The Family Planning Program Effort Index: 1999 Cycle

By John Ross and John Stover

Context: *Indices of effort by large-scale family planning programs have been measured periodically since 1972. These scores are intended to capture program effort or strength, independent of outputs such as contraceptive use or fertility change.*

Methods: *Questionnaires were sent to expert observers who provided judgments on the details of program effort for 89 developing countries. The responses for each country were converted to scores for 30 program features, which were then grouped into four components of program effort. An overall program effort index was calculated as the sum of all 30 feature scores.*

Results: *The average program effort index was higher in 1999 (54% of the maximum possible score) than in 1994 (48% of maximum). Countries with low scores in 1972 improved considerably more than those with initially high scores; by 1999, the gap between these two groups was small. On average, strong and weak programs differed sharply in their score profiles; strong countries outscored weak ones in every feature category. All countries, regardless of their average score, were selective in the program features they emphasized, but weak programs were more erratic in their selectivity. The strongest programs have stabilized at about 80% of the maximum score. Prevalence of contraceptive use continued to be highest for countries possessing both favorable social settings and strong programs.*

Conclusions: *Many developing countries have expanded their reproductive health programs in accordance with recommendations issued by the 1994 International Conference on Population and Development. The improved program effort index and scores for 1999 suggest that countries have been able to do so without seriously weakening their family planning efforts.*

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The Family Planning Program Effort Index was begun around 1970, when many developing countries had established large-scale programs to reduce fertility or to extend contraceptive services and information for other reasons. Some of these programs existed in name only, while others were fully operational, covering a large proportion of the population in their respective countries.

In response to a growing belief that standard measures were needed to quantify the nature and strength of these efforts, Robert Lapham and W. Parker Mauldin[1] assembled data on the programs and used a simple scale to rate them; they then created a set of indices to describe the types of program efforts and monitor change over time. Using data from a variety of countries, they were able to correlate these program inputs with outcomes such as contraceptive use and fertility change. Other researchers also used the indices for extensive analyses of program inputs and outcomes.[2]

Around 1980, Lapham and Mauldin developed the precursor of the current questionnaire. They identified a wide variety of program characteristics and included approximately 125 items in the questionnaire. In 1982, they sent the questionnaire to recipients in 93 countries,* whose responses were coded and combined to create a final set of 30 scores. The conversion rules for score creation and all other aspects of the methodology have since remained consistent, to maintain the accuracy of time trends.† The 30 scores were further organized into four groups or components: policy and stage-setting activities; service and service-related activities; evaluation and recordkeeping; and availability of fertility control methods. Lapham and Mauldin published the results,[3] relating the scores to contraceptive prevalence and fertility. Three more cycles of the questionnaire were conducted in 1989, 1994 and 1999, so that estimates are now available from five cycles over a 27-year period.

The index measures 30 features of program effort, each of which is meant to capture inputs independent of outputs such as contraceptive use or fertility change. This permits an examination of the relationship between effort and outcomes, while taking into account the levels and the 30 types of effort. The scores are also useful for diagnosing program weaknesses and detecting improvement over time. Two countries, Vietnam[4] and Egypt,[5] have adapted the scores to gauge provincial differences in effort and to provide suggestions for administrative changes.

Earlier reports have summarized the extensive historical literature on this index since 1974;[6] here we discuss only research that has appeared in the last 5–8 years. The scores have been used extensively to examine how program effort interacts with socioeconomic setting to increase contraceptive use and lower fertility. The vast majority of that work has been cross-sectional and has examined how much fertility decline has been due to effective family planning programs and to favorable socioeconomic conditions. However, the accumulation of score cycles over the decades has made it possible to do time-series analyses,[7] which have found an appreciable program effect on fertility after controls for numerous social and economic factors were introduced. These studies also reviewed much of the technical literature regarding such calculations.[8] Several methods have been employed repeatedly over the years.[9]

It has been argued that fertility change has been driven by shifts in desired family size rather than by the efforts of family planning programs.[10] However an exploration of program effects upon fertility found that much of the disagreement concerning program effects disappeared when countries' scores were weighted by their respective population sizes (in which case the higher scores for some large coun-

*Of 630 questionnaires sent in 1982, 427 were returned.

†An exception is that in the 1999 cycle, the budget item was reduced to a single question that asked for the respondent's estimate of the proportions of program funding from donor and local sources, respectively. Prior to 1999, the estimates came from a complex table asking for funding amounts in highly detailed categories.

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Table 1. Family planning program effort scores as percentage of maximum possible score, by component, according to region and country, 1999

Region/country	Total	Policy	Services	Evaluation	Method availability
Grand average	**54**	**55**	**51**	**57**	**55**
East Asia	**64**	**60**	**57**	**64**	**86**
China	86	89	87	70	88
Korea, Rep. of	55	45	39	63	97
Mongolia	38	31	35	26	58
Taiwan	79	74	67	96	100
South/Southeast Asia	**60**	**62**	**58**	**60**	**63**
Bangladesh	74	70	75	72	81
Cambodia	46	56	45	50	32
Hong Kong	57	63	41	32	100
India	65	72	58	60	72
Indonesia	82	84	86	81	72
Laos	39	51	41	36	18
Malaysia	69	72	61	86	72
Myanmar	37	34	38	59	27
Nepal	57	61	56	67	49
Pakistan	57	59	57	52	57
Philippines	57	56	50	66	67
Singapore	44	41	44	29	54
Sri Lanka	69	67	71	49	76
Thailand	75	61	72	95	89
Vietnam	76	82	74	66	79
North Africa and Middle East	**58**	**61**	**54**	**66**	**61**
Algeria	64	81	55	65	60
Egypt	57	63	58	60	46
Iran	71	70	62	68	94
Jordan	47	47	45	53	48
Lebanon	60	49	63	74	61
Morocco	57	57	51	76	61
Oman	53	41	45	59	81
Syria	66	52	74	88	56
Tunisia	71	80	71	88	52
Turkey	59	71	44	61	76
Yemen	37	56	27	33	36
Anglophone Africa	**54**	**57**	**53**	**59**	**47**
Ethiopia	44	48	49	43	28
Ghana	63	68	61	72	58
Kenya	62	55	64	63	67
Lesotho	62	62	58	77	61
Malawi	50	57	58	53	23
Mauritius	71	67	67	91	75
Mozambique	43	49	37	52	40
Namibia	54	66	30	63	84
Nigeria	45	47	49	38	38
South Africa	54	62	45	46	65
Sudan	35	41	40	39	12
Tanzania	55	64	65	46	27
Uganda	54	62	57	60	34
Zambia	50	42	57	62	39
Zimbabwe	61	61	63	79	49
Francophone Africa	**49**	**55**	**52**	**57**	**29**
Benin	45	46	48	54	30
Burkina Faso	54	58	59	60	33
Cameroon	44	53	52	54	10
Central African Rep	50	66	57	50	13
Chad	43	67	44	52	4
Congo	35	56	26	29	27
Côte d'Ivoire	50	56	52	71	27
Gabon	35	27	37	40	40
Guinea	60	61	64	63	48
Madagascar	42	44	48	44	26
Mali	58	55	70	73	31
Mauritania	37	35	39	55	25
Niger	47	59	50	61	16
Rwanda	62	77	60	66	44
Senegal	55	58	54	64	46
Togo	63	64	67	75	45
Latin America and the Caribbean	**50**	**48**	**44**	**51**	**65**
Argentina	30	33	21	36	40
Bolivia	49	46	44	45	64
Brazil	59	50	46	59	100
Chile	61	50	56	60	86
Colombia	64	44	66	78	80
Costa Rica	32	38	21	19	57
Dominican Republic	50	43	52	44	58
Ecuador	46	47	43	47	50
El Salvador	46	49	45	41	46
Guatemala	37	35	32	35	51
Guyana	46	42	44	56	51
Haiti	51	59	50	39	51
Honduras	44	43	41	40	52
Jamaica	62	71	59	63	58
Mexico	75	79	62	84	90
Nicaragua	49	35	53	60	55
Panama	49	61	34	60	61
Paraguay	56	56	43	59	81
Peru	59	65	42	60	85
Puerto Rico	62	49	53	66	97
Trinidad & Tobago	59	55	59	62	63
Uruguay	34	22	30	54	47
Venezuela	29	32	12	13	71
Central Asian Republics	**52**	**51**	**48**	**53**	**60**
Kazakhstan	42	36	42	38	51
Kyrgyzstan	49	45	43	54	64
Tajikistan	54	58	48	68	55
Turkmenistan	59	49	59	65	68
Uzbekistan	55	69	48	41	60

tries raised the means).[11] Furthermore, some program effects that had seemed modest and had not been expected to improve further after 1982 actually improved substantially, from an average score of 29% of the maximum to a score of 54%.

In recent years, program effort strength has continued to increase beyond the levels observed in earlier analyses,[12] especially in countries where modernization has lagged. As a result, many analysts have shifted their attention away from confirming the existence of a program effect and toward examining the ways in which programs make their contributions and how those can be enhanced.

Also notable are the numerous documents that were published as part of the six-year EVALUATION Project. This body of work examined much of the research literature concerning program evaluation and made innovative use of the program effort index and scores; it included a major review of findings on how selected family planning programs have worked,[13] an inquiry into methods used by programs to increase contraceptive use[14] and a review of what programs do to reduce fertility rates.[15]

In another study, researchers used international data to create two scales, based partly upon the program effort scores, to estimate for most developing countries the sustainability of national family planning programs and of the fertility transition.[16] A wall chart containing tabular data for monitoring national family planning programs was also published in collaboration with the Population Reference Bureau; it displayed selected effort scores, along with numbers of facilities and personnel, ratios of staff to population, service types and per capita funding levels.[17]

In this article, we present the most recent data on family planning program effort, collected during 1999 from 374 informants in 89 countries. We examine regional patterns in program effort, contrast the stronger programs with the weaker ones and present time trends in various measures of program effort. Finally, we briefly analyze how levels of socioeconomic development and program effort are interrelated.

Methodology

In the 1999 assessment, the detailed questionnaire, printed in English, French, Spanish and Russian, was sent as in previous cycles to four types of expert respondents:

- government officials directly involved in the implementation of the program;
- donor personnel close to the program in agencies such as the United Nations Population Fund (UNFPA), the World Bank, the U.S. Agency for International Development (USAID) and various nongovernmental organizations, including some International Planned Parenthood Federation affiliates;
- citizens in the various countries who were familiar with the program but were not involved in policy or management; and
- foreigners who were closely familiar with the program.

The respondents did not know what items produced which of the 30 scores, nor did they know the weights involved in converting items to scores.

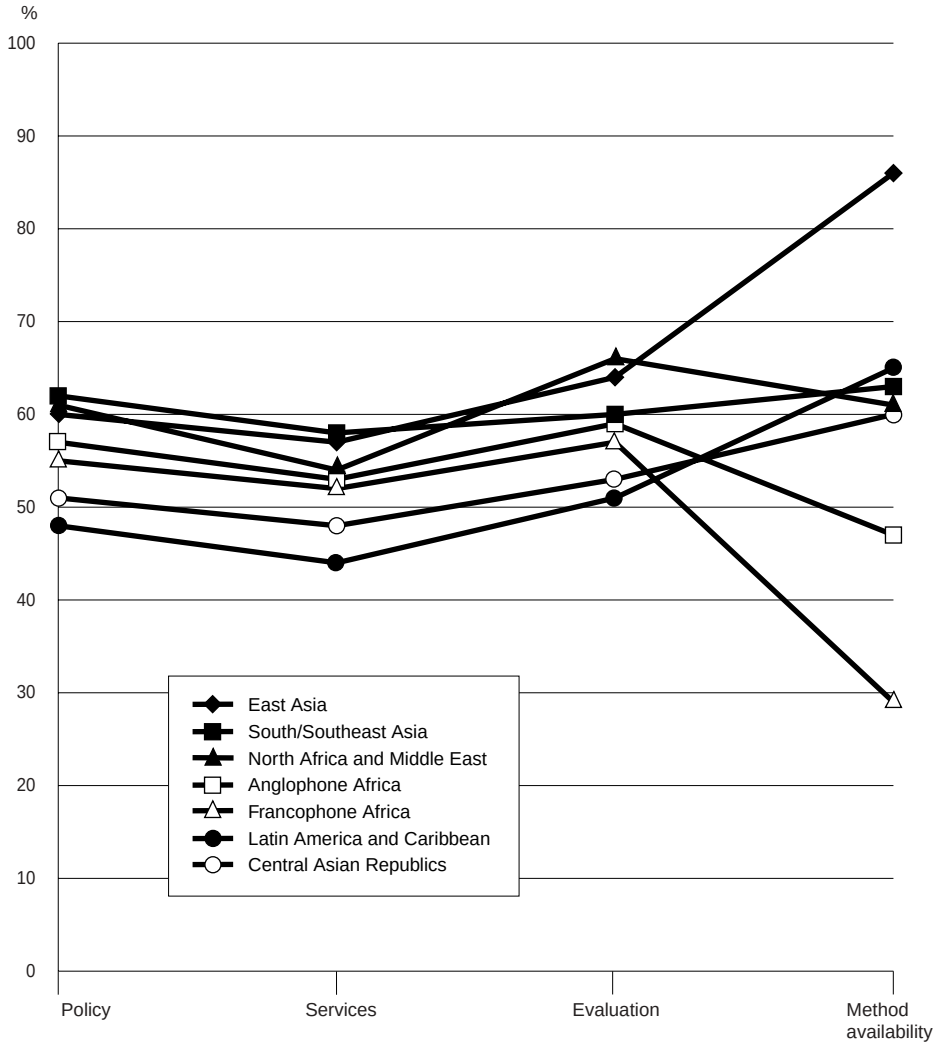
All questionnaire responses were entered into a computer, and a complex set of programming statements automatically converted the items to the 30 scores. Within each country, scores were averaged across all respondents after highly improbable outliers had been eliminated. The total program effort score is simply the sum of the 30 individual scores, as in the previous cycles. Subscores were also computed for the four program components mentioned earlier (policy, services, evaluation and fertility control method availability). The appendix gives a brief description of each score and groups them under the four component categories.

Each of the 30 scores ranges from zero to four, giving a maximum of 120 for the total effort index. The four components vary in the number of scores they encompass: eight for policy, 13 for services, four for evaluation and six for method availability; the maximum scores for these components are therefore 32, 52, 12 and 24, respectively. For ease of comparison, we give most results as a percentage of the maximum possible score (for example, a policy score of 25 becomes 25 / 32, or 78%.

A variable for level of social setting (i.e., social and economic development) is also included. As in earlier analyses,[18] the social setting categories are based on an index composed of seven items: the proportion of adults who are literate; the primary and secondary school enrollment ratio as a percentage of those aged 5–19; life expectancy at birth; the infant mortality rate; the proportion of the male labor force that is doing nonagricultural work; the gross national product per capita; and the proportion of the population living in an urban setting.

We ranked countries on each item and calculated the index as the sum of the item ranks divided by seven; each country was then assigned to the high, upper middle, lower middle or low social setting category, according to quartiles. We also assigned countries to high, upper middle, lower middle or low program effort quartiles, using the average of their total program effort scores for 1994 and 1999.

Figure 1. Family planning program effort scores as percentage of maximum possible score, by component, according to region, 1999



Results

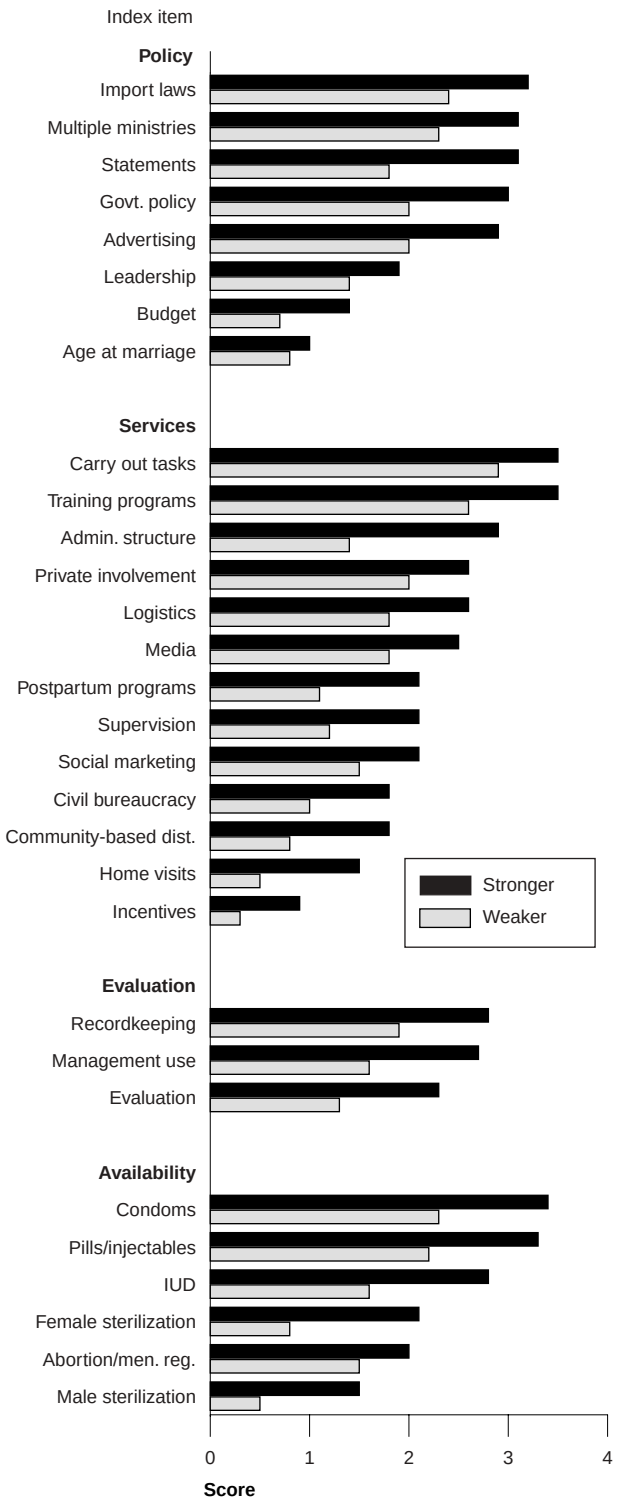
Survey Responses

Eight months after the mailing of the questionnaire, 374 replies had been received from respondents regarding 89 countries, with a range of one to 12 per country and an average of 4.2 per country. The overall response rate was 49% from 758 names (more than were sought in the previous cycles). The final number of replies for the 1999 cycle was similar to that for previous years (359–433 respondents in about 95 countries).

Regional Patterns

Scores for all 89 countries in 1999 are presented in Table 1, which shows the program effort index (i.e., the total score) as well as the four component scores. Each score is cited as a percentage of the maximum; a score of zero signifies no effort and a score of 100 represents full effort. The total scores range from a low of 29 (for Venezuela) to a high of 86 (for China); the average program effort score for all countries in 1999 is 54. China, Indonesia, Taiwan, Vietnam, Thailand and Mexico, all of which are recognized for the strength of their family planning programs, have

Figure 2. Mean family planning program effort score, by area and item, according to strength of program



total scores of 75 or higher. These six countries, as well as others at the upper end of the range, generally score well on all four components.

At the lower end of the range, seven countries have total scores of 35 or less: Sudan, Congo, Gabon, Uruguay, Costa Rica, Argentina and Venezuela. Countries with low scores have varying program characteristics. Sudan, Congo and Gabon simply have extremely weak programs. Costa Rica has only a modest program, yet contraceptive prevalence is high and fertility is low, due to the favorable social setting and to contraceptive use outside of the program proper. Governments in Uruguay, Argentina and Venezuela have not implemented a formal outreach program to support contraceptive use.

Average scores for each region are shown by component in Figure 1 (page 121). The widest variation in scores clearly occurs in contraceptive method availability. Regions differ by only 15–20 points in the areas of policy, services and evaluation, but more than 50 points separate the region that is lowest in method availability (Francophone Africa) from the region that is highest (East Asia). Most regions now have positive policies in place, as well as programs containing important elements of service delivery and evaluation. However, the implementation of these programs, as represented by the availability of contraceptive methods, sharply differentiates the high-effort countries from the low-effort ones. A relatively full choice of methods is available to those living in most East Asian countries, whereas many programs in Sub-Saharan Africa provide more limited options and reach only certain segments of the population.

Latin America has the lowest regional scores for policy, services and evaluation. The low scores are probably due to a number of factors. Latin American countries originally developed family planning programs to improve maternal and child health, and never adopted the demographic rationale common to many countries in other regions. In addition, the private sector plays a much larger role in many Latin American countries than in other regions: Argentina, Uruguay and Venezuela all score quite poorly because of their lack of emphasis on public-sector programs to provide services, and their low scores pull down the regional average.

North Africa and the Middle East received the highest score for evaluation. It is not entirely clear why this is the case, but all respondents in the region except those for Yemen felt that these programs were strong in evaluation and recordkeeping.

Stronger and Weaker Programs

In previous rounds, programs were classified into four broad categories of effort based on the total score:

Program effort	Total score	% of maximum
Strong	≥80	≥67
Moderate	55–79	46–66
Weak	25–54	21–45
Very weak / none	0–24	0–20

According to this classification, in the 1999 survey, 13 countries had a strong program, 53 had a moderate program and 23 had a weak program. No programs were classified as "very weak or none" in 1999.

Although these categories are somewhat arbitrary, they do separate programs into very different types. Figure 2 shows the average scores on all 30 features for the stronger programs (the 66 programs in the strong and moderate categories) and the weaker programs (the 23 programs classified as weak). The features within each component are arranged in descending order by the scores of the stronger countries. The stronger countries had higher average scores for every one of the 30 categories. Furthermore, the gap between the stronger and weaker countries is fairly consistent, with only a few exceptions (marriage age policy and abortion availability). As a group, the weaker countries need to improve in essentially all program features.

The weaker programs exert effort less evenly across the 30 feature categories than the stronger programs do. This is confirmed by the standard deviations across the scores (not shown), which are considerably greater for the weaker programs than for the stronger programs. However, even stronger programs vary in their relative emphasis of program fea-

Table 2. Program effort scores as a percentage of the maximum, by country and region, according to year of survey

Region/country	1972	1982	1989	1994	1999
Overall average	**20**	**29**	**45**	**48**	**54**
East Asia	**49**	**58**	**76**	**68**	**64**
China	83	84	87	92	86
Korea, PDR	0	50	54	63	u
Korea, Rep. of	80	79	81	71	55
Mongolia	0	0	u	38	38
Taiwan	80	79	81	78	79
South/Southeast Asia	**33**	**45**	**50**	**54**	**60**
Afghanistan	10	11	36	u	u
Bangladesh	10	57	72	69	74
Bhutan	0	u	22	36	u
Cambodia	0	0	9	26	46
Fiji	u	50	u	u	u
Hong Kong	77	69	u	61	57
India	63	66	72	68	65
Indonesia	47	75	80	83	82
Laos	0	0	8	28	39
Malaysia	60	51	66	54	69
Myanmar	0	4	12	27	37
Nepal	20	37	59	51	57
Pakistan	27	40	48	48	57
Papua New Guinea	0	26	26	28	u
Philippines	53	56	49	60	57
Singapore	87	79	63	63	44
Sri Lanka	40	67	80	69	69
Thailand	37	61	80	75	75
Vietnam	67	53	68	67	76
North Africa/Middle East	**12**	**19**	**41**	**43**	**58**
Algeria	10	25	46	44	64
Cyprus	u	25	u	u	u
Egypt	27	40	66	59	57
Iran	47	11	57	61	71
Iraq	0	3	1	38	u
Jordan	0	16	31	40	47
Kuwait	0	5	u	23	u
Lebanon	0	33	49	33	60
Morocco	13	35	57	63	57
Oman	u	1	5	45	53
Saudi Arabia	0	1	u	5	u
Syria	0	11	44	48	66
Tunisia	40	59	69	82	71
Turkey	20	29	46	54	59
United Arab Emirates	u	1	33	14	u
Yemen	0	10	28	30	37
Anglophone Africa	**8**	**20**	**37**	**46**	**54**
Angola	0	u	39	24	u
Botswana	u	27	75	66	u
Ethiopia	0	6	32	38	44
Gambia	u	26	u	u	u
Ghana	10	18	52	53	63
Guinea-Bissau	u	14	28	36	u
Kenya	20	28	58	56	62
Lesotho	0	14	45	43	62
Liberia	10	22	3	u	u
Malawi	0	6	16	44	50
Mauritius	67	68	69	74	71
Mozambique	0	16	27	33	43
Namibia	u	u	11	43	54
Nigeria	7	13	43	42	45
Anglophone Africa (cont.)					
Sierra Leone	0	16	35	47	u
Somalia	0	10	1	u	u
South Africa	u	u	62	56	54
Sudan	10	8	20	29	35
Tanzania	10	22	42	48	55
Uganda	0	17	12	44	54
Zambia	0	16	49	41	50
Zimbabwe	10	27	56	68	61
Francophone Africa	**1**	**10**	**36**	**40**	**49**
Benin	10	11	28	38	45
Burkina Faso	0	4	45	u	54
Cameroon	0	8	34	49	44
Central African Rep.	0	10	42	40	50
Chad	0	7	20	27	43
Congo	0	15	36	28	35
Côte d'Ivoire	0	6	55	38	50
Gabon	u	u	u	u	35
Guinea	0	5	40	50	60
Madagascar	0	9	40	33	42
Mali	0	11	38	45	58
Mauritania	0	4	21	32	37
Niger	0	5	38	46	47
Rwanda	0	23	43	u	62
Senegal	0	23	44	51	55
Togo	0	14	30	u	63
Zaire	10	13	28	u	u
Latin America and the Caribbean	**30**	**39**	**51**	**50**	**50**
Argentina	u	u	21	21	30
Bolivia	0	8	23	49	49
Brazil	0	43	32	43	59
Chile	53	44	58	55	61
Colombia	53	71	62	66	64
Costa Rica	70	33	16	46	32
Cuba	50	52	65	54	u
Dominican Republic	47	55	54	67	50
Ecuador	20	35	58	53	46
El Salvador	43	63	68	58	46
Guatemala	30	28	53	58	37
Guyana	0	26	55	26	46
Haiti	10	36	42	38	51
Honduras	23	25	63	51	44
Jamaica	77	56	66	65	62
Mexico	13	66	77	74	75
Nicaragua	0	20	u	53	49
Panama	63	51	52	56	49
Paraguay	10	8	36	35	56
Peru	0	22	51	59	59
Puerto Rico	u	u	u	53	62
Trinidad & Tobago	50	47	66	50	59
Uruguay	u	u	42	39	34
Venezuela	23	31	54	38	29
Central Asian Republics	**na**	**na**	**na**	**39**	**52**
Kazakhstan	u	u	u	34	42
Kyrgyzstan	u	u	u	36	49
Tajikistan	u	u	u	u	54
Turkmenistan	u	u	u	33	59
Uzbekistan	u	u	u	54	55

Note: A "0" entry means that the score when rounded equaled zero. u=unavailable, because the country was omitted that year. na=not applicable, because averages could not be computed. Entries lacking data can affect the regional averages in each year.

tures. It is possible that the conversion rules governing the questionnaire items and feature scores may contribute to this observed variability in both the weaker and the stronger programs.

Although weaker and stronger program profiles differ in the magnitude of their total scores and the variability of their individual feature scores, they are similar in the relative emphasis that they place on features within each of the four components (Figure 2). For instance, in the policy and stage-setting activities component, most countries in both groups score highest on items related to policies in place, lower on leadership levels and budget support, and most poorly on policies regarding age at marriage.

The services and service-related activities component also shows a similar pattern in both groups: a continuum from highly rated activities, such as completion of assigned tasks and training, to poorly rated ones, such as involvement of the civil bureaucracy, community-based distribution, home-visiting workers and the use of incentives and disincentives. Within the method availability component, both stronger and weaker programs judge condoms, pills and IUDs to be more available

Table 3. Number of countries, total population of countries and percentage distribution of population, all by program effort level, according to year

Program effort level	1972	1982	1989	1994	1999
No. of countries					
Very weak/none	61	40	12	1	0
Weak	9	24	28	34	23
Moderate	11	14	31	34	53
Strong	9	10	14	14	13
Population (in millions)					
Very weak/none	695	450	137	18	0
Weak	186	502	507	663	259
Moderate	838	295	629	724	1,132
Strong	961	2,067	2,260	2,748	3,018
% distribution of population					
Very weak/none	26	14	4	<1	0
Weak	7	15	14	16	6
Moderate	31	9	18	17	26
Strong	36	62	64	66	68
Total	100	100	100	100	100

than sterilization and abortion, and male sterilization is clearly the least available method. The one exception is availability of abortion services, which scores higher relative to other methods in the weaker countries than in the stronger countries.

Time Trends

The average program effort index for all countries rose from 48 to 54 between 1994 and 1999, continuing a trend toward improvement observed in each of the previous cycles (Table 2, page 123). This 12% rise is substantial, about twice that observed from 1989 to 1994, but much less than the 55% jump that occurred between 1982 and 1989.

Although the global program-effort index has continued to improve, the scores of some countries, especially those with strong programs, have reached a plateau or even declined. Furthermore, when countries' scores are weighted by their respective populations, the improvement since 1972 is less dramatic. For instance, the rise in the unweighted average score from 20 in 1972 to 54 in 1999 corresponds to a much smaller increase in the population-weighted average, from 52 to 68 (not shown).

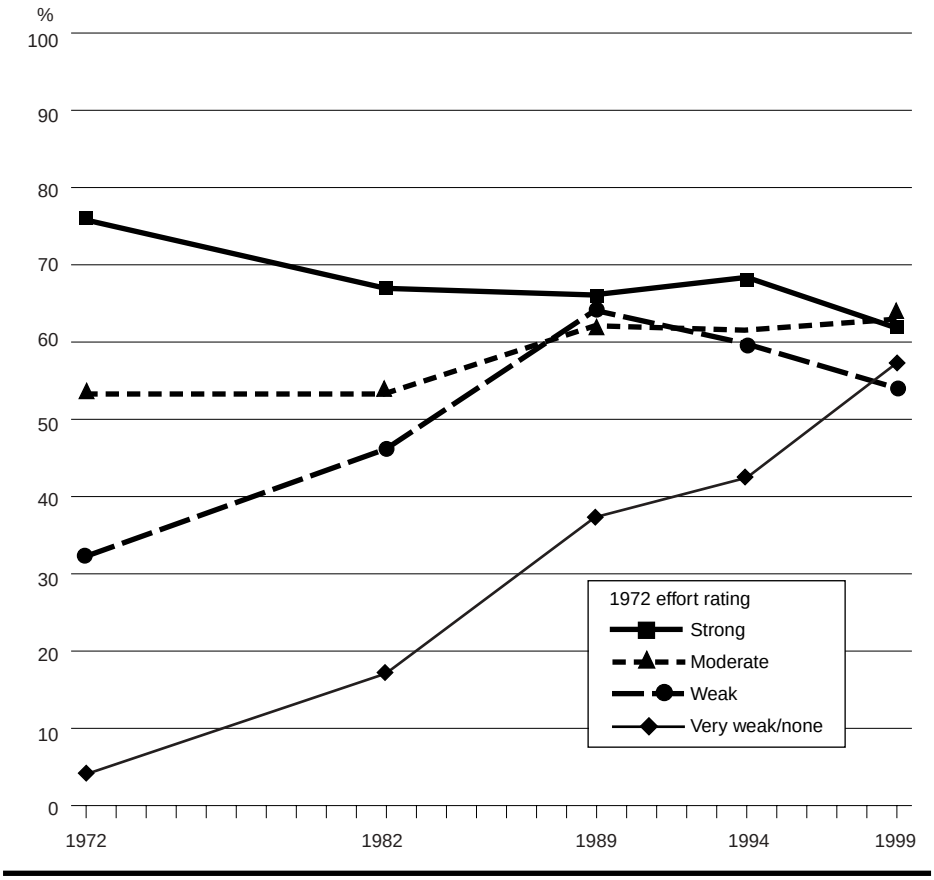
Temporal trends in the distribution of countries and population by program effort level appear in Table 3. When program effort was first assessed in 1972, many countries had no programs or policies at all. Of the 108 countries listed in Table 2, 42 received scores of zero in 1972. Overall, effort level in more than 60 countries was classified as very weak or none (Table 3). As more countries have worked over the years to institute and improve policies and programs, effort levels have improved dramatically. By 1999, no countries were classified as having a very weak or no program, and only 23 were considered weak; the majority of countries were classified as showing moderate program effort. There has been very little change over the years in the number of countries classified as having strong programs.

Temporal trends based on the total populations rather than on the number of countries present a more positive picture (Table 3). The strong category has remained the largest in every cycle because of China, and has continued to grow over time. While only 36% of the population lived in countries with strong programs in 1972, this percentage increased to 62% by 1982 and to 68% by 1999.*

We established cohorts of countries according to their effort level in 1972 and followed them through time (Figure 3). The average program effort index for the strong cohort declined slightly in 1982 but has remained fairly consistent since then. The average total score for the moderate cohort increased slightly, from 53 in 1972 to 62 in 1999. The greatest change is seen in the weak and very weak or no effort cohorts, whose scores rose dramatically and had nearly converged with those of the stronger cohorts by 1999.

Regions differ in the degree of their improvement across program components. East Asia had the highest scores in the past, but in 1999 experienced a decline in all categories except method availability (not shown). The declines are mainly due to small decreases in China's scores and large decreases in those for the Republic of Korea, especially in the services component.† South and Southeast Asia has shown steady improvement: By 1999, this region matched or exceeded East Asia in policies and services, but still lagged be-

Figure 3. Family planning program effort score as a percentage of the maximum, by year, according to effort rating in 1972



*Technically, India should have shifted from the strong to the moderate category in 1999, but since its score decreased only slightly, from 68 to 65, we have left it in the strong category for this analysis.

†Since this region comprises only 4–6 countries, its averages are more sensitive to individual country changes than is true for other regions.

Figure 4. Contraceptive prevalence, by family planning effort category, according to social setting

Social setting	Program effort								Average prevalence
	High		Upper middle		Lower middle		Low		
	Country	%	Country	%	Country	%	Country	%	
Total		**60**		**45**		**28**		**29**	**41**
High	Average prev.	73	Average prev.	67	na	na	Average prev.	49	65
	Hong Kong	86	Brazil	77			United Arab Emirates	28	
	Rep. of Korea	77	Panama	58			Kuwait	35	
	Jamaica	66	Singapore	65			Kazakhstan	59	
	Colombia	72	Trinidad & Tobago	53			Costa Rica	75	
	Cuba	69	Uzbekistan	68					
	Mauritius	75	Puerto Rico	78					
	Mexico	65							
Upper middle	Average prev.	62	Average prev.	57	Average prev.	54	Average prev.	38	53
	Syria	40	Nicaragua	60	Kyrgyzstan	60	Iraq	18	
	Iran	73	El Salvador	60	Jordan	53	Mongolia	57	
	Sri Lanka	66	South Africa	53	Paraguay	51			
	Thailand	72	Algeria	47	Honduras	50			
	Tunisia	60	Turkey	64	Oman	24			
			Egypt	55	Namibia	29			
			Philippines	46	Ecuador	57			
			Dominican Republic	64					
			Peru	64					
Lower middle	Average prev.	57	Average prev.	23	Average prev.	25	Average prev.	36	36
	Morocco	59	Senegal	13	Côte d'Ivoire	11	Papua New Guinea	26	
	Zimbabwe	48	Lesotho	23	Nigeria	15	Congo	8	
	Botswana	33	Pakistan	18	Zambia	26	Myanmar	33	
	India	41	Ghana	20	Cameroon	19	Gabon	75	
	Vietnam	75	Kenya	39	Guatemala	31	Mauritania		
	Indonesia	57			Bolivia	48			
	China	83							
Low	Average prev.	31	Average prev.	14	Average prev.	13	Average prev.	13	16
	Rwanda	21	Tanzania	18	Ethiopia	4	Sudan	10	
	Togo	24	Mali	7	Benin	16	Laos	25	
	Bangladesh	49	Nepal	29	Haiti	18	Yemen	21	
			Guinea	2	Central African Rep.	15	Chad	4	
					Niger	8	Cambodia	13	
					Malawi	22	Bhutan	8	
					Uganda	15	Madagascar	19	
					Burkina Faso	8	Mozambique	6	

hind in method availability. Considerable improvement has occurred in North Africa and the Middle East for all four components. In Sub-Saharan Africa, there has been significantly less growth in method availability compared with the other three components: Although many of the policies, structures and programs are in place, implementation is still weak. Latin America showed improvement from 1972 to 1982, but its component scores have been more or less stable since then. In all regions, the average component scores conceal important differences among individual countries.

Program Effort by Social Setting

Researchers have used the Family Planning Program Effort Index since the 1970s to examine the effects of social and economic development and family planning effort on fertility decline and contraceptive use. Studies have generally found that program effort and social setting both play important, and roughly equal, roles in fertility decline. Figure 4 uses the 1999 scores to show how these two characteristics are associated with contraceptive use. Categories for social setting effort appear in the left-hand column, while those for strength of program are shown across the top row. (The cell value for each country is contraceptive prevalence as of 1999.)

The row and column averages indicate that contraceptive use is positively associated with both social setting and program effort. The average prevalence of contraceptive use is 65% among countries in the high quartile for social setting; prevalence declines to 53%, 36% and 16% as social setting declines to the upper middle, lower middle and low quartiles, respectively. A similar pattern is seen for program effort: Prevalence falls off from 60% in high-effort countries to 28–29% for the lower-middle and low-effort countries. The gradient is sharper and occurs over a greater range for social setting than for program effort, suggesting that the former exerts a more fundamental influence. The highest prevalence (73%) is found in the upper left-hand corner of the figure, where both social setting and program effort strength are high.

The findings of the cross-tabulation analysis in Figure 4 are supported by an ordinary least-squares multiple regression of social setting and family planning effort on prevalence, which confirms that both determinants have significant effects.*

*The regression equation with standardized coefficients is P=–24.45+(0.65xSES)+(0.38xFPE), where P is the contraceptive prevalence in the most recent year available, SES is the social and economic setting (as measured by the average rank in the seven component indexes) and FPE is the average of the 1994 and 1999 family planning effort scores expressed as a percentage of maximum. There are 79 observations. The adjusted R-squared is .73. All coefficients are significant, with t-scores of –4.2, 11.7 and 6.3, respectively.

Thus, the 1999 results are consistent with the conclusions of other studies that family planning program effort, as measured by the program effort index, makes an important contribution to contraceptive practice independent of social setting.[19]

Discussion

Use of Expert Respondents

The use of expert respondents to provide information has both advantages and disadvantages; one of the latter is the potential for bias. National respondents might exaggerate the strengths of a program; international respondents might be influenced by their knowledge of contraceptive prevalence and fertility trends, and give lower ratings to those programs that they perceive have performed worse.

The methodology contains a number of features designed to decrease respondent bias. Some items are factual rather than judgmental. Consulting four different types of respondents avoids overreliance on any single perspective on program effort. The questionnaire does not directly solicit a score for each of the 30 features; instead, it contains a large number of detailed closed-ended questions, which are later coded and combined to yield each score. Thus, the respondent does not provide the score directly, and does not know how each score is calculated. The mean of the respondents' scores is used because it is generally thought to be the most stable measure; however, when the standard deviation among responses is unusually high, the original questionnaires are examined in detail and improbable outlying scores are removed.

The small number of expert respondents per country, the unknown extent of variance among respondents, and changes in the respondent pool over time are also limitations of the survey methodology. The results would be more robust if, to reduce respondent variance, the same respondents could rate several countries, but that would be feasible for only a small number of respondents. Time trends would also be more precise if the same persons rated each country across cycles. However, considerable turnover of expert respondents is inevitable, especially over a span of five or more years.

Validity and Reliability

Tests of validity require a "gold standard" against which to compare an instrument's results. The program effort index has no single standard, as it encompasses several program features for which objective measures are unavailable, such as the adequacy of training and supervision, restrictions on contraceptive advertising, and strength of community-based distribution systems. The questionnaire, as used from 1982 through 1999, contains items of this type, as well as fairly objective measures for items like the formal policy of the government or the administrative level held by the program director, but checks on those cannot be done independently for many countries all at once.

A number of studies have assessed the validity and reliability of the program effort scores. One conducted in Kenya and Bangladesh compared scores obtained using the standard questionnaire and methodology with those obtained from direct measurement.[20] Direct measurement activities included sampling print media and radio programs to assess the extent of mass media coverage and interviewing ministry representatives to assess the degree of multiministry involvement in the program. In both countries, the scores based on direct measurement were quite similar to those obtained using the questionnaire. The great amount of labor and time required to perform direct measurement of all 30 scores rules out the latter as a feasible alternative to an expert respondent-based methodology, especially for a large-scale data collection effort involving almost 100 countries. Attention therefore returned to the methodology of the standard questionnaire, to which informed respondents in each country can reply within a limited time span.

A second exercise to obtain a separate estimate for each feature score was conducted among the 89 participating countries in the 1999 cycle.[21] The standard questionnaire was followed by a final section asking for a simple rating of each of the 30 features on a scale from one (very weak effort) to 10 (very strong effort). These directly solicited scores were generally in close agreement with the scores that had been calculated using the standard methodology; discrepancies in the scores were greatest where the wording of the questions differed significantly between the two methodologies.

Another important analysis applied factor analysis methods to the 30 feature scores obtained in the 1982–1994 cycles, thereby identifying six components that were predictive of strong family planning programs.[22] The fact that these components remained relatively consistent across cycles argues in favor of the questionnaire's reliability.

The Family Planning Program Effort Index was developed from the concept of program effort or strength as input, which implies that a vigorous program should be placed at a high administrative level, should be supported by a firm government policy position, should have adequately trained and supervised staff, should make frequent and effective use of mass media, should undergo regular evaluation, should stimulate the private sector and should provide services to a large proportion of the rural and urban population. It is not possible to demonstrate the validity of this concept in a definitive fashion, nor can we conduct a test-retest reliability exercise in each cycle for such a large undertaking. However, the detailed patterns and trends over time make sense and correlate reasonably to outcome measures, for both individual countries and regions.

Future Directions

The program effort index has continued to rise in most developing countries during the last five years, but still leaves considerable room for further improvement. As of 1999, the average country score is only 54% of maximum; even the strongest programs have never risen much above 80% of maximum. Based on these results, one might ask how much further progress can reasonably be expected. If we use the 80% attained by the strongest programs as the standard rather than 100%, the average index of 54 in 1999 actually represents a more substantial two-thirds of maximum achievement.

The 1999 scores confirm earlier findings that family planning program effort makes an important contribution to contraceptive practice independent of social setting. Although many developing countries have improved their efforts remarkably over the past 25 years, they still differ significantly in the component for method availability. Progress has been least in the actual provision of contraceptive methods to the mass of the population. That appears to be more difficult than the development of policy positions or the implementation of training and supervision protocols; clearly, it is still a major task facing many family planning programs.

The upward movement in the program effort index since the International Conference on Population and Development held in Cairo in 1994 could not have been confidently predicted. Countries attending the conference had been urged to broaden their reproductive health programs to focus on issues other than contraception, and there was a possibility that this expansion might occur at the expense

of their current programs. In addition, many countries had experienced fertility declines that might have tempted them to relax their policies and programs.

Some expectations of downward movement have been realized. Since 1994, the Republic of Korea's overall score dropped substantially. Taiwan has revised its antinatalist policy, and China's lower score in 1999 may reflect the liberalization of some aspects of its aggressive program. Singapore and Malaysia have weakened their policies, and in 1996 India revolutionized its target system by essentially canceling method-specific worker quotas. These changes may be too recent to have affected 1999 scores appreciably. However, the increase in the average 1999 index and scores suggests that countries have been able to expand programs to include other aspects of reproductive health without seriously weakening their family planning efforts.

While the present study serves as an important resource for family planning monitoring and analysis, it does not collect information on some of the key topics that emerged during and after the Cairo conference. The current questionnaire is already extensive, and the expertise of its respondents somewhat narrow. It would be cumbersome to expand the questionnaire into a multipurpose instrument and assemble different sets of respondents for different sections, so other sources of information are critical.

The Cairo mandates are being monitored internationally based on donor funding, which has been disappointingly low,[23] and on conditions within the countries themselves. Some researchers are collecting time-trend information on the unmet need for and the intention to practice contraception;[24] estimates of maternal mortality are also being refined.[25] Three other activities related to Cairo priorities are underway. Levels and types of maternal and neonatal health program efforts are being measured in 49 countries, including China and India.[26] HIV and AIDS program efforts in some 43 countries are also being evaluated.[27] A five-part policy survey has been implemented in several countries to obtain a "policy environment score," which will measure strength at the policy level for family planning, safe motherhood, safe abortion, adolescent health, and HIV and AIDS.[28] Over the next two years, more complete information regarding funding, family planning issues and specific elements of reproductive health should help to clarify the state of post-Cairo achievements.

Appendix

Policy and Stage-Setting Activities

(1) Government's official policy or position concerning fertility family planning and rates of population growth. Existence and type of official policy to reduce the population growth rate, support family planning activities for reasons other than demographic ones, allow private-sector family planning activities in the absence of government-sponsored activity, or, on the other hand, to discourage family planning services.

(2) Favorable statements by leaders. Whether the head of the government speaks publicly and favorably about family planning at least once or twice a year, and whether other officials also do so.

(3) Level of family planning program leadership. Level of the post (i.e., the person appointed) to direct the national government family planning program, and whether or not the program director reports to the highest level of government.

(4) Age-at-marriage policy. Minimum legal age at marriage for females of at least 18 years (higher scores for minimum legal ages of 19 years and 20 years or more), and the extent of effort to enforce any changes in the law since 1960 regarding legal age at marriage for females. (A score for the latter item is allowed only if the new legal minimum is at least 18 years.)

(5) Import laws and legal regulations regarding contraceptives. Extent to which import laws and legal regulations facilitate the importation of contraceptive supplies that are not manufactured locally, or the extent to which contraceptives are manufactured within the country.

(6) Advertising of contraceptives in the mass media is allowed. Whether the advertising of contraceptives in the mass media is allowed with no restrictions, whether there are weak restrictions, whether there are social restrictions, or whether there are strong restrictions.

(7) Other ministries or government agencies involved. Aside from the ministry or government agency that has primary responsibility for delivering family planning supplies and services, the extent to which other ministries and governmental agencies assist with family planning or other population activities. This involvement or assistance may be provided through the public sector or through private-sector family planning programs or population activities, and is classified as follows: assistance with the delivery of family planning supplies and services; assistance in the form of services particular to that ministry; assistance with family planning information and education in concrete ways; membership on a council for family planning that meets at least twice annually; moral support and small miscellaneous assistance; and no assistance.

(8) In-country budget for program. Percentage of the total family planning and population budget available from in-country sources. The top score is given if in-country sources provide 85% or more of the budget; no score is given if these sources provide less than 50% of the budget.

Service and Service-Related Activities

(9) Involvement of private-sector agencies and groups. Extent to which private-sector agencies and groups (including family planning associations) assist with family planning or other population activities. Involvement or assistance with family planning and population activities may include: delivery of family planning supplies and services; training; family planning information and education; membership in an interagency family planning group that meets at least twice annually; moral support; and other assistance.

(10) Civil bureaucracy used. Use of the civil bureaucracy of the government to ensure that program directives are carried out, and the extent to which the senior government administrators at the following levels assume responsibility for the success of the program: central government level; provincial or state level; district, governorate, regency or other levels; and county levels.

(11) Community-based distribution (CBD). Proportion of the country covered by public or private CBD programs for the distribution of contraceptives in areas not easily served by clinics or other service points. The essential feature of CBD is that contraceptive supplies are available upon request within the village, local community or local residence neighborhood. CBD programs are assumed to be primarily rural; however, a partial extra score is allowed for urban CBD programs.

(12) Social marketing. Proportion of the country covered by a social marketing program (i.e., subsidized contraceptive sales in the commercial sector). The essential feature of social marketing is that contraceptives are subsidized and sold at low cost, through channels easily available to rural or urban residents, such as in local shops, pharmacies or specially created local sales outlets. Some forms of social marketing are called commercial retail sales programs. Social marketing programs are assumed to be primarily urban programs; however, an extra score is allowed for rural programs.

(13) Postpartum programs. The extent of coverage of new mothers by postpartum programs, which may be hospital-based or field-based. (Most are field-based.) For hospital-based programs, the score is constructed from the proportion of deliveries in hospitals and maternity centers where the new mothers are provided family planning information and education services (by trained female workers), and the proportion of all deliveries in the country that take place in hospitals and maternity centers (often a small proportion). For field-based postpartum programs, the score is constructed from the proportion of women who deliver at home and are offered family planning information and education services by trained fieldworkers.

(14) Home-visiting workers. The proportion of the population covered by a group of workers whose primary task is to visit women in their homes (at least in rural areas) to talk about family planning and child care. The population covered by each fieldworker is taken into account; the score for the proportion of the country covered by fieldworkers is deflated if the average population covered by each home-visiting worker is more than 15,000.

(15) Administrative structure. Whether there is adequate administrative structure and staff at the national, provincial and county levels. "Adequate" means that the administrative structure is sufficient to ensure that plans developed for each level are carried out, is capable of recognizing and solving problems that cause low performance, and is able and willing to use existing resources or to call upon higher administrative levels to obtain resources needed to carry out plans for the delivery of family planning supplies and services.

(16) Training programs. Whether there is an adequate training program for each category of staff in the family planning program: administrative staff, physicians, nurses, paraprofessionals, village-level distributors, fieldworkers and motivators, staff in other ministries and organizations, and others. "Adequate" means that the training provides personnel with the knowledge, information and skills necessary to carry out their jobs effectively, and that facilities exist to carry out the

training. The score is determined by the quality of the training program for each category of staff: very good; moderately good; mediocre or poor; or nonexistent.

(17) Personnel carry out assigned tasks. The extent to which each category of family planning program staff carries out assigned tasks: administrative staff; physicians; nurses; paraprofessionals; village-level distributors; fieldworkers and motivators; staff in other ministries and organizations; and others. The ratings for task implementation are: very well; moderately well; and poorly.

(18) Logistics and transport. The extent to which the logistics and transportation systems are sufficient to keep stocks of contraceptive supplies and related equipment available at all service points at all times, at the following levels: central; provincial; and county. The score is based on the availability of supplies and equipment: all or almost all of the time; about half to three-quarters of the time; sometimes; or seldom or never.

(19) Supervision. Whether there is an adequate system of supervision at all levels. "Adequate" means that: supervisors exist at all levels of program operations in sufficient numbers to make possible supervisory visits at least once a month at service delivery levels (and quarterly at higher administrative levels); supervisors do in fact make such supervisory visits to the work sites of the persons supervised; during these supervisory visits, encouragement, advice and support are provided to supervised workers, in addition to any necessary checking of operations and records that assist in the evaluation of worker performance; and supervisors follow through on providing and obtaining supplies and services identified as needed during their visits (or at least make serious attempts to obtain these needed supplies and services).

(20) Mass media for information, education and communications. The frequency of mass media messages that provide family planning information, including where family planning services are available and how much of the country is covered by various types of mass media: newspapers, magazines, radio, television, mobile information, education and communication units (films, etc.), billboards and other outdoor media (buses, etc.), traditional types (puppet shows, folk dances, local theater, etc.), and other types. The frequency classifications include: at least once a month; sometimes (about once every 3–6 months); infrequently (about once a year or less often); and never.

(21) Incentives and disincentives. The use of monetary or other incentives for the adoption of family planning. Incentives may be provided to clients, recruiters, service personnel (including CBD workers) or communities. Disincentives may refer to individuals or to communities, and include regulations and constraints designed to encourage family planning or small family size.

Evaluation and Recordkeeping

(22) Recordkeeping. Whether there are recordkeeping systems for family planning clients at the clinic level, a system for the collection and periodic reporting of summary statistics at regional and national levels (e.g., numbers of acceptors, quantity of supplies distributed, numbers of workers), and feedback from regional or national units to each reporting unit. The scoring takes into account both the existence and the quality of recordkeeping systems. "Feedback" refers to the reporting back to lower-level units on a regular basis, with progress measured against some standard, such as acceptance or prevalence targets or trends.

(23) Evaluation. Whether any of the following exist (partial score given for each): regular estimation of prevalence levels and trends (annually or quarterly), using program statistics and estimated continuation rates; measurement every 2–4 years of family planning prevalence levels and trends, using data collection methods that are independent of program statistics (such as contraceptive prevalence studies); implementation of operations research studies designed to help program management understand the program, its problems and potential improvements; professional staff in an evaluation unit who prepare technically correct periodic reports on the program, what it has achieved, etc.; professional staff who interpret and summarize, for program management, national and regional population data collected through censuses, vital registration systems and surveys (these staff may be directly associated with the program or with other institutions); good coordination and working relationships, and timely sharing of information, between the evaluation unit and other units in family planning programs. A partial score is also given for the existence of universities or research institutes in the country that carry out demographic research, family planning research or population research of other kinds.

(24) Management use of evaluation findings. The extent to which program managers (decision-makers) use the research and evaluation findings to improve the program in ways suggested by those findings.

Method Availability and Accessibility

(25) Male sterilization. Whether medically adequate voluntary sterilization services for males are legally and openly available, and the percentage of the population that has ready and easy access to such services.

(26) Female sterilization. Whether medically adequate voluntary sterilization services for females are legally and openly available, and the percentage of the population that has ready and easy access to such services.

(27) Pills and injectables. The percentage of couples of reproductive age who have ready and easy access to pills through programs other than CBD and social marketing programs. "Ready and easy access" means that the recipient spends no more than an average of two hours per month to obtain contraceptive supplies and services. Easy access also implies that the cost of contraceptive supplies is not burdensome; to meet this criterion, a one-month supply of contraceptives should cost less than 1% of a month's wages. (If the availability of injectables is higher than that of pills, data on injectables are used to score this item.)

(28) Condoms and spermicides. The percentage of couples of reproductive age who have ready and easy access to condoms through programs other than CBD and social marketing programs. "Ready and easy access" is defined as in item 27. (If the availability of other conventional contraceptives is greater than that of condoms, data on those other methods are used to score this item.)

(29) IUDs. The percentage of couples of reproductive age who have ready and easy access to IUDs through programs other than CBD and social marketing programs. "Ready and easy access" is defined as in item 27.

(30) Abortion and menstrual regulation. The proportion of the population that has ready and easy access to abortion services, whether or not abortions are legal, or to menstrual regulation services; however, excluded from the scoring is the availability of abortions carried out only under poor conditions.

References

1. Lapham RJ and Mauldin WP, National family planning programs: review and evaluation, *Studies in Family Planning*, 1972, 3(3):29–52.

2. Freedman R and Berelson B, The record of family planning programs, *Studies in Family Planning*, 1976, 7(1):1–40; and Mauldin WP and Berelson B, Conditions of fertility decline in developing countries, 1965–75, *Studies in Family Planning*, 1978, 9(5):84–148.

3. Lapham RJ and Mauldin WP, Family planning program effort and birthrate decline in developing countries, *International Family Planning Perspectives*, 1984, 10(4):109–118; and Lapham RJ and Mauldin WP, Contraceptive prevalence: the influence of organized family planning programs, *Studies in Family Planning*, 1985, 16(3):117–137.

4. San PB et al., Measuring family planning program effort at the provincial level: a Vietnam application, *International Family Planning Perspectives*, 1999, 25(1):4-9.

5. Khalifa M, Suliman ED and Ross JA, *Family Planning Program Effort in Egypt's Governorates*, Cairo: POLICY Project, The Futures Group International, May 1999.

6. Mauldin WP and Ross JA, Family planning programs: efforts and results, 1982–89, *Studies in Family Planning*, 1991, 22(6):350–367; and Ross JA and Mauldin WP, Family planning programs: efforts and results, 1972–94, *Studies in Family Planning*, 1996, 27(3):137–147.

7. Tsui AO, Population policies and programs and the Asian economic miracle, paper presented at the annual meeting of the Population Association of America, Washington, DC, March 27–29, 1997; and Tsui AO, Population programs and fertility: the family planning record, revised paper presented at the Conference on the Global Fertility Transition, Bellagio, Italy, May 18-22, 1998.

8. Ahlburg D and Diamond I, Evaluating the impact of family planning programs, in: Ahlburg D, Kelley A and Mason K, eds., *The Impact of Population Growth on Well-Being in Developing Countries*, Berlin: Springer, 1996, pp. 299–336; Schultz TP, Sources of fertility decline in modern economic growth: is aggregate evidence on the demographic transition credible? in: Rosenzweig MR and Stark O, eds., *Handbook of Population and Family Economics*, Amsterdam: North Holland Publishing, 1993; and Schultz TP, Human capital, family planning and their effects on population growth, *American Economic Association Papers and Proceedings*, 1994, 84(2):255–260.

9. Ross JA and Mauldin WP, Measuring the strength of family planning programs, paper prepared for the IUSSP / EVALUATION Seminar on Methods for the Evaluation of Family Planning Program Impact, Jaco, Costa Rica, May 14–16, 1997; and Ross JA and Lloyd CB, Methods for measuring the fertility impact of family planning programmes: the experience of the last decade, in: Phillips JF and Ross JA, *Family Planning Programmes and Fertility*, Oxford, UK: Clarendon Press, 1992, pp. 28–55.

10. Pritchett LH, Desired fertility and the impact of population policies, *Population and Development Review*, 1994, 20(1):1–55.

11. Bongaarts J, The role of family planning programmes in contemporary fertility transitions, in: Jones GW et al., eds., *The Continuing Demographic Transition*, Oxford, UK: Clarendon Press, 1997, pp. 422–444.

12. Pritchett LH, 1994, op. cit. (see reference 10); and Bongaarts J, 1997, op. cit. (see reference 11).

13. Samara R, Buckner B and Tsui AO, *Understanding How Family Planning Programs Work: Findings from Five Years of Evaluation Research*, Chapel Hill, NC, USA: Carolina Population Center, The EVALUATION Project, 1996.

14. Guilkey D, The impact of family planning programs on contraceptive use: a review of the literature, Chapel

Hill, NC, USA: Carolina Population Center, The EVALUATION Project, 1998.

15. Hermalin A and Khadr Z, The impact of family planning programs on fertility: a selective assessment of the evidence, Chapel Hill, NC, USA: Carolina Population Center, The EVALUATION Project, 1996.

16. Knight RJ and Tsui AO, *Family Planning Sustainability at the Outcome and Program Levels*, Chapel Hill, NC, USA: The EVALUATION Project, Carolina Population Center; and Honolulu, HI: East-West Center, 1997.

17. Population Reference Bureau (PRB), *Monitoring Family Planning Programs, 1996*, wall chart issued by PRB and the EVALUATION Project, Washington, DC: PRB, 1996.

18. Mauldin WP and Berelson B, 1978, op. cit. (see reference 2).

19. Freedman R and Berelson B, 1976, op. cit. (see reference 2); Tsui AO, 1997, op. cit. (see reference 7); Bongaarts J, 1997, op. cit. (see reference 11); Guilkey D, 1998, op. cit. (see reference 14); Hermalin A and Khadr Z, 1996, op. cit. (see reference 15); Angeles G et al., A meta-analysis of the impact of family planning programs on fertility preferences, contraceptive method choice, and fertility, MEASURE Evaluation Working Paper WP0130, Chapel Hill, NC, USA: Carolina Population Center, 2001; and Tsui AO, Population programs and fertility: the family planning record, revision of paper presented at the Conference on the Global Fertility Transition, Bellagio, Italy, May 18–22, 1998.

20. Mauldin WP et al., Direct and judgmental measures of family planning program inputs, *Studies in Family Planning*, 1995, 26(5):287–295.

21. Ross JA and Cooper-Arnold K, Comparison of long- and short-form questionnaires to collect judgments on family planning effort, Glastonbury, CT, USA: The Futures Group International, 2000. (Accessible as a MEASURE Evaluation Working Paper at http: / / www.cpc.unc.edu / projects / measure / publications / workingpapers / wp0128.pdf.)

22. Bulatao RA, Evolving dimensions of family planning effort from 1982 to 1994, unpublished paper, Glastonbury, CT, USA: The Futures Group International, 1996.

23. Vlassoff M, Exterkate M and Eelens F, Global resource flows for population activities: post-ICPD experience, paper presented at the 1998 annual meeting of the Population Association of America, Chicago, IL, USA, Apr. 2–4, 1998; and Ross JA and Bulatao RA, Contraceptive projections and the donor gap, Washington DC: The Futures Group International. (Also issued as a background document for the seminar Meeting the Reproductive Health Challenge: Securing Contraceptives, and Condoms for HIV / AIDS Prevention, Istanbul, May 3–5, 2001.)

24. Casterline JB and Sinding SW, Unmet need for family planning and implications for population policy, *Population and Development Review*, 2000, 26(4):691–723; and Ross J and Heaton L, Intended contraceptive use among women without an unmet need, *International Family Planning Perspectives*, 1997, 23(4):148–154.

25. AbouZahr C, and Wardlaw T, Maternal mortality in 1995; estimates developed by WHO and UNICEF, New York: UNICEF, 2000; Hill K, AbouZahr C and Wardlaw T, Estimates of maternal mortality for 1995, *Bulletin of the World Health Organization*, 2001, 79(2):182–193; Shiffman J, Can poor countries surmount high maternal mortality? *Studies in Family Planning*, 2000, 31(4):274–289; and WHO and UNICEF, Revised 1990 estimates of maternal mortality: a new approach by WHO and UNICEF, 1996, available at http: / / www.unicef.org / reseval / matr / htm.

26. The Futures Group International, *The Maternal and Neonatal Program Effort Index (MNPI): Manual*, Glastonbury, CT, USA: The Futures Group International, 1999.

27. Stover J, Rehnstrom J and Schwartlander B, Measuring the level of effort in the national and international response to HIV / AIDS: the AIDS program effort index (API), paper presented at the 13th International AIDS Conference, Durban, South Africa, July 9–13, 1999.

28. The Futures Group International, *The Policy Environment Score (PES): Manual*, Glastonbury, CT, USA: The Futures Group International, 1997.

Resumen

Contexto: *Desde 1972, se han estado desarrollando periódicamente los índices de rendimiento de los programas de planificación familiar en gran escala. Estas puntuaciones tienen por finalidad identificar el trabajo y la solidez de los programas, en forma independiente a resultados tales como el nivel de uso de anticonceptivos o el cambio de la fecundidad.*

Métodos: *Se enviaron cuestionarios a observadores expertos quienes formularon juicios sobre los detalles del trabajo del programa que se realiza en aproximadamente 100 países en desarrollo. Estas respuestas correspondientes a cada país se convirtieron en 30 puntuaciones del programa, las cuales fueron luego clasificadas en cuatro grupos de componentes que representaban el trabajo del programa. Se calculó un índice general sobre el trabajo del programa, lo cual presentó la suma de las 30 puntuaciones de las características.*

Resultados: *El promedio del índice de trabajo del programa fue más elevado en 1999 (54% de la posible puntuación máxima) que en 1994 (48% del máximo). Los países que al principio presentaron puntuaciones bajas mejoraron considerablemente más que aquellos que al inicio registraron puntuaciones elevadas; en 1999, la brecha entre los dos grupos era pequeña. En el promedio, los programas sólidos y débiles presentaron una gran disparidad de los perfiles de las puntuaciones; los países más sólidos lograron una puntuación promedio mayor que los más débiles con respecto a cada una de las categorías de las características. Todos los países, fuere cual fuere su puntuación promedio, fueron selectivos con respecto a las características que destacaron en sus programas, aunque los programas más débiles resultaron ser más erráticos con respecto a esta selectividad de énfasis. Los programas más sólidos se han estabilizado en una puntuación de aproximadamente el 80% de la puntuación máxima. La más elevada prevalencia del uso de anticonceptivos continuó registrándose en aquellos países que disponen de un entorno social favorable y de programas más sólidos.*

Conclusiones: *Muchos países en desarrollo han ampliado sus programas de salud reproductiva, conforme a las recomendaciones emanadas de la Conferencia Internacional sobre Población y Desarrollo de 1994. Los mejores en el índice de trabajo y las puntuaciones de los programas sugieren que los países han podido hacerlo sin debilitar seriamente los esfuerzos que realizan en el campo de la planificación familiar.*

Résumé

Contexte: *L'effort des programmes de planning familial à grande échelle est mesuré régulièrement depuis 1972. Ces mesures visent à quantifier l'effort ou la force de ces programmes, indépendamment de leurs résultats (pratique contraceptive, variations de la fécondité, etc.)*

Méthodes: *Des questionnaires adressés à des observateurs experts ont permis d'obtenir leur évaluation détaillée de l'effort des programmes d'une centaine de pays en voie de développement. Les réponses relatives à chaque pays ont été converties en 30 cotes de fonction, ensuite groupées en quatre composants d'effort de programme. La somme des 30 cotes de fonction a été calculée pour produire l'indice d'effort global des programmes.*

Résultats: *L'indice d'effort moyen de 1999 s'est révélé supérieur (54% de la cote maximale possible) à celui de 1994 (48%). Les pays dont la cote était initialement faible ont enregistré une amélioration nettement supérieure à celle de leurs homologues à cote élevée en 1972. En 1999, l'écart entre les deux groupes était faible. En moyenne, les programmes forts et faibles différaient largement dans leur profil de cote, les pays forts l'emportant sur les plus faibles dans chaque catégorie de fonction. Tous les pays, indépendamment de leur cote moyenne, faisaient preuve d'une approche sélective des fonctions qu'ils accentuaient, mais les programmes plus faibles révélaient une plus grande inconstance dans leur sélectivité. Les programmes les plus forts se sont stabilisés à 80% environ de la cote maximale. La prévalence de la pratique contraceptive reste supérieure dans les pays présentant, à la fois, un cadre social favorable et des programmes forts.*

Conclusions: *De nombreux pays en voie de développement ont renforcé leurs programmes d'hygiène de la reproduction conformément aux recommandations de la Conférence internationale de 1994 sur la population et le développement. L'amélioration de l'indice et des cotes d'effort de 1999 semble indiquer la réussite de ce renforcement sans affaiblissement marqué de l'effort de planning familial.*