

301.32072  
R253a

301.32072  
PNAB1086

## IMPACT OF FAMILY PLANNING PROGRAMS UPON FERTILITY

Impact of Family Planning Programs Upon Fertility.

301.32072 Agency for International Development.  
R253a Impact of Family Planning Programs  
Upon Fertility. R.T. Ravenholt. May 1973.  
13 p.

WV  
1001.32072/05203

1. Family planning - Research. 2. Fertility -  
research. I. Ravenholt, R.T. II. Title.

R. T. Ravenholt, M.D., M.P.H.  
Director, Office of Population  
Bureau for Population and Humanitarian Assistance  
Agency for International Development  
Washington, D.C.

May 1973

1

Although many variables affect fertility, the inter-relations now perceivable between the strategy and timing of family planning programs and changes in fertility by country, time, and maternal age, appear consistent with the concept that family planning programs which provide information and improved means of fertility control to people in developing countries ordinarily have a powerful effect upon fertility. (1)

This concept derives from analysis of fertility and family planning program data collected over a considerable number of years by national agencies, the United Nations (2), the Agency for International Development (3), and the U.S. Bureau of the Census.

Graphic analysis of these fertility data for selected countries (Figures 1, 2), and comparison of fertility trends with the strategy and operation of related family planning programs (Table 1), provide an improved basis for judging the impact of these programs upon fertility.

At a glance it is apparent that the four Asian and four Latin American countries indicated in Figures 1 and 2, all experienced remarkably large declines<sup>s</sup> in fertility during the decade of the 1960's. It is unlikely that any comparable decrease in fertility has ever previously occurred in these developing countries.

While the fact of rapid fertility decline in close temporal and spatial association with family planning programs is relatively easy to establish, this is not sufficient, by itself, to establish a cause and effect relationship -- because of the many other factors simultaneously operative.

But by invoking the third cardinal parameter of epidemiology -- studying the distribution of an entity (fertility) according to the personal characteristics of a population (age of mother), a more incisive understanding of the impact of family planning programs can be achieved.

The four Asian countries indicated in Figure 1 had similar age-specific fertility silhouettes in 1960 (black outline) but strikingly different silhouettes a decade later (white lines). Within the authors' experience, the skewed distribution of Taiwan's fertility pattern in 1970 is unique; and contrasts sharply with the age-balanced decline of fertility in Hong Kong and Singapore. A detailed view of the evolution of fertility patterns in Taiwan and Singapore during the 12 years, 1959-1970 is provided in Figures 3 and 4.

Reflection upon possible causes of the markedly different changes in fertility patterns in Taiwan and Singapore during the 1960's leads to the realization that the most plausible explanation for these changes is found in contrasting strategy and operation of their family planning programs: Singapore,

like Taiwan, started a family planning program in 1963 which relied mainly upon the intrauterine device, but when difficulties with the IUD were encountered in Singapore, a rapid shift was made to oral contraceptives<sup>(4)</sup>, whereas in Taiwan the use of the intrauterine device (Lippes Loop) was strongly emphasized throughout the 1960's<sup>(5)</sup>. Even when oral contraceptives were introduced into Taiwan's family planning program in the late 1960's, a particular attempt was made to limit distribution of pills to "IUD dropouts"; and until the present time (1973), the Taiwanese family planning program is "tilted" for the IUD and against the pill by payment of larger incentives to workers for recruitment of IUD acceptors than pill acceptors and by a number of educational and distributive practises.<sup>(6)</sup>

Korean family planning program strategy has resembled that of Taiwan, but family planning practises were modified somewhat by more extensive use of oral contraceptives from commercial sources and greater access to abortion.<sup>(5)</sup>

No doubt commercial sales of contraceptives and unrecorded use of abortions have contributed to the patterns of fertility change in all the indicated countries, but the operation of these other variables does not prevent one from discerning the unique age-specific impact of Taiwan's technologically distinctive family planning program.

That the greater or lesser availability of various means for control of fertility is ordinarily a dominant determinant of fertility is additionally indicated in Figure 5.-- which contrasts evolution of fertility patterns in four countries -- all of which experienced rapid economic development during the decade of the 1960's.

- . Mexico, with specific religious and legal constraint on availability of contraceptives and abortion, experienced little change in its age-specific fertility pattern -- which remained at a high level.
- . Taiwan, which initiated a family planning program in 1963 based mainly on the intrauterine device, experienced considerable reduction of fertility among older women by 1970, but with little change among young women.
- . Hong Kong, with program emphasis shifting from IUD's to oral contraceptives about 1968, experienced little change in fertility from 1961 to 1965, but had a rapid age-balanced decrease in fertility during the late 1960's.
- . Japan, which liberalized its abortion law in 1948, has maintained its fertility at a low level since the early 1950's.

## Conclusion

In the absence of improved availability of more effective means of fertility control, little change in fertility can be expected -- even if there is substantial economic improvement.

. Family planning programs which make available improved means of fertility control ordinarily result in rapid decrease in fertility.

. No one has yet identified and reported a situation in the developing world where the most effective means of fertility control -- abortion, oral contraceptives, sterilization, intrauterine devices, and condoms -- have been made appropriately available and where there is a problem of lack of utilization or lack of rapid impact upon fertility.

. For young women on the threshold of their reproductive lives, there is no generally satisfactory substitute for oral contraceptives. This is just as true for illiterate and impoverished women in developing countries as for highly educated and sophisticated women in America and Europe. But because of the avalanche of young women now entering reproductive age groups in developing countries, the need for general availability of oral contraceptives is most acute there.

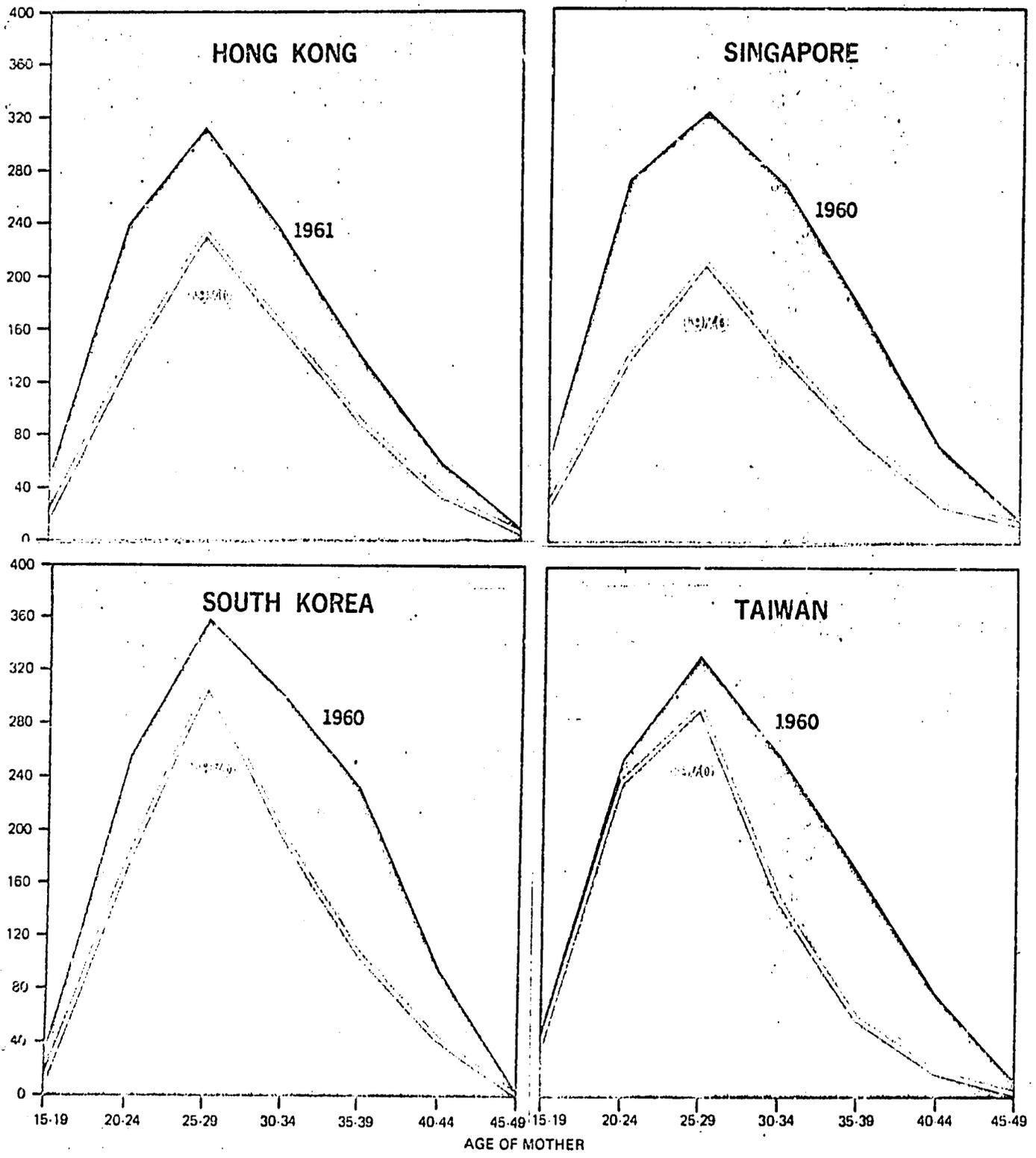
The most urgently needed action for resolution of the population crisis in developing countries is to rapidly achieve complete coverage of these populations with non-clinical means, i.e. oral contraceptives and condoms, and to make the best clinical means -- abortion, sterilization, and intrauterine devices -- as generally and rapidly available as possible.

References

1. Ravenholt, R.T., Chao, J., and Brackett, J. Epidemiology of World Fertility, presented at the First International Planned Parenthood Federation S.E. Asia and Oceania Regional Medical and Scientific Congress, Sydney Australia 14-18 August 1972
2. Demographic Year Book, 1969 and 1970 Statistical Office of the United Nations Department of Economic and Social Affairs United Nations, New York
3. Population Program Assistance Agency for International Development Washington, D.C., December 1971
4. Kanagaratnam, K. Singapore. The National Family Planning Program Stud. Fam. Plan. 28:1, 1968
5. Ravenholt, R. T., Piotrow, P.T., and Speidel, J.J. Use of Oral Contraceptives, A Decade of Controversy Int'l J. Gynec. & Obstet. 8:941, November 1970
6. Keeny, S. Periodic reports and personal communications, 1968-1973.

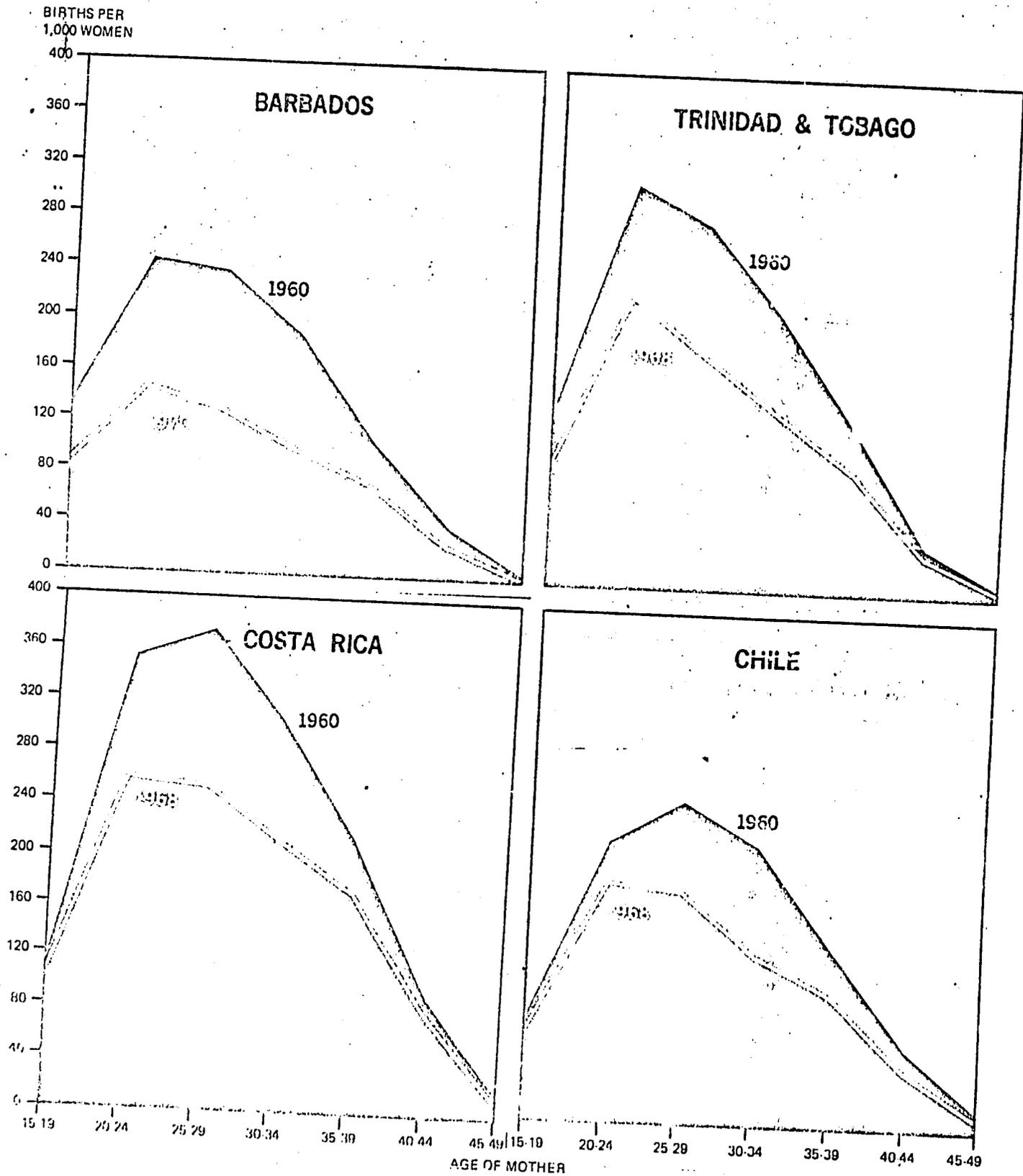
# AGE-SPECIFIC FERTILITY RATES BY COUNTRY AND TIME

BIRTHS PER  
1,000 WOMEN



Source: Prepared for the Office of Population, Agency for International Development, by the International Statistical Programs Center, U.S. Bureau of the Census, February 1973

# AGE-SPECIFIC FERTILITY RATES BY COUNTRY AND TIME



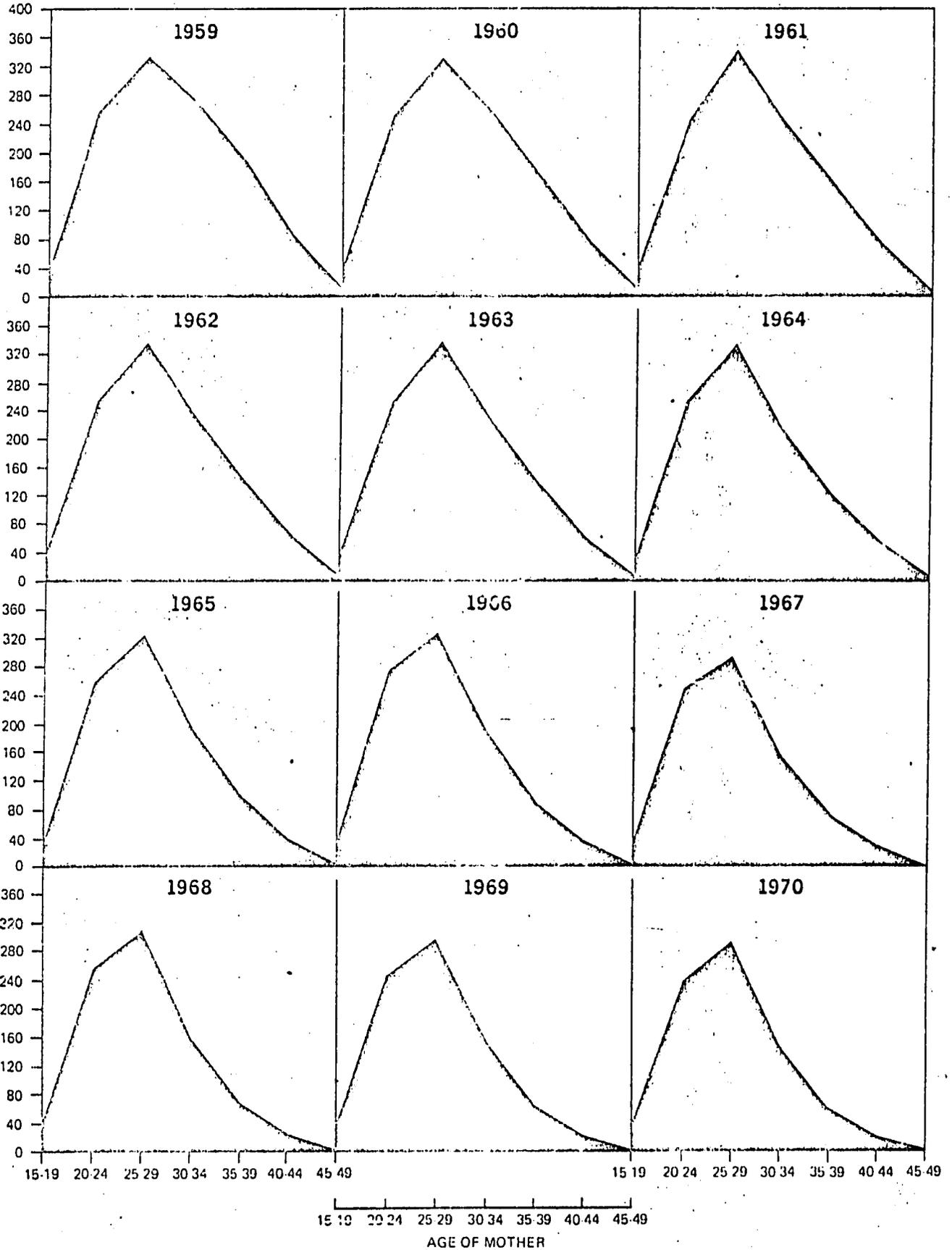
Source: Prepared for the Office of Population, Agency for International Development, by the International Statistical Program Center, U.S. Bureau of the Census, February 1973

# NUMBER OF NEW ACCEPTORS OF PILLS AND IUDs AND THEIR RATIO TO ONE THOUSAND WOMEN AGED 15-44 IN EACH INDICATED COUNTRY AND YEAR

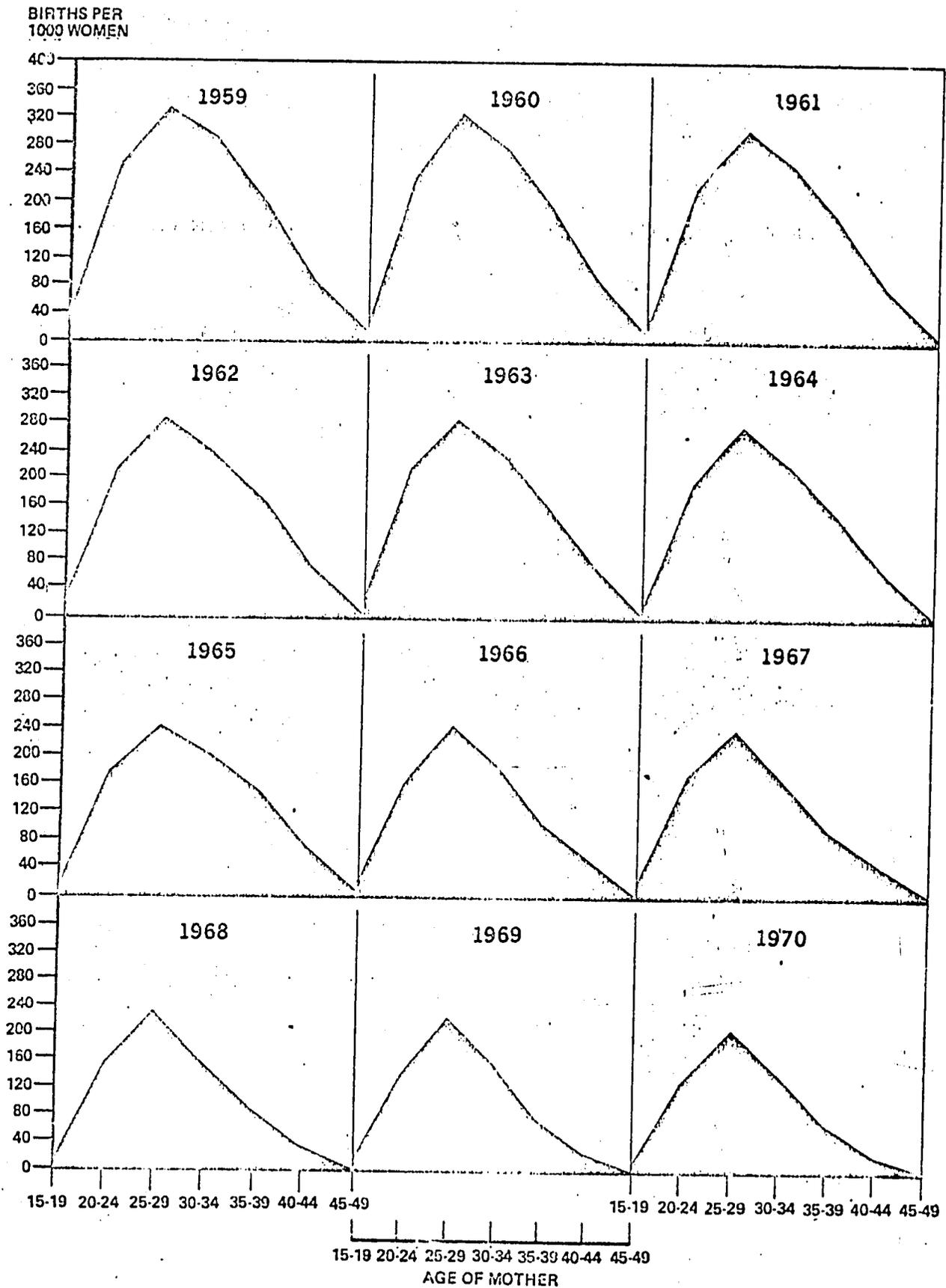
Country	Method	1965 New Acceptors		1966 New Acceptors		1967 New Acceptors		1968 New Acceptors		1969 New Acceptors		1970 New Acceptors		1971 New Acceptors	
		Number (1000)	Per 1000 Women 15-44												
		BARBADOS	Pills	N.A.	-	N.A.	-	N.A.	-	N.A.	-	1.3	23.6	0.8	15.7
	IUD's	N.A.	-	N.A.	-	N.A.	-	N.A.	-	0.1	1.8	0.1	2.0	N.A.	-
CHILE	Pills	9.4	5.4	23.0	12.8	47.0	25.7	31.0	16.6	24.0	12.5	N.A.	-	N.A.	-
	IUD's	20.0	11.4	30.0	16.8	81.0	44.2	133.0	71.1	76.0	39.7	N.A.	-	N.A.	-
COSTA RICA	Pills	N.A.	-	N.A.	-	N.A.	-	3.4	10.5	6.6	19.7	12.9	37.2	17.2	48.1
	IUD's	N.A.	-	N.A.	-	N.A.	-	5.8	17.9	4.2	12.5	2.3	6.6	3.1	8.7
HONG KONG	Pills	0.5	0.7	0.7	1.0	3.0	4.0	13.1	17.1	18.0	23.2	20.2	25.6	26.5	32.9
	IUD's	30.0	41.9	14.0	19.2	9.0	12.1	6.0	7.9	4.0	5.2	2.8	3.5	1.8	2.2
KOREA	Pills	N.A.	-	N.A.	-	N.A.	-	76.0	12.2	253.0	39.8	268.0	41.4	168.9	25.6
	IUD's	226.0	38.8	380.0	63.6	305.0	50.0	327.0	38.1	229.0	36.0	224.0	34.6	212.0	32.1
TAIWAN	Pills	N.A.	-	N.A.	-	27.6	10.1	35.6	12.8	32.2	11.7	54.9	18.9	85.7	29.4
	IUD's	89.1	36.2	99.9	38.3	109.8	40.4	102.0	36.8	95.0	32.2	97.6	33.6	101.1	34.6
TRINIDAD & TOBAGO	Pills	N.A.	-	N.A.	-	N.A.	-	10.0	51.4	11.7	59.4	N.A.	-	N.A.	-
	IUD's	N.A.	-	N.A.	-	N.A.	-	0.8	4.1	1.0	5.1	N.A.	-	N.A.	-
SINGAPORE	Pills	3.2	8.6	14.0	36.8	18.9	48.7	19.4	48.1	18.3	43.7	22.9	50.2	N.A.	-
	IUD's	1.1	3.0	2.8	7.4	0.3	0.8	3.7	9.2	1.3	3.1	1.6	3.5	N.A.	-

# AGE-SPECIFIC FERTILITY RATES FOR TAIWAN 1959-1970

BIRTHS PER  
1,000 WOMEN



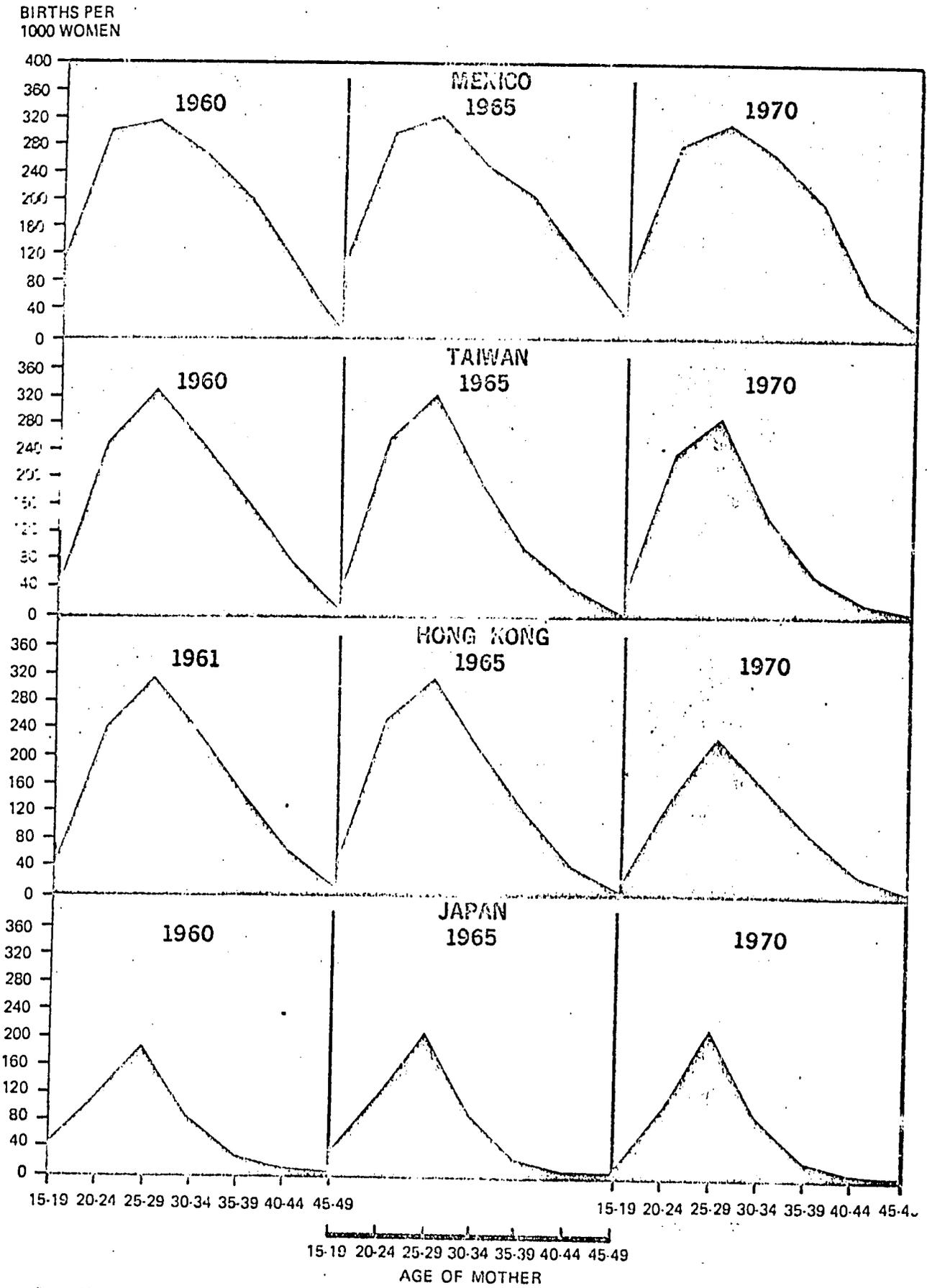
# SINGAPORE: AGE-SPECIFIC FERTILITY RATES, 1959-1970



SOURCE: SESA/BUCEN/IDSC-AID/PHA/POP, OCTOBER, 1972

19

# AGE-SPECIFIC FERTILITY RATES BY COUNTRY AND TIME



Source: Prepared for the Office of Population, Agency for International Development, by the International Statistical Program, U.S. Bureau of the Census, January 1973.