

AGENCY FOR INTERNATIONAL DEVELOPMENT  
 WASHINGTON, D. C. 20523  
**BIBLIOGRAPHIC INPUT SHEET**

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*Batch 72*

1. SUBJECT  
 CLASSI-  
 FICATION

A. PRIMARY

Population

PC00-0000-0000

B. SECONDARY

Family planning

2. TITLE AND SUBTITLE

An assessment of family planning service programs in 21 selected countries ,draft report

3. AUTHOR(S)

(101) Family Health Care, Inc., Washington, D.C.

4. DOCUMENT DATE

1976

5. NUMBER OF PAGES

51p.

6. ARC NUMBER

ARC

7. REFERENCE ORGANIZATION NAME AND ADDRESS

FHC

8. SUPPLEMENTARY NOTES (Sponsoring Organization, Publishers, Availability)

9. ABSTRACT

10. CONTROL NUMBER

PN-RAB-702

11. PRICE OF DOCUMENT

12. DESCRIPTORS

Surveys  
 Delivery systems

Evaluation

13. PROJECT NUMBER

14. CONTRACT NUMBER  
 AID/air-1138 GIS

15. TYPE OF DOCUMENT

D R A F T I I

The Family Health Care Report:

AN ASSESSMENT OF FAMILY PLANNING SERVICE PROGRAMS  
IN 21 SELECTED COUNTRIES

Draft Submitted: March 30, 1976

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Contract No. AID/afr-C-1138  
Agency for International  
Development  
Washington, D.C. 20523

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BIBLIOGRAPHY (to be submitted in final report)

## I. SUMMARY AND RECOMMENDATIONS

Utilizing readily available information regarding twenty-one (21) preselected countries, Family Health Care, Inc. (FHC) has reviewed the characteristics of the specific populations, the processes by which family planning contraceptive services are provided and the fertility outcome as measured primarily by the current percentage of contraceptive users among married women of reproductive age. Our literature review aggregates a number of useful facts and opinions, yet also demonstrates the paucity of uniformly defined data needed by program planners.

From the limited data, we document that the percentage of contraceptive use is correlated inversely with estimated current birth rates. There is also a high degree of association between current birth rates or prevalence of contraceptive use with female literacy and current death rates. Emerging evidence in Indonesia, however, suggests that the illiteracy or low education barrier can, at least in part, be overcome through appropriate policy initiatives, program momentum and service accessibility.

In reviewing the various programs, we find rising new acceptor rates and relatively high current contraceptive use rates in those programs which at least over time have offered various family planning methods through

dissimilar distribution channels focusing on the village. Reliance on a single contraceptive or a single delivery channel has not yet met with success. Those programs which utilize mid-level health auxiliaries and lay personnel in non-clinic noncommercial, i.e., community or village or household distribution schemes appear to be making rapid progress in 1975. This, in our judgment, is the most promising service delivery system for programs in nearly any stage of program development.

The availability of new technologies for sterilization and abortion/menstrual regulation have provided the means for a significant impact in the Tunisian, Korean (Rep.), Indian and Costa Rican fertility control programs.

Overall program organizational characteristics appear of less importance than interdepartmental or interministerial cooperation, program administrative skills, policy and budget commitments and adequate IEC program support. But, these program support elements alone cannot create contraceptive use without a viable, appropriately channeled, multiple contraceptive services system.

The degree to which family planning services are offered as a component of basic health care is of particular importance in Africa and Latin America. Integration of planning processes for population/family planning and related sectors is nearly non-existent.

Inadequate utilization and availability of auxiliary and transport equipment is a moderately severe constraint in several countries. Funding is a constraint in some countries.

To complement population program assistance, the possible utilization of education sector funds for improved adult literacy programs and health sector funds *(specifically including women)* for auxiliary training programs and health infrastructure development (primarily Africa) appears warranted.

Despite the data inadequacies, we note large variations in program costs and suggest that some country programs be reviewed carefully before additional AID funding (i.e., Costa Rica and Tunisia).

In Section VI, we offer our judgments on the most effective order for family planning service program development. Beginning with a clinic-based service, there should be available to acceptors at least oral contraceptives, IUDs and condoms through health auxiliaries. Then, the clinic base should subsequently transform its operations to sterilization and abortion services, and provide all consumable contraceptives through village-based contraceptive distribution systems. These schemes should be centered on the political, administrative and social structure of the village. If economically justified, program managers can then create subsidized commercial distribution systems for condoms and oral

contraceptives. While the Helm's amendment restrictions are recognized, we nonetheless encourage AID to continue reviewing the positive demographic and medical attributes of abortion services.

Our specific recommendations for program policy considerations follow.

#### RECOMMENDATIONS

1. Continue support for noncommercial non-clinic (community, village or household) distribution schemes for oral contraceptives and condoms. Ideally, these systems should be linked with the political/administrative/social structure of the rural communities.
2. Explore available mechanisms for furthering the use of auxiliaries in family planning services--and basic maternal child health programs.
3. Continue all efforts to foster contraceptive supply self-sufficiency in those countries or regions requiring large quantities of consumable contraceptives. Explore mechanisms by which AID financing (rather than Export-Import Bank) can be allocated more easily for capital investments and technical assistance.
4. Encourage <sup>female</sup> greater use of educational funds for basic literacy, including adult literacy programs. Examine more thoroughly the relationship and degree of causality between contraceptive use and literacy.
5. Seek more effective mechanisms for improving family planning/population program management.
6. Investigate carefully the degree to which family planning services can become an integral portion of basic health care services in rural areas without the necessity of expending large sums of population funds for health infrastructure systems.

7. Encourage greater health sector resource allocation, both host country and donor, for health systems in Africa particularly.
8. Re-examine AID's financing role in Tunisia and Costa Rica.
9. Review potential for greater funding assistance to Ethiopia and Turkey.
10. Pla. now for a regularized annual or bi-annual review of national family planning programs, including the analyses of program costs. Consider the basic framework against which evaluations will be made, the data requirements, the cost and feasibility of obtaining that data, and the appropriate locus either within AID or without, e.g., Population Council, for implementing the data collection and analysis process.

## II. PURPOSE AND METHODOLOGY OF ANALYSIS

### II.A. PURPOSE

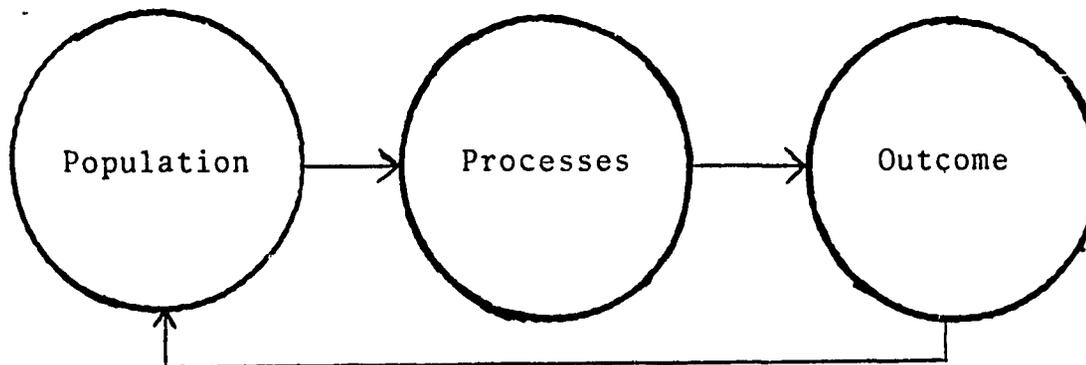
Effective March 1, 1976, Family Health Care, Inc. (FHC) and the Agency for International Development (AID) signed a contract for the following scope of work:

"Using data published by the Population Council, United Nations, Population Reference Bureau, AID's Population Office, as well as other sources, Family Health Care personnel will assess and compare the impact on fertility (or at least on acceptance of family planning services) of various forms of family planning services established in the past ten years or so, focusing on different types of family planning methods, different modes of delivery, and different means of financing (and addressing AID's role in particular). They will explicitly compare family planning only and integrated health, nutrition and family planning programs. The study will involve careful consideration of impediments to the wider practice of family planning, including funding constraints, personnel constraints, management problems, and other factors tending to limit consumer demand for family planning, with a view to suggesting programs that would ease major impediments. This study will provide conclusions as to the likely comparative effectiveness of different types of future family planning programs which would form a significant part of the basis for AID population program planning over the next several years. The Contractor shall work in close consultation with the AID liaison official and submit to AID, within one month after the effective date of this work order, a written report summarizing the conclusions and methodology. The second month of the work order period will be used for revision and rewriting of the report."

11.B. METHODOLOGY OF ANALYSIS

To accomplish the task outlined by AID, the FHC analytical framework was used to organize and view the available data and information. The following diagram outlines the fundamental approaches which serve to maximize understanding of the family planning services subcomponent within the totality of a population and to some extent a health sector.

Core Analytical Framework



In essence, a population with given characteristics of age, socioeconomic status, geographic dispersion, societal values, health status and fertility status proceeds through health and/or fertility control processes and experiences changes in fertility and health.

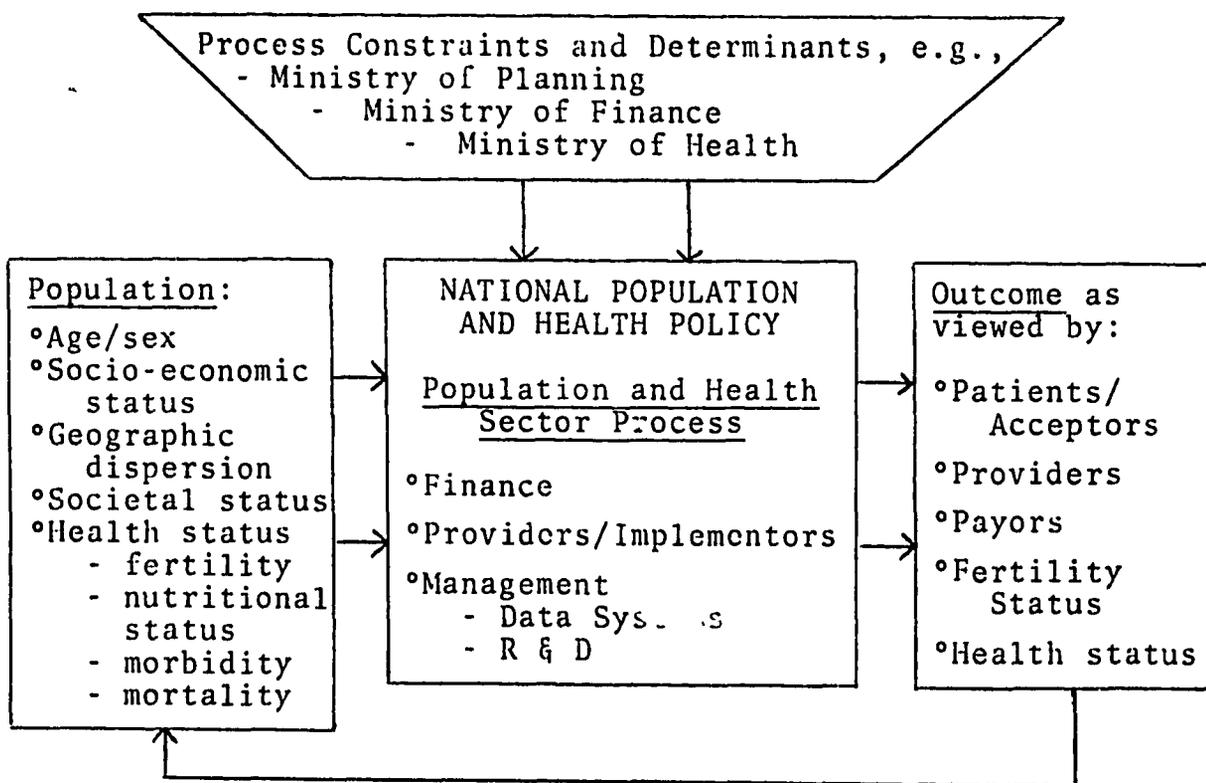
Family Health Care views the population or health sector process as a triad of: (1) available finances, (2) providers of services, and (3) management. To varying extents, management uses data systems combined with research and development tools to improve the process. The process,

in the whole, is guided by a national health and population policy influenced by various constraints (e.g., human resources) and determinants (e.g., political, economic policies, etc.).

The outcome of a population proceeding through a health/population program process can be described from the various vantage points of the patient/acceptor, the service provider, the payors for the services or the health and fertility status of the patient.

The FHC analytical framework is presented diagrammatically below:

Expanded Analytical Framework



From an ideal standpoint, this analytical framework assists in identifying the multiple systems operating to provide personal health services, public health services, and family planning services. Time restraints, however, mandated that FHC primarily confine its analysis to the characteristics of the population, the fertility control process and the fertility outcome. To varying extents, the interplay of the health sector attributes, when applicable, were reviewed.

For the most part, FHC created major groupings of available data and demonstrated relationships (though not necessarily causality) between variables of a family planning services program. In essence, we attempted through this rough process to recognize data limitations, yet discern significant variations and extremes among the program variables.

### III. PROJECT CONSTRAINTS AND ASSUMPTIONS

Understandably, this analysis reflects the press of time constraints and more significantly, the lack of and nonuniformity of fertility control program data. The absence of standardized definitions and an agreed upon basic framework for analyzing or at least viewing the totality of a fertility control program add to the constraint.

The comparisons provided below, and from which conclusions and recommendations are drawn, stem from information primarily compiled by AID and the Population Council. Financial data were taken primarily from the work sheets of the AID Inspector General for Foreign Assistance. Though cognizant that much of the data are incomplete, we have attempted to utilize data with the least inconsistencies and that which is confirmed, at least in part, by AID officials. The scope of work precluded any field visits for data gathering or data confirmation. Under these conditions, our stated estimates of contraceptive use, growth rates and program inputs are intended to provide the best available growth reflections rather than precise statistical representations of country programs.

Unless otherwise indicated, all information provided refers to CY 1975 and does not consider plans for or

reported progress resulting from CY 1976 activities.

We note that this analysis does not include some outstanding national programs, e.g., Singapore, Chile, Barbados, Fiji and Trinidad/Tobago, Mauritius and Hong Kong, where considerable fertility impact is evident, and China, where available evidence suggests an energetic national fertility control effort.

Because this study primarily seeks a more thorough understanding of the characteristics and determinants of publicly financed fertility control programs, we compare program characteristics with new acceptors and current contraceptive users served by the public sector. Significant commercial sector activities, which are not directed or controlled by the public program, will be noted when appropriate. We acknowledge here the enormous difficulty in attributing family planning services program efforts to effects on birth rates. Freedman and Berelson\* stated clearly the issue:

"...Again we are handicapped in reaching a firm answer, partly because of lack of data but also because of technical difficulties in disentangling the impact of this one factor from a complex of simultaneous events; or in determining how much of a program's apparent effect on fertility reduction is merely a substitution for what would have happened anyway by other means, given

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\* Freedman, R. and Berelson, B. "The Record of Family Planning Programs," Studies in Family Planning, Volume 7, No. 1, January 1976.

favorable development trends; or in measuring the indirect efforts of program activity upon the practice of fertility control; or indeed in satisfactorily conceptualizing the very notion of cause in such situations."

This assessment does not unravel debated issues, but will identify the program characteristics which appear to provide increasing levels of coverage of multiple contraceptive methods to beneficiaries who, in some cases, are distant from the mainstream of economic development.

Finally, this assessment, does not analyze specifically the contribution of current contraceptive use to fertility declines. Age of first marriage, child spacing, degrees of subfertility, infertility and other variables enter the equation. But in the main, most women in the developing world are fertile and they control fertility most effectively by using modern contraceptive services provided by someone somewhere. Therefore, we will work under the assumption that the subsequently demonstrated associations between current contraceptive use and birth rate are, at least in part, causally related.

#### IV. POPULATION CHARACTERISTICS

Table 1A provides data regarding the 1975 population size, the crude birth rate, crude death rate and crude rate of natural increase for the 21 countries under consideration. In addition, GNP/capita, percentage of female literacy, age of marriage of rural females, percentage of urbanization and population density per total land area and total arable land are provided.

##### IV.A. EXTREMES OF POPULATION SIZE

Those countries with more than 100 million population in 1975 include: India (608.5 million), Indonesia (131.9 million) and Brazil (107 million). Those countries with less than 10 million population are: Ghana (9.9 million), Tunisia (5.8 million), El Salvador (4.1 million) and Costa Rica (2.0 million).

##### IV.B. EXTREMES OF CRUDE BIRTH RATES (CBR)

Only Tanzania has a CBR of 50, though Ethiopia, Ghana and Nigeria are reported to have CBRs of 49 per 1,000 population. Costa Rica, Taiwan and Korea (Rep.) were the only countries with CBRs below 30 among those being examined.

##### IV.C. EXTREMES OF CRUDE DEATH RATES (CDR)

All the Latin American countries reviewed, plus Korea (Rep.) and Taiwan, have CDRs below 10. The highest

TABLE 1A 1975 POPULATION DATA, SELECTED COUNTRIES

	Population (in Millions) <sup>1</sup>	Crude Birth Rate <sup>1</sup>	Crude Death Rate <sup>1</sup>	Crude Rate of Natural Increase <sup>1</sup>	GNP/ Capita (\$) <sup>1</sup>	Percentage Female Literacy, by Definition <sup>2</sup>		Percentage Urban Population <sup>1</sup>	Population Density <sup>3</sup>		Mean Age of Females at First Marriage	
									Total Area	Arable Land	Urban	Rural
Korea, Rep.	34.1	29	9	2.0	380	87	6 yrs+	41	345	1,476	23.9	22.7
Taiwan	16.0	23	5	1.9*	660	79	6 yrs+	63	445	1,850	--	22.6--
Philippines	42.8	41	11	3.0	250	82	10 yrs+	32	142	500	n/a	n/a
Indonesia	131.9	38	17	2.1	120	49	10 yrs+	18	69	1,039	n/a	n/a
Thailand	42.3	36	11	2.5	230	75	10 yrs+	13	82	370	25.1	21.6
Bangladesh	74.0	47	20	2.7	100	4	u	9	513	812	16.7	15.5
India	608.5	35	15	2.0	120	49	10 yrs+	20	185	372	18.2	16.6
Nepal	12.6	43	20	2.3	90	4	6 yrs+	4	59	602	n/a	n/a
Pakistan	70.3	44	15	2.9	130	17 <sup>a</sup>	10 yrs+	26	87	363	18.9	18.2
Turkey	39.2	39	12	2.7	580	42	6 yrs+	39	50	141	20.4	18.9
Egypt	37.2	38	15	2.3	260	65	20-24 yrs	43	37	1,313	n/a	n/a
Yemen	5.8	38	13	2.5	460	40 <sup>a</sup>	10 yrs+	40	35	128	21.8	20.2
Ethiopia	27.9	49	26	2.3	80	± 5	u	11	23	216	n/a	n/a
Yugoslavia	9.9	49	22	2.7	290	34	6 yrs+	29	41	348	n/a	n/a
Nigeria	63.0	49	23	2.7*	250	26 <sup>a</sup>	u	16	68	289	n/a	n/a
Zambia	15.2	50	22	2.8	130	15	10 yrs+	7	16	130	n/a	n/a
Mexico	60.2	46	8	3.8	870	73	10 yrs+	61	30	253	n/a	n/a
Costa Rica	2.0	28	5	2.3	780	90	10 yrs+	41	39	312	23.1	21.3
El Salvador	4.1	40	8	3.2	340	45	10 yrs+	39	192	633	21.3	20.2
Colombia	22.3	41	9	3.2	410	78	7 yrs+	64	20	441	22.2	20.7
Brazil	107.2	37	9	2.8	750	64	15 yrs+	58	13	360	23.9	22.1

Male/female rate combined.

Source: "World Population Growth and Response," p. 120.

Undefined age group.

Differences due to rounding of CBR and CDR.

Source: "World Population Growth and Response," Population Reference Bureau, 1976.

Source: Nortman, D. "Population and Family Planning Programs: A Factbook," Reports on Population/Family Planning, No. 2, Seventh Edition, October 1975. (Generally early 1970's data.)

Production Yearbook 1970, Food and Agriculture Organization, U.N., Volume 24, Table 1, pp. 3-8.

n/a = not available

crude death rate is Ethiopia (26).

IV.D. EXTREMES OF CRUDE RATE OF NATURAL INCREASE (CRNI)

Those countries reported to have growth rates greater than 30/1,000 or 3.0 percent annually are Mexico (3.8), El Salvador (3.2) and Colombia (3.2). Only Taiwan reports a CRNI below 2.0, though discussions with AID officials strongly suggest that the 1975 CRNI for Korea (Rep.) was also slightly below 2.0 percent.

IV.E. EXTREMES OF GNP/CAPITA

Costa Rica, Brazil and Mexico reportedly have GNP/capita rates greater than \$750. Those countries under \$150 are: . Indonesia, India, Bangladesh, Nepal, Pakistan, Ethiopia and Tanzania.

IV.F. EXTREMES OF FEMALE LITERACY

Though definitions of female literacy varied (e.g., some measure literate female children above age 6, others above age 10), the following extremes are noted. Above 75 percent female literacy (ability to read and write):

Korea (Rep.)  
Taiwan  
Philippines  
Thailand  
Costa Rica  
Colombia

Below 25 percent female literacy:

Bangladesh  
Nepal  
Ethiopia  
Tanzania

IV.G. EXTREME . . . . . DENSITY

Korea (Rep.), Taiwan, Indonesia and Egypt have more than 1,000 population per square kilometer of arable land. Turkey, Tunisia, Ethiopia and Tanzania have less than 250 population per square kilometer.

IV.H. EXTREMES OF AGE OF MARRIAGE

Data were found on only 10 of the 21 countries. Of those available, Brazil and Korea (Rep.) report rural female age of marriage above 22.0. India at 16.6 and Bangladesh at 15.5 years for the age of first marriage among rural females are the lowest.

IV.I. TIME TRENDS

Table 1B, based on UN data, provides the population in millions, crude death rate, crude birth rate and crude rate of natural increase and estimated fertility levels in 1965, 1970 and 1975 for the selected 21 countries. The different sources for Table 1A and 1B yield some differences for 1975; we preferred the Population Reference Bureau source for Table 1A because a broader range of information was available in that reference.

TABLE 18 DEMOGRAPHIC INDICATORS FOR SELECTED COUNTRIES, 1965-1975

	Population (in millions)			Annual Rate of Population Growth (averaged)			Crude Birth Rate (averaged)			Crude Death Rate (averaged)			General Fertility Rate (averaged)			Total Fertility Rate
	1965	1970	1975	1960-65	1965-70	1970-75	1960-65	1965-70	1970-75	1960-65	1965-70	1970-75	1960-65	1965-70	1970-75	1970-75
Rep. Korea	27.71	30.72	33.95	2.3	2.1	2.0*	39	31	29*	12	10	9	169	135	117*	3977*
Taiwan <sup>a</sup>	12.44	14.04	n/a	3.4 <sup>b</sup>	2.6 <sup>c</sup>	n/a	32 <sup>d</sup>	28 <sup>e</sup>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Philippines	32.03	37.60	44.43	3.0	3.2	3.3*	44	44	44*	14	12	11*	199	201	200*	6380*
Indonesia	105.67	119.47	136.04	2.5	2.6	2.6*	47	45	43	22	19	17	199	182	176*	5524*
Thailand	30.64	35.75	42.09	3.0	3.1	3.3*	45	44	43*	15	13	11	202	198	194*	6349*
Bangladesh	58.80	67.69	73.75	2.7	2.8	1.7	51	50	50*	24	21	28*	236	234	232	7216*
India	482.37	543.13	613.22	2.4	2.4	2.4*	44	41	40	20	18	16	190	181	176*	5740*
Nepal	10.10	11.23	12.57	1.9	2.1	2.3	45	44	43	26	23	20	199	183	182	6150
Pakistan	52.42	60.45	70.56	2.7	2.9	3.1*	48	47	47*	21	19	17*	230	226	224*	7175*
Turkey	31.15	35.23	39.88	2.5	2.5	2.5	41	40	39	15	14	13	183	182	175*	5822*
Egypt	29.39	33.33	37.54	2.5	2.5	2.4	43	41	38	18	16	14	186	177	161	5210
Tunisia	4.62	5.14	5.75	1.8	2.1	2.3	47	43	40	18	16	14	216	202	182	6231
Ethiopia	22.23	24.86	27.98	2.1	2.2	2.4*	51	50	49	30	28	26*	216	215	215	6700
Ghana	7.74	8.63	9.87	2.7	2.2	2.7	50	50	49	25	24	22	220	221	218	6699*
Nigeria	48.68	55.07	62.93	2.5	2.5	2.7	50	50	49	25	24	23	222	220	218	6699*
Tanzania	11.52	13.27	15.44	2.7	2.8	3.0	51	51	50	24	22	20	212	215	217	6706
Mexico	42.86	50.31	59.20	3.3	3.2	3.3	45	43	42*	11	10	9	208	199	193*	6465*
Costa Rica	1.50	1.74	1.99	3.6	3.0	2.8*	45	37	33 <sup>e</sup>	9	7	6	212	172	146*	4646*
El Salvador	2.95	3.52	4.11	3.1	3.5	3.1*	48	44	42*	16	13	11	220	206	195*	6191*
Colombia	18.69	22.08	25.89	3.2	3.3	3.2*	45	44	41*	12	10	9	203	197	182*	5878*
Brazil	92.54	95.20	102.73	2.9	2.9	2.8*	39	38	37*	10	10	9	169	165	159*	5150*

n/a = not available

\* Indicates "medium variant" where there is a difference between "low variant," "medium variant," and "high variant" of estimated data.

<sup>a</sup> After the Republic of China (Taiwan) was voted out of the United Nations in 1970, the U.N. ceased publishing its national data.

<sup>b</sup> Average for the period 1958-1964. For the period 1963-1968, average growth rate was 2.9 percent annually.

<sup>c</sup> Average for the period 1963-1970.

<sup>d</sup> Estimate for the year 1966.

<sup>e</sup> Estimate for the year 1970.

Sources: Taiwan: United Nations Demographic Yearbook, 1966 and 1970 Editions. New York: Statistical Office of the United Nations, Department of Economic and Social Affairs, United Nations Secretariat.

All Other Countries: "Selected Demographic Indicators by Countries, 1950-2000," Prepared by the Population Division, Department of Economics and Social Affairs, United Nations Secretariat, New York: May 28, 1975 (Document No. ESA/P/MP.55).

## V. MEASURES OF OUTCOME

Under the assumptions noted earlier in Section III, we shall attempt to identify those elements of family planning service programs which appear to result in the most favorable reduction in fertility. Therefore, we will present the best available measures of fertility at this point of the presentation so as to use these as a measure of family planning program progress against various program characteristics described below. We emphasize again the difficulty in establishing causalities between programs and effects on fertility, but will proceed on the basis that some causality exists.

Very few countries among the 21 designated for review have reasonable 1975 specific fertility rates. Thus, we are restricted severely in measuring recent program impact specifically. In several countries, AID financed intercensal surveys or fertility surveys should greatly assist similar evaluations in forthcoming years.

As a substitute, we have joined others, e.g., Population Council, AID/IGA, in using the prevalence of contraceptive use defined as percentage of current (1975) contraceptive users among married women or couples of reproductive age (MWRA), as a reflection of the crude birth rate. From available analyses, we demonstrate the strong relationship between current contraceptive use and

birth rates, and again will proceed under the assumption that there is at least partial causality.

V.A. SOURCES OF DATA

For the denominator, i.e., couples or married women of reproductive age, we used data presented in the Population Council's 1975 "Population and Family Planning Programs: A Factbook," Reports on Population/Family Planning (Seventh Edition), which utilizes UN compiled and analyzed data. As noted later in Table 2A, the frequency of consensual marriage, particularly in Latin America, cause the denominator to be understated. This results in some degree of overestimation of current contraceptive use prevalence rates.

Numerous data, i.e., number of current contraceptive users from the public sector, were accumulated primarily from the quarterly reports submitted by AID Mission Population Officers. Significant private sector commercial contraceptive use was noted in Korea (Rep.), Taiwan, Thailand, Egypt, Mexico and Brazil. Table 2A provides our best estimation of the 1975 total number and percentage of current users by contraceptive type from the public sector and the percent of current users from private commercial sources.

The specific value for nearly any rate provided in Table 2A could be argued endlessly. We have chosen to estimate as best as possible the prevalence rates, then

TABLE 2A CURRENT CONTRACEPTIVE USE AMONG MARRIED WOMEN OF REPRODUCTIVE AGE (MRA).  
BY TYPE, LATE 1974 OR EARLY 1975

	MRA <sup>1</sup> (000s)	Current Users, Public Program (000s) <sup>2</sup>							Public Program, Current Users/1,000 MRA							Estimated Current Users From Private Commercial Sector (All Methods) <sup>1</sup>	Current Contraceptive Users from All Sources Per 1,000 MRA	
		OC	Condom	IUD	Male Sterilization	Female Sterilization	Other	Total	Quarter of CY	OC	Condom	IUD	Male Sterilization	Female Sterilization	Other			Total
Korea, Rep.	4,100	267	191	761	190	22	---	1,411	2Q/75	60	45	185	46	5	--	344	70	414
Italian	2,000	75	32	420	---	21	---	548	4Q/74	37	16	210	--	10	--	274	340	614
Philippines	5,200	533	Inc. in Other	204	---	---	417	1,154	2Q/75	102	--	39	--	--	80	222	na	222
Indonesia	21,000	1,470	200	800	---	---	---	2,470	2Q/75	70	10	38	--	--	--	118	na	118
Trinidad	5,200	452	40	317	22	306	33	1,171	2Q/75	87	8	61	4	59	6	225	75	301
Thailand	15,000	233	170	64	314	6	76	864	2Q/75	15	11	4	21	--	5	58	na	58
India	101,000	32	2,149	1,375	--12,714	(comb.)--	30	16,391	2Q/75	.3	21	14	--	--125--	.3	161	na	161
Nepal	2,400	19	9	2	30	2	---	62	2Q/75	8	4	.8	12	.8	--	26	na	26
Pakistan	14,729 <sup>3</sup>	396	1,234	337	6	17	30	2,021	2Q/75	27	84	23	.4	1	2	137	na	137
Sri Lanka	6,000	15	---	159	---	---	---	165 <sup>1</sup>	1/74	2.5	--	25	---	---	--	27	na	27
Spain	5,100	471	---	387	---	---	30	853 <sup>1</sup>	1/75	92	--	76	---	---	.6	174	39	212
Tunisia	700	12	1	52	---	25	---	91	2Q/75	17	1.4	74	---	36	---	130	14	144
Ethiopia	5,000	7	---	3	---	.6	---	10	4Q/74	--	--	--	---	---	---	2	na	2
China	1,900	na	na	na	na	na	na	150	1974	--	--	--	--	--	--	26	na	26
Nigeria	8,500	21	.2	22	---	---	2.3	46	4Q/74	2.4	--	--	2.5	--	.2	5	na	5
Tanzania	2,800	30	---	3	---	---	---	33	4Q/74	11	--	1	---	---	---	12	na	12
Mexico	9,300 <sup>4</sup>	---	---	---	---	---	---	1950	1975	--	--	--	--	--	--	105	122 (73 data)	228
Cote d'Ivoire	250 <sup>4</sup>	53	7	8	--130--	--	8	106	1Q/75	212	28	32	---	--120--	32	424	na	424
El Salvador	800 <sup>4</sup>	49	12	16	1	17	6	101	2Q/75	61	15	20	1	21	7	126	na	126
Colombia	3,100 <sup>4</sup>	271	16	287	---	---	18	591	2Q/75	87	5.2	93	---	---	6	191	na	191
Brazil	18,000 <sup>4</sup>	na	na	na	na	na	na	na	na	na	na	na	na	na	na	225	190 <sup>5</sup>	120

na not available

1 Source: Nortman, D. "Population and Family Planning Programs: A Factbook." Reports on Population/Family Planning, Number 2, Seventh Edition, Table 3, October 1975 (except as noted).

2 Source: "Family Planning Service Statistics," AID/PHA/PCP/FPSD, 1974, unless noted otherwise, and subsequent reports.

3 Source: USAID/Istanbul. This MRA base is 13% higher than reported in Nortman's "Factbook".

4 As noted by Nortman, "Persons living in consensual unions are classified as married. It appears, however, in a number of countries a significant number of consensually married women are reported as being single. As a consequence, the estimates shown here may substantially understate the number of women exposed to the risk of pregnancy in these Latin American countries."

5 Current users in IOP affiliate program, adapted from "Family Planning Programs, World Review 1974," Studies in Family Planning, Volume 6, Number 8, p. 265, August 1975.

6 "World Population Growth and Response," Population Reference Bureau, p. 221.

TABLE 2B PREVALENCE OF CONTRACEPTIVE USE THROUGH  
PUBLICLY FINANCED PROGRAMS, LATE 1974 OR  
EARLY 1975

	<u>Country</u>	<u>Percentage of MWRA</u>
Above 20 Percent of MWRA	Costa Rica	42
	Korea, Rep.	34
	Taiwan	27
	Thailand	22
	Philippines	22
Between 10-19 Percent of MWRA	Colombia	19
	Egypt	17
	India	16
	Pakistan	14
	Tunisia	13
	El Salvador	13
	Indonesia (Java & Bali = 17%)	12
	Mexico	11
Between 5-9 Percent of MWRA	Bangladesh	6
Below 5 Percent of MWRA	Turkey	2.7
	Nepal	2.6
	Ghana	2.6
	Brazil	2.2
	Tanzania	1.2
	Ethiopia	< 1
	Nigeria	< 1

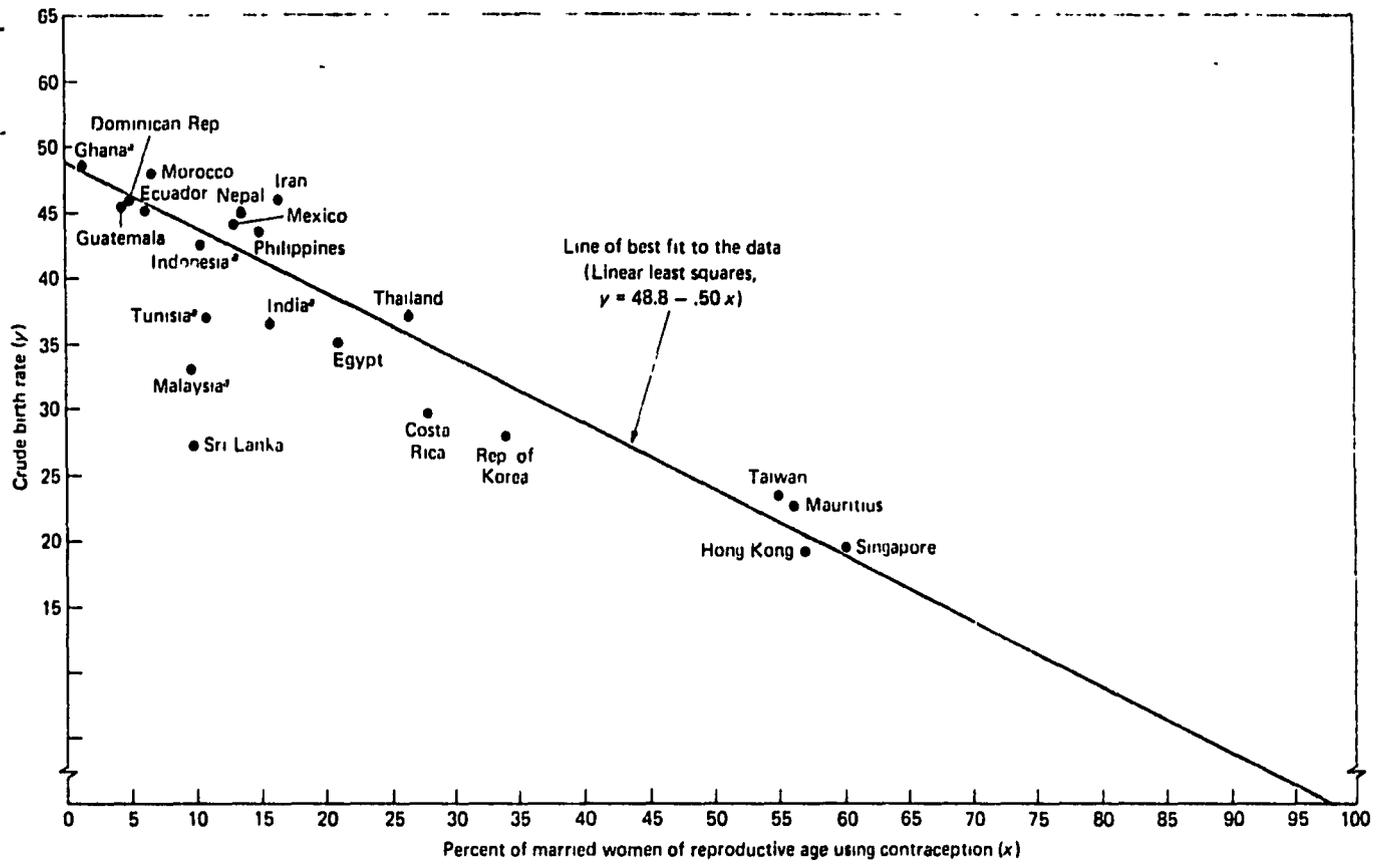
group country specific rates into various levels of contraceptive use for comparative purposes. Table 2B organizes the contraceptive use prevalence rates from the public sector only in this manner.

V.B. PREVALENCE OF CONTRACEPTIVE USE AND CURRENT CRUDE BIRTH RATES

Figure 1, taken from the Population Council's 1975 "Population and Family Planning Programs: A Factbook," demonstrates the strong relationship between the percentage of current users and current crude birth rates. Figure 2 from the December 1975 AID/IGA report, "AID Bilateral Population Programs: Policy Implications of Available Data," notes a similar relationship. Finally, Figure 3A and 3B from our data (Tables 1A and 2A) show the total (combined sources and public program only) prevalence of contraceptive use and current crude birth rate relationship for those countries within this assessment. Even with this limited sample of countries, the strong relationship is evident.

With regard to Figure 1, the editors of the referenced Population Council document state, "the slope of the line is such that a two percent increase in the proportion of couples using contraception takes one point off the crude birth rate."

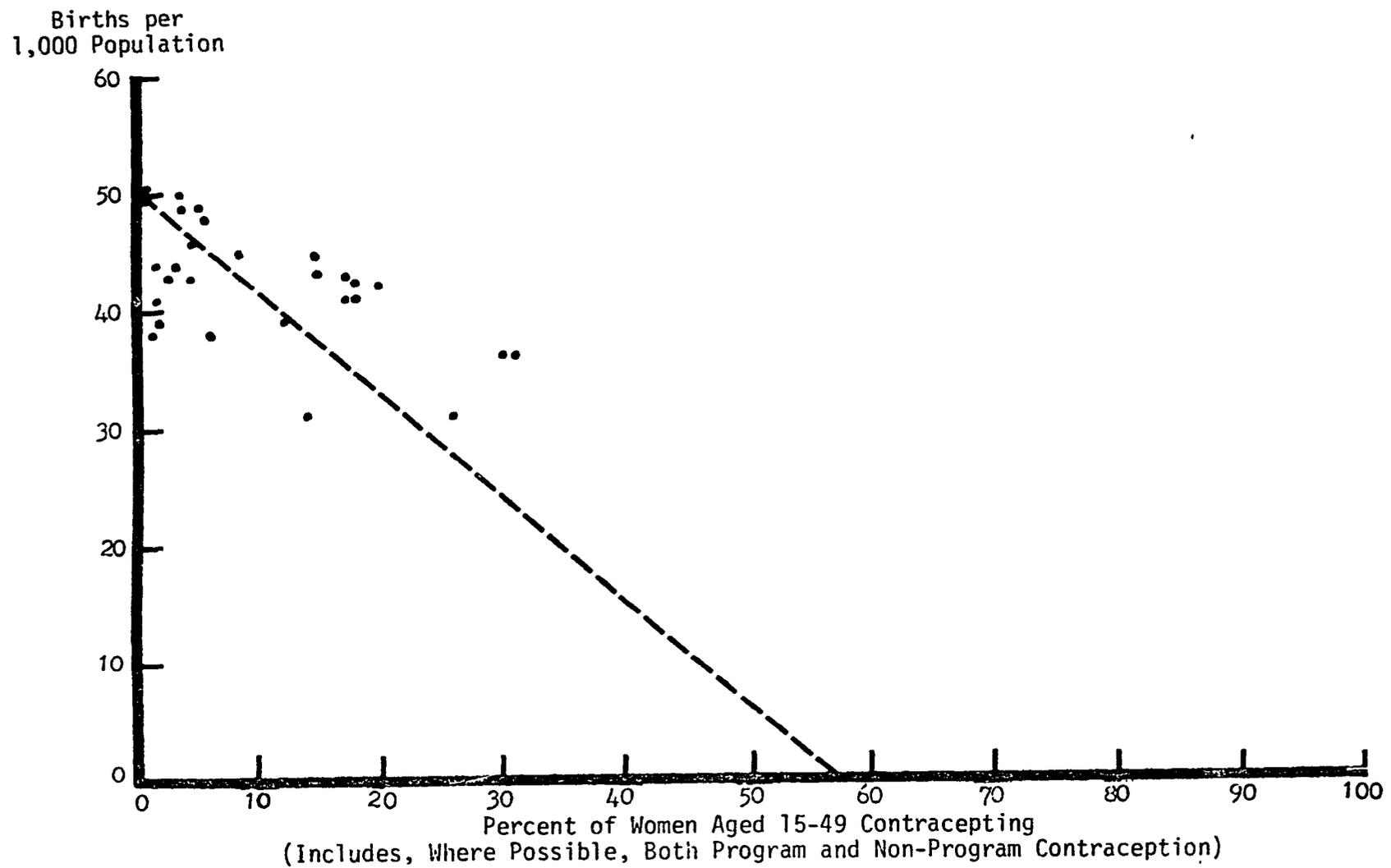
Figures 4-9 present in scattergram format the relationship between total (combined public and private



\*Program users only. Malaysia and Tunisia are excluded from the computation of the line because considerable contraception is thought to take place through the private sector in these two countries in the absence of which the birth rate would be higher than that shown.

Source: Nortmann, D., "Population and Family Planning Programs: A Factbook," Reports on Population/Family Planning, No. 2, 7th Edition, Figure 3, p. 85, Oct. 1975.

FIGURE 1 CONTRACEPTIVE USE AND BIRTH RATES



Source: "Inspection Report, AID Bilateral Population Programs: Policy Implications of Available Data," Office of the Inspector General of Foreign Assistance, Figure 9, p. 34, December 1975.

FIGURE 2 BIRTH RATE VS. PERCENT WOMEN AGED 15-49 CONTRACEPTING, LATEST AVAILABLE YEAR

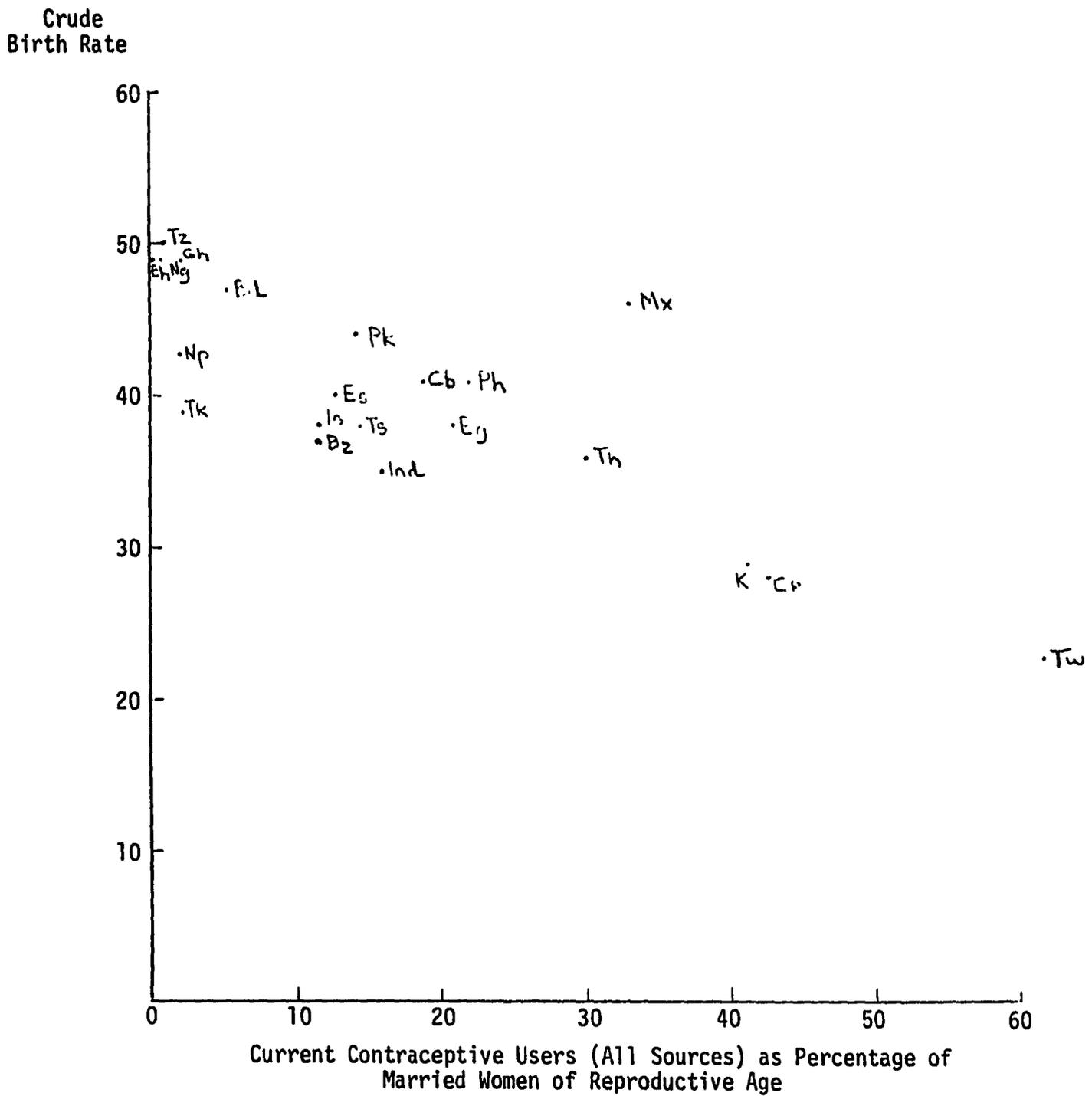


FIGURE 3A RELATIONSHIP BETWEEN CURRENT CONTRACEPTIVE USE (PUBLIC AND PRIVATE SOURCES) AND CRUDE BIRTH RATE

Crude  
Birth Rate

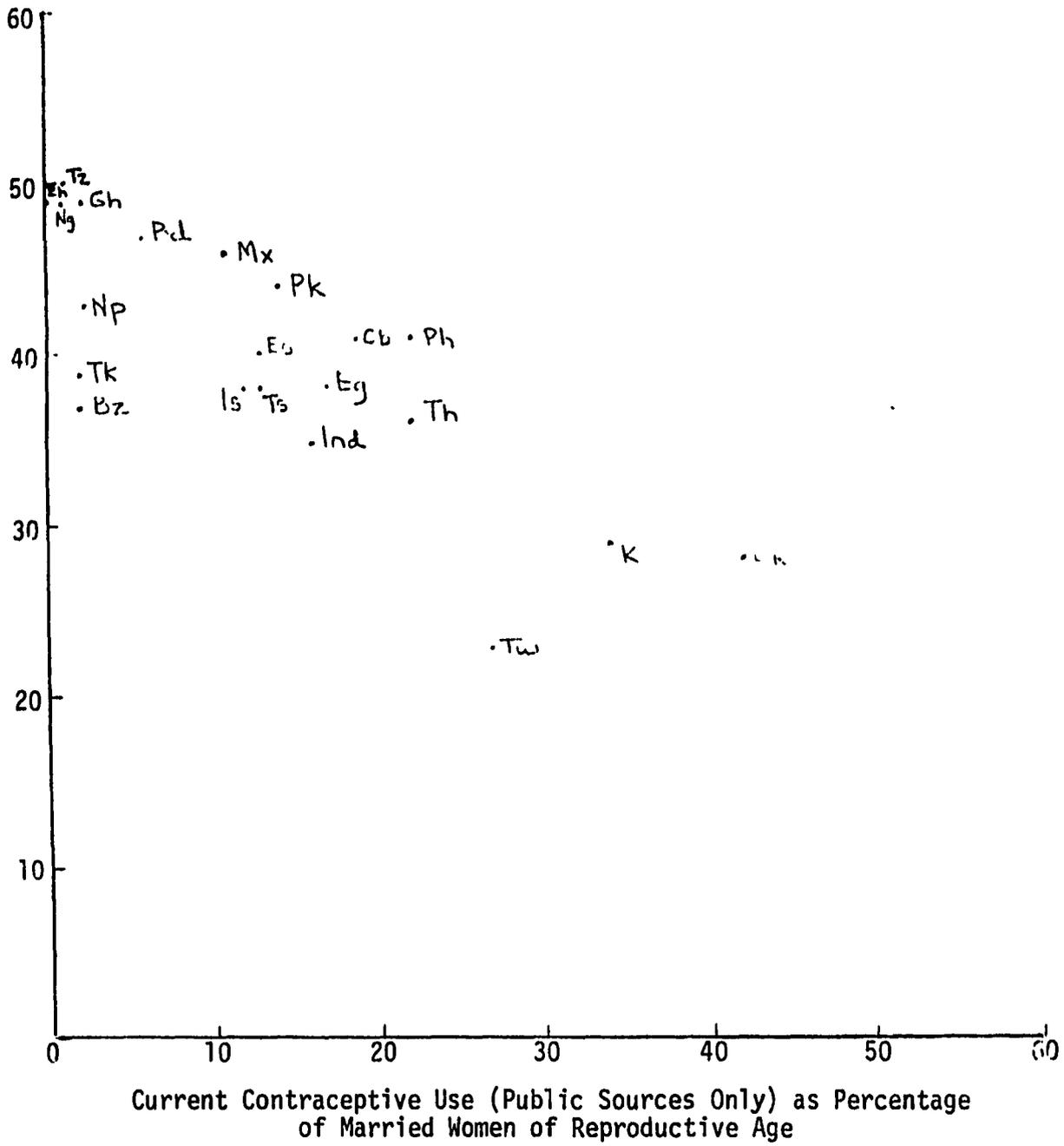


FIGURE 3B RELATIONSHIP BETWEEN CURRENT CONTRACEPTIVE USE (PUBLIC PROGRAM SOURCES ONLY) AND CRUDE BIRTH RATE

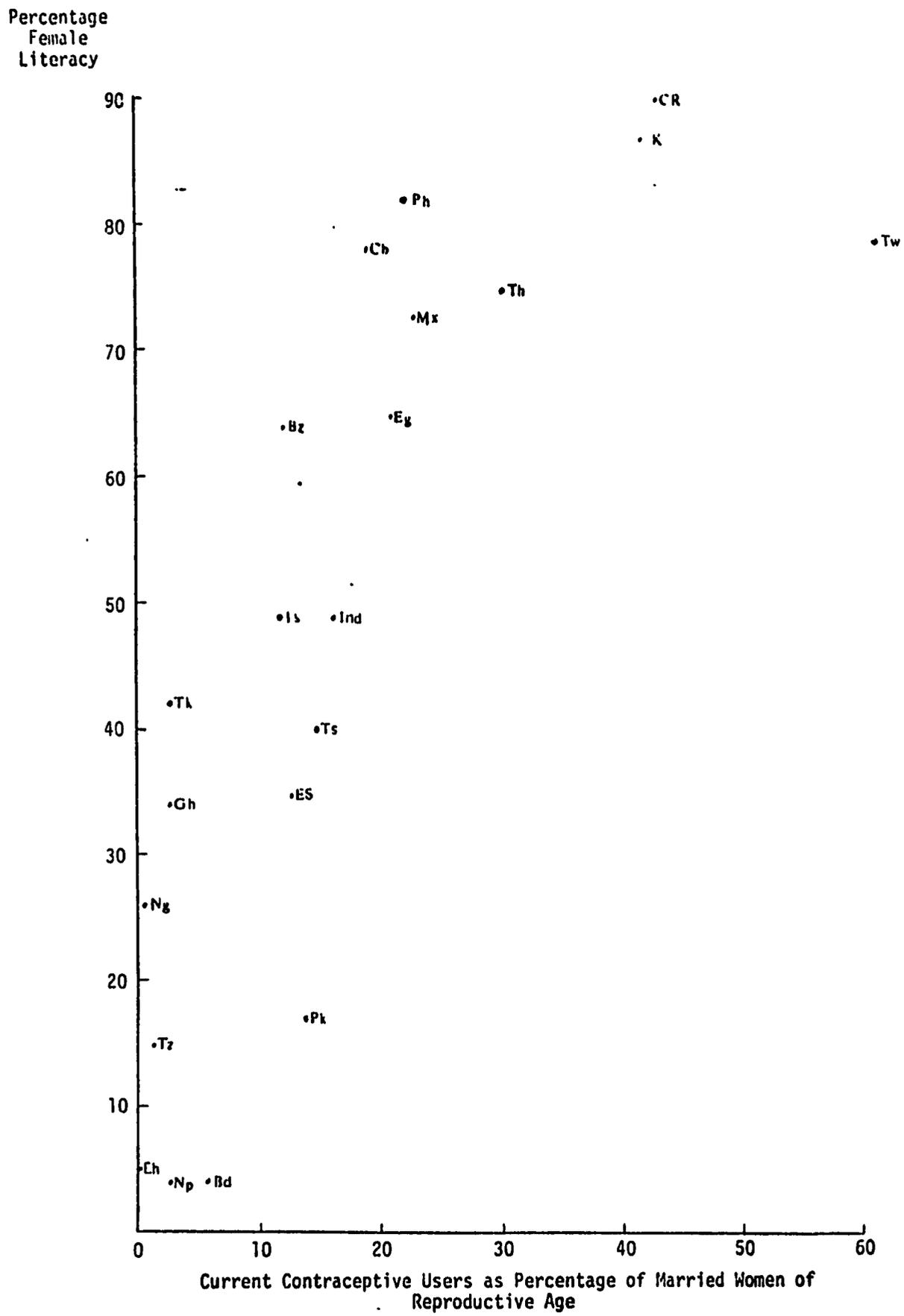


FIGURE 4 RELATIONSHIP OF CURRENT CONTRACEPTIVE USE AND FEMALE LITERACY

Percentage  
Population  
Urban

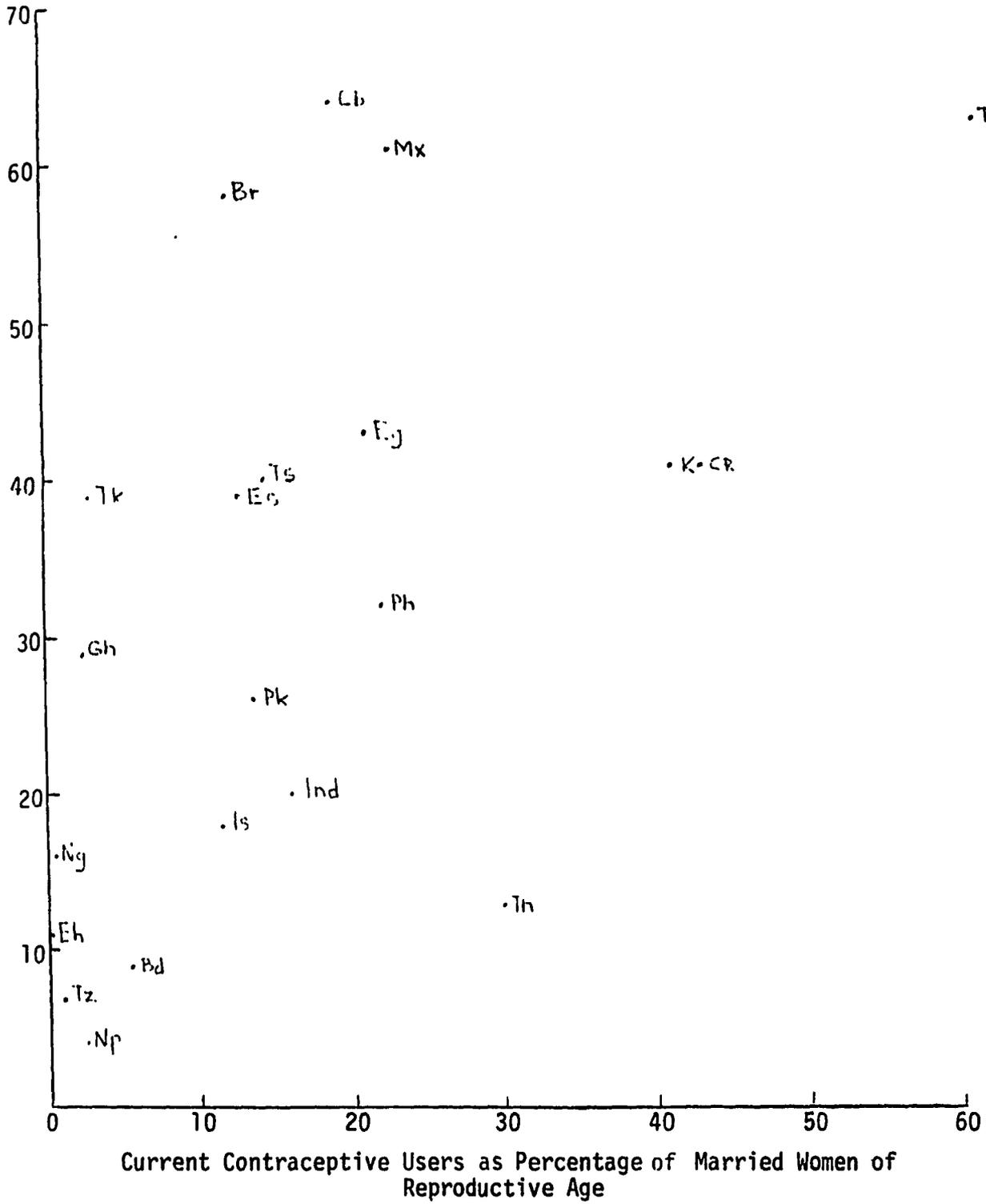


FIGURE 5 RELATIONSHIP OF CURRENT CONTRACEPTIVE USE  
AND PERCENTAGE OF URBAN POPULATION

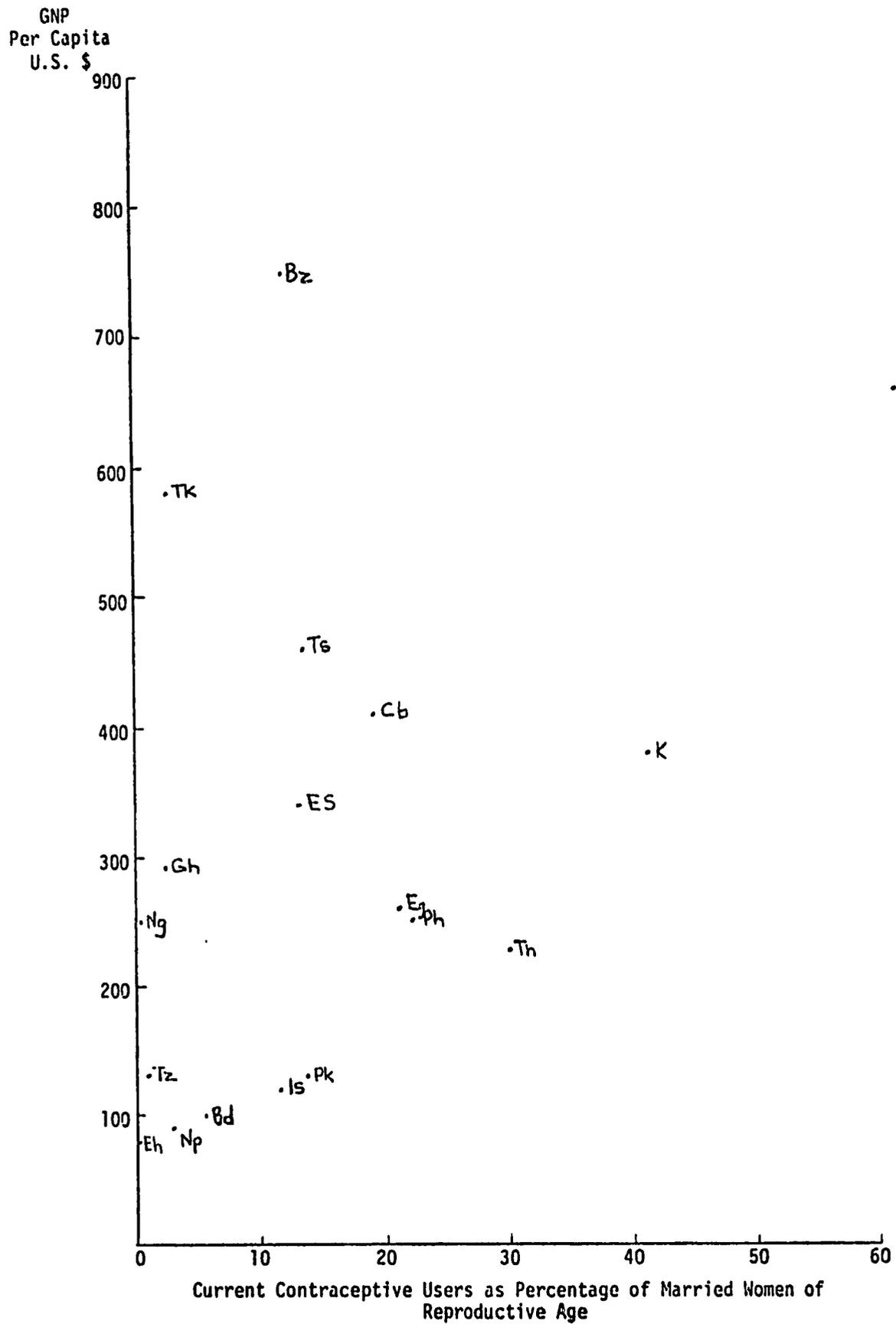


FIGURE 6 RELATIONSHIP OF CURRENT CONTRACEPTIVE USE AND GNP/CAPITA

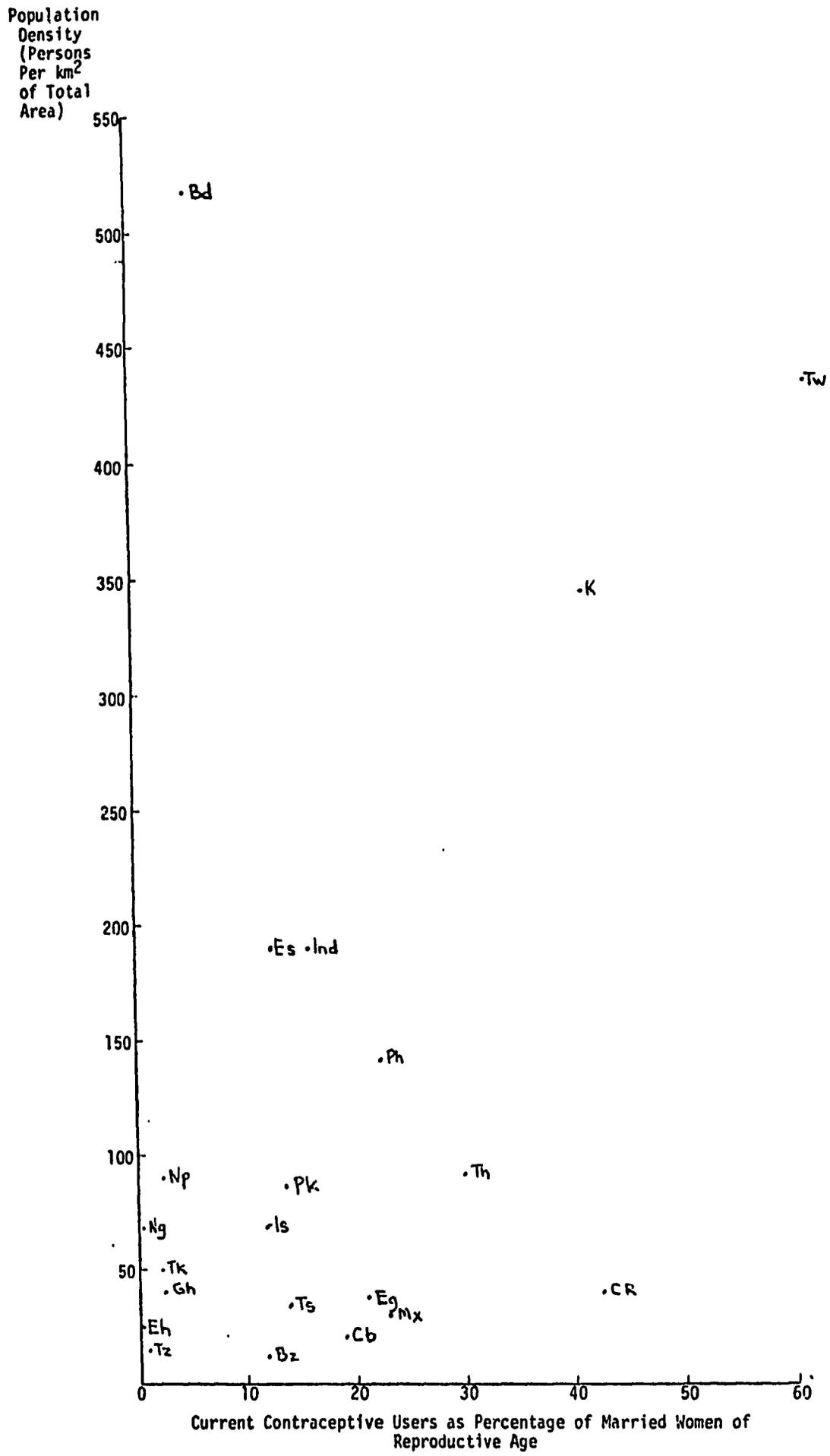


FIGURE 7 RELATIONSHIP OF CURRENT CONTRACEPTIVE USE AND POPULATION DENSITY

Per km<sup>2</sup>  
of Total  
Arable  
Land)

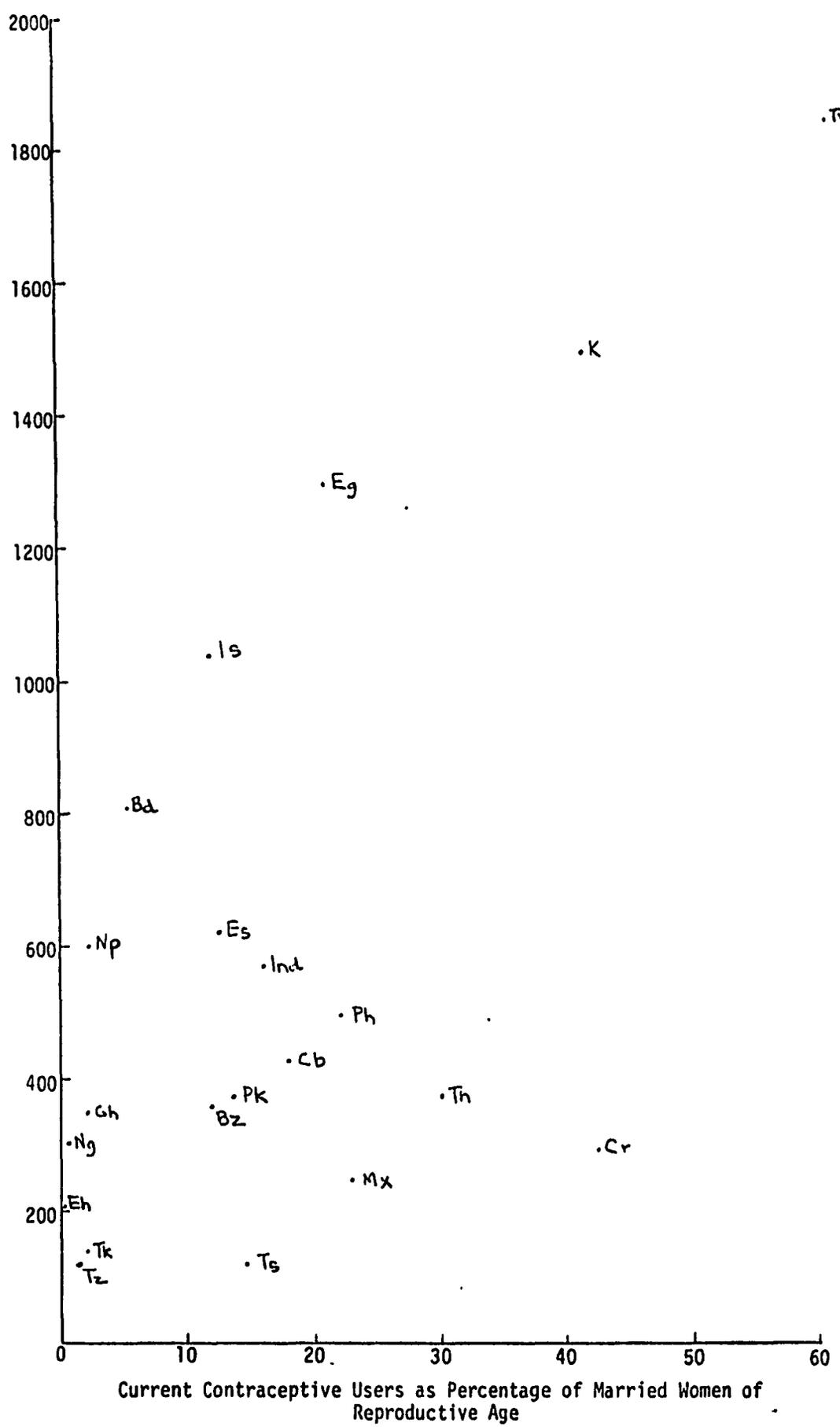


FIGURE 8 RELATIONSHIP OF CURRENT CONTRACEPTIVE USE AND POPULATION DENSITY ON ARABLE LAND

Crude  
Death Rate

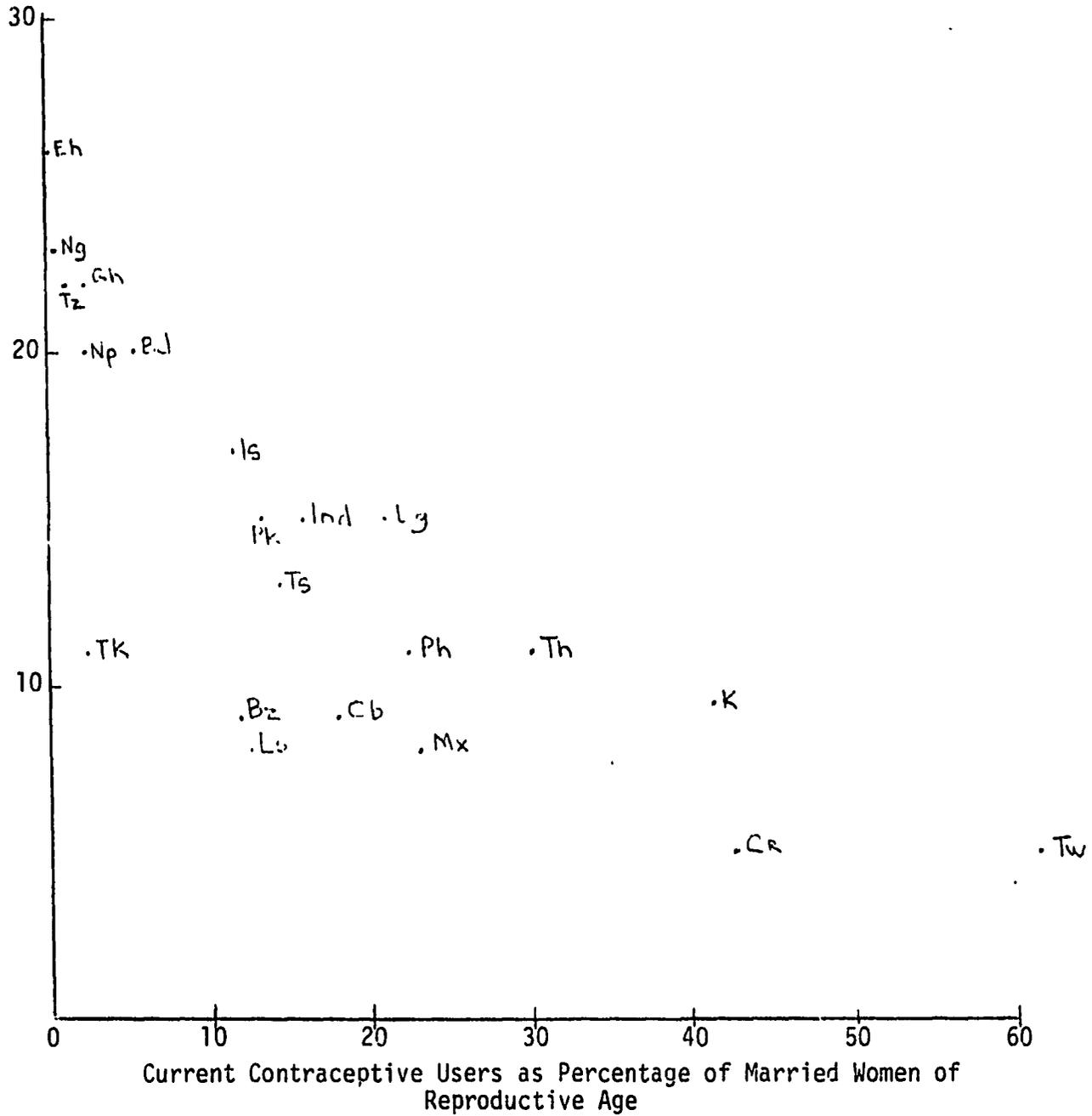


FIGURE 9 RELATIONSHIP OF CURRENT CONTRACEPTIVE USE  
AND CRUDE DEATH RATE

sources) prevalence of contraceptive use and the percentage of female literacy, percentage of urbanization, GNP/capita, population density per square kilometer of total land and arable land and the crude death rate. We note a more direct relationship between total prevalence of current contraceptive users and the female literacy rate and the crude death rate than with the other socioeconomic/geographic indicators.

Freedman and Berelson emphasized this relationship between contraceptive use, female literacy and death rates in their outstanding review, "The Record of Family Planning Programs," Studies in Family Planning, Volume 7, Number 1, January 1976.

Though there are nearly no reported data regarding the socioeconomic status (e.g., education or occupation) or average age and size of family for current users of contraception, the following section will provide available information regarding the characteristics of new contraceptive acceptors.

#### V.C. OUTCOME AS MEASURED BY NEW ACCEPTORS OF CONTRACEPTION

Table 3A provides the total number of new acceptors per 1,000 MWRA by contraceptive type and country for 1974, the last year with complete data via AID sources.

Comparisons with other documents demonstrate considerable discrepancies in new acceptor data. The omission of sterilization data<sup>1</sup> from some country reports, e.g., Colombia, may significantly understate new acceptors sterilization

NEW CONTRACEPTIVE ACCEPTORS, 1969 and 1974  
IN THOUSANDS

TABLE 3A

	1969		1974						% Inc (Dec)		1974 New Accep	
	TOTAL		TOTAL	ORALS	IUD	KONDOM	MALE STER	FEMALE STER	OTHER	1969	1974	per 1000 MWRA
KOREA, Rep <sup>1</sup>	554		435	111	280		30	7	7 MR		(21)	106
TAIWAN <sup>3</sup>	163		283	64	157	50	1	11			74	142
PHILIPPINES <sup>4</sup>	85		747	368	75	198			106		778	144
INDONESIA <sup>5</sup> (JAWA-BALI)	53		1494	1027	196	271	-	-	-		2718	11
												103
THAILAND <sup>9</sup>	123		554	298	87	77	6	72	13 MJ		350	106
BANGLADESH <sup>11</sup>	786		41		34		2	4			(95)	3
INDIA <sup>12</sup>	3390		3672	-	350	in other	656	443	2222		(8)	36
NEPAL <sup>13</sup>	32 <sup>(10)</sup>		104	30	1	67	5	1	-			43
PAKISTAN <sup>14</sup>	1167		637	88	113	233	1	4	196		(45)	43
TURKEY <sup>16</sup>	53		na									
EGYPT <sup>17</sup>	na		na									
TUNISIA <sup>18</sup>	22		63	11	19	10		11	12 MR		186	90
ETHIOPIA <sup>21</sup>	na		7	na	na	na	na	na	na		-	1
GHANA <sup>22</sup>	na		34	19	3				12			18
NIGERIA <sup>23</sup>	na		33	21	8	1			3			4
TANZANIA <sup>25</sup>	na		14	10	2				2			5
MEXICO <sup>26</sup>	na		na									
COSTA RICA <sup>28</sup>	15		29	17	2	4		3	3		93	116
EL SALV <sup>29</sup>	26		41	24	8	4	4	5			58	51
COLOMBIA <sup>30</sup>	99		228	133	81				14		130	74
BRAZIL <sup>31</sup>	na		na									

na = equivalent data not available

SOURCE: FAMILY PLANNING SERVICE STATISTICS, ANNUAL REPORT, 1974

and current users.

Costa Rica, Korea (Rep.) and Taiwan brought over ten percent of the MWRA into the program in 1974 and had a 1975 prevalence of contraceptive use greater than 30 percent of MWRA.

Philippines and Thailand exceeded the level of ten percent of MWRA as 1974 new acceptors and had a contraceptive use prevalence of greater than 20 percent.

Using AID data sources, Table 3B provides a rank listing of the percentage increase (or decrease) in total new acceptors in 1974 compared with 1969. Table 3C provides a rank listing of 1974 new acceptors per 1,000 MWRA.

#### V.D. CHARACTERISTICS OF NEW ACCEPTORS

In the absence of information regarding the socioeconomic characteristics of current contraceptive users, we turn to available data for new acceptors. Even here the data are scarce.

Extracting from the 1975 edition of "Population and Family Planning Programs: A Factbook," Table 4 provides the median age and median number of living children for new acceptors in a majority of the countries in this review. Within a given country program, the median age of new oral contraceptive acceptors is slightly lower than the median age of new IUD acceptors, and the median number of living children of new oral contraceptive users is equal to or less than the number of living children of new IUD acceptors. The Korea (Rep.) program is an

TABLE 3C NEW ACCEPTORS PER 1,000 MWRA FROM 1974  
PUBLIC PROGRAMS, BY RANK

<u>Rank</u>	<u>Country</u>	<u>Rate</u>
1	Philippines	144
2	Taiwan	142
3	Costa Rica	116
4	Thailand	106
4	Korea, Rep.	106
6	Tunisia	90
7	Colombia	74
8	Indonesia (Java and Bali = 103)	71
9	El Salvador	51
10	Pakistan	43
11	Nepal	43
12	India	36
13	Ghana	18
14	Tanzania	5
15	Nigeria	4
16	Bangladesh	3
17	Ethiopia	1

Equivalent data unavailable for:

Brazil  
Mexico  
Egypt  
Turkey

TABLE 4 MEDIAN AGE (MA) and MEDIAN NUMBER of LIVING CHILDREN (MLC) of NEW ACCEPTORS by CONTRACEPTIVE TYPE

	IUD		ORALS		MALE STERILIZATION		FEMALE STERILIZATION		STERILIZATION NOT DEFINED		ALL METHODS		Reference Year Unless Indicated
	<sup>1</sup> MA	<sup>2</sup> MLC	<sup>3</sup> MA	<sup>4</sup> MLC	<sup>5</sup> MA	<sup>6</sup> MLC	<sup>7</sup> MA	<sup>8</sup> MLC	<sup>9</sup> MA	<sup>10</sup> MLC	<sup>11</sup> MA	<sup>12</sup> MLC	
Korea, Rep	32.8	3.6	33.5	3.7	u	u	u	u	34.2	3.7	u	u	72
Taiwan	29.3	3.1	27.9	2.8	u	u	u	u	u	u	u	u	73
Philippines	29.0	3.5	28.9	3.2	u	u	u	u	u	u	29.5	3.3	73
Indonesia	28.3	3.0	27.6	2.6	u	u	u	u	u	u	27.9	2.7	74
Thailand	27.6	2.9	27.3	2.6	u	u	u	u	30.1	3.2	u	u	74
Bangladesh	u	u	u	u	u	u	u	u	u	u	u	u	-
India	32.8	3.4	u	u	35.0	4.0	34.0	4.4	u	u	u	u	70
Nepal	30.1	3.3	29.6	3.4	31.4	4.5	u	u	u	u	u	u	73-74
Pakistan	u	u	u	u	u	u	u	u	u	u	u	u	-
Turkey	28.3	3.2	u	u	u	u	u	u	u	u	u	u	73
Egypt	u	u	u	u	u	u	u	u	u	u	u	u	-
Yunia	30.9	4.3	30.5	4.2	u	u	u	u	u	u	u	u	72
Ethiopia	u	u	u	u	u	u	u	u	u	u	u	u	-
Ghana	30.8	4.4	28.7	3.9	u	u	u	u	u	u	31.8	4.1	73-74
Nigeria	u	u	u	u	u	u	u	u	u	u	u	u	73
Tanzania	u	u	u	u	u	u	u	u	u	u	u	u	-
Mexico	27.8	3.7	27.8	3.7	u	u	u	u	u	u	u	u	73
Costa Rica	26.6	2.6	23.8	1.7	u	u	u	u	u	u	24.7	2.0	74
El Salvador	u	u	u	u	u	u	u	u	u	u	26.5	2.8	72
Colombia	26.1	2.7	25.0	2.4	u	u	u	u	33.3	5.1	26.0	2.7	74
Brazil	u	u	u	u	u	u	u	u	u	u	u	u	-

u = unavailable

Source: Northman, D. "Population and Family Planning Programs: A Factbook", Reports on Population/Family Planning, No 2 (Second Edition), Tables 20-21, October, 1975

exception.

In general, the median age of new oral contraceptive or IUD acceptors is mid 20's to low 30's and the median number of living children, 3 to 3.5. The median age of sterilization acceptors is generally in the low to mid 30's; the median number of living children is 4-5.

Freedman and Berelson\* noted that the new acceptors median age and median number of living children, in general, have been dropping over time. In Indonesia, for example, the median age and median number of living children of new contraceptive acceptors has fallen nearly every reporting quarter since 1971.

On the basis of available evidence, most authorities conclude that family planning services are being provided to those in need who have already demonstrated high fecundity (capability of bearing children). These couples are, indeed, demographically significant; for them to postpone or abstain from an additional birth contributes to fertility control. However, if the gradual decline in the median age and living children of contraceptive users continues, the demographic impact of fertility control programs should be strengthened further.

Even less data are available regarding the occupation or educational status of current contraceptive users and

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\* Freedman, R. and Berelson, B., "The Record of Family Planning Programs," Studies in Family Planning, Volume 7, Number 1, p. 8, January 1976.

new acceptors.

Evidence\* substantiates that at least in Taiwan, Korea (Rep.) and Indonesia, large numbers of minimally educated women are entering the family planning programs. For the Indonesian Java-Bali program in October-December 1974, 37 percent of approximately 400,000 new acceptors were illiterate while another 28 percent had less than six years education. Eighty-two percent were the wives of farmers, fishermen, manual laborers or the unemployed. A subsequent analysis has demonstrated that these distributions are nearly equal to the general Java-Bali population characteristics.

While the available information is encouraging, a more thorough review of new acceptor and current users socioeconomic characteristics is warranted.

#### V.E. FERTILITY DECLINES

We acknowledged earlier the difficulty in establishing causality to program strength, current contraceptive use/reduced birth rates. The available data presented here indicates a correlation between current contraceptive use and current birth rates. But, where have fertility rates fallen? And, to what degree were

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\* Freedman, R. and Berelson, B., "The Record of Family Planning Programs," Studies in Family Planning, Volume 7, Number 1, p. 8, January 1976.

non-program factors relevant? We demonstrate later that lower birth rates and higher contraceptive use rates are generally associated with stronger family planning services programs. It should be mentioned, however, that a similar correlation exists between lowered fertility rates and socioeconomic status.

We note here the data presented by Watson and Lapham\*. It is based on their criteria of socioeconomic status (a combination of infant mortality, GNP/capita and female school enrollment) and estimates of reduction of the crude birth rate in the 1970 to 1974-75 period. However, for purposes of illustration, their matrix has been reduced to include only the countries in this review.

The modified matrix is as follows:

Estimated Change in Crude Birth Rate, 1970-1974

Socio-Economic Status	Decline of 8% or More, or CBR of 25 or Less	Possible or Probable Possible or Probable Decline, but under 8%	No Decline or Imperceptible Decline
High	Taiwan	Korea Brazil Costa Rica	Mexico
Middle	Thailand Colombia	Philippines El Salvador Turkey Tunisia	Egypt
Low		Indonesia India	Bangladesh Nepal Pakistan Ethiopia Ghana Nigeria Tanzania

Clearly, a number of determinants, perhaps synergistically, affect fertility. But, as noted earlier in Section III, we have proceeded under the assumption that, at least in the developing world at nearly any socioeconomic level, publicly organized services for contraceptive methods can contribute toward more rapid fertility declines.

\* Watson, W. B. and Lapham, R. J. "Family Planning Programs: World Review 1974," Studies in Family Planning, Vol. 6, No. 8, August 1975.

## VI. FAMILY PLANNING DELIVERY SYSTEM PROCESSES

This section will review the characteristics of family planning services and their relationships to current contraceptive use. The characteristics examined are:

(a) family planning services, (b) family planning methods, (c) overall program organizational characteristics, (d) family planning services constraints. For the latter two, indices were created and judged by FHC with adjustment and correction made after discussions with AID/PHA/POP regional population officers and individuals familiar with the country specific programs.

### VI.A. FAMILY PLANNING SERVICE CHANNELS

For more than a decade, there has been considerable debate as to whether family planning services should be delivered as a single purpose service or in combination with other basic health care services. Although "integration" has become the watchword, it does have various definitions. Integration can refer to the degree in which a family planning/population planning process is related to other sector planning, i.e., health, nutrition, education. Further, it can refer to the manner in which actual services are provided to patients or clients, for example: (1) a mother can find a clinic offering contraceptive services and maternal/child health

(MCH) services provided by the same personnel at the same site on the same visit. (2) More frequently, FP/MCH services are regularly scheduled by the same clinic and personnel at differing times, theoretically to increase the efficiency of scarce clinic staff and limited available space. From the health center's viewpoint, there are some legitimate reasons for this, especially if a clinic is limited to a few--or more frequently one, examining room. The instrument and equipment requirements for a diarrheic child, a pregnant mother with high blood pressure and an IUD insertion are varied. For small clinics with few personnel, keeping all instruments and equipment for various MCH and family planning services in a "ready" status is difficult and time consuming. (3) And, there is also an intermediate position where non-scheduled FP or MCH services are provided to the individual who has traveled far or under unusual circumstances for multiple health/FP reasons.

The available literature does not allow a specific analysis of the degree of integration among the various alternatives for the countries under study. The absence of evidence to the contrary suggests that the planning of family planning and population is not integrated closely with the planning for nutrition, health education and other relevant sectors. The evidence, however, does substantiate that in at least 16 of the 21 countries, the

majority of family planning services are provided through the government's health system, though they frequently are provided in isolation from other basic health care services, particularly maternal and child health services.

#### VI.A.1. Accessibility to Service Channels

Those countries in which the majority of family planning services are provided primarily outside the government health care system are as follows:

- Korea (Rep.), where most services are provided by private practice physicians on a fee-for-service basis.
- Taiwan, where a phenomena similar to Korea (Rep.) is noted.
- Pakistan, where a public sector (non-health related) controlled contraceptive distribution scheme is operative, and
- Colombia and Brazil, where the IPPF affiliate provides the bulk of family planning services on a singular basis.

Plans for significantly greater integration of family planning services into primary health delivery are currently underway in India and Bangladesh.

In summary, a wide variation of service channels incorporating dissimilar degrees of health system integration are evident with varying degrees of success. Asia has the vigorous Korea (Rep.) and Taiwan programs, where services are provided by private physicians in countries that have an uncommonly small percent of the government's total budget devoted to health. On the other

hand, Pakistan utilizes a public sector contraceptive distribution scheme which operates outside the basic health system. Indonesia and Thailand, at the other extreme, utilize the national health system as the backbone for family planning services, particularly for new acceptors. The Philippines demonstrate a multiplicity of private sector health care schemes and a moderately strong government health care system.

In African countries, where health personnel and facilities are generally more limited, almost all available family planning services are delivered through the health system. At times, e.g., Ethiopia, these family planning services are offered in health system facilities, yet in the name of local family planning voluntary agencies. (A similar arrangement existed in Indonesia prior to the Ministry of Health's assumption of responsibility for family planning services in 1969.)

In Costa Rica a pattern similar to Africa, Indonesia and Thailand exists: services are provided through the health system as a part of national health service policies. Among the Latin American countries examined, Brazil and Colombia have the majority or near majority of services provided by the International Planned Parenthood Federation (IPPF) affiliates.

Of particular note is the accelerating development of commercially based distribution schemes and noncommercial,

non-clinic based distribution schemes for oral contraceptives and condoms. While India was the sole program with a vigorous public sector controlled commercial distribution scheme in the 1960's, several countries, including three in this study--Indonesia, Philippines and Ghana--have initiated commercial distribution schemes for condoms.

Of greater significance, ten countries representing several of the currently "vigorous" programs, *i.e.*, 1974 new acceptors greater than ten percent of MWRA and 1975 prevalence greater than 20 percent of MWRA, have developed noncommercial, non-clinic based distribution schemes. (We shall call them village contraceptive distribution schemes.) Those countries are: Republic of Korea, Philippines, Indonesia, Thailand, Bangladesh, Pakistan, Colombia, Costa Rica, El Salvador and Mexico. For the Philippines, Indonesia and Thailand, the village contraceptive distribution schemes represent an extension "beyond" the government's national health system, though often closely tied to it. They, therefore, transcend the barriers which generally result in only 15-25 percent of the populace using MCH services. The evidence suggests that village contraceptive distribution schemes for new or continuing acceptors are the current frontier of family planning service systems. Several of those countries now engaged in this area have programs of relatively high contraceptive

use prevalence and new acceptor rates. Two of the countries, Pakistan and Bangladesh, now recognize that prior distribution systems were grossly inadequate and have adopted modifications of this technique as a major service route.

A significant yet unanswered question relates to the appropriate timing for introduction of noncommercial non-clinic schemes. Could an emerging country initiate a fertility control program through this means, or must it obtain its legitimization only after clinic based and/or commercial schemes are operative? Though evidence is lacking, we believe the latter process is generally required.

However, Indonesia's rapid introduction of village contraceptive distribution schemes, after only five years of a national program, suggests that an excessively long incubation period is not necessary if political/policy support is substantial.

#### VI.B. FAMILY PLANNING METHODS

Only two countries among those examined provide legally all five major forms of modern fertility control: oral contraceptive, IUD, condom, sterilization and abortion. These countries are Korea (Rep.) and Tunisia, with contraceptive use prevalence of 34 percent of MWRA and 13 percent of MWRA, respectively. Even in these countries, the availability of specific family planning methods is unequal.

The following <sup>is a</sup> <sup>of</sup> list of countries where administrative regulations preclude complete, program-wide use of one of the methods:

Oral Contraceptives:	Excluded in India
Intrauterine Device:	Excluded in no countries
Condom:	Excluded in no countries
Sterilization:	Excluded in Indonesia, Ethiopia, Nigeria, Mexico and Tanzania
Abortion:	Varying degrees of exclusion and acceptance exist in the countries under study

The latter method, abortion, can be described further with the classification utilized by Tietze and Murstein.\* This allowed us to extract the information relevant for the countries included in this study, though data for Nepal and Tanzania were not available. In Colombia, Egypt, Indonesia, Philippines and Taiwan, abortion is illegal and no exceptions are provided. In Bangladesh, Brazil, Mexico, Nigeria and Pakistan, abortion is legal on narrowly defined (threat of loss of life) medical grounds. Costa Rica, El Salvador, Ethiopia, Ghana, Korea (Rep.), Thailand and Turkey provide broader medical grounds for legal abortion. On eugenic grounds, Turkey and Korea (Rep.) provide for legal abortion. Only India provides for abortion on stated

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\* Tietze, C. and Murstein, M. C., "Induced Abortion: 1975 Factbook," Reports on Population/Family Planning, Number 14, 2nd Edition, December 1975.

social and social/medical grounds. For Tunisia, the legal grounds are not specified.

Clearly, some of the developing countries are moving toward a more liberalized institutional legal status for abortion services. Tietze reports that Bangladesh and Pakistan are considering a more liberal approach in the near future.

It must be emphasized that the degree of restriction against abortion varies considerably from nearly no enforcement and ready availability, e.g., Taiwan, to strict controls in Moslem and some Catholic dominated countries.

In overview, none of the 21 countries under study-- and in our knowledge, none in the developing world--has achieved a current contraceptive use prevalence of 20 percent of MWRA without the combined availability of the IUD, oral contraceptive, condom and at least sterilization or abortion.

As discerned from Table 2A, the outstanding (measured in terms of current users) oral contraceptive programs are the Philippines, Thailand, Indonesia, Costa Rica and Colombia. Indonesia's national program is heavily concentrated on Java and Bali, though the rate in Table 2A considers the entire country. In early 1975, Java's oral contraceptive use was comparable to Thailand's oral contraceptive use rate. For the above mentioned countries, liberal (in varying degrees) distribution of oral contraceptives through a health system structure does exist.

The outstanding IUD programs are in Taiwan and Korea (Rep.) where heavy reliance for the clinical delivery of services is placed on private physicians.

By far, the most prevalent use of the condom has been achieved in Pakistan. Korea (Rep.), too, has a significant percentage of current public sector supplied condom users.

India (Hindu), Costa Rica (Catholic), Thailand (Buddhist) and Korea, Rep. (Confucianism) show significant gains in sterilization programs. India's program, using predominantly a single purpose approach, has achieved approximately 12.5 percent prevalence of fertility control with this means. Tunisia has the highest prevalence (3.6 percent) of female sterilization in the Moslem world. Data regarding illegal abortion in the 21 countries are scant. Available data\* regarding legal abortion rates are as follows:

India	1974/75	0.72/1,000 women ages 15-44 (illegal rate estimated at 40/1,000 women ages 15-44)
Korea (Rep.)	1973	53.3/1,000 women ages 15-44
Tunisia	1974	10.7/1,000 women ages 15-44

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\* Tietze, C. and Murstein, M. C., "Induced Abortion: 1975 Factbook," Reports on Population/Family Planning, No. 14, 2nd Edition, December 1975.

While we were unable to calculate the demographic impact of these legal abortion rates, the demographic importance of abortion\* is shown in a recent computer simulation which concluded:

"...it is unlikely that any population has ever attained a low level of fertility (TFR = 2.2 or less) without the use of induced abortion, legal or illegal..."

In reviewing the choice of contraceptives among new acceptors, the following characteristics are noted.

Those countries where the majority of new acceptors (1974) chose the oral contraceptive are:

Indonesia	(68%)
Costa Rica	(64%)
El Salvador	(59%)
Colombia	(58%)
Ghana	(56%)
Thailand	(53%)
Philippines	(49%)

The above countries, again in varying degrees, provide family planning services predominately through the health system, and are often supplemented with some form of village contraceptive distribution scheme.

The majority of 1974 new acceptors chose the IUD in these countries:

Taiwan	(55%)
Korea (Rep.)	(64%)
Bangladesh	(83%)

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\* Tietze, C. and Bongaarts, J., "Fertility Rates and Abortion Simulations of Family Limitation," Studies in Family Planning, No. 6, May 1975 as reported by Freedman, R. and Berelson, B., "The Record of Family Planning Programs," Studies in Family Planning, Vol. 7, No. 1, January 1976.

Bangladesh's rate of new IUD acceptors is so low as to exclude it from comparison with Taiwan and Korea (Rep.). The latter achieved their success through strong policy guidance as to the choice of contraceptive, and dependable private physicians for the necessary clinical services.

At least one-fourth of new acceptors in 1974 chose the condom in these countries:

India  
Pakistan  
Nepal  
Philippines

The considerable variations among programs solely utilizing condoms are too great to draw helpful inferences.

We wish to note at this point that the current programs providing oral contraceptives, IUDs, condoms, sterilization and abortion did not simultaneously offer these family planning methods. Though the IUD and simple methods (diaphragm, foam and, to a limited extent, condoms) were available in the 1960s, abundant oral contraceptives did not become available until the early 1970s when AID's central procurement and development of controls for price and packaging became effective. Thereafter, the generally unattractive grey-white condom was replaced by colored, lubricated condoms at low U.S. prices in the mid 1970s. Female sterilization required the technical breakthroughs of the laparoscope, cul-de-scope (early 70s) and particularly the mini-lap (in late 1974 and 1975). Hence, current and

future programs now have a much greater opportunity to implement multiple contraceptive techniques early in program development than did past programs. Any judgment based on historical review regarding the<sup>most</sup> appropriate timing for the introduction of one of these family planning methods must keep these mass availability issues in mind.

In examining the program development of Korea (Rep.), Taiwan, Thailand, Philippines and Indonesia, there appears to be a significant new "market of potential clients" for each new contraceptive technique offered. Those programs reliant on the IUD have noted<sup>a</sup> considerable increase in new and current acceptor when oral contraceptives, sterilization or abortion was added to the available methods. An exception to this might be the condom, though specific evidence is lacking. Family planning personnel are generally convinced that continuation rates and non-pregnancy rates for condoms are far below those noted with oral contraceptives and IUDs. Therefore, we do see reticence by some to pursue vigorously the provision of condoms in public programs. Commercial condom programs have, however, shown reasonably good results and probably reach an audience not yet attracted to clinic based family planning services.

In reviewing the multiplicity of service and contraceptive methods, we find success primarily in diversity, rarely in singularity. From this generality, more specific

lessons of experience are evident.

1. No country of the 21 examined has attempted a hospital based delivery system alone. The post-partum concept -- is attractive and frequently instrumental in winning OB-GYN professional support and family planning program recognition, but most of the developing world's infants are delivered at home.
2. No country totally reliant on IUDs or condoms delivered through a government controlled clinic based system has achieved a contraceptive use prevalence exceeding ten percent.
3. No country with greater than 20 percent contraceptive use prevalence has excluded the oral contraceptive.
4. Only Korea (Rep.) and Taiwan with extensive use of widely available private physicians have achieved IUD contraceptive use prevalence rates approximating 20 percent.
5. No country with greater than 20 percent contraceptive use prevalence has excluded sterilization.

#### VI.C. NATIONAL PROGRAM ORGANIZATIONAL CHARACTERISTICS

Table 5 provides an overview of the organizational placement of national family planning/population program control and 1975 public sector contraceptive use prevalence. This/<sup>program</sup>characteristic does not appear to be highly associated with program success. Philippines and Indonesia demonstrate viable programs with operational control outside the Ministry of Health. Thailand, Korea (Rep.) and Taiwan demonstrate good results with program control within the Ministry of Health. In Taiwan, the family planning program

**TABLE 5 PREVALENCE OF CONTRACEPTIVE USE AND ORGANIZATIONAL PLACEMENT OF FAMILY PLANNING/ POPULATION PROGRAM CONTROL**

Program Control External to Ministry of Health	Ghana	Indonesia Mexico Tunisia Egypt	Philippines	Costa Rica
Program Control in Ministry of Health* But External to MCH	Bangladesh Turkey	India Pakistan El Salvador	Thailand Taiwan	
Program Control in Ministry of Health and Combined with MCH Program Control	Nepal Tanzania	Colombia		Korea, Rep.
	0-9	10-19	20-29	30+
	Current Contraceptive Users as Percentage of Married Women of Reproductive Age			

\* Or Ministry incorporating at least health and FP/POP

control section is a subdivision of the Provincial Health Department's MCH Division.

The critical determinate is the degree to which the controlling elements (either in or out of the Ministry of Health) genuinely cooperate with the service elements which generally are within the Ministry of Health. Insufficient cooperation between these two elements appears to be a significant program progress deterrent for several Asian and African programs.

#### VI.D. FAMILY PLANNING SERVICES SUPPORT ELEMENTS

Based on the FHC conceptual framework and discussions with AID personnel, three basic family planning services support elements were identified: (1) a policy and budget commitment, (2) an information/education/communication (IEC) program, and (3) a research and development program.

Following our review of available literature and specific discussions with AID/PHA/POP regional officers, scores were assigned to support elements in each of the 21 countries. Table 6 lists those scores. In a modified scattergram, we present in Tables 7-9 the relationship of these support element scores to public sector contraceptive use prevalence. (Because we seek relationship with public programs, we will use public sector supplied contraceptive use rates only.)

Table 7 suggests that no program has achieved a contraceptive use prevalence greater than 20 percent

INDICES OF FAMILY PLANNING PROGRAM SUPPORT ELEMENTS by COUNTRY

(1 = low; 5 = high)

TABLE 6

	1 Policy/Budget	2 IEC Program	3 Research/Development	12	13
Korea, Rep <sup>1</sup>	4	4	5		
Taiwan <sup>2</sup>	4	4	4		
Philippines <sup>4</sup>	4	3	4		
Indonesia <sup>5</sup>	4	4	2		
Thailand <sup>7</sup>	4	3	3		
Bangladesh <sup>8</sup>	2	2	2		
India <sup>10</sup>	3	3	3		
Nepal <sup>11</sup>	3	3	2		
Pakistan <sup>13</sup>	3	3	2		
Turkey <sup>14</sup>	2	2	3		
Egypt <sup>15</sup>	3	2	2		
Tunisia <sup>17</sup>	3	3	2		
Ethiopia <sup>18</sup>	1	1	1		
Ghana <sup>20</sup>	3	3	3		
Nigeria <sup>21</sup>	1	1	2		
Tanzania <sup>22</sup>	2	2	1		
Mexico <sup>24</sup>	4	2	3		
Costa Rica <sup>25</sup>	3	4	4		
El. Salvador <sup>27</sup>	3	2	3		
Colombia <sup>28</sup>	3	4	4		
Brazil <sup>30</sup>	1	1	1		

TABLE 7 1975 PREVALENCE OF CONTRACEPTIVE USE COMPARED WITH POLICY/BUDGET COMMITMENT

Policy  
and Budget  
Commitment

Strong

5

4

3

2

1

Weak

	Indonesia Mexico	Philippines Thailand Taiwan	Rep. Korea
	India Pakistan Tunisia El Salvador Colombia Egypt		Costa Rica
	Turkey Bangladesh Tanzania		
	Ethiopia Nigeria Brazil		
	0-9	10-19	20-29
			30+

Current Contraceptive Users as Percentage of Married Women of Reproductive Age

**TABLE 8 1975 PREVALENCE OF CONTRACEPTIVE USE COMPARED WITH CURRENT IEC PROGRAM**

IEC Program Strength		Current Contraceptive Users as Percentage of Married Women of Reproductive Age			
		0-9	10-19	20-29	30+
Strong	5				
	4		Indonesia Colombia	Taiwan	Rep. Korea Costa Rica
	3	Nepal Ghana	India Pakistan Tunisia	Philippines Thailand	
	2	Bangladesh Turkey Tanzania	Mexico El Salvador Egypt		
	1	Ethiopia Nigeria Brazil			
Weak					

TABLE 9 1975 CURRENT CONTRACEPTIVE USE COMPARED WITH RESEARCH AND DEVELOPMENT PROGRAM STRENGTH

Research and  
Development  
Program

Strong

5

Rep. Korea

4

Colombia

Philippines  
Thailand  
Taiwan

Costa Rica

3

Turkey  
Ghana

India  
Mexico  
El Salvador

2

Bangladesh  
Nepal  
Nigeria

Pakistan  
Tunisia  
Egypt  
Indonesia

1

Ethiopia  
Tanzania  
Brazil

Weak

0-9

10-19

20-29

30+

Current Contraceptive Users as Percentage of Married Women of Reproductive Age

Table 10 summarizes the scores (1 = nearly non-existent constraint; 5 = severe constraint) for the following variables:

1. Program management capabilities .
2. Availability of funding, either from the country or donors
3. Availability and appropriate utilization of physicians, clinical auxiliaries and administrative personnel
4. Availability of facilities
5. Availability of family planning medical services equipment and transport equipment
6. Availability of oral contraceptives and condoms.

In a similar manner to the modified scattergram presentation already discussed, Tables 11-17 present visually the relationship between selected constraints and contraceptive use prevalence. Among programs with contraceptive use prevalence greater than 20 percent of MWRA, only the Philippines, with a contraceptive use prevalence of 22, is scored with a significantly severe program management constraint. All other programs rating program management as a constraint at mid-level or higher have yet to achieve 20 percent prevalence of contraceptive use.

From Table 12 one sees that those countries listed (Ethiopia, Turkey, Ghana and Tanzania) as having severe constraints obtaining funds have yet to achieve ten percent

TABLE 10 INDICES of OPERATIONAL CONSTRAINTS by COUNTRY  
(1 = nearly non-existent constraint; 5 = severe constraint)

	Program Mgt. Capability	Availability of		Availability and Utilization			Availability of	Availability of Equipment:		In-country Supply		12	13
		LC	FX	Physicians	Auxiliaries	Adm Per.	Facilities	Contracep.	Transport	Orals	Condoms		
Korea, Rep <sup>1</sup>	2	2	2	1	2	2	2	2	2	2	1		
Taiwan <sup>2</sup>	2	2	2	1	2	2	2	2	u	u	u		
Philippines <sup>4</sup>	3	1	1	1	2	3	2	2	2	1	1		
Indonesia <sup>5</sup>	2	3	4	2	2	2	2	2	2	1	1		
Thailand <sup>7</sup>	2	2	2	3	2	2	2	1	2	2	2		
Bangladesh <sup>8</sup>	4	2	2	4	4	4	2	3	4	1	1		
India <sup>10</sup>	4	2	2	3	3	3	2	2	2	5	2		
Nepal <sup>11</sup>	4	2	2	4	5	4	2	2	4	2	1		
Pakistan <sup>13</sup>	4	2	2	4	4	4	2	2	4	1	3		
Turkey <sup>14</sup>	3	4	3	2	2	2	2	2	2	4	3		
Egypt <sup>15</sup>	4	3	3	2	3	2	2	3	4	3	3		
Tunisia <sup>17</sup>	3	2	3	3	4	2	1	2	2	3	3		
Ethiopia <sup>18</sup>	5	5	5	5	5	5	5	5	5	5	5		
Ghana <sup>20</sup>	3	4	3	4	3	3	4	4	4	2	3		
Nigeria <sup>21</sup>	3	5	5	4	3	3	4	4	4	5	5		
Tanzania <sup>22</sup>	3	4	3	4	4	4	4	4	4	2	3		
Mexico <sup>24</sup>	1	1	1	4	4	3	5	5	4	4	3		
Costa Rica <sup>25</sup>	2	2	2	3	3	2	1	1	2	1	2		
El Salvador <sup>27</sup>	3	2	2	4	4	2	1	1	2	1	1		
Colombia <sup>28</sup>	2	2	2	3	4	3	2	2	3	3	3		
Brazil <sup>30</sup>	3	5	5	u	u	u	u	4	u	5	5		

u = sufficient information unavailable



TABLE 11. 1975 CURRENT CONTRACEPTIVE USE COMPARED WITH PROGRAM MANAGEMENT CAPABILITY CONSTRAINT INDEX

Program  
Management  
Capability  
Constraint Index

Severe

5

Ethiopia

4

Bangladesh  
Nepal

India  
Pakistan  
Egypt

3

Brazil  
Ghana  
Nigeria  
Tanzania  
Turkey

Tunisia  
El Salvador

Philippines

2

Indonesia  
Colombia

Thailand  
Taiwan

Rep. Korea  
Costa Rica

1

Mild

Mexico

0-9

10-19

20-29

30+

Current Contraceptive Users as Percentage of Married Women of  
Reproductive Age

TABLE 12 1975 CURRENT CONTRACEPTIVE USE COMPARED WITH LOCAL CURRENCY AVAILABILITY CONSTRAINT INDEX

Local Currency  
Availability  
Constraint Index

Severe

5

Nigeria  
Ethiopia  
Brazil

4

Turkey  
Ghana  
Tanzania

3

Indonesia  
Egypt

2

Bangladesh  
Nepal

India  
Pakistan  
Tunisia  
El Salvador  
Colombia

Taiwan  
Thailand

Costa Rica  
Rep. Korea

1

Mild

Mexico

Philippines

0-9

10-19

20-29

30+

Current Contraceptive Users as Percentage of Married Women of Reproductive Age

TABLE 13 1975 CURRENT CONTRACEPTIVE USE COMPARED WITH AUXILIARIES  
 AVAILABILITY AND UTILIZATION CONSTRAINT INDEX

Auxiliaries  
 Availability  
 and Utilization  
 Constraint Index

Severe

5

Nepal  
 Ethiopia

4

Bangladesh  
 Tanzania

Pakistan  
 Tunisia  
 Mexico  
 El Salvador  
 Colombia

3

Ghana  
 Nigeria

India  
 Egypt

Costa Rica

2

Turkey

Indonesia

Thailand  
 Philippines  
 Taiwan

Rep. Korea

1

Mild

0-9

10-19

20-29

30+

Current Contraceptive Users as Percentage of Married Women of  
 Reproductive Age

TABLE 14 1975 CURRENT CONTRACEPTIVE USE COMPARED WITH AVAILABILITY OF FAMILY PLANNING SERVICES FACILITIES CONSTRAINT INDEX

Availability of  
FP Services  
Facilities  
Constraint Index

Severe

5

Ethiopia

Mexico

4

Ghana  
Nigeria  
Tanzania

3

2

Bangladesh  
Nepal  
Turkey

Colombia  
Indonesia  
India  
Pakistan  
Egypt

Philippines  
Thailand  
Taiwan

Rep. Korea

1

Mild

Tunisia  
El Salvador

Costa Rica

0-9

10-19

20-29

30+

Current Contraceptive Users as Percentage of Married Women of Reproductive Age

TABLE 15 1975 CURRENT CONTRACEPTIVE USE COMPARED WITH AVAILABILITY AND UTILIZATION OF TRANSPORT EQUIPMENT CONSTRAINT INDEX

Availability  
and Utilization of  
Transport Equipment  
Constraint Index

Severe				
5	Ethiopia			
4	Bangladesh Indonesia (Outer Island) Nepal Ghana Nigeria Tanzania	Egypt Pakistan Mexico		
3		Colombia		
2	Turkey	Indonesia (Java-Bali) India Tunisia El Salvador	Philippines Thailand	Rep. Korea Costa Rica
1 Mild				
	0-9	10-19	20-29	30+
	Current Contraceptive Users as Percentage of Married Women of Reproductive Age			

Note: No information available regarding Taiwan or Brazil

TABLE 16 1975 CURRENT CONDOM USE COMPARED WITH IN-COUNTRY AVAILABILITY OF CONDOMS

In-Country  
Availability  
of Condoms  
Constraint Index

Severe					
5	Ethiopia Nigeria Brazil				
4					
3	Turkey Egypt Tunisia Ghana Tanzania Mexico Colombia				Pakistan
2	Thailand	India Costa Rica			
1 Mild	Philippines Indonesia Bangladesh Nepal El Salvador		Rep. Korea		
	.1-2.0	2.1-4.0	4.1-6.0	6.1-8.0	8.1-10.0
	Current Condom Users as Percentage of Married Couples of Reproductive Age				

TABLE 17 1975 ORAL CONTRACEPTIVE CURRENT USE COMPARED WITH IN-COUNTRY AVAILABILITY OF ORAL CONTRACEPTIVES

In-Country  
Availability of  
Oral Contraceptives  
Constraint Index

Severe

5

India  
Ethiopia  
Nigeria  
Brazil

4

Turkey

Mexico

3

Egypt  
Tunisia

Taiwan

Colombia

2

Nepal  
Ghana  
Tanzania

Rep. Korea

Thailand

1

Bangladesh

Pakistan

Indonesia  
(All)  
El Salvador

Philippines  
Indonesia  
(Java-Bali)

Costa Rica

Mild

0-2.4

2.5-4.9

5.0-7.4

7.5-9.9

10.0-12.4

12.5-14.9

15.0+

Public Sector Current Pill (OC) Contraceptive Users as Percentage of Married Women of Reproductive Age

contraceptive use prevalence. As will be noted later, availability of funds, e.g., in Tunisia, does not, however, assure correspondingly high contraceptive use levels.

Nearly 50 percent of the countries have scores indicating that the availability and appropriate use of auxiliaries is a moderately severe constraint. None of these countries have a prevalence of contraceptive use above 15 percent of MWRA. All vigorous oral contraceptive programs have this constraint listed as "3" or lower.

The non-existence of clinical facilities is rated as moderately severe or severe only in Ethiopia, Mexico, Ghana, Nigeria and Tanzania.

Egypt is the only country with a prevalence of contraceptive use approaching 20 percent of MWRA for which the availability/utilization of transport is a moderately severe or severe constraint. All countries with prevalence of contraceptive use greater than 20 percent are designated as having only modest constraints with transport.

Finally, the constraint analysis of available contraceptives reflects both current and perhaps projected concerns. In India, Ethiopia, Tunisia, Taiwan and Colombia in-country availability of oral contraceptive supplies are noted as a significant constraint. Yet, in none of these countries is the prevalence of oral contraceptive

use greater than approximately ten percent of MWRA. Where oral contraceptive current use is high, i.e., Costa Rica, Philippines and Indonesia, oral supplies apparently are adequate at present.

Regarding condoms, Pakistan with the highest condom use prevalence is noted as having a moderate constraint with condom supplies. Severe constraints are noted in Mexico and Ethiopia where current condom use is below two percent of married couples of reproductive age.

#### VI.F. FINANCES

Family planning/population program costs data are available primarily through two sources, the Population Council's annual "Factbook" and the worksheets of the recently completed AID/IGA review. For many of the countries in this study, the two data sources report widely varying program costs for a given year. Table 18 provides a brief overview of the total program costs for FY 1973-75 as reported by one or the other or both data sources. AID/IGA data refers to U.S. fiscal years and Population Council generally refers to the fiscal year of the reporting country. Some budgets refer to allocation, others to expenditures, and others are unclassified. These differences, however, would not appear to account for the considerable variance between reported fiscal data for Pakistan, Tunisia, Ghana and Mexico.

TOTAL FAMILY PLANNING/POPULATION PROGRAM FINANCIAL INPUTS, 1973-75 in THOUSANDS of US \$ EQUIVALENT

TABLE 18 Reported by Population Council<sup>(1)</sup> Reported by AID/IGA<sup>(2)</sup> 1975 \$ Input/Capita (AID data unless unavailable) COMMENTS

	1973	1974	1975	1973	1974	1975			1975 \$ Input/Capita (AID data unless unavailable)	COMMENTS			
	1 \$ 000	2 \$ 000	3 \$ 000	4 \$ 000	5 \$ 000	6 \$ 000	7 \$ 000	8	9	10 \$	11	12	13
Korea, Rep <sup>1</sup>	5901 e	7294 a	na		6306	8285	7344			.22	@		
Taiwan <sup>2</sup>	1396 e	1451 a	1727 a		na	na	na			.11			
Philippines <sup>4</sup>	10,000 a	11,000 e	15,300 a		8595	11283	13053			.30			
Indonesia <sup>5</sup>	14,824 a	22,304 a	28,486 a		23948	18266	21450	Excludes IDA/UN/FPA for 75		.16	@		
Thailand <sup>7</sup>	3609 a	4280 a	na		4396	5380	4893			.12	@		
Bangladesh <sup>8</sup>	8098 a	na	na		3985	3567	4903			.07			
India <sup>10</sup>	79,241 e	70,264 e	na		74,853	83747	99562			.16	@		
Nepal <sup>11</sup>	611 a	1032 a	na		1996	1549	1762			.14	@		
Pakistan <sup>13</sup>	8339 e	14500 a	na		33791	38462	49489			.70	@	AID/PC difference >100% for 74	
Turkey <sup>14</sup>	1893 a	2473 a	na		317	683	2058			.08			
Egypt <sup>15</sup>	na	na	na		na	na	na			na			
Tunisia <sup>17</sup>	1246 e	5121 a	na		2021	1687	3427			.59		AID/PC difference >100% for 7	
Ethiopia <sup>18</sup>	na	na	na		195	780	290			.01			
Ghana <sup>20</sup>	849 a	901 e	na		2222	1903	1522	Includes Data		.15		AID/PC difference >100% for 74	
Nigeria <sup>21</sup>	na	na	na		2167	1348	1676			.03			
Tanzania <sup>22</sup>	na	na	na		7233	5553	5016			.33			
Mexico <sup>24</sup>	25626 *	na	na		968	1475	3830	Excludes Govt input		.06		PC data suggests substantial more input than reported by AID/IGA	
Costa Rica <sup>25</sup>	422 e	1171 e	na		1189	2312	2114			1.06			
El Salvador <sup>27</sup>	1101 a	na	na		1245	1432	1130			.22			
Colombia <sup>28</sup>	5355 e	5535 e	na		5372	7326	8499			.22			
Brazil <sup>30</sup>	na	na	na		2694	3004	3300	IPPF only		.03		@ = 75% inputs from national government	

a = allocated  
e = expended  
\* = Govt only

SOURCE: (1) Northman J. "Population and Family Planning. Factbook, Seventh Edition. Report in Population/Family Planning, No. 2, October 1975"

Assuming some validity for the AID/IGA compiled FY 1975 fiscal data, Table 18 also provides a cost input in U.S. dollars per capita for each country where data are available.

Viewing the data broadly, three countries had program costs input greater than \$0.50 per capita: Pakistan, Tunisia and Costa Rica. Costa Rica had the highest costs per capita in FY 1975: \$1.07. The Philippines, El Salvador, Tanzania and Colombia were in the \$0.25 to \$0.50 range. Those countries with program costs varying between \$0.11 and \$0.24 in FY 1975 were Korea (Rep.), Taiwan, Thailand, Indonesia, India, Ghana and Nepal. Taiwan clearly had the lowest program costs input (\$0.11) per level of current contraceptive use. Those countries with program costs less than \$0.10 per capita in FY 1975 were Bangladesh, Turkey, Mexico, Nigeria, Brazil, and Ethiopia--with the lowest program costs of one cent per capita for FY 1975. Although Mexico falls in the low category, this figure is contradicted by available data from Population Council which indicates substantial inputs by the Government of Mexico.

In overview, no national program with less than \$0.10 per capita inputs has a significantly high new acceptor or current acceptor rate. Several countries manage to maintain vigorous programs with inputs in the \$0.11 to \$0.25 range: Taiwan, Korea (Rep.), Thailand and

Indonesia. However, with similar inputs, Ghana and Nepal have not developed high acceptor rates or high prevalence of contraceptive use rates.

For the group of countries allocating more than \$0.25 per capita to the family planning program, there is a mixed picture. Some of the programs, e.g., Pakistan, El Salvador, Tanzania and Colombia, are in the early stages of program development and, therefore, may be experiencing extensive "start-up" costs. Pakistan is a new program in the sense of its recently developed "inundation scheme".

In the same group, however, are more established programs, e.g., Tunisia, where the input costs are high, though prevalence of contraceptive use is only modest (13 percent for Tunisia). Costa Rica's costly input of \$1.07 per capita in FY 1975 makes its high prevalence of contraceptive use rate of 42 percent more understandable.

For FY 1975, the Philippines, Bangladesh, Turkey, Tunisia, Ethiopia, Ghana, Nigeria, Tanzania, Costa Rica, El Salvador, Colombia and Brazil governments contributed less than half to the total FY 1975 program costs inputs.

India and Pakistan had the highest national government inputs while, according to AID/IGA data, Turkey and Ethiopia contributed nothing. Comparable data were not available for Taiwan and Egypt.

For the countries under review, insufficient data exist to analyze the allocation of the above monies to specific program function or type of expenditure.

Similarly, the AID/IGA fiscal data regarding country specific contributions by AID financed intermediaries and other donors does not provide data regarding the type of expenditure or the program function of the resource transfer. Hence, a review of donor specific associations with program impact is extremely difficult. A trend toward bilateral AID assistance is generally noted for a few years after a national program gathers momentum. This area of donor contribution, over time as programs develop, deserves considerably more review and analysis.

In summary, program costs data are highly variable in quality and provide few clues in predicting program success other than to estimate extremes. \$0.10 input per capita per year appears to be the least amount possible to maintain a reasonably vigorous program. Well established programs are found operating with program costs between \$0.11 and \$0.25. The pragmatic collection and analysis of program costs is an area of inquiry deserving greater attention by national governments and the international donor community.

VI.G. IMPLICATIONS FOR FAMILY PLANNING SERVICES PROGRAM DEVELOPMENT

In this section we have reviewed the processes by which family planning contraceptive services are delivered within a larger family planning/population program. The requirements for financing, management, supplementary services (IEC, research/development, and policy development) the providers of services, the specific services offered and the immediate and overall program organizational issues have been reviewed.

Services must reach the people--and this has personnel, equipment and organizational implications. The overall program control can assume different forms if rurally oriented services are delivered. Sound management, reasonable funding and availability of contraceptives and related equipment are critical. As can be seen from the preceding tables, nothing will substitute for these.

In reviewing various program strategies and alternative service delivery systems, we believe that even the most cautious national program should incorporate clinic-based oral contraceptives and IUD services immediately. The former can be implemented with less initial costs and training time than the latter. Simultaneously, condoms and possibly foam should be provided both in the clinics and through a noncommercial distribution scheme, preferably one which rests with local community political leadership.

This stage, accompanied by vigorous information regarding the existence of services, initiates availability of family planning services. As soon as appropriate groundwork has fostered positive public opinion, and prohibitive regulations regarding oral contraceptives are altered, a non-clinical, noncommercial distribution scheme for supplying or resupplying oral contraceptives should be developed for each village. Heavy reliance should be placed on lay personnel and mid- to low-level health auxiliaries. This should be supplemented with subsidized commercial distribution schemes for condoms and, if the economics are reasonable, for similar programs based on oral contraceptives. This stage represents the development of ready accessibility. Without these multiple extensions beyond the traditional clinic, most family planning systems will fail to attract and sustain significant numbers of current contraceptive users.

Sterilization should follow with an emphasis on the simpler techniques of vasectomy and mini-lap tubal ligation. Again, issues of ready accessibility to these services must be managed, e.g., through mobile teams or circuit camps. Following aggressive actions to alter legal impediments, abortion/menstrual regulation services should be provided to address simultaneously the maternal mortality secondary to improper abortions, as well as excessive fertility problems. Providing abortion services

for "contraceptive failure" appears to be one reasonable first approach.

In the presence of adequate information services, each additionally provided service through alternative delivery systems generally attracts a new "market" of contraceptive users.

The family planning services program should "piggy-back" on any viable delivery system--both public and private health systems: cooperatives, village organizations, e.g., mothers' clubs, religious organizations, organizations of government administrators' wives, etc. Integration of clinic-based family planning services with maternal/child health services should be implemented as soon as possible, but preferably not at the cost of building a health system infrastructure first. The feasibility of combining health information or health services into the workers' role in village contraceptive distribution schemes should be examined as rapidly as possible.