero for most combinations of any FPE component with any API component. Most coefficients take trivial or negative values. There are however a few modest exceptions: the correlations are higher between the FPE Availability component and the API components for Resources, Care, and Evaluation. These are plausible, since countries with fairly strong resources, evaluation, and clinical capacities for AIDS treatment are also those that are able to implement contraceptive availability to the general population.

MNPI and API

As the total scores (above) showed, these two programs overlap somewhat, with a correlation of 0.39. There are too many correlations to discuss individually, but certain patterns emerge. First, it is reassuring that the highest correlations exist between the MNPI Policy component and the two API policy components (Political Support and Policy Formulation) (0.41 and 0.54). MNPI Policy also tends to agree with API Prevention Programs, as well as the other API components, except for Care Programs.

API's Organizational Structure correlates with MNPI's Delivery Services, which is plausible since the infrastructures overlap. API's Program Resources correlates with MNPI's Resources, but equally well (0.47) with MNPI's use of the media, which is less plausible and reminds us that there are fortuitous connections throughout that can raise or lower the figures. API's Prevention Programs correlates with MNPI's Access to Rural Services (0.40), less well with MNPI's urban services (0.27); this is reversed for the API's Care Programs, where the figures are 0.29 and 0.41 respectively. API's Prevention and Care Programs both correlate at 0.46 with MNPI Delivery Services.

The API Legal and Regulatory component bears nearly no connection to any of the MNPI components, except for Antenatal Services and for Policy, both at 0.33.

Finally, the Evaluation/Monitoring Components of the two programs correlate at 0.42, not surprising. Oddly, the figure is 0.56 for API Evaluation and MNPI Delivery Services, and is in the 0.40's for three other MNPI components. Otherwise, looking at MNPI Evaluation, the relationship is noticeable only with API Care Programs, at 0.40, not particularly plausible. It may be that those programs that have the leadership, analytic approach, and resources to pay attention to monitoring and research are also those that do well in actual services.

CONCLUSIONS

1. National programs for family planning, maternal health, and HIV/AIDS run parallel only to a degree. On average, across these 30 countries, they are about equally strong, at a little better than half of maximum effort. Even the regional averages are close (except that Asia stands out for family planning). In 14 countries the three scores lie within 10 points of each other. In each of the two-way comparisons of the programs, about 12 countries are within five points (though not the same countries in each comparison).
2. However larger differences also exist, and the averages conceal sharp disparities in some countries, which become sharper as one moves from total scores to component scores and on to particular program features. The picture is a mixed one, requiring attention to each country as a special case for management purposes.
3. There is a zero correlation across these countries in the strength of the family planning program and the strength of the HIV/AIDS program. However the other two-way comparisons show an appreciable correspondence, i.e. between the maternal health program and each of the other two programs. A high correlation does not mean that both programs are strong in each country, only that where one is stronger the other tends to be also, and where one is weaker the other tends to be also.
4. Over time, the weaker programs have improved more than the stronger ones, and this is true for all three programs. Countries with weaker programs are tending to catch up, to an extent.
5. The Sub-Saharan countries, compared to other countries, show no particular differences in the extent to which the three programs parallel each other.
6. The policy scores for the three programs do not vary greatly by region (Asia excepted); suggesting the relative ease with which favorable policies can be issued.
7. However, actual access to services by the broad mass of the population varies greatly by both region and program. In Asia and Latin America family planning programs, and secondarily maternal health programs show better access, with HIV/AIDS efforts well below them, at a level that is nearly the same in all regions.

In the African regions the three programs are of roughly equal strength, so that HIV/AIDS competes better there against the others.

8. Rural access falls seriously below urban access for all three efforts: HIV/AIDS, maternal health, and family planning, documenting the inability of large populations to obtain services, including basic supplies and emergency treatment.

APPENDIX 1. THE COMPONENTS FOR THE THREE INDICES**Family Planning Effort (FPE)**

1. Policy
2. Services
3. Evaluation/Record Keeping
4. Availability of Methods

Maternal and Neonatal Health Program Effort Index (MNPI)

1. Health Center Capacities
2. District Hospital Capacities
3. Percentage with Access to Care
4. Antenatal Services
5. Delivery Services
6. Newborn Services
7. FP at Health Centers
8. FP at District Hospitals
9. Policies toward safe pregnancy
10. Resources & Private Sector
11. Information, education
12. Training arrangements
13. Monitoring, evaluation

AIDS Program Effort Index (API)

1. Political support
2. Policy formulation
3. Organizational structure
4. Program resources
5. Monitoring & Research
6. Legal and regulatory
7. Prevention programs
8. Care programs

APPENDIX 2. CORRELATION MATRIX FOR EACH PROGRAM

CORRELATION MATRIX FOR THE FPE COMPONENTS

	FPE TOTAL	Policy	Services	Evaluation/ Record Keeping	Method Avail- ability
FPE TOTAL	1.00				
Policy	0.89	1.00			
Services	0.86	0.74	1.00		
Evaluation/Record Keeping	0.78	0.63	0.68	1.00	
Method Availability	0.64	0.43	0.23	0.39	1.00

CORRELATION MATRIX FOR THE MNPI COMPONENTS, IN TWO PARTS

	Capacities of MNPI TOTAL	Capacities of health centers	Capacities of district hospitals	Percent with rural access	Percent with urban access	Care at antenatal visits	Care at delivery	Care for newborns
MNPI TOTAL	1							
Capacities of health centers	0.67	1						
Capacities of district hospitals	0.61	0.62	1					
Percent with rural access	0.78	0.24	0.42	1				
Percent with urban access	0.83	0.35	0.25	0.82	1			
Care at antenatal visits	0.66	0.7	0.61	0.33	0.41	1		
Care at delivery	0.88	0.62	0.49	0.65	0.72	0.65	1	
Care for newborns	0.82	0.57	0.46	0.62	0.7	0.68	0.83	1
Family planning at health centers	0.7	0.59	0.54	0.48	0.43	0.46	0.64	0.54
Family planning at district hospitals	0.66	0.35	0.54	0.56	0.53	0.24	0.55	0.47
Policies toward safe pregnancy	0.64	0.5	0.35	0.42	0.43	0.26	0.52	0.37
Resources	0.46	0.22	0.3	0.36	0.32	0.45	0.32	0.36
IEC	0.54	0.08	0	0.44	0.52	0.04	0.41	0.26
Training	0.81	0.48	0.37	0.59	0.77	0.58	0.69	0.69
Monitor, Evaluation	0.79	0.45	0.24	0.54	0.77	0.41	0.69	0.68

MNPI MATRIX, CONTINUED

	Family planning at health centers	Family planning at district hospitals	Policies toward safe pregnancy	Resources	IEC	Training
Family planning at health centers	1					
Family planning at district hospitals	0.79	1				
Policies toward safe pregnancy	0.4	0.31	1			
Resources	0.1	0.06	0.18	1		
IEC	0.12	0.24	0.59	0.35	1	
Training	0.45	0.46	0.32	0.4	0.43	1
Monitor, evaluation	0.41	0.38	0.63	0.22	0.6	0.77

CORRELATION MATRIX FOR THE API COMPONENTS

	API TOTAL	Political support	Policy form- ulation	Organiza- tional structure	Program resources	Monitoring &Research	Legal and regulatory	Prevent- ion programs	Care programs
API TOTAL	1								
Political support	0.72	1							
Policy formulation	0.86	0.69	1						
Organizational structure	0.88	0.68	0.82	1					
Program resources	0.88	0.6	0.63	0.72	1				
Monitoring & Research	0.76	0.24	0.56	0.58	0.77	1			
Legal and regulatory	0.66	0.59	0.6	0.63	0.43	0.3	1		
Prevention programs	0.88	0.58	0.75	0.67	0.7	0.64	0.59	1	
Care programs	0.75	0.33	0.51	0.54	0.7	0.67	0.22	0.68	1

APPENDIX 3. CORRELATION MATRIX FOR ALL COMPONENTS, ALL THREE PROGRAMS (IN 3 PARTS BELOW).

	API TOTAL	Political support	Policy formulation	Organiza- tional structure	Program resources	Monitoring & Research	Legal and regulatory	Prevention programs	Care programs
API TOTAL	1.00								
Political support	0.72	1.00							
Policy formulation	0.86	0.69	1.00						
Organiza-tional structure	0.88	0.68	0.82	1.00					
Program resources	0.88	0.60	0.63	0.72	1.00				
Monitoring & Research	0.76	0.24	0.56	0.58	0.77	1.00			
Legal and regulatory	0.66	0.59	0.60	0.63	0.43	0.30	1.00		
Prevention programs	0.88	0.58	0.75	0.67	0.70	0.64	0.59	1.00	
Care programs	0.75	0.33	0.51	0.54	0.70	0.67	0.22	0.68	1.00
FPE TOTAL	(0.00)	(0.08)	(0.04)	(0.06)	0.08	0.02	(0.21)	0.21	0.04
Policy	(0.01)	(0.00)	(0.10)	(0.07)	0.09	(0.02)	(0.17)	0.19	(0.00)
Services	(0.07)	(0.01)	0.01	(0.10)	(0.10)	(0.13)	(0.10)	0.16	(0.12)
Evaluation/Record Keeping	0.13	0.04	0.19	0.10	0.10	0.09	(0.05)	0.34	0.06
Method Availability	0.06	(0.21)	(0.10)	(0.01)	0.25	0.24	(0.30)	0.10	0.26
MNPI TOTAL	0.39	0.11	0.40	0.26	0.32	0.47	0.07	0.43	0.39
Capacities of health centers	0.12	0.02	0.28	0.16	(0.02)	0.10	0.04	0.09	0.11
Capacities of district hosp.	0.12	0.07	0.13	0.03	0.01	0.09	0.11	0.25	0.11
Percent with rural access	0.30	0.07	0.22	0.22	0.27	0.36	0.01	0.40	0.29
Percent with urban access	0.25	(0.01)	0.16	0.12	0.26	0.40	(0.13)	0.27	0.41
Care at antenatal visits	0.30	0.04	0.30	0.24	0.10	0.31	0.32	0.27	0.29
Care at delivery	0.47	0.08	0.50	0.41	0.32	0.56	0.11	0.46	0.46
Care for newborns	0.33	(0.10)	0.37	0.27	0.19	0.43	0.06	0.35	0.44
FP at health centers	0.19	0.07	0.31	0.17	0.06	0.22	0.02	0.26	0.09
FP at district hospitals	0.13	(0.08)	0.09	0.04	0.16	0.27	(0.16)	0.28	0.18
Policies toward safe preg	0.43	0.41	0.54	0.32	0.35	0.33	0.33	0.46	0.11
Resources	0.37	0.25	0.21	0.32	0.46	0.39	0.19	0.23	0.30
IEC	0.43	0.30	0.36	0.27	0.47	0.42	0.15	0.39	0.33
Training	0.15	(0.18)	0.13	(0.01)	0.19	0.36	(0.19)	0.14	0.38
Monitor, evaluation	0.34	0.07	0.38	0.09	0.33	0.42	0.02	0.38	0.40

	FPE TOTAL	Policy	Services	Evaluation/ Record Keeping	Method Availability	MNPI TOTAL	Capacities of health centers	Capacities of district hospitals	Percent with rural access	Percent with urban access
FPE TOTAL	1.00									
Policy	0.89	1.00								
Services	0.86	0.74	1.00							
Evaluation/Record Keeping	0.78	0.63	0.68	1.00						
Method Availability	0.64	0.43	0.23	0.39	1.00					
MNPI TOTAL	0.49	0.43	0.36	0.41	0.39	1.00				
Capacities of health centers	0.11	0.13	0.06	0.11	0.06	0.67	1.00			
Capacities of district hospitals	0.35	0.26	0.32	0.23	0.27	0.61	0.62	1.00		
Percent with rural access	0.57	0.53	0.41	0.32	0.49	0.78	0.24	0.42	1.00	
Percent with urban access	0.48	0.45	0.29	0.29	0.47	0.83	0.35	0.25	0.82	1.00
Care at antenatal visits	(0.08)	(0.13)	(0.14)	(0.00)	0.08	0.66	0.70	0.61	0.33	0.41
Care at delivery	0.36	0.23	0.26	0.35	0.34	0.88	0.62	0.49	0.65	0.72
Care for newborns	0.26	0.11	0.11	0.37	0.38	0.82	0.57	0.46	0.62	0.70
FP at health centers	0.42	0.26	0.37	0.44	0.32	0.70	0.59	0.54	0.48	0.43
FP at district hospitals	0.75	0.60	0.58	0.63	0.59	0.66	0.35	0.54	0.56	0.53
Policies toward safe preg	0.37	0.44	0.44	0.39	(0.07)	0.64	0.50	0.35	0.42	0.43
Resources	(0.03)	0.01	(0.22)	(0.07)	0.22	0.46	0.22	0.30	0.36	0.32
IEC	0.42	0.50	0.46	0.37	0.03	0.54	0.08	(0.00)	0.44	0.52
Training	0.32	0.29	0.15	0.22	0.37	0.81	0.48	0.37	0.59	0.77
Monitor, evaluation	0.33	0.29	0.26	0.37	0.22	0.79	0.45	0.24	0.54	0.77

	Care at antenatal visits	Care at delivery	Care for newborns	Family planning at health centers	Family planning at district hospitals	Policies toward safe pregnancy	Resources	IEC	Training	Monitor evaluati
Care at antenatal visits	1.00									
Care at delivery	0.65	1.00								
Care for newborns	0.68	0.83	1.00							
Family planning at health centers	0.46	0.64	0.54	1.00						
Family planning at district hospitals	0.24	0.55	0.47	0.79	1.00					
Policies toward safe pregnancy	0.26	0.52	0.37	0.40	0.31	1.00				
Resources	0.45	0.32	0.36	0.10	0.06	0.18	1.00			
IEC	0.04	0.41	0.26	0.12	0.24	0.59	0.35	1.00		
Training	0.58	0.69	0.69	0.45	0.46	0.32	0.40	0.43	1.00	
Monitor, evaluation	0.41	0.69	0.68	0.41	0.38	0.63	0.22	0.60	0.77	1

APPENDIX 4. SEPARATE COMPONENT COMPARISONS FOR SUB-SAHARAN AFRICA AND OTHER REGIONS.

Note that none of the correlations below say whether scores of any type are high or low in one region or another; the correlations only indicate how well one score tracks with another across the countries. Also with only 15 countries in each group, randomness and measurement error play larger roles.

SSA: Sub-Saharan Africa: 15 countries

Non-SSA: The 15 countries in Latin America and Asia.

FPE and MNPI

Total-Total Correlation: Non-SSA: 0.55 SSA: 0.43

The FPE Total correlations with 5 of the 14 MNPI components are substantial in both regions in a plausible pattern: for district hospital capacity, for rural and urban access to maternity services by most women, for family planning services at district hospitals, and for general policy support. The regions disagree however in other respects: In SSA, but not in Non-SSA, the FPE total score correlates well with newborn care and training, but the Non-SSA correlations are better for delivery care and family planning services in health centers.

The interesting correlations among the 4 FPE and 14 MNPI components concern first, the closeness of 3 of the 4 FPE components with the MNPI item for maternity care capacities of the district hospitals, and especially so in the Non-SSA group (in SSA the correlations for health center capacity are less impressive). Rural and Urban MNPI Access also correlate well with the FPE components, though less well with FPE Services in SSA.

FPE and API

Total-Total Correlation: Non-SSA: 0.03 SSA: 0.16

The FPE Total correlations with 7 of the 8 API components are very low in both regions; the exception is with the “Prevention Programs” component: Non-SSA 0.25, SSA 0.39. This is reasonable since the “Prevention” component contains items reflecting logistics capacity, condom distribution, mass media use, and field capacities.

Most correlations among the 4 FPE components and the 14 API components are low and show no particular pattern, in either regional group. However, an exception is that in the Non-SSA group the FPE Availability component shows substantial correlations with 7 of the 8 API components (six in the range of 0.35 to 0.42, and another at 0.58). Since FPE method availability to the general population is the acid test of program capacity, this implies that a strong infrastructure for family planning does carry over to strengthen API work. The puzzle is that that SSA shows no such relationships – its comparable correlations are nearly zero or actually negative.

MNPI and API

Total-Total Correlation: Non-SSA: 0.38 SSA: 0.50

MNPI tracks with API much more closely than FPE does. In both regional groups the MNPI Total Score correlates at about 0.35 to 0.45 with several of the API components.

For unclear reasons, the MNPI component for Resources correlates very highly with all eight API components, at 0.58 to 0.70, in Non-SSA, while this is decidedly not true in SSA, where the r values are very low indeed. This is reversed for the API Legal and Regulatory component, which correlates well with half of the MNPI components in SSA but poorly with most of them in Non-SSA.

Other patterns among the two sets of components show frequent values in the 30s and 40s but without the strong patterns just mentioned.