BIBLIOGRAPHIC DATA SHEET PN-AAJ-808

INCENTIVES, FERTILITY BEHAVIOR, AND INTEGRATED COMMUNITY DEVELOPMENT; AN OVERVIEW

PERSONAL AUTHORS - DAVID, H.P.

CORPORATE AUTHORS -

1980, 73P.

ARC NUMBER - 304.66.D249
CONTRACT NUMBER - AID/OTR-147-79-80
PROJECT NUMBERS -
SUBJECT CLASS - PC0000000000

DESCRIPTORS -

FERTILITY	FAMILY PLANNING
ASIA	BIRTH CONTROL
INCENTIVES	POPULATION GROWTH
COMMUNITY DEVELOPMENT	INTEGRATED DEVELOPMENT

PN-AAJ-808

INCENTIVES, FERTILITY BEHAVIOR, AND INTEGRATED COMMUNITY DEVELOPMENT:

AN OVERVIEW

January, 1980

EXECUTIVE SUMMARY

Incentives, Fertility Behavior, and Integrated Community Development:

An Overview

by

Henry P. David

January, 1980

Adoption of policies designed to slow the rate of population growth by a number of developing countries over the last decade has resulted in various schemes to reward couples or individuals who adopt family planning methods or limit the number of births. These incentives range from direct payment for adoption of certain contraceptive methods to no-birth bonuses to priority for low parity children in selection of schools. This paper outlines with examples the various schemes that have been tried. A special section focusses on the integrated community approach pioneered in Thailand within which incentives are linked to community development.

Most of the incentive experiments are in Asia: China, Singapore, Korea, India, Indonesia, Philippines, Sri Lanka and Taiwan. Their effectiveness depends to a large extent upon the cultural and political circumstances which allowed initiation and implementation of certain kinds of incentive programs and on an existing political and social awareness and acceptance of the advantages of limiting population growth. The introduction of such schemes is clearly dependent upon the existence of readily accessible family planning services.

Based on the overview of experience to date, the author presents a number of conclusions with implications for policy development. Following is a brief summary of his findings.

In the past policy decisions on the size of incentive payments to whom they should be paid, when, how, and in what form appear to have been made largely on the basis of conjecture and intuition, seldom as the result of field experience. Despite the large amount of money spent on incentives, virtually no control studies have been reported. Little knowledge exists on whether incentives will lower the birthrate or how large they would have to be to do so. There is a wide gap between the number of schemes proposed and the few that have been implemented with a research component.

There is disagreement on whether incentives influence persons to want fewer children or prod them into accepting family planning (notably sterilization) before they would otherwise do so. It has also not been possible to establish the extent to which incentives cloud the judgment of recruiters and service providers or the informed consent of acceptors. Delayed incentives and no-birth bonus schemes are providing encouraging initial results but longer-term studies are needed to assess effects on fertility and cost effectiveness. Acceptance of non-permanent methods, prompted mainly by a desire for a small, one-time financial reward, tends to elicit low continuation rates.

Disincentives can reinforce the public perception of small family norms and encourage rational decision-making by emphasizing cost-benefit factors without preventing couples from having additional children if they wish to pay the costs entailed. They are more readily accepted in societies where all methods of fertility regulation are easily available, where a strong and stable government has a well-established consensual relationship with its citizens, and when care is taken to avoid undue hardships for children born in disregard of official policy.

As has been found with non-fertility related community programs integrated community programs which include fertility reduction schemes are most positively perceived when they are oriented to community development, are sensitive to local needs, involve the community in voluntary decision-making and allow local autonomy. In more cohesive communities there is a greater probability of recognizing the need for integrating fertility reduction with socio-economic development for the common benefit.

Finally, it is clear that the complexity of fertility behavior requires consideration of both psycho-social and economic determinants of fertility in any program to stimulate fertility reduction through individual or community incentive programs.

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AN OVERVIEW*

Henry P. David**

*Prepared under Contract Order No. AID/OTR-147-79-90 with the Agency for International Development. While many of the concepts presented are those of colleagues acknowledged in the references, the author assumes full responsibility for the views expresed.

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An Overview

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INCENTIVES, FERTILITY BEHAVIOR, AND INTEGRATED COMMUNITY DEVELOPMENT: AN OVERVIEW

Henry P. David

Abstract

After outlining selected psychosocial and economic determinants of fertility behavior and discussing their relationship to quality-of-life considerations, relevant aspects of population policy are noted. The next section offers a conceptualization and definition of types of incentives and disincentives, plus a discussion of integrated community approaches to fertility reduction with an orientation to enhancing community development. Legal and ethical constraints are presented in terms of legislative changes, perceived constraints on freedom, and coercion and human rights. The Regional Overview features country capsules summarizing experience reported from Bangladesh, China, India, Indonesia, Korea, Philippines, Singapore, Sri Lanka, and Taiwan. The integrated community approach pioneered in Thailand is described in a separate section. Research findings are surveyed with particular attention given to sociocultural and methodological concerns as these relate to suggested cooperative pilot and policy research. A summary of major findings plus more than 180 references conclude the overview.

Preface

One of the conclusions of the 1974 World Population Conference was that a policy advocating fertility reduction cannot be isolated from other social and economic development policies concerned with family and individual well-being (U.N., 1974). The multifaceted nature of these interactions is being gradually understood as clearer linkages are emerging between fertility behavior and economic, social, cultural, and political determinants and consequences of national policies. Social scientists have become increasingly involved in studies of the modifiability of fertility choice behavior, motivation for fertility reduction, and willingness to limit family size for societal well-being. One of the objectives of this overview is to summarize what is presently known about the effects of incentives and disincentives, including costs/benefits, ethical consideration, and integration with community development policies.

The general approach of this paper encompasses a consideration of psychosocial and psychoeconomic determinants of fertility behavior. Not enough is known as yet about what influences which couples to limit family size under selected environmental conditions. Findings accumulating from well-defined field studies are, however, providing suggestions for ethically acceptable initiatives, rooted in local traditions with a humanistic approach designed to improve the quality-of-life of participating villagers. This is an encouraging evolution when it is considered that most organized family planning programs in the developing world are less than 20 years old, that millions of couples still lack access to modern contraceptive methods, and that the right to choose legal pregnancy termination remains a topic of considerable controversy (David, 1980).

After this preface, there will be a section reviewing relevant aspects of fertility behavior, quality-of-life, and population policy, followed by a discussion of diverse incentives, disincentives, and integrated community approaches. After consideration of legal and ethical constraints, the regional overview presents information from nine Asian countries, plus more extensive observations on the Thai experience with community-based programs. Research findings are surveyed and suggestions offered regarding needed future research to answer specific questions. A summary of major findings and a listing of more than 180 references conclude the overview.

Ascertaining the state-of-the-art on the complex topics discussed in this paper is rendered more difficult than usual by the controversy that has long swirled around the concept of incentives. Although diverse sources were consulted and intensive literature searches conducted, no claim is made for completeness, systematic coverage of all relevant aspects, or total objectivity. Many of the research findings presented are "soft" in the sense that they have not been cross-validated or replicated in other settings. The writer's personal experience in transnational research on fertility behavior will be apparent in the comments and conclusions. In an effort to balance and/or emphasize certain views, liberal use has been made of selected quotations at the beginning and/or end of each section.

Prepared with the support of the Agency for International Development, this overview is based entirely on materials available to the Transnational Family Research Institute. I am pleased to acknowledge the considerable support provided by Hirofumi Ando, Chai Bin Park, and Paul E. Mason through the facilities of the United Nations Fund for Population Activities; Helen Kolbe and Phyllis Piotrow, Population Information Program, Johns Hopkins University; Bruce Knarr, Librarian of the Population Reference Bureau; and Laura Olson, Chief, Clearinghouse and Information Section, Population Division, U.N. Economic and Social Commission for Asia and the Pacific. Much valued consultation was graciously given by James T. Fawcett, East-West Population Institute, Honolulu; Cynthia Green, Population Crisis Committee, Washington; and S. B. Seward, Social Science Division, International Development and Research Centre, Ottawa. Special thanks are expressed to Jonathan V. David who spent several weeks in the field with the Community Based Family Planning Service Program in Thailand and to the senior CBFPS staff who took time during their travel to the United States to visit Bethesda and answer our many questions. The Population Council kindly made available the galley proofs of the monograph on the Singapore experience by Peter S. J. Chen and James T. Fawcett.

It has been said that "the road to political inaction is paved with unused research reports" (Henry, 1976). Discussions at international meetings and regional seminars confirm that serious problems exist in bringing already available and cogent social science research findings to bear in a continuous and systematic way on the refining of priorities and implementation of policies, whether the area be population policy or unintended adolescent premarital pregnancy. While researchers shrug their shoulders about

the "underutilization" of their findings, policy makers and government planners complain that social science research is rarely relevant to immediate policy issues, timely, or couched in an "employable" format.

The effectiveness of dissemination methods and the barriers to the use of policy-relevant information by decision-makers have been well reviewed (e.g., Caplan, 1975; Batscha, 1976). There is clear need for fostering dialogue between policy makers and social science researchers. Involving those close to decision-making in the process of establishing research priorities and the early phases of research planning is likely to enhance better perception of realities and eventual utilization of service oriented recommendations.

It is with the hope of advancing the transnational and interdisciplinary understanding of population policies involving incentives and disincentives in stimulating voluntary fertility reduction, fostering "bottom-up" community development, and enhancing the quality-of-life of acceptors, especially in the villages of developing countries, that this overview is presented.

H.P.D.

January 1980

> The complexity of fertility and the degree to which it is supported and promoted by solid social institutions and widely shared values make difficult the devising of adequate strategies for reducing it. If we ask the economists how it is to be done they advise us to change the balance of costs and benefits of children. Reduce the utilities and increase the costs and there will be fewer children born. The sociologists point to the long standing, deeply ingrained, and highly cherished social institutions and values that support fertility and say that we shall have to change them. The psychologists direct us toward the need to find substitutes for the psychic rewards we get from children and devise alternative ways of achieving the emotional supports and satisfactions that having and living with children provide. The physicians suggest that the way lies through increasing maternal and child health services, including family planning, and through reducing infant and child mortality and improving nutrition. The politician replies with his ringing declaration of unfettered reproduction as an inalienable human right and ducks both the question and the awareness that the freedom of choice he defends is as mythical as the unicorn. The dedicated and zealous family planner holds that if we but provide widely enough the means of contraception and abortion, they will create their own demand. The biological scientists imply that the means of salvation will be found in improved contraceptive techniques. And the leftists tell us that if the rich quit consuming the poor will stop breeding and that, in the words of the World Population Year slogan, if we take care of the people, population (read fertility) will take care of itself. (Simmons and Saunders, 1975)
>
> Choices inherent in population policy are best seen as trade-offs among "quality-of-life" values. Eventually the difficult task of population policy is to discern, measure, and adjust the effect of alternative demographic behavior upon such values--recognizing that some socially cherished values will probably be lost or weakened in the process of realizing others, e.g., the attrition of traditional customs, familistic values, and long-held sex and age roles under the impact of lowered fertility and mortality. (Berelson, 1971)

Fertility Choice Behavior: A Rationale

Successful fertility regulation requires the coordination of three distinct human forces: the desire to have sexual intercourse, the wish to have or not to have a child, and the will to regulate the fertility

consequences of sexual behavior. While these forces may be logically linked, they are not psychologically related. Coordination requires a considerable and ever-vigilant effort, typically with a longer term reward that appears only in the guise of the absence of the event. Although improvements have been and continue to be made in fertility-regulating methods and delivery systems, universal availability and acceptability remain distant goals (David, Friedman, van der Tak, & Sevilla, 1978).

In many lands the present generation is often the first to engage in the conscious process of deciding whether, when, and how many children to have (David & Johnson, 1977). For numerous couples such a decision is difficult to make, requiring a balance of personal and cultural values, anticipated costs and benefits, and perceived social environmental pressures. Throughout their fertile years individuals are confronted with many decision points and alternative courses of action that will largely determine their efforts to control their own fertility. The awareness of these choice points, the extent to which alternate courses of action are recognized, and the degree to which decisions are based on realistic appraisals of benefits, costs, and consequences are believed to be the keystones of rational fertility choice behavior (Friedman, Johnson, & David, 1976). The difficulty is that in many developing countries far too many couples are still unaware that they have a choice.

The psychosocial model of fertility behavior emphasizes the subjective assessment of the environment by the individual and the importance of the two partners in a couple influencing each other's perceptions and choice behavior (e.g., David & Friedman, 1973; Friedman, Johnson, & David, 1976). To understand specific reality situations, it is important to know not only existing resources for fertility regulation and the cost of such supplies in a given environment but, perhaps even more critically, what the individual believes the situation to be. A central feature of successful couple planning behavior is their joint ability to anticipate future outcomes, plan ahead, and develop contingency alternatives. If the partners share similar views and accurately perceive each other's aspirations, a major obstacle to successful fertility regulation is removed.

That the pleasures which parents experience in raising their children are highly valued has been well demonstrated in crossnational studies and commentaries (e.g., Arnold et al., 1975; Nag, 1975). In most developing

countries, the large majority of the population is concentrated in rural areas, obtaining a significant portion of their subsistence from the land. In primarily agricultural economies, existing on the fringe of the modern economic sector, pressures are perceived by the people as demanding a total family size that assures continued high levels of national fertility. Thus, although the economic contribution of children to farm work may be only marginal, their contributions are seen as insuring survival for the family. A woman's status is often primarily dependent on her bearing sons who are viewed as assuring family lineage and providing economic security in old age (e.g., Bicknell & Walsh, 1976; Williamson, 1976). High infant and child mortality rates are believed to be additional pressures for having more children, although this view has been questioned of late (e.g., Simmons, 1979).

While wider access to subsidized and well-organized family planning services, utilizing all available methods of fertility regulation, may suffice to influence highly motivated couples after they have had the "desired" number of children, complementary programs are needed to stimulate parents to limit or reduce family size. In a germinal paper, Becker (1960) proposed that the economic theory of the consumer could be modified to explain fertility behavior by viewing fertility choices as resource allocation decisions. Some economists perceive couples as attempting to utilize scarce temporal and financial resources in rationally consistent fertility decision-making (e.g., Winter, 1969). Thus far, there has been little field research confirming the investment/consumption cost approach or demonstrating how diverse couples respond to variations in the costliness of children (McGreevey, 1974). There is, however, growing recognition of the need to integrate psychosocial determinants in any effort to develop a microeconomic theory of the demand for children (e.g., Turchi, 1975, 1978).

The history of efforts to explore and delineate motivational determinants of fertility behavior is long and strewn with testimonials to the complexity of the task (e.g., Pohlman, 1969; Fawcett, 1970, 1973; Smith, 1973; Friedman, Johnson, & David, 1976). There is increasing recognition that when attitudes are assessed without consideration of the motivational environment needed to interpret findings, they are rarely predictive of actual behavior and of little value in identifying policy options (Simmons, 1977). The frequent observation that couples determined to avoid unintended conceptions and/or unwanted births will find a way to do so, even when access to

modern contraceptives or legal abortions is difficult, makes it imperative to consider both psychosocial and economic fertility determinants in any effort to evolve a meaningful population policy.

Quality-of-Life

Although there are multiple definitions of the diverse components comprising the concept "quality-of-life," there appears to be consensual agreement that personal well-being and successful family coping are among the key factors (Campbell, 1977; Flanagan, 1978). Population issues and quality-of-life concerns interact and affect each other causally and consequentially (Zeidenstein, 1978a, 1978b). For example, as couples perceive an improvement in their quality-of-life, the desire to limit family size frequently increases. Conversely, rapid population growth can aggrevate the socio-economic stressors that lower quality-of-life, make it more difficult to cope, and increase the potential for family disruption.

Observations from recent psychosocial research suggests that there are differences in planning behavior and future time orientation between successful contraceptors and nonacceptors of available services, whether poor illiterate Indian villagers (Friedman & David, 1977) or literate urban adolescents (e.g., Miller & Godwin, 1977; Mindick et al., 1977). There are important differences between couples in the way in which they believe they can control their own destinies and the degree to which they have aspirations for a modern life style. As rural couples see more evidence of successful planning in agriculture, economic development, and health care, they are also likely to become better family planners. In the more developed countries of Europe and North America, the ever-escalating costs of child rearing and the family need for the woman's income may explain the current preference among young couples for two or fewer children (David & Johnson, 1977).

The economics of large versus small families, or the desire of women to have fewer children, is not significantly different between major countries currently experiencing quite diverse population swings, e.g., India and Indonesia. What is different is the motivation of political leaders and the willingness of governments to support effective policies and voluntary programs across the entire country; these are usually designed to reduce infant mortality, develop alternative status roles for women by providing more educational and employment opportunities, and communicate the

the availability and accessibility of all methods of family planning to couples who want them. When viewed in historical perspective, these movements toward achieving a better quality-of-life have been extraordinarily rapid (Freedman, 1978).

Population Policy

Population policies tend to be the product of decisions that are broadly political, representing compromise and the reconciliation of competing interests or goals (Fawcett, 1980). Formulation of such policies is typically ambiguous and macro-level in intent, but results have to be obtained through micro-level changes in couple values and behavior (Simmons & Saunders, 1975). The means for achieving such ends are theoretically numerous, but in practice are severely limited by technological, political, administrative, economic, and ethical constraints (Berelson, 1969).

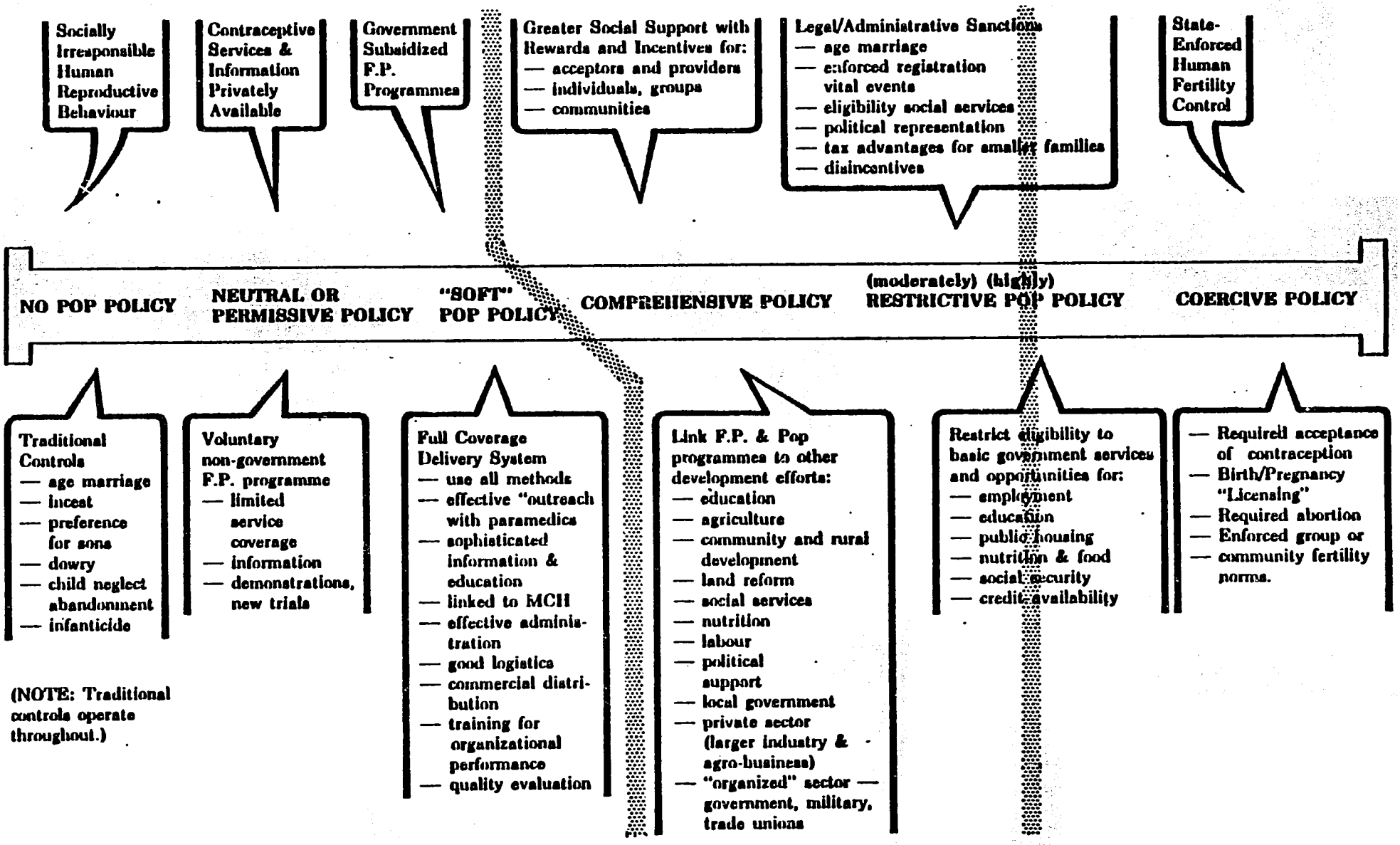
As depicted in Fugure 1, the spectrum of external influences affecting fertility behavior ranges from socially irresponsible human reproduction to state enforced fertility control, operating within a policy context ranging from an absence of any population policy to a totally coercive policy, mediated by controls ranging from none other than traditional cultural influences to required acceptance of fertility regulation (Kangas, 1976; ESCAP, 1978).

In considering population policies, it seems appropriate to limit discussion to fertility reduction policies described by Simmons and Saunders (1975) as those expressing "an explicit intention to induce a change in fertility rates in a downward direction through governmental measures that are specified and with appropriate resources that are committed in order to realize one or more societal values or goals." Thus, a family planning policy may or may not be a fertility-reduction policy. It will depend on the circumstances.

This overview will focus on the area between the two gray lines in Figure 1, covering comprehensive and moderately restrictive population policies. Within this segment of the spectrum, primary attention will be on incentives and disincentives designed to stimulate fertility reduction and, to the extent possible, enhance community development and an improved quality-of-life.

FIGURE 1.

SPECTRUM OF EXTERNAL INFLUENCES AFFECTING FERTILITY BEHAVIOR



Source: ESCAP, 1978

Of particular importance in evaluating alternative policies is an understanding of the ways in which the social system imposes a structure of perceived rewards and costs, or contingencies, related to childbearing choices (Fawcett, 1974). While these contingencies may not always be readily recognized by persons within the society, it remains true that the social system does convey messages to individuals about the likely consequences, positive or negative, of having another child or having a large or small family. Allowing for variability in individual choices, the goal of population policy is to steer the statistical aggregate of fertility decisions in the desired direction (Fawcett, 1974).

Population policies and programs have traditionally concentrated on providing medically oriented and controlled family planning services and supplies, assuming that such endeavors would reduce the birthrates most rapidly (Muscat, 1978b). Of more recent origin is the provision of benefits and imposition of liabilities designed to channel fertility behavior in desired ways. In some cases, governments are implementing specific policies designed to reduce the societal costs of children. The intent is clear: the individual household or family is free to have as many children as it wishes but will have to pay a more direct cost, often in terms of relinquishing some benefits for the privilege of having more than a specified number of children. The cost to society both at present and in the future is viewed as too great to permit complete individual freedom in determining family size (ESCAP, 1978).

Rapid population growth is not the sole cause of an impoverished quality-of-life in the developing world. Fertility is only one of several threads in the complex tapestry of people's lives (Zeidenstein, 1978a). Programs advocating conception control, touching upon the most intimate aspects of a couple's private behavior, are increasingly integrated with other culturally sensitive efforts to improve the position of women, enhance the family's economic well-being, and foster the community's quality-of-life.

Incentives, Disincentives, and Integrated Community Approach

The increasing interest in Beyond Family Planning measures--that is, social and economic measures and factors that affect fertility--reflects a recognition that population and development are closely related, and that additional, perhaps more demographically powerful means

> of affecting fertility behavior, should be explored as a complement to family planning programs. (Muscat, 1978a)
>
> The use of monetary or other incentives as a means of stimulating contraceptive behavior has become one of the most controversial aspects of family planning programmes in recent years. Incentive schemes are questioned not only or moral and ethical grounds, but also with regard to the economic feasibility and their effectiveness in reducing birthrates. (Minkler, 1976).

The Concept of Incentives

Incentives, disincentives, and other "beyond family planning" measures were considered at the 1976 workshop convened in Penang, Malaysia, by the Inter-Governmental Coordinating Committee for Southeast Asia Regional Co-operation in Family and Population Planning (IGCC, 1978). The participants concurred that fertility behavior encompasses more than family planning and that minimum desired family size can be influenced by socioeconomic determinants. "The link between socioeconomic policy and individual couples' behavior may seem distant but it is real and demonstrably strong" (Herz, 1978). While many suggestions for "beyond family planning" programs have been suggested over the years, and several were proposed at Penang, few have been implemented.

The notion of financial incentives to stimulate wanted behavior is hardly new, as evidenced, for example, by research reported from agriculture, consumer behavior, and industrial/organizational behavior (Fawcett, 1970). The application to specified fertility behavior is of undetermined origin, probably beginning with the first time a family planning pioneer offered anybody a free contraceptive with the understanding that the acceptor would use it and, hopefully, return for a fresh supply (e.g., Williams, 1978; Wilkinson, 1978). Other behavioral scientists prefer such terms as "motives" for high or low fertility in response to perceived environmental "needs" (e.g., Bogue, 1967; Lipe, 1971). Berelson (1969a) was blunter, writing that "national programs have found that the profit motive is a useful way to support the family planning motive."

The terms "incentives" and "disincentives" as approaches to fertility-reducing behavior have been used primarily by economists, who tend to limit their utility largely to developmental and economic consequences of having or not having additional children (e.g., Enke, 1966; Spengler, 1969; Kangas, 1970; Enke & Hickman, 1973; Herz, 1978). Thus, incentives are often

portrayed as an investment for developing countries to prevent population growth from continuing to offset the nation's economic growth. Benefits occurring to a society in future years from a current "nonbirth" are then discounted back to the present (e.g., Enke, 1966), a view challenged by Leibenstein (1969) and questioned by Simon (1976).

The first large-scale incentive scheme was begun in 1956 by the state government of Madras (now Tamil Nadu) in India (e.g., Repetto, 1969). Selected private medical practitioners were given a subsidy of 25 rupees (worth $5 at the time) per case to perform vasectomies on men with low incomes. Subsequently a cash grant of 30 rupees ($6) was awarded to every "poor" person who agreed to be sterilized. From 1959, the sum of 10 rupees ($2) was paid to "canvassers and tutors in family planning" who sent persons for sterilization to approved surgeons and government hospitals. The payment to the acceptor was deemed compensation for transportation costs and loss of earnings. Incentive programs involving direct cash payments to acceptors, motivators, and service providers were soon instituted throughout India and spread to several other countries.

Disincentives also have a long history (Wishik, 1978). For example, in the 1940s Indian soldiers with up to four children were given housing on military cantonments; those with more than four children had to find costlier and less desirable housing off the base. During the same time period, Hawaiian sugar and pineapple plantation owners arbitrarily limited free housing and medical care to couples with four or fewer children, exerting considerable pressure for sterilization thereafter.

Definitions

For the purposes of this paper, an "incentive" is defined as a tangible or intangible reward to an individual, couple, or other target group designed to induce specified fertility-reducing behavior. Pronatalist incentives will not be considered.

A "disincentive" is a tangible or intangible negative sanction incurred by an individual, couple, or other target group as a consequence of exceeding specified fertility behavior. Incentives and disincentives leave room for voluntary individual/couple decision-making. Total coercion, such as compulsory sterilization after a specified number of births, is <u>not</u> considered a disincentive because there is no option for rejection.

Incentives may be paid to the persons involved in the adoption of prescribed fertility behavior, whether it is by delaying marriage, using contraception, or otherwise agreeing to limit family size. Persons making such decisions are termed acceptors or adopters. The persons stimulating the decision have been called motivators, diffusers, promoters, recruiters, or finders. The person rendering professional services, such as a physician performing a vasectomy, is the service provider. Any of these persons, singly or in combination, may receive incentives.

Type of Incentives

While there are many types of incentives and disincentives, they all share the common conditional characteristic of something happening as a consequence of fertility behavior. While most incentives involve cash or other tangible rewards, incentives can be incorporated into a range of policy areas, including income, taxation, educational and employment opportunities for women as well as children, housing, land development, health, social security, etc. It is recognized that each government has to define its own concepts in such terms as encouragement, rewards, and compensation for specified fertility behavior or the withdrawal of privileges for exceeding specified limits. Within the context of the stated definition, consideration will not be given to educational campaigns or other noneconomic efforts attempting to persuade couples that they should limit family size for the common good.

Small Incremental Payments

The incremental approach is based on the assumption that the primary purpose of incentives is to search for and attract those persons who are already prepared to accept family planning. Regardless of eligibility criteria, the payment is usually one time, small, in cash, and paid the moment a specified method is adopted. A variation is to pay an acceptor a larger amount for sterilization after two children and proportionately lesser amounts after a higher number of children. Payments can also consist of fees to recruiters and/or service providers. A majority of countries organizing subsidized government efforts to reduce fertility have experimented with incremental schemes, sometimes increasing or decreasing their payments. Fertility reduction is an assumed outcome and formulas may be devised to convert acceptance or contraceptive distribution figures to birthrates.

This overview will skim over incentives paid to recruiters, motivators, diffusers, and service providers, in part because this topic has been discussed at greater length elsewhere (e.g., Pohlman, 1971; Rogers, 1972; Park, 1979). Research findings indicate that adopter incentives (paid to recruiters) increase the "quantity" of changed behaviors (adoption of contraception) but the "quality" of such decisions tends to be relatively low, often leading to early discontinuation of contraceptive practice (Rogers, 1972). Results are difficult to monitor.

Large Incentive Payments

The large incentive approach assumes that parents desire numerous children, especially sons, for social and economic reasons, and that substantial economic incentives can change desired family size by affecting the costs and benefits of children to parents. This strategy differs from the incremental approach in the scale of payments which must be perceived as sufficiently large to compensate, at least partially, the "cost" to the family of having fewer children than logic would otherwise dictate. The large incentive model further assumes that family planning is part of an overall strategy of social and economic transformation where complementary programs are oriented to such goals as a better quality-of-life in the country, improved individual and family well-being, and participation by all citizens in decision-making (Finnigan, 1977).

The large incentive payments strategy focuses on birth limitation either by requiring adoption of a permanent form of contraception (e.g., sterilization) or by carefully monitoring childbirths. Accumulating payment schemes, designed to provide benefits for nonpregnancy, have been proposed for over 20 years (e.g., Enke, 1960, 1966; Samuel, 1966; Titmuss & Abel-Smith, 1968; Ridker, 1969; Kangas, 1970; Ridker & Muscat, 1973). Willingness to trade the security of additional children for governmental guarantees requires a high degree of faith in political stability. Confidence can be maintained by periodically indexing or adjusting the longer term value of such incentives to changes in the cost of living (e.g., Herz & Muscat, 1978; Wishik, 1978). Thus far, only limited field trials have been reported, all from Asia. They will be cited in the country capsules.

Some economists hold that in certain countries where labor is in particularly ample supply and marginal productivity is low, averting a birth may

produce a substantial "social dividend" equal to the cost of providing "welfare benefits" to an additional person net of whatever that person might have produced (Herz, 1978). Under those conditions, averting a birth saves scarce resources and an incentive to practice family planning merely returns all or part of the social dividend to those responsible for earning it (King, 1974). Even in those countries where it may cost more to prevent a birth than it would to provide the baby with health care, education, and essential public services, the total social good may exceed the total social cost when the benefits of income redistribution and social transformation are factored into the equation (Finnigan, 1977).

Disincentives

The disincentive strategy assumes that population growth is of sufficient importance to make it a concern of governmental policy, that the conventional family planning approach alone is not sufficient, and that government has a right to intervene in private behavior to prevent what it considers excessive fertility (Davis, 1967, 1978). The disincentive approach recognizes the high cost of paying people incentives for doing what they should be doing in the national interest, utilizing instead a system oriented only to those who violate established standards of fertility behavior. Disincentives are also perceived as having educational effects, serving as forceful reminders of officially sanctioned family size policies. They have generally been implemented only in societies where all methods of fertility regulation, including legal abortion, have been readily available (e.g., China and Singapore).

For economies where incomes are sufficiently high to permit broad based taxation, disincentives may be virtually cost free. Taxing a family on the basis of the number of children implies that those who choose not to limit family size pay the additional public costs involved. Disincentive policies require a strong political commitment to reduce fertility, a well-established relationship between government and the people, and sanctions to guard against failure to register births. Care must also be taken to reduce any possible harm to children born in disregard of disincentives. Such policies should be differentiated from politically organized peer pressures and coercion similar to those which recently backfired in India.

Integrated Community Approach

Organized, government-supported efforts to influence a couple's fertility behavior have typically adopted an approach of attempting to match the capabilities of existing bureaucracies to the task of reducing the birthrate. As Saunders (1968) observed, government officials tend to reason "we have a health ministry that consists of an infrastructure of clinics and hospitals, a hierarchy providing administrative control, plus doctors, nurses, health educators, and paramedical personnel; now, how can we utilize these available resources to promote and facilitate the practice of contraception?" The initial result of such a policy decision is a program that emphasizes a clinical approach while broader population and development considerations are given less attention.

The integrated community development or social mobilization strategy is based on the assumption that communities are capable of perceiving and solving their fertility problems, given adequate guidance and motivation. It includes the transfer of authority for local program planning, operation, and day-to-day evaluation to lower administrative levels (e.g., China) and/or the creation of integrated community development programs which reward villages for inducing couples to engage in fertility-reducing behavior (e.g., Thailand). Such community-oriented programs tend to avoid the cultural insensitivities and communication failures plaguing other delivery systems (Bicknell & Walsh, 1976).

Another kind of integrated approach to family planning was developed by the Japanese Organization for International Cooperation in Family Planning (JOICFP) in association with the International Planned Parenthood Federation (IPPF). Initiated in 1975 in Taiwan, a basic objective is to demonstrate how to establish or increase the credibility of family planning field workers in the community by adding to family planning a health concept, such as control of a soil-transmitted parasite (e.g., hookworm) and an associated nutrition education component (e.g., Katagiri, 1978; Kunii, 1979; IGCC, 1979; Trainer, 1979). The Integrated Program builds on the more than 25-year Japanese experience with parasite control and family planning, using the community participation approach. In the last four years, a variety of integrated projects have been initiated in several countries of Asia and Latin America. With few exceptions, notably Thailand, these are not programs meeting the suggested definition of incentives (IGCC, 1979).

Group and community rewards for limiting family size were "conspiculously absent" from programs and proposals reviewed a decade ago (e.g., Kangas, 1970). Specific community-oriented incentive programs were only recently launched with World Bank support in Egypt and Indonesia. For example, village councils may be told that the government's objective is to reduce fertility and that any village which succeeds in meeting the government-set target will be eligible to receive a prize or reward of their own choosing (Green, 1978). Such an approach requires a community service capability which is best exemplified in integrated community-based delivery programs. These endeavors can be further strengthened by an application of the principles of appropriate technology transfer, involving immediate economic rewards for acceptance and continuation of family planning programs, as will be described in the section on Thailand.

Legal and Ethical Constraints

> In the best of all possible worlds there would be no government incentives to modify population-related behavior. Families of individually determined size would collectively produce some universally agreed upon optimum population size, growth rate, and distribution. In a slightly less utopian world, individuals might act voluntarily to meet commonly perceived goals even if some personal sacrifice were required. Until that world is achieved, however, there will be individuals and institutions, governmental and private, determined to face the question of what should be done to modify human behavior, to solve what is perceived as a population problem. (Veatch, 1977)

> There is also danger that incentives through bonuses will put the whole matter of family planning in a grossly commercial light. It is quite possible that to poor and harassed people financial inducements will amount to coercion and not to an enlargement of their freedom of choice. (Notestein, 1966)

> The "universal human right" of every couple to choose the timing and the number of children they will have is a noble sentiment, but there is not a country in the world where it is not subject to highly effective societal and cultural constraints. And any policy measures intended to influence fertility will in turn be affected by the extent to which they are compatible or incompatible with the existing complex of shared beliefs, values, and customary practices. (Simmons & Saunders, 1975)

Legal Aspects

Most governments have legislation which is implicitly or explicitly pro-natalist. Examples include laws to safeguard the child and the family, discourage adults from remaining single or childless, prohibit the importation of modern contraceptives, or make abortion less readily available. Other government programs reduce some of the financial burdens associated with having large families by providing birth bonuses, income tax allowances, free schooling, and related social services. In some countries, the private sector amplifies these "incentives" by offering discounts for large families, benefits to employees' families, medical insurance with family rates, etc. (Wiest & Squier, 1974).

The legal approach to fertility reduction, as characterized by the work of the UNFPA-sponsored International Law and Population Programme, assumes that the revision of laws with regard to marriage, divorce, health care, distribution of contraceptives to minors, abortion, social services, status of women, child labor, etc., will help exert counterpressures for reducing family size. Changes in legislation may then form the basis for the adoption of incentive and disincentive measures, and for the mobilization of social pressure toward fertility-reducing behavior. While incentive programs may be administered by either governmental or nongovernmental agencies, disincentive schemes generally require governmental administration.

A Question of Ethics

It has been said that "critics and skeptics. . .often view incentive payments as a Machiavellian mixture of bribery and coercion, particularly if they are to be applied with sophisticated popularization techniques to an unsophisticated tradition-oriented population" (Kangas, 1970). At times, the mere suggestion of economic measures to influence fertility behavior seems to arouse an emotional reaction against external control and against the supposed concomitant loss of individual freedom in the traditionally private area of sex and procreation (Lipe, 1971).

The recent Report of the Select Committee on Population of the U.S. House of Representatives (1978) contains a section on "Ethical Issues" that raises more questions than it settles. As the Committee asks, "Is the right of the parents to determine the number of children an absolute one?" "Is it always unethical for government to use compulsion to restrict population

size?" What will happen if the solution to the 'population problem,' however defined, cannot be achieved without some form of incentive or pressure or sanction?" "Where do the ethical rights lie then?" (Berelson & Lieberson, 1979) As Davis (1978) suggested to the Select Committee, "to endorse absolute voluntarism when it comes to having children is to deny the harsh consequences on human well-being of high rates of population growth and is therefore neither ethical nor humanitarian." The question is how best to create an environment in which couples will want to decide voluntarily to limit family size for the broader social well-being (Callahan, 1971; Rich, 1973).

Fertility-reducing incentives can generally be placed somewhere on the continuum from complete freedom to coercion (Veatch, 1977). Fertility behavior is usually deemed to be learned, the product of interaction with social environmental influences (e.g., Friedman, Johnson, & David, 1976). When perceived in terms of desired and undesired fertility behavior, the question of "freedom" may well be a matter of psychological conditioning to social norms (Wiest & Squier, 1974). While some incentives are stronger than others, very few population specialists have advocated coercive measures, such as compulsory sterilization. For example, Spengler (1969), who outlined a strong economic incentive program for fertility reduction, recommended "as little interference as possible with individual freedom of choice" by placing emphasis on the composition of the options to which persons respond.

Freedom, however defined, is seldom the only ethical imperative in population policy. While coercion is often disapproved, equivalent measures designed to limit individual freedom for the presumed common well-being are more acceptable in such demographically related areas as age at marriage, monogomy, international migration, etc. Similarly, certain conduct may be made compulsory for the benefit of all (Lee, 1978). Thus, the "right" to education also includes a coercive element (compulsory education) to ensure that the "right" is enjoyed. Vaccination or compulsory treatment of certain communicable diseases assumed an important role in the programs of the World Health Organization from the very beginning of that cooperative international effort. Indeed, any governmental regulation contains at least an implied sanction (coercion) to guard against violation.

Ethically, government benefit and incentive plans must be assessed according to clear and consistent moral standards (Corsa & Oakley, 1979). If scarce resources are being allocated, as they are in every society, family

size criteria may be better than the usual patterns favoring existing elites. What logical case can be made that tangible benefits are less ethical or more coercive than social approval or disapproval? Individuals and governments make daily decisions that slight some couples and benefit others. Rarely is the effect random; as a group, the poor often benefit less than the well-to-do (Corsa & Oakley, 1979). In the case of encouraged motivation to limit births, couples restricting their fertility would probably derive gains from smaller family size (Wray, 1971), although their overall well-being might not be perceived as enhanced if they felt they had been coerced.

That local circumstances alter local perceptions was recognized in Resolution XVI adopted by the 1974 World Population Conference in Bucharest (U.N., 1974). It specifically recommended "that all population policies and programmes depend on the conditions of each country and fall within its sovereignty. . .care being taken to ensure that they are carried out with absolute respect for the fundamental rights of the human being, that they preserve the dignity of the family, and that no coercive measures are used."

Human Rights

It has been suggested that incentives are compatible with human rights in at least two fundamentally different ways (Lee, 1978). One is the relatively long-term or delayed and indirect effect of incentives on many measures of human welfare through the direct effect of the incentives on reducing fertility. The second way is an immediate and direct benefit to the economic welfare of families that receive the incentives. Thus, even if the fertility control effect of the proposed incentive is uncertain, the incentive may still be compatible with human rights on the basis of its direct effects on income distribution. Attracting the less modernized, incentive payments give people an infusion of income or material advantage they would not otherwise have (Corsa & Oakley, 1979).

If the dichotomy between individual and collective human rights and between short- and long-term effects on human rights is accepted, disincentives can be justified on the basis of looking beyond direct and immediate impacts on the individuals involved to the longer term enhancement of human rights for all, including those whose rights might initially appear to have been infringed. Whether or not a particular disincentive program is justified or justifiable will depend upon a cluster of factors and can ultimately be decided only by the community affected. Politically organized peer

pressures, going beyond disincentives that may be ignored at a purely financial cost, pose perhaps the most difficult ethical and human rights problems since there is obviously considerable room for abuse.

Evaluating only one element of a population program in terms of human rights may well be inappropriate without consideration of its relationship to the overall government program for social and economic development. Given the uncertainty of the effects of some measures on human rights, decision-makers are faced with the problem of choosing an imaginative strategy, appropriate for their particular situation, in accord with expressed desires of the people, and demonstrating sufficiently dynamic leadership to stimulate consent and fertility reduction (e.g., ESCAP, 1978; Corsa & Oakley, 1979). What is politically, legally, and administratively feasible in one country may not be so in another.

At the 1974 Symposium on Law and Population, convened in Tunis by the United Nations Fund for Population Activities, initial agreement was reached on minimum standards consistent with basic human rights principles (Law and Population Programme, 1974).

> The Symposium on Law and Population,
>
> Recognizing the obligations of Governments to take steps to secure for all their people the full realization of the economic, social and cultural rights expressed in the Universal Declaration of Human Rights;
>
> Noting that as stated in Article 25 of the Universal Declaration of Human Rights such rights include the right of every person to a "standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services";
>
> Noting further, as recognized in General Assembly Resolution 2542 (XXIV), the necessity of assuring that family planning services are freely available in order to provide families with the knowledge and means required for the free exercise of the right to determine freely and responsibly the number and spacing of their children; and,
>
> Taking into account that changes in family size may in some circumstances have an impact on the economic resources of the family and on security in old age which Governments may wish to redress by offering benefits or services in the context of family planning;

Recommends that:

1. Any benefits or services provided or withheld as incentives or disincentives take into account the value system and mores prevailing in any given society and be planned so as to counteract the practical obstacles facing family planning programmes;

2. Governments adopting programmes of incentives relating to family planning ensure that any benefits or services provided as incentives to family planning be in addition to the benefits and services to which all persons are entitled as basic human rights; and,

3. Governments ensure that any benefits or services withheld or withdrawn as disincentives in the context of family planning do not conflict with the enjoyment of basic human rights.

The substance of the 1974 Tunis recommendations was subsequently adopted by the Regional Seminar on Law and Population for South and Southeast Asia, sponsored by the Inter-Governmental Coordinating Committee with the cooperation of UNFPA, ESCAP, the Indonesian Government, IPPF, and the International Advisory Committee on Population and the Law (Lee, 1978). The participants in the 1977 Bangkok Conference (ESCAP, 1978) reaffirmed the Bucharest Declaration of the basic human right of couples to determine "freely" and "responsibly" the number and spacing of their children. It was noted that involved in "responsible" parenthood is a balancing of the "individual" with the "collective" or "societal" right, that is, the right of the "individuals" or "couples" concerned to those of the "child" and society at large. The view was expressed that the

> "individual" right of family planning must be harmonized with the "collective" right, particularly in certain circumstances where the resources, both actual and potential, of a country dictate the limitation of the size of its population in the interest of all. The question of when exactly does the "individual" right give way to the "collective" right is always difficult to answer. However, it is equally clear that inability to define with exactitude the relationship between the two rights does not negate their existence. (ESCAP, 1978)

A review of the literature, international declarations, and conference proceedings suggests that the use of incentives, disincentives, and peer pressure is not incompatible with human rights principles so long as care is taken to consider viable alternatives as well as the costs and benefits involved, and implementation does not result in discrimination on grounds of

income, race, sex, language, religion, or property (Lee, 1978; ESCAP, 1978).

After extensive consideration of diverse ethical aspects in governmental actions to reduce fertility, Berelson & Lieberson (1979) conclude "that there is no overriding 'correct' ethical system or universally 'approved' ranking of human rights that is ready and waiting for application to specific events." Ethical constraints stem from perceptions of specific conflicts between ethical values or between such values and other goals. "We consider that there is no automatic or absolute or fool-proof way to 'settle' such issues save through continuing judgmental review and renewing consensus on a specific problem in a specific culture." In extreme situations, when community consensus is apparent and all other choices have been tried, policies involving organized peer pressure may also be "ethically admissable" (Berelson & Lieberson, 1979).

The views of colleagues in developing countries may have been reflected in Chowdhury's (1978) statement at the 1978 ESCAP Expert Group Meeting on socioeconomic measures affecting fertility behavior.

> A population control programme cannot operate in isolation if it is to match the needs of the people. It has to be an integral part of an acceptable concept and process of socioeconomic and cultural change. This can happen when power and, consequently, the process of decision making and resources are shared equitably by all classes of people. Macro and micro needs, collective and individual egos will then coincide. Population experts can offer no short-cuts to this process.

Regional Overview and Country Capsules

> Incentive proposals for fertility control have stimulated considerable debate and only narrowly conceived trials. (Kangas, 1970)

> Much has been proposed but little is in effect. (Berelson, 1978)

Regional Review

In 1973, the U.S. National Academy of Sciences conducted five regional seminars on population policy. Incentives and disincentives were discussed in the Asian and Middle Eastern seminars, but African and Latin American seminar participants expressed little interest (National Academy of Sciences, 1974). The following section presents a summary of known programs in Africa

and the Middle East. Asia is covered on a country capsule basis, followed by a separate section on experience with integrated community approaches in Thailand. In many countries of Latin America, where services are often free or subsidized, acceptors and diffusers rarely receive financial benefits. In Europe, Canada, and the United States, existing incentive programs tend to be pronatalist in orientation.

Africa

In 1966, the Government of Egypt encouraged the adoption of IUDs by offering 50 piastres (then about US $0.70) to physicians and paramedical personnel for each insertion. Subsequently, financial inducements were offered to persons who brought clients to the clinic, including husbands, midwives, or friends (IPPF, 1968; Croley, 1969). In 1967, Egypt instituted a delayed incentive program by authorizing payment during the woman's follow-up visit, rather than at the time of IUD insertion (Berelson, 1969c).

In 1968, Mauritius' family planning association offered incentives to vasectomy acceptors ($4.50) and promoters ($1.85), as well as $0.37 to IUD recruiters (Pohlman, 1971; Castodot & Laraqui, 1973). A more recent survey indicates that the governments of Botswana, Egypt, Gambia, Ghana, Morocco, Rhodesia, Tunisia, and Uganda all had incentive schemes related to family planning acceptance in 1977 (Nortman & Hofstatter, 1978). Some of these experimental projects have been briefly described by Cuca & Pierce (1978).

Asia

Asian countries began to provide national family planning services in the 1960s (ESCAP, 1978). Although incentives were usually related to the adoption of long lasting or permanent methods of contraception (IUD or sterilization), other incentive and disincentive schemes were devised and tried. IUD payments have been more often directed to motivators and service providers than acceptors. Amounts paid to medical personnel have usually been higher. Payments made in 1977 for IUD insertions in Bangladesh, India, Korea (South), Napal, Pakistan, and Taiwan have been compiled by Nortman & Hofstatter (1978), who also note cash incentives for sterilization recruiters in these countries. Psychosocial aspects of incentives and disincentives were given particular attention by Asian social scientists at the 1973 Choonchun Seminar (David & Lee, 1974).

The following country capsules are based on national reports presented at the September 1977 Expert Group Meeting convened by ESCAP (1978), plus additional information compiled by the ESCAP Population Division Clearinghouse and Information Section or obtained from other indicated sources. Available research findings will be cited. A separate section is devoted to Thailand for a longer report on the integrated community program developed there.

Bangladesh

Although several incentive schemes have been tried, these have been confined primarily to efforts to increase popular acceptance of sterilization. Research studies indicate that the net effect of incentive payments to new acceptors, to physicians, and to administrators "is neither clear nor easy to access" (ESCAP, 1978, p. 7). Furthermore, "the incentive scheme and its management have not been secure against charges of corruption and coercion," plus false reporting. Sterilization is now entirely on a voluntary basis, without incentives.

Several pilot programs with community incentives have been launched. For example, the Swanivar Projects aimed at mobilizing local organizational capabilities and resources to improve productivity and income, while also fostering fertility reduction. Although early findings are encouraging, costs incurred render replicability difficult.

China

> We must consciously carry out ideological, educational, and technical work as well as child care and health work throughout the country so that people can practice family planning willingly, safely, and effectively. Practical measures should be taken to reward couples who limit themselves to a single child and, gradually, to institute social insurance for aged people who are childless.
> (Hua Guofeng, 1979, Premier, People's Republic of China)

As the most populous nation on earth, China's policy of birth planning is of major interest and importance. Since the establishment of the People's Republic of China in 1949, there have been three distinct national birth planning campaigns, 1954-1957, 1962-1965, and from 1969 to the present. The most recent campaign, instituted after the Cultural Revolution (1966-1969) was further intensified after the fall of the "Gang of Four" and the

initiation of the "Four Modernizations." The Chinese program of promoting child spacing offers all methods of fertility regulation and has been well reported (e.g., Chen, 1970, 1975, 1976, 1979a, 1979b; Faundes & Luukkainen, 1972; Orleans, 1974; Wolfson, 1976; Kane, 1977; Aird, 1978; Fraser, 1979). Recently described as a "mixture of propaganda, political directives, and heavy social pressure" (Wolfson, 1975), the objective is to strengthen national development by reducing the birthrate and family size, promote maternal and child health, and improve the quality-of-life.

Available published reports indicate that the accomplishments of the past decade, attained without international donor assistance, are unsurpassed in terms of magnitude. With total self-sufficiency, the Chinese birthrate declined from a peak of 40 per 1,000 population during the 1960s to 18.3 in 1978 (Chen, 1979b). Another major phase began in June 1979 when Premier Hua Guofeng (1979) announced the goal of reducing the annual population growth rate to 5 per year by 1985. Attainment of this target depends on gradual increase in the proportion of one-child families and drastic reduction in third- and higher-order children who constituted 50 percent of the 18 million children born in 1978 (Fraser, 1979).

On 11 August 1979, Vice Premier Chen Muhua, Director of the State Council Birth Planning Leading Group since its inception in 1978, published an article in The People's Daily entitled, "To Realize the Four Modernizations, It Is Necessary to Control Population Increase in a Planned Way." The Council is a supraministerial agency, responsible for implementing China's birth planning policy and coordinating and supervising the nationwide network of birth planning programs. The translation of Chen Muhua's article by P. C. Chen (1969b) contains a summary of planned incentives and disincentives, a major component of what is rapidly becoming the most thoroughly organized state-guided national educational effort to induce couples to lower their "birth production" and accept social self-discipline for the common good.

By the end of August 1979, at least nine provinces (Beijing, Tianjian, Sichuan, Shandong, Shanghai, Anhui, Hunan, Gansu, and Guangdong) had taken the initiative and drawn up their own trial economic incentive measures aimed at encouraging the one-child family. Chen (1979b) notes that couples residing in cities, who have only one child and pledge not to have another, and are practicing fertility regulation, may apply for a one-child certificate. This certificate will entitle them to a fixed stipend per month until

the child reaches 14 years of age. The couples will also be entitled to housing space equal to that given to two-child families, or will receive preferential treatment when they apply for housing. Their children will be given priority consideration for admission to school and in job applications. When the one-child couples retire, they will be entitled to pensions over and above what they would otherwise receive under the current labor protection law (Chen, 1979b).

One-child couples residing in rural areas will receive additional monthly work points (which are the basis of determining the amount of pay in kind and in cash in rural communes) until their child reaches age 14. The couples will get the same grain ration as two-child couples. All couples, regardless of family size, will get the same size plot for private cultivation and same size housing lot (an allocation based on four persons). Since peasants derive considerable marginal income from their private plots, this provision is a substantial perquisite. In urban and rural areas, if an only child dies or becomes disabled, the parents may have another child and continue receiving the same benefits (Chen, 1979b).

Additional incentives are being tried in selected provinces. For example, in Guangdong attendance is free of charge for the only family child in preschool nurseries, creches, and kindergartens when parents have taken effective steps to guarantee that further children will not be born (e.g., by sterilization of either or both husband and wife). Also in Guangdong, ancillary charges made in primary and middle school will be waived for such items as food, textbooks, writing materials, and medical costs, which normally would be paid by the parents. The Guangdong directive specifies that the medical and schooling costs involved in promoting the one-child families will be the responsibility of the rural commune, production team, or work unit.

The trial measures adopted by five provinces (Beijing, Tianjian, Hunan, Shanghai, and Anhui) also contain disincentives for officials, workers, and peasants who disregard the appeal to limit family size to two children. For example, in Anhui, if an official or worker has a third- or higher-parity child within six months after promulgation of the incentive measures, 6 percent of the combined total income of husband and wife will be deducted and added to the welfare fund of their work units. The deduction will continue to the child's 14th birthday. The percentage of income deducted will increase with each additional child. The only exception allowed is multiple

births. Also in Anhui, families previously rewarded for having only one child but subsequently having a second will forfeit their "planned birth glory coupon" and will have to repay the first child's health expenses or supplementary work points already issued (Fraser, 1979).

It has been reported that disincentives will become stronger in March 1980 when salaries of couples having a third child will be reduced by 10 percent until that child reaches age 14. Charges will also be levied for education and medical care (Sullivan, 1979). Such disincentives have already been implemented in Beijing and Tianjian (Kramer, 1979). Thus far, no research reports have been published related to the incentive program or to child development in one-child families.

India

In 1952, India became one of the first countries in the world to adopt family planning as a national policy, subsequently experimenting with different approaches for the delivery of family planning services to its more than 600 million inhabitants, 80 percent of whom reside in rural areas. India has had the most extensive experience with incentives and has been the site of much of the published research (e.g., Rogers, 1971, 1972; Chako, 1975).

Research projects involving Indian governmental programs have been summarized by Rogers (1971, 1972). That adopter incentives increased the rate of adoption of an innovation was demonstrated by the Tamil Nadu vasectomy program (Repetto, 1969; Krishnakumar, 1971) and by comparisons of married workers receiving different adopter incentives in diverse factories (Research and Marketing Services, 1970), a study criticized by Simon (1976). It was also shown that adopter incentives led to adoption of an innovation by different individuals than would otherwise adopt. Workers who accepted sterilization because of the incentive tended to have lower socioeconomic status and larger families. The finding that poorer people reacted more favorably to incentives than did persons of higher income also has considerable ethical implications (Srinivason & Kachirayan, 1968), particularly when several studies note that from 38 percent to 50 percent of the adopters did not meet legal requirements for sterilization (Kapoor & Chandhoke, 1968; Repetto, 1969).

The problems inherent in India's incentive programs became widely apparent in the seemingly successful sterilization program (Kothari, 1975).

As noted by Freedman as early as 1969, no records were kept on recruiters and their methods of obtaining clients. "The opportunities for corruption, abuse, waste, and eventual serious repercussions on the public image of, and respect for, the program are too obvious to require elaboration" (Freedman, 1969).

After the monetary incentives for sterilization had been increased in August 1975, and a State of Emergency declared in April 1976, the growing coercive pressures to recruit acceptors produced considerable corruption and excesses (Potts & Selman, 1979). The official record, if valid, demonstrates the program's efficiency: over 6 million vasectomies were performed in FY 1976, compared to 1.4 million in FY 1975, and a backlash 0.2 million in FY 1977. It appears that there was no single program of "compulsion" or "legal sanctions" but rather strong pressure from the top "that was transmitted, felt, and applied in different ways at the bottom" (Berelson & Lieberson, 1979). The excesses that occurred have been well reported (e.g., Landman, 1977; Seneviratne, 1977; Gwatkin, 1979).

Following the March 1977 elections, the new government reformulated its family planning policy, opposing all coercive pressures, integrating family planning with rural health services, and renaming the Ministry of Health and Family Planning as the Ministry of Health and Family Welfare. Mrs. Gandhi's recent return to government by a resounding majority vote may herald a revitalization of the lagging family planning program without the element of coercion which made the previous effort so unpopular.

In the nongovernmental sector, India has had considerable experience with a variety of incentive programs designed to influence individual fertility behavior. The deferred incentive or no-birth bonus scheme, designed by Ridker when he was with USAID in Delhi, was introduced experimentally (with important modifications) on three selected tea plantations in South India by the United Planners Association of South India, starting in July 1971 (Ridker, 1971; Chako, 1978). Under the plan, a certain amount of money each month is set aside for every participant successfully using any form of contraception and having no birth. The essential idea is to reward a tea estate's worker for limiting her number of births by providing funds for retirement purposes paid in a lump sum at age 45. Complete forfeiture of these savings and the interest they earn is caused by pregnancy after the fourth child; partial forfeiture results from an additional birth after the second or third child.

Although a 1974 evaluation of the scheme suggests that some demographic change has occurred in its wake in the participating villages (Chako, 1978), it is still too early to evaluate the full and multifaceted impact of the project. One point which should not be overlooked, however, is that in addition to the demographic impact of the project, it has had a substantial effect on the political and social organization of the villages. Some experts feel that the lack of a sense of organization in rural villages is a root cause of much of the failure of development programs in India. The no-birth incentive plan has focused on the benefits to be derived by organizing rural communities and by making the community ultimately responsible for its own destiny (ESCAP, 1978).

Indonesia

Various forms of individual incentives were tried in Indonesia but the program eventually collapsed under the weight of bureaucratic difficulties and the complaints from acceptors that motivators were keeping most of the money. A uniquely successful community-based delivery system evolved over time, encouraging and maintaining acceptors through a variety of highly organized community activities, ranging from prizes to monitoring of couple contraceptive practices by local village councils (Hull et al., 1977).

In Bali, the present program

> . . .makes family planning a community affair, centered on the island's more than three and a half thousand banjar, or hamlets. An extraordinarily strong social and administrative group, the banjar is a traditional center for mutual aid and cooperative work as well as a gathering point for recreation and ceremony. Household heads meet monthly to discuss community matters. . . . A map of all houses in the banjar is now displayed prominently in the banjar hall. Houses of IUD users are outlined in blue, pill in red, condom in green; houses of non-users are left blank. . . . The contraceptive situation is discussed at each monthly meeting of household heads. If an apparently fertile couple are not trying for a pregnancy and are also not contracepting, the husband will be questioned. . . . Along with the People's Republic of China, Bali perhaps now leads the world in its ability to harness the authority of strong community structures for the promotion of family planning. (Hull et al., 1977)

In East Java,

> . . .a strong provincial BKKBN (National Family Planning Coordinating Board) mobilized bureaucratic resources from the governor's office right down to the thousands of hamlet heads. By decree, every public servant was ordered to promote the family planning program in every way. This included the entire military apparatus as well as the government civilian structure. . . . Armed with the governor's order, the BKKBN exploited this network to mobilize community acceptance of birth control. Basically, the system works as follows: Each level of government follows directions handed down from the next higher level. . . . Messages are transmitted down the chain of command within a relatively short time. A high level decision to support a program like family planning thus implies automatic support from lower levels. The system clearly works on the basis of communication and loyalty. . . . In some areas, the hamlet head daily raps a signal on a hollow wooden instrument to remind village women to take their pills. . . . With its particularly authoritarian bureaucracy, rumors of coercion swirl most often around East Java. This offends many observers, but to some administrators these are necessary evils to be tolerated for the sake of more important goals. (The head of the East Java BKKBN is quoted as follows: ". . . who are the spirits, the gods of the Javanese village? The governor, the army, the police, the religious leaders, the civil administrator, the village chief. When they apply social pressure, the birth rate declines.") (Hull et al., 1977)

In January 1978, the Indonesian National Family Planning Coordinating Board designed a comprehensive community incentive scheme, backed by a World Bank loan, in 14 selected areas of Bali, North Sumatra, South Sulawesi, and 5 provinces of Java. These are among the most densely populated districts of the country. Each year the villages with the best overall performance in family planning will receive a share of specially allocated development funds for a project of their choice likely to improve the socioeconomic structure and enhance motivation for small families. The village group, rather than field workers, are expected to recruit new acceptors, keep adequate records, and initiate non-family planning development activities, such as cooperative purchasing and marketing. Baseline village studies will be followed by sample surveys to check performance claims. Further research will assess the impact of the incentive scheme on community and family attitudes and behavior (People, 1978).

Korea

Motivational and incentive efforts played an important role in the successful development of the family planning program begun in the Republic of Korea in 1964 (Kim et al., 1972; Lee, 1974). The rapid decline in fertility since the 1960s has been attributed primarily to a real reduction in marital fertility (ESCAP, 1978).

To move even closer to replacement level in the face of deep rooted values and attitudes towards both number and sex preferences of children, a newly reformulated population policy was announced by the government in 1976. The major components are: (a) the creation of additional social supports for the two-child family; (b) a change of social norms and individual attitudes related to population; (c) an improvement and expansion of the family planning program to reach more people; and (d) the restructuring of the organizational mechanisms responsible for population activities.

The major strategies for creating social support for the two-child family include revision of laws to discourage son preference and discrimination against women in such areas as inheritance, adoption, marriage, and regulations relating to female employment. Incentives and disincentives in the areas of public housing, health programs, and individual and corporate tax exemptions have been considered appropriate on the assumption that much behavior is already subject to social sanctions. Most of the population incentives/disincentives are associated with economic sanctions (ESCAP 1978).

One of the strategies for improving and expanding the family planning program consists of enlisting the cooperation of the private sector in the program primarily by means of tax and other incentives. The Sam Yang Tire Company is one of the better known examples. To encourage employers to participate voluntarily in family planning programs for their employees, the government allows tax exemptions for the expenses incurred. In addition to community-sponsored information campaigns, the entire costs of male and female employee sterilizations are borne by the company. Special incentives and disincentives, such as preference for company low interest loans, educational funds, and preference for employee housing allotments further reinforce acceptance of sterilization (ESCAP, 1978).

While there is a tradition of behavioral research on family planning in Korea, featuring field experimentation (e.g., Chung et al., 1972), there have been few studies on incentives in recent years.

Philippines

Of late, the government of the Philippines has begun experimenting with the use of incentives and disincentives as part of public policy and legislation (Bulatao, 1974). For example, the Internal Revenue Service Code was amended to limit the number of exemptions for dependent children to no more than four. Another set of policies was formulated in an amendment to the Child Labor Law. One subsection limits employer-paid maternity leaves for only the first four deliveries. Another subsection instructs the Department of Labor to develop and prescribe incentive bonus schemes to encourage family planning among the married workers. These include pension plans, insurance benefits, savings deposits, and other social security measures; bonuses and time off for contraceptive acceptance or for successfully avoiding pregnancy; cash, leave, or promotion credit bonuses to female employees who do not utilize their maternity leaves for a certain number of years; cash and other bonuses to employee motivators for recruitment of new acceptors or for successfully encouraging continuation of contraception; group bonuses to divisions and departments for exceeding certain levels of contraceptive acceptance or certain levels of aggregate years of non-pregnancy among employees. In addition, programs are also being tried on a small-scale basis for possible replication on a larger scale (ESCAP, 1978).

One of the more pioneering programs was initiated by the Rural Bank of San Luis, Pampanga. Among its salient features is the "Special Integrated Financing Scheme." Participating borrowers pay only 10 percent interest instead of the usual 12 percent provided they practice family planning and no pregnancy occurs within one year. In Cagayan de Oro, in northern Mindanao, the "Model City Project" is presently being implemented by the city government. The project incorporates several incentive schemes in support of fertility limitation. These include savings accounts for family planning workers, hospitalization plans, a free legal aid plan, free contraceptive supplies and services, public housing projects, etc.

Several other projects are in various stages of development or implementation. One experiments with incentives to employees who will become voluntary acceptors of sterilization. The incentives envisioned include paid vacations, salary loan privileges, reimbursement of sterilization costs over and above medicare, and provision for transportation to and from the service center. Another pilot project, referred to as "Incentive Program for Small Families," includes an insurance scheme designed to encourage

couples to have less than four children. As a short-term incentive, lotteries are held, open only to couples having four or fewer children (ESCAP, 1978).

Although social science research in the Philippines has made many excellent contributions toward the understanding of determinants of fertility behavior and family planning practice (e.g., Bulatao, 1977), the contribution of incentives is only beginning to be assessed.

Singapore

> Before we embarked on these [disincentives] measures we had to win popular support for the idea of limiting the size of the family. (Lee Kuan Yew, 1974, Prime Minister of Singapore)

> Once they have accepted the government's definition of the population problem, the respondents accept the view that the disincentives are designed to help the people help themselves. (J. Saloff & A. K. Wong, 1978)

A compact city-state with a population of 2.3 million people, Singapore experienced a rapid demographic transition, highlighted by the achievement in 1975 of replacement-level fertility rates. The establishment of the Singapore Family Planning and Population Board in 1966 marked official recognition of the close interrelationship of population issues with national development. The success of Singapore's approach, laced with social and economic disincentives to discourage couples from having large families (and, in recent years, from having more than two children), has stirred considerable international attention (e.g., Hall, 1974; Tan et al., 1977; Salaff & Wong, 1978; and Chen & Fawcett, 1979). Many of the following comments are based on the monograph by Chen & Fawcett which was kindly made available by The Population Council in galley page proof.

Social disincentive policies have been introduced, implemented, and revised since 1973. As of 1979, delivery fees are graded according to family size in government maternity hospitals where 80 percent of babies are born. The delivery charge is waived if the woman is sterilized. Maternity leave is not given for the delivery of the third and each subsequent child unless the woman accepts the option of sterilization after delivery. Women who do not yet have two living children pay only 25 percent of the cost of antenatal visits at government clinics charged to women with two or more living children (although this charge is deducted from the graded delivery fee if birth occurs in a government hospital).

At the time of enrollment for the first grade of school, very high priority in school choice is given for the first or second child, provided that one of the parents was sterilized before age 40 and before the birth of a third child. Lower-level priority in the choice of a primary school is given to the third and each subsequent child if one of the parents was sterilized before age 40.

Income tax deductions are not offered for the fourth and each subsequent child. Working women in certain professions are given more favorable income tax deductions for the first two children and less for the third child. Large families no longer receive priority in the allocation of public housing. Residents who have three or fewer children are permitted to sublet rooms.

Male and female employees are eligible for seven days of unrecorded full-pay leave following sterilization. Abortion and sterilization services are provided by the government at heavily subsidized rates and are available on demand.

The Chen & Fawcett monograph offers a valuable case study of the ways in which a particular society has chosen to deal with a variety of issues related to population. The coverage is broad, incorporating elements of history, politics, law, economic development, and social change as these are related to public policies and programs relevant to population. Some of these policies and programs were designed to influence demographic events, while others were drafted with different goals in mind but had significant demographic implications. In analyzing fertility trends in Singapore, it is not possible to separate the effects of incentives and disincentives from the effects of concurrent changes in the society and in the economy. One reason is the inadequacy of existing records; another is the uncertainty surrounding the process of policy formation in the small city-state. There seems little doubt, however, that the disincentives have probably accelerated the fertility decline (e.g., Anderson et al., 1977). The research evidence also suggests that disincentives have (a) important educational effects, reinforcing the small family norm; (b) significant facilitating effects, encouraging "rational" decision-making in childbearing by emphasizing the cost/benefit factors; and (c) relatively weak barrier effects in the sense of preventing people from having another child if they decide to do so (Fawcett & Chen, 1979.

Researchers have noted that disincentive policies are not as coercive as they appear to many outside observers. They "are useful for conveying the serious intent of the government in population matters, can have a significant effect on attitudes and behavior, and, if carefully designed, can be implemented without serious harm to parents and children. Based on these conclusions, our belief is that selected disincentive measures might be usefully introduced in other countries, as part of a broader program of population and development and with a view more to their educational effects than to their coercive potential" (Fawcett & Chen, 1979.

Sri Lanka

The Sri Lankan Government intends to discourage large families through tax disincentives. In his November 1978 Budget Speech to Parliament, the Finance Minister announced a personal tax-free allowance of Rs 12,000 (US$800) a year regardless of the number of children in the family. There will be no special child allowance (People, 1979).

In January 1980, the government launched a plan providing cash and paid leave for voluntary sterilizations. Volunteers will receive $7 and those with jobs in public and private sectors will be entitled to seven days' paid leave for tubectomy and three days for vasectomy in addition to normal annual leave (Agence France-Presse, 1980).

Taiwan

The first non-birth educational savings incentive plan with the implicit permission of a national government was launched in a rural township in Taiwan in October 1971 (Finnigan & Sun, 1972). At the end of 10 years, eligible couples having no more than three children would receive certificates for free secondary schooling for each child. Families with only two children would get benefits valued at twice as much as those with three children. If they have a fourth child, the account is cancelled and all funds previously credited are returned to the bank. About 75 percent of eligible women enrolled in the plan, expressing a strong desire to assure the education of their child and a willingness to plan and work for it many years in advance.

Following an evaluation conducted after the first year (Wang & Chen, 1973), an incentive for birth spacing is being tested in an urban area.

The project offers free delivery services, postpartum care, and nutritional supplements for women who space their first and second children more than 36 months apart (Finnigan, 1977). Further research reports are awaited.

An Integrated Community Approach: Thailand

> Our approach means looking to the people themselves for solutions, going into villages and finding out what people want and what their ideas are in dealing with their problems. (Mechai Viravaidya, 1974).
>
> What we do is common sense. (Mechai Viravaidya, 1979b)

Introduction

Historically, Thailand had a pronatalist policy, paying bonuses to large families until 1956. The Royal Thai Government did not express public concern until 1958, when a World Bank Economic Mission concluded that the high rate of population growth was adversely affecting economic development efforts (JOICFP, 1978). In 1965, family planning services were added to selected facilities of the Ministry of Public Health. From 1968 to 1970, family planning was a very low key activity, operating without public information support, without full-time family planning workers, and without incentives. Acting on a policy statement from the National Economic Development Board, the Thai Cabinet in March 1970 promulgated a National Population Policy, established the National Family Planning Program (NFPP) for providing voluntary services to the public, and placed responsibility for implementation in the Ministry of Public Health. The Planned Parenthood Association of Thailand was founded later that year.

It is not the purpose of this presentation to review family planning services in Thailand. This has been well done by others (e.g., JOICFP, 1978). Rather, this section will discuss the nongovernmental Community-Based Family Planning Services program and its evolution into the Population and Community Development Association, launched in 1979, followed by consideration of presently operating and envisaged integrated community projects.

CBFPS

In 1973, Mechai Viravaidya--henceforth referred to as Mechai in accord with the usual Thai tradition of calling people by their first names--then the Secretary-General of the Planned Parenthood Association of Thailand,

conceived the idea of an experimental project for Community-Based Family Planning Services (CBFPS) in parts of Thailand and neighboring Laos (Potts & Bhiwandiwala, 1979). Encouraging results were obtained whenever village leaders, itinerant entertainers, or other indigenous personnel were recruited to help spread the idea of effective family planning. Communities responded to the improved availability of services, provided with the support of a grant from the International Planned Parenthood Federation. The approach used borrowed heavily from imaginative marketing techniques infused with traditional Thai folk humor. While some would consider it similar to incentive efforts in other countries, Mechai preferred to use a Thai word meaning "common sense," ultimately talking about rewards for family planning practitioners and evolving a community development philosophy based on grass roots decision-making (David, 1979).

By the end of 1973, it became possible to explore prospects for the development of a nonclinical and nongovernmental community-based contraceptive promotion and marketing system. When some of the leaders of the Planned Parenthood Association of Thailand did not endorse the project, and also for other reasons, Mechai resigned from PPAT. In 1974, he established the Community-Based Family Planning Services (CBFPS) as an independent, nonprofit organization with nominal links to PPAT and with cooperative relationships to the Royal Thai Government. Plans to implement a trial project in one district of 70,000 people were approved by the Ministry of Public Health, an advisory committee of Thai leaders and development specialists was organized, and initial financial assistance became available through IPPF. The dramatic growth of CBFPS, its unique innovations, and its "revolutionary" impact on rural and urban Thai life styles have been well-presented in numerous reports (e.g., Phelan, 1975; O'Donnell, 1977, 1978; Viravaidya, 1979). One of its strong points has been a continuing creative partnership with governmental services (Potts, 1979).

In quantitative terms, the CBFPS achievements over a period of four years (1974-1978) are impressive. By the end of 1978, the project extended to 158 districts and 16,236 villages (out of a total of about 600 districts and 45,000 villages in the country), serving approximately 14 million people or 33 percent of the national population. Indigenous personnel--shopkeepers, farmers, teachers, and housewives--distribute contraceptives and provide information about family planning practices to persons in their own villages. A recent study concludes that by 1976 CBFPS had reached 10 percent of total

acceptors in Thailand at substantially less than 10 percent of the total national expenditures for family planning. According to CBFPS sample surveys, in the CBFPS districts between 1974 and 1976 pregnancy rates declined by 40 percent, compared to an average 20 percent in neighboring districts served solely by the government programs (Burintratikul & Samaniego, 1978). The overall changes in Thai fertility behavior and contraceptive practices have been substantiated by other demographic studies (e.g., Knodel & Debavalya, 1978).

An independent case study of CBFPS, conducted in 1978 by the International Council for Educational Development, concluded that

> The striking achievement of CBFPS is that it has overcome the familiar barriers of geographical access to family planning information and contraceptive supplies by making these available in the village community itself. Another distinguishing feature is that CBFPS is a nongovernment private sector effort of sizeable dimensions that mobilizes private resources, including manpower and management talents, but functions in cooperation with the government within the framework of the national family planning program. A third significant characteristic is its attention to long-range cost feasibility of family planning services, including in particular, its effort to make community level distribution and communication activities at least partially self-financing. (Burintratikul & Samaniego, 1978)

Community Participation

That community-based family planning service programs can be important ingredients of integrated development efforts is often acknowledged in the abstract. Once in the field, uncertainty arises over where the participation of the people begins. Mechai's experience demonstrates the utility of using the amusing side of contraception, rather than purely financial motivations, as an entry to the serious business of family planning and family size limitation. For example, the CBFPS business card is a folded form with an attached condom, now popularly called a "mechai." On the inside pages, a series of drawings show how a condom should be used, including a cartoon of a proudly erect penis smiling appreciatively for being fully covered. The tear-off mail order segment of the card conveys a seductive commercial which roughly translates as, "Plan your family with rainbow colored mechais. Bright colors, beautiful perfume, safe and so easy to use. No side effects. Highly effective family planning and whisper-quiet home delivery service." The back of the form offers a brief lesson in

demography, graphically depicting the number of children born in Thailand each minute, hour, day, week, month, and year, along with the slogan "Too many children make you poor."

It is common practice at village meetings to invite a group of men from the audience to compete in a condom contest. Each participant is given a condom to unwrap, blow up, and burst. Few people can maintain a serious attitude when contraceptives are handled in such a public and often hilarious way. These balloon contests have been staged on TV, in classrooms, and at political rallies, wherever and whenever they were likely to lighten the mood and make the audience laugh. By desensitizing contraception, family planning becomes part of daily life. Once the villagers get the idea that fertility-regulating methods are just one more thing to buy in the local shop, they will have far fewer inhibitions about their use (Brydson, 1975). In Mechai's words, "I want people to accept contraceptives the same way they do soap or toothpaste" (Warren, 1978).

Village schools are also involved. Children recite family planning nursery rhymes, shout the slogan "Too many children make you poor," and sing the Thai family planning song. Based on a traditional tune they already know, it describes the hardship of having children too often and thus not having enough for everyone to eat. It ends on a happy note, reminding each listener that there is no need to worry because the local distributor will tell the parents where to get the pill, a condom, an IUD, or sterilization. "The children may not understand exactly what contraception is," says Mechai, "but they do know what it can mean to them" (O'Donnell, 1977). Mechai adds, "We want them to grow up feeling family planning is normal" (Guerrero, 1978). And, "if parents hear this song often enough from their children, it becomes part of their thinking. Anyway, it is good to give these kids an early start. They will be parents soon enough" (Michai to Ridder, 1979).

Integrated Community Projects

Governmental acceptance of the community-based approach is reflected in a major new initiative. With the support of a consortium of international donors, an enlarged program is being instituted in 20 provinces during the years 1978-1980. Village health volunteers, backed by paramedics, are providing basic health care needs, including family planning,

in their respective villages. This program of integrated community-based services builds on the experience CBFPS gained with the Integrated Family Planning and Parasite Control Program, launched in 1976 with support from the Japanese Organization for International Cooperation in Family Planning, and the Integrated Family Planning Health and Hygiene Program, initiated in mid-1977 with assistance from the U.S. Agency for International Development. Experience demonstrated that family planning was the most logical point of entry into primary health care, followed by parasite control, household installation of sanitary latrines, water purification, immunization, and malnutrition prevention programs (D'Agnes, Viravaidya, & D'Agnes, 1979). The parasite control program is now providing six-month loans to build latrines for active family planning practitioners who are eligible for loan-reducing rebates if they recruit a certain number of additional acceptors who continue to practice family planning for a specified period or if they obtain one vasectomy acceptor (D'Agnes, 1979).

In view of the expanding activities, the Population and Community Development Association (PDA), with CBFPS as its major component, was organized in 1979 as an independent, tax-exempt, and nonprofit organization engaged in the training and support of change agents for service delivery in family planning, parasite control, general health, and community development at the village level and in some urban communities in close collaboration with governmental agencies (Population and Community Development Association, 1979). Also under the PDA umbrella is the Asian Training Centre for Population and Community Development, presently offering two-week seminars for managers and senior program staff of on-going community-based family planning programs and those interested in developing such endeavors.

Another growing segment of PDA is the Community-Based Appropriate Technology and Development Service. Its purpose is to enhance the quality of rural life by adding an appropriate technology component to villages where CBFPS change agents are also active. CBFPS has always recognized that "family planning alone is not enough" and wherever possible has supported the creative endeavors of its village distributors to use family planning as a springboard for other income-raising or life-enhancing community develment activities (CBFPS, 1979; D'Agnes, 1979). Over the years, CBFPS has shown the way to fertility-related development by organizing such projects as, for example, a discount buffalo rental service for field ploughing, transportation and marketing of agricultural products, and a pig-growing

scheme. "These services are not meant to be incentives to practice family planning, rather they are rewards for fertility management and opportunities for greater self-help and self-sustaining development" (CBFPS, 1979). In a larger sense, they are integrative community programs, utilizing appropriate technology to demonstrate that parents don't need a lot of children to produce sufficient food and income (D'Agnes, 1979).

The present program evolved from isolated efforts initiated in 1975 when CBFPS added a small marketing operation to its existing contraceptive distribution program, allowing people who practice family planning to deposit their nonperishable agricultural products and handicrafts at the house of the distributor. Transportation was then arranged which, by skipping the middleman, usually produced a 30 percent better sales price than would be obtainable at the local market. On the return trip, the truck carried fertilizer, seed, or garlic purchased by CBFPS at wholesale and resold to family planning practitioners at 30 percent below local market price (D'Agnes, 1979).

In some villages, CBFPS sponsored discount dressmaking, discount hairdressing, or discount drug purchases for family planners (D'Agnes, 1979). A low-interest bank loan can be arranged; a vasectomy is worth a $300 credit line. Interest on a bank loan may be halved if the borrower's wife is sterilized or if he obtains a vasectomy. In other villages, a farmer who has had a vasectomy can obtain the lifetime services of the "family planning bull," who evokes good natured titters when he appears on the scene (Rowen, 1978).

Mechai has always emphasized the importance of people seeing an immediate benefit from family planning. He encourages villages which have accepted the CPFPS program to invest some of their money in a pair of buffalo. "Let them breed," he says. "They're not people. They're better than tractors because tractors don't produce baby tractors. Tractors eat expensive fuel not grass and they don't produce fertilizer" (O'Donnell, 1977). Village distributors are responsible for the animals and registered family planning users can rent them at half the price charged to non-family planning practitioners. In one village, the three buffaloes for rent were emblazoned on their sides with the slogans, "I've been sterilized" or "I've had an IUD fitted" or "I love few kids' dad" (Nation, 1977).

In an attempt to simultaneously reduce fertility and provide income-generating activities for villagers, CBFPS (1979) launched a Contract Pig Growing Program in one district of Chiengrai Province in Northern Thailand

in August 1978. It evolved from the experience of a local CBFPS supervisor in offering the services of his popular high-quality stud boar, nicknamed "The Family Planning Pig," free-of-charge to any of the active acceptors in his district. These services were also made available to other villagers but they had to pay the going market price or its equivalent--one piglet from the stud's litter (CBFPS, 1979).

In the subsequently expanded project with an improved strain of pigs, women are urged to "space your next pregnancy with a pig." A family planning acceptor enters into a contract with CBFPS to take a 15-kilo, two-month-old piglet--for free--to be fattened on table scraps and rice-crop leavings to 90 kilos. CBFPS then assumes transportation and marketing responsibilities, splitting the net profits 50-50 with the villager. (Currently, a revised formula for profit sharing is being explored.) The woman's part of the deal is to promise to continue practicing family planning during the pig's fattening period, usually requiring eight to nine months. If a contract grower breaks the contract by becoming pregnant, she is not penalized and the pig is not taken away, but the family may lose the opportunity to receive another pig in the future. As of December 1979 no contract grower had given birth, an increasing number of villagers are becoming involved, and a veterinarian has joined the CBFPS staff (CBFPS, 1979; D'Agnes, 1979; van der Tak, 1979).

More recently plans were implemented to improve the breeding stations, using low-cost building materials. At one station a biogas digestor was installed so that pig manure can be recycled into rich fertilizer and methane gas. The addition of the biogas unit will help to control flies and parasites as well as improve the environment around the village piggery. It is hoped that the piggery can be expanded into a full-scale integrated farming system with 20 breeder pigs, a fish and duck pond, chorella algae pond, and vegetable and rice plots. Algae are a low-cost animal food supplement that can be harvested every other day and requires only sunlight for growth. It would greatly reduce the cost of feeding the pigs. Run-off from the algae tank and effluent from the biogas digestor can be directly fed into the fish or duck pond for daily feeding. The proposed integrated farming and marketing system would provide an excellent demonstration and training site for the use of renewable energies in farming. Revolving funds are sought for making non-pregnancy loans and further improve the scheme of helping the rural poor to help themselves, setting an example of the process of relating

fertility reduction to socioeconomic development and an improved quality-of-village-life (CBFPS, 1979; D'Agnes, 1979).

As one result of its success, CBFPS was invited to work with Cambodians and Laotians in the refugee camps of Thailand. Family planning workers are recruited from the camp inhabitants and then use a sliding range of incentives to attract acceptors of injectibles and IUDs. Sterilization and abortion are not part of the program. Appropriate technology schemes are employed to help active family planning acceptors raise quails, grow bamboo vegetable poles, or collect needed rain water. These income-generating activities improve camp life and morale while helping to reduce fertility (D'Agnes, 1979).

In the recently published case study of CBFPS, it was concluded that while it

> is not an experimental project to prove the comparative merits of a single-purpose and an integrated service approach, the evolution of CBFPS into a multipurpose integrated program probably holds a significant lesson. A genuine community-based approach, it appears, cannot continue to function on the basis of a narrow, rigid, imposed-from-outside program scope and objectives. A program that subscribes to the values and ethics of a community-based service has to subordinate its immediate and narrow objective--be it the acceptance of contraceptives, or the treatment of parasites, or vaccination against preventable diseases--to the ultimate needs and interests of the community people. These needs and interests of community as perceived by the community can be the only basis for an authentic community-based service program. The particular interest of an outside agency like the CBFPS can evoke a response from the community if it is a genuine need, but it has to fit into the total pattern of crucial concerns and priorities of the community. This is where the integrated approach comes into play. (Burintratikul & Samaniego, 1978)

As will be further discussed in the subsequent section, there are many lessons to be learned from the humorous, humanistic, and nonpunitive approach so boldly pioneered in Thailand by one charismatic innovator.

Research Findings and Suggested Research

> The overarching problem in population policy is how to turn public objectives into private action.
> (McGreevey, 1974)

> Social science research can contribute to policy determinants to the extent that it enables policy makers to make decisions with greater awareness, better sense of probable outcomes, more insight into unintended consequences, sharper appreciation of alternatives, and so on--in short, to the extent that it enables them to do something they could not do as well before. (Berelson, 1976).

> All research activity remains an academic exercise unless the results are used by policy makers and national planners and find acceptance in public opinion. (Aldaba-Lim, 1977)

Research Rationale

Research and evaluation of incentive and disincentive schemes depend on the context within which such efforts are operating. For example, the large-scale use of incentives and disincentives in support of national population policy is often based on the assumption that such programs are administratively, politically, and economically feasible, and are in keeping with individual and societal norms. The validity of such an assumption can ultimately only be determined by the fertility behavior of the community and society affected (ESCAP, 1978).

Insofar as can be determined from the literature, policy decisions on the size of incentive payments, to whom they should be paid, when, how, and in what form appear to have been made largely on the basis of conjecture and intuition, seldom as the result of specific field research (e.g., Kangas, 1970; Rogers, 1971, 1972; Park, 1979). Such decisions may not be surprising in view of the inadequacy, thus far, of research on socioeconomic determinants of fertility behavior (McGreevey & Birdsall, 1978). Policy makers are of course free to ignore the impact of socioeconomic policies on fertility trends or to deliberately choose whatever policies they perceive as likely to encourage couples to have smaller families (Herz, 1978). Moreover, results obtained from highly controlled but artificial experiments are often of less interest to policy makers accustomed to making decisions in a fluid, dynamically changing environment.

After reviewing the early literature, Berelson (1969c) commented that "to date we simply do not know whether incentives will lower a birthrate or, rather, how large they would have to be in order to do so." These sentiments were echoed by another reviewer (Pohlman, 1971) and at the conference convened by the Carolina Population Center in Chapel Hill in 1971. The participants noted the wide "gap between the huge number of schemes

proposed and the almost total lack of research" (Pohlman, 1973, p. 451). Moreover, "in a strictly scientific sense, it is difficult to prove that they [incentives] have any effect or to know whether larger incentives are more effective than smaller ones" (Pohlman, 1973, p. 456).

The kinds of fertility behavior to be induced by incentives have been summarized by several investigators (e.g., Pohlman, 1971; Rogers, 1972). There is disagreement on whether incentives influence persons to want fewer children or prod them into accepting family planning (notably sterilization) before they would otherwise do so. The nature of the influence probably varies with different people and population subgroups but may often exist in combination (Pohlman, 1973). Distinction should also be made between national macro objectives and smaller community micro effects. Over the longer term, quality-of-life micro benefits for individual families may prove as, or more, important than such macro benefits as improved gross national product.

Incentives

Despite the millions of dollars spent on incentive payments, almost no control studies have been reported (Rogers, 1971; Pohlman, 1973). It is virtually impossible to assess the effects of extraneous variables in any reported project. While some research from India and Korea documents the importance of monetary incentives for recruiting acceptors, especially candidates for vasectomy, the pressures encountered and excesses experienced led to the eventual collapse of the Indian family planning effort. It has not been possible to establish clearly the extent to which the payment of incentives for sterilization clouded the judgment of recruiters and service providers, or the informed consent of acceptors.

Acceptance of nonpermanent methods, prompted mainly by a desire for a small one-time financial reward tended to produce low contraceptive continuation rates (Rogers, 1972). Substantially larger immediate incentives appear useful in signaling official approval of a new social norm (Berelson, Mauldin, & Segal, 1979). Delayed incentives or no-birth bonus schemes are of too recent origin to permit longer-term evaluation of their effects on fertility. Although there are considerable differences among and within projects, initial reports are encouraging. Still, King (1974) warns that the environments in which these incentive programs were launched were atypical of most developing countries.

Disincentives

The only major research on the effects of disincentives comes from Singapore (Chen & Fawcett, 1979. While it has not been possible to separate the effects of disincentives from the effects of concurrent social and economic changes, available evidence strongly suggests that disincentives probably accelerated the fertility decline. They reinforced the public perceptions of the small family norm and encouraged "rational" decision-making in fertility behavior by emphasizing cost-benefit factors, without however preventing couples from having an additional child if they so wished. Disincentives seem to work best when all methods of fertility regulation are readily available and when there is a strong and stable government which has a well-established relationship with its citizens. Since the measurable outcome of such programs is the number of children born, the method of fertility regulation is best left to the couple.

Integrated Community Programs

Particularly promising for longer-term effects are integrated community-based programs, especially those oriented to "bottom-up" community development and improved economic well-being, organized and administered under voluntary auspices with local input, and avoiding any semblance of "top-down" pressures (e.g., Thailand). Experience with community-based programs demonstrates the potential for applying commercial marketing concepts to social needs (Black & Harvey, 1976; Ylanan & Verzosa, 1979) and involving the community in self-help economic development projects oriented to fertility reduction (Viravaidya, 1979a). Contraception becomes part of daily life rather than something associated with the medical community or health authority figures. Such a change is in accord with the view that sex is not the exclusive province of the medical establishment but rather a normal activity of healthy women and men prepared to accept personal responsibility for their own sexual behavior (David & Johnson, 1979).

It is increasingly recognized that the kind of "bottom-up" fertility-related community development program advocated in Thailand has a considerable psychological impact, especially when integrated with the application of appropriate technology to fertility-reducing efforts. Once the new equipment has been installed, it provides a daily reminder of "payoffs" associated with family size limitation. Tangible benefits are provided immediately in a program otherwise dependent on the psychic rewards of a longer-term nonevent, that is, not becoming pregnant.

Some of the experimental projects integrating parasite control and nutrition education with family planning have been plagued with organizational and administrative problems and questions of cost effectiveness. The feasibility of diverse approaches remains to be tested (Bang, 1979). For example, parasite reinfestation, due to lack of local sanitary facilities, has been experienced in several countries. CBFPS coped with this situation in Thailand by offering loans for building latrines with repayments reduced for those family planning paractitioners who recruited others into a program aimed at fertility reduction (IGCC, 1979). With the support of the Canadian International Development Research Centre, a cooperative program is being launched to permit researchers in at least three countries to develop and apply a methodology designed to assess the efficiency and effectiveness of integrated programs (Seward, 1979).

Sociocultural Considerations

Experience in Thailand, Indonesia, and elsewhere demonstrates that people are more likely to be responsive to the need for limiting family size if they perceive the problem in the context of common needs and development interests (Green & Fearey, 1978). The more cohesive the community, the greater the probability of community recognition of the need for integrating fertility reduction and socioeconomic development for the common benefit. The permanence of villages in developing countries is one more reason why integrated programs should be rooted in community life.

Only limited research attention has been devoted to studies of how participation in a program is generated, directed, and sustained (Ness, 1976). The socioeconomic and political environment in which fertility reduction is to occur is a major consideration. For example, in the revolutionary command system of the People's Republic of China, where all methods of fertility regulation are readily available, local participation can be accomplished through a wide range of directives building on traditional Chinese social cohesiveness. In the market economy of Thailand, the success of the CBFPS program is based more on imaginative private marketing with outside donor assistance, traditional folk humor, and increasingly effective integration of fertility management with economic development as perceived at the grass roots level (Ness, 1976). Local participation is achieved through stimulating demand among an aggregate of consumers who retain the right not to participate or to discount their participation (CBFPS, 1979; D'Agnes, 1979).

Of particular interest in the Thai experience is the already mentioned resort to humor. When appropriately used in a group setting, laughter offers a fleeting opportunity to create "moments of normlessness," leading to subsequent acceptance of partially new norms (Ness, 1976).

The apparent distinction in the use of humor between the Chinese and Thai approaches to limiting family size may be the result of some deeper cultural difference regarding either humor in general or the appropriateness of sexual behavior as a subject of humor. While Chinese society is not humorless, it appears more restrained on the topic of sex (Chen, 1975). The CBFPS use of rural folk singers with their bawdy songs to increase the demand for vasectomies, the ubiquitous condom-blowing contests, and the considerable press coverage of the latest Mechai-inspired event seem to have evoked acceptance with a smile--certainly more so that the use of pamphlets, lectures, or slides in other countries. Laughter may well be a development-promoting strategy transferable beyond geographic, linguistic, or other cultural barriers.

Methodological Concerns

Reviews of research methodology have been sharply critical of studies on the presumed fertility effects of family planning programs (e.g., Forrest & Ross, 1978). The work reported ranges over a variety of questions, program types, data sets, assumptions, and methods. Different incentive programs have received different degrees of emphasis in the countries concerned. At times this has resulted in confusion about what a specific program may have accomplished and any fertility effects directly traceable to it. Only limited knowledge exists about actual linkages between incentives/disincentives and fertility. There have been no systematic or comparative explorations of the perceptions of political leaders and administrators toward diverse incentive/disincentives. Much remains to be learned about economic development efforts integrated with fertility reduction schemes, especially in rural areas. Patterns of association have been identified, albeit not conclusively, between fertility behavior and such development factors as income, education, women's employment, and health. Causal patterns are less well understood and seldom demonstrated. Large-scale modeling of economic-demographic interactions are good devices for organizing what is known but rarely shed new light on fertility behavior.

Short-Term Pilot Research

The Expert Committee convened by ESCAP (1978) suggested that in considering future incentive programs an essential first step is to determine which incententives/disincentives are likely to offset existing pressures influencing couples to have many children. In such a situation it would be helpful to conduct research on the value of children to parents and into economic and social determinants of fertility at the household level. For example, if children are valued for the assistance they give parents in agricultural work, and if there is a positive correlation between agricultural holdings and family size (as is the case in the Philippines), then it may be worthwhile to consider alternatives to child labor on the farm. These might include providing effective family planning practitioners with lower cost access to farm machinery, cooperative arrangements, or marketing resources (as is done in Thailand).

To arrive at a level of incentive needed to compensate families fully and fairly for the loss of economic and social support, as well as financial insecurity implied by having fewer children, it would first be necessary to establish the gain to society as a whole, and then to the national economy, from having an average of two rather than four children per couple. Subsequently, a portion of the estimated savings could be reallocated to the incentive program with differential programs tested in several randomly selected but "typical" areas. The differential in fertility among these areas could eventually help determine the level of incentive for a national program. A less rigorous approach would be to readjust the incentive offered until such time as it has a fertility effect of the desired magnitude.

Pilot projects are usually proposed with the understanding that a critical evaluation will be conducted after some specified time to determine whether to expand the project on a wider scale, modify certain aspects, or abandon it. Pilot areas and controls (which are similar in all respects except for offering the incentive tested in the pilot areas) should be economically and socially representative of the larger areas to which the program is to be eventually expanded. As much "baseline" data as possible should be obtained on potential participants, including age, age at marriage, pregnancy history, contraceptive practice, and other demographic, socioeconomic, and educational indicators. Presently available family planning resources should be broad ranging in both the pilot and control areas so that the additional effect of incentives or disincentives can be more easily

established. Guidelines suggested for research on fertility choice behavior should be considered (e.g., Friedman, 1974; Friedman, Johnson, & David, 1976; Mindick & Oskamp, 1979).

In selecting a target population research can help to identify thresholds indicating which subpopulations might welcome or resist an incentive program. Other questions in the selection of a target population include the degree to which the incentive would act to redistribute wealth and the need to respect the rights of minority groups. Several models of planning could be tested, including the top-down or "trickle-down" model, the interaction model, and the "bottom-up" model of giving communities independence in planning. If there are insufficient funds to test several models of community participation, it is suggested that two models be assessed, one of which involves potential participants in the planning process and the other serving as a control group, treated as they normally are in government programs. Perhaps most important, the target population should include all adults in their fertile years, that is, those for whom fertility regulation is most relevant, without concentrating unduly on the community's poor for whom financial rewards would be especially tempting.

By offering the same levels of income to different subpopulations, it should be possible to test the hypothesis that those with greater need for children and with less government support in their own economic lives (e.g., fishermen) are less likely to respond to a particular level of incentive than are those with less need of children and with a stronger economic relationship to government (e.g., factory employees covered by minimum wage level and social security). It should be possible later to vary the level of incentive to see if the responses change.

Policy Research

To answer such questions as whether incentives can be used as redistributive measures to help reduce the gap between rich and poor will require collecting base line data to determine economic correlates of fertility before and after program implementation. One difficulty is that the same variables which lead to compliance with an incentive/disincentive scheme may also be highly correlated with economic success, independent of any incentive. However, during experimentation, it is important to ascertain which economic and social outputs may result from incentive/disincentive programs

so as to provide policy makers with an appreciation of the multiple outcomes (both positive and negative) of these approaches.

It is impossible at this time to assess how incentive/disincentive programs compare with other efforts to reduce fertility, particularly the "supply side" approach which takes demand for small families as a "given." The kind of large-scale control study needed to answer such a question has not yet been conducted, although the literature is replete with well-meaning suggestions (e.g., Kangas, 1970; Rogers, 1972; Finnigan, 1977; Muscat, 1978c). There are, however, few countries where family planning has absorbed much more than 1 percent of the national development budget (Simmons, 1979).

Ultimately, successful programs using incentives, disincentives, or integrated community approaches will have to be formulated as consistent, clearly defined, and well-communicated policies, responsive to local needs and values with dynamic leadership to obtain and nurture continued political backing. In Mechai's words, "Do your best to prove your effectiveness and efficiency and give credit to the bureaucracy for whatever achievements you have made" (Burintratikul & Samaniego, 1978). Outside donors may need to be similarly reassured. It will then become increasingly important to demonstrate the complementarity of fertility reduction schemes with socioeconomic development, designed humanistically to improve the quality-of-life, especially in the impoverished rural villages of developing countries.

In considering next steps, it seems best to tailor future research to the interests and needs of a specific country, to seek local leadership, and to involve policy makers in the research planning phase so as to assure maximum likelihood that eventual findings will be utilized. A small interdisciplinary seminar of knowledgeable colleagues could be organized to develop and coordinate an eventual cooperative transnational effort, initially focusing on pilot studies yielding comparable data. The rapidly moving integrative community program in Thailand, with its strong voluntary component, seems particularly open to collaborative research and for identifying potentially transferable elements of successful endeavors.

In sum, the experience gained to date strongly suggests that it would be useful to encourage the present policy of using U.S. Government funds for incentive programs, especially in support of projects having a strong community development orientation less subject to abuse. "This type of incentive has particular merit both in terms of increasing

flows of assistance to villages and in terms of stimulating motivation, including peer pressures, for lowering birthrates" (National Security Council, 1978).

Summary of Major Findings

Background Factors

- The complexity of fertility behavior requires that both psychosocial and economic determinants of fertility be considered in any microeconomic approach to the value of children and policy initiatives to stimulate fertility reduction through using incentives, disincentives, or integrated community programs.

- An incentive is defined as a tangible or intangible reward to an individual, couple, or other target group designed to induce specified fertility-reducing behavior. A disincentive is defined as a tangible or intangible negative sanction incurred by an individual, couple, or other target group as a consequence of exceeding specified fertility behavior.

- Incentives may be paid to recruiters, acceptors, and/or providers of services. They may be small one-time cash payments or larger amounts paid at a later date, dependent on acceptance of specified conditions.

- Disincentive programs should be differentiated from politically organized pressures and coercion which restrict voluntary choice behavior.

- Integrated community programs relate fertility reduction to community development, are sensitive to local needs, and involve the community in voluntary decision-making.

- "The 'universal human right' of every couple to choose the timing and number of children they will have, is a noble sentiment, but there is not a country in the world where it is not subject to highly effective societal and cultural constraints."

- The use of incentives, disincentives, and peer pressure is not incompatible with human rights principles as long as there is a community consensus and implementation does not result in discrimination on grounds of income, race, sex, language, property, or religion.

- Most incentive programs have been reported from Asia, particularly from Bangladesh, China, India, Indonesia, Korea, Philippines, Singapore, Sri Lanka, Taiwan, and Thailand.

Problems Encountered

- Policy decisions on the size of incentive payments, to whom they should be paid, when, how, and in what form appear to have been made largely on the basis of conjecture and intuition, seldom as the result of field experience.

- Despite the millions of dollars spent on incentives, virtually no control studies have been reported. Little knowledge exists on whether incentives will lower the birthrate or how large they would have to be to do so. There is a wide gap between the number of schemes proposed and the few that have been implemented with a research component.

- There is disagreement on whether incentives influence persons to want fewer children or prod them into accepting family planning (notably sterilization) before they would otherwise do so. It has also not been possible to establish the extent to which incentives cloud the judgment of recruiters and service providers, or the informed consent of acceptors.

- Acceptance of nonpermanent methods, prompted mainly by a desire for a small, one-time financial reward, tends to elicit low continuation rates. Delayed incentives or no-birth bonus schemes are of too recent origin to permit longer-term evaluation of their effects on fertility or costs.

- The same variables which lead to compliance with an incentive/disincentive program may also be highly correlated with economic success, independent of any incentive. Ultimately, the validity of the assumption that incentive programs are administratively and politically feasible, economically workable, and in keeping with individual and societal norms can only be assessed by the fertility behavior of the community and society affected.

Successful Elements

- Delayed incentives and no-birth bonus schemes are providing encouraging initial results but longer-term studies are needed to assess effects on fertility and cost effectiveness.

- Disincentives reinforce the public perception of small family norms and encourage rational decision-making by emphasizing cost-benefit factors without, however, preventing couples from having additional children if they wish to pay the costs entailed.

- Disincentives are more readily accepted in societies where all methods of fertility regulation are easily available, where a strong and stable government has a well-established consensual relationship with its citizens, and when care is taken to avoid undue hardships for children born in disregard of official policy.

- Integrated community programs are positively perceived when fertility reduction schemes are oriented to community development, involving local autonomy and appropriate technology to enhance quality-of-life.

- The nongovernmental community-based family planning service program pioneered in Thailand demonstrates the feasibility of utilizing imaginative marketing, traditional folk humor, and innovative leadership tied to economic development goals. The more cohesive the community, the greater the probability of recognizing the need for integrating fertility reduction with socio-economic development for the common benefit.

Suggested Recommendations

- Review [illegible] the use of U.S. Government funds for incentives for fertility reduction, particularly for integrated community development schemes known to enjoy the voluntary support of the local population and less subject to possible abuse. More than half the world's population resides in the rural villages of the developing countries of Asia. Their needs should be understood within the context of their own perceptions of fertility behavior, integrated community development, and an enhanced quality-of-life.

- Organize a small working party to identify and reach consensus on psychosocial and economic determinants of fertility behavior in seemingly successful incentive programs that are integrated with community development, supported by the villagers concerned, and focused on fertility reduction and an improved quality-of-life. Another purpose should be to develop guidelines for reporting such programs in a transnationally useful manner and making suggestions regarding priorities related to program delivery, the utility of appropriate technology schemes for fertility reduction, and service oriented research.

- Convene an interdisciplinary regional seminar of informed policy makers, service administrators, and researchers, able to report and discuss programs identified as successful by knowledgeable persons in the field. Project reports presented should follow guidelines suggested by the working party. The objective would be to develop a methodology for cooperative, interdisciplinary, and transnational research, yielding comparable results on program ingredients affecting psychosocial and economic determinants of fertility behavior, voluntary local acceptance, and the utility of appropriate technology schemes in assessments of cost effectiveness.

- Fund cooperative studies of about 18 to 24 months' duration, yielding cross-culturally comparable information that will permit making implementable recommendations to policy makers for organizing similar programs in other lands where administrative and political c[illegible] are favorable.

- Provide support for organizing and implementing carefully monitored larger field projects developed in consultation with directors of programs previously identified as successful and with semiannual meetings to review progress, problems, and plans.

- Provide special funds to support and monitor the family planning services organized by the CBFPS program in Thailand for Cambodian and Laotian refugees.

- To be useful, programs using incentive/disincentive schemes or integrated community approaches will have to be formulated in consistent, clearly defined, and well-communicated policies, responsive to local needs and values with dynamic leadership to obtain and nurture continued political and administrative backing. They will have to demonstrate the complementarity of fertility reduction schemes with socioeconomic development, designed humanistically to improve the quality-of-life, especially in the impoverished rural villages of developing countries.

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