

Family Planning in Pakistan's Third Five Year Plan

by

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Introduction

It is commonplace that population growth looms large in the complex of problems associated with economic and social development. This is true in Pakistan as elsewhere and the Third Five Year Plan has faced up squarely to this issue. This article will review the population policy contained in the Plan and its supporting documents. Our analysis is sometimes critical but never unsympathetic. The planners in Pakistan have recognized the importance of population control and the present Plan devotes considerable resources to this goal. For this they deserve only praise. However, critical analysis of the Family Planning Scheme by interested but objective observers may still serve a useful purpose.

The Plan's basic statement on population deserves to be quoted to start our analysis:

The size of population, estimated at 112 million for 1965, is expected to grow at an annual compound rate of about 2.6 per cent during the Perspective Plan (1965-1985). With the planned improvement in health facilities and nutritional standards, the mortality rate is likely to decline fairly rapidly. Unless it is checked by a fall in the fertility rate, the population growth rate could easily be pushed beyond 3 per cent per annum. If this happens, population will double itself by 1985. Such an increase would defeat any attempts to raise per capita incomes by a significant amount. One of the basic assumptions of the present projections is that the rate of growth of population will decline after 1975 owing to a decrease in the fertility rate. In other words, it is assumed that declining fertility will more than offset declining mortality. The population in 1985 is thus projected at 187 million. A vigorous and broadly based programme of family planning is, therefore, an integral part of the strategy for the Perspective Plan [44, p. 24].

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And again:

Moreover, the present 2.6 per cent growth rate of population may well increase in future. Pakistan is in a phase of demographic transition; of declining mortality rate unaccompanied by a corresponding decline in fertility. The mortality rate is projected to decline from 29 to 15 over the period of the Perspective Plan. To prevent a population explosion which may imperil most of the targets of the Perspective Plan, from tripling per capita income to universal literacy, the Plan assumes that birth rates will decline from 55 to 35. Thus, the growth rate in 1985 is expected to decline to 2 per cent and the overall growth rate during the period is estimated at 2.6 per cent.

Clearly, if the increases of per capita income postulated in the Perspective Plan are to be achieved, a decline in fertility is a necessary condition. The availability of modern medicines and related health facilities has been and continues to be the main determinant of the dramatic decline in mortality rates. The supply of contraceptive devices and extension of family planning facilities is similarly called for if fertility rates are to be contained [44, p. 265].

Some disagreement exists about the growth rate used in the Plan. The death rate of 29 per thousand assumed by the Plan appears high relative to other evidence about the present levels. There is in fact ample evidence to support the belief that an acceleration of the growth rate has already begun to occur and that it is already 3.0¹.

However, there is little point in arguing over half a percentage point. Even given the perhaps low growth rate assumed, the statements of the Plan are obviously correct. Assuming a higher growth rate would only make them more correct and add greater urgency to the population question.

Previous Family Planning Efforts

Enthusiasm over the fact that the Third Plan contains a detailed and ambitious family planning programme should not obscure one important fact: this is not the first family planning programme to be launched in Pakistan. Both the First and Second Plans contained family planning as an explicit policy and the Second Plan spelled out in some detail a mechanism by which fertility reduction was hoped to be accomplished.

In the First Plan the philosophy of family planning was accepted and a very modest programme initiated, consisting chiefly of grants to private, voluntary family planning groups. The total budget was only 500 thousand rupees. The plan document itself did not appear until the plan period was nearly half over and the programme, modest as it was, accomplished little.

¹ Chiefly the data from the Population Growth Estimation Project, jointly sponsored by the Pakistan Institute of Development Economics and the Central Statistical Office. See, [33].

The Second Plan took a much more forthright position on population growth:

Since population growth can threaten to wipe out the gains of development, the Plan clearly recognizes the paramount need for a conscious population policy and its implementation. A population policy, however, must take into account many implications of population growth for other aspects of planning. The existing pressure of population leads to an intense struggle for the means of life at subsistence levels. Inadequate diet results in a prevalent malnutrition that cannot be cured by public health measures alone. Apathy is the companion of malnutrition and ignorance. Under these conditions people have meagre reserves of energy to strive for wider understanding and improvement [40, p. 335].

And in terms of the specific programme:

The First Plan contained a small provision for family planning but practically nothing was done except some pilot work by the family planning associations. Since a declining trend in fertility must be sought over a long period, the Second Plan health programme is primarily designed to influence social attitudes and practices in favour of family planning. It also seeks to provide the necessary medical and other facilities. Clinics will be established in all general hospitals, dispensaries and maternity centres. Provision is also made for educational and other materials, training programmes and research. Publicity and education programmes will be organized through all available media, with the assistance of voluntary organizations, Village AID and community development units. Arrangements will be made for the training of doctors, nurses, health visitors, midwives and medical administrators in family planning methods. Research will be initiated on reproductive behaviour, on factors which motivate parents to have large or small families, and on the acceptability and effectiveness of different methods of birth limitation. The Plan provides Rs. 30 million for family planning [40, p. 360].

Thus, the Scheme was comprehensive and, on the face of it, well planned and plausible. Some progress was made and in reviewing the progress under the Second Plan, the First Mid-Plan Review in 1963 had the following optimistic comments to make:

The family planning programmes received an increasing measure of attention. 1,573 centres were established in both wings of the country; of these 553 centres were established in East Pakistan and 1,020 centres in West Pakistan. 605 doctors, 446 health visitors/nurses and 4,800 V-AID workers and Ansars were trained. Two medical social research projects were set up at Lahore and Dacca with the assistance of the Population Council of New

York. Four films were produced on family planning. Seven persons were sent to the USA for higher training in demography, statistics and maternal and child health education. In East Pakistan, construction of three maternity and child welfare centres was completed while another such centre was in its final stages of completion. In West Pakistan, construction of 3 child welfare centres was completed [41, p. 42].

However, it quickly became clear that no real impact on the population growth rate could be expected. In early 1965 the Third Plan was forced to draw the following less optimistic conclusions:

The achievements of this programme have on the whole fallen below expectations. The allocation was too small to permit adequate supplies and proper distribution and the motivational barriers outlined earlier were not consciously tackled. Besides the programme was administered as a normal function of the existing health services with the result that doctors and other health personnel running these services were over-burdened with clinical work and could not give adequate attention to family planning [44, p. 267].

Another discussion lists the following reasons for the failure of the Plan:

(i) Lack of motivation in the general masses (ii) unsatisfactory arrangements for the distribution of contraceptives (iii) inadequate education and information of the masses in family planning (iv) shortage of administrative personnel; the programme was administered as a normal function of the existing health services with the result that doctors and other health personnel running those services were over-burdened with clinical work and could not give adequate attention to family planning [46, p. 36; also 36, p. 29].

Outlines of the Present Scheme

A total of 166 million rupees is provided for by the Third Plan, while the overall Scheme is to cost some 280 million rupees [45, p. 2].

✓ The Scheme is clear as to its objectives:

The principal objective of the new programme is to bring down the birth rate from 55 per thousand to 45 per thousand. To achieve this target, 20 million couples, who represent almost all the women in the reproductive ages in 1970, will be induced to practice family planning in one form or another. The scheme is to be launched in 36 districts of West Pakistan and 16 districts of East Pakistan during the Third Plan period. Two-thirds of the districts will be covered in the first two years and the remaining one-third in subsequent years [44, p. 267].

The Scheme also makes very clear its fundamental assumption that family planning can be approached as an administrative function. "It should be recognized that family planning is essentially an administrative and not a clinical programme. Large-scale acceptance of conventional contraceptives depends on: a) efficient distribution of supplies; and b) motivation of the people; while technical services and supervision are needed for tubeligation, vasectomy and insertions of intrauterine device (called IUD or flexible coil)"[45, p. 4]. A majority of the detail in the Scheme is administrative detail—who reports to whom, what forms are to be used, and so on. An elaborate administrative apparatus is outlined.

- ✓ There will be a Family Planning Council at the Centre and Family Planning Boards at the Provincial and District levels. All the Union Councils in East Pakistan and Thana Councils in East Pakistan will be associated with the programme. The family planning work at these levels will be looked after by a Family Planning Supervisor (one for 3 Union Councils) in West Pakistan and Thana Family Planning Officer (one for each Thana) in East Pakistan. At the bottom of the hierarchy will be the village *dai*. She will perform such functions as motivating the people and distributing contraceptives. At the national level the programme will be supervised by the Family Planning Commissioner who heads a new Division in the Ministry of Health, Labour and Social Welfare to be called the Family Planning Division.

The Administrative set-up at the Central, Provincial and District levels has been considerably strengthened. The Scheme provides for 1,000 Family Planning Supervisors in West Pakistan who will work with the Union Council Secretaries. In East Pakistan 400 Thana Family Planning Officers have been provided. One general assistant, one female assistant and one male assistant will be attached to each Thana Family Planning Officer. A total of 50,000 village *dais* will be employed. 30,000 in East Pakistan and 20,000 in West Pakistan at the rate of one *dai* for two villages or 1600 population in East Pakistan and one *dai* for two villages in West Pakistan. About 2,400 part-time family planning doctors at the rate of 6 for each Tehsil in West Pakistan and 3 for each Thana in East Pakistan will be registered and appointed for the purpose of IUD insertions and clinical sterilization [44, pp. 268-269].

A high degree of decentralization in the administration of the Plan is called for. Of the 166 million rupees budgeted, only 11 million rupees are at the Centre, with 80 million for East Pakistan and 75 million for West Pakistan. The principal levels of authority are: a) Central Family Planning Council, "headed by the Health Minister, instead of being an advisory body, should exercise the functions of policy, co-ordination, assessment, and evaluation and be generally responsible

for the overall implementation of the Scheme by the Provinces and particularly for research". The Family Planning Commissioner is Secretary and principal executive officer of the Council; b) Provincial Family Planning Boards: "headed by the Provincial Health Minister should be responsible for the implementation of the Scheme and the administrative functions connected therewith, and in particular for training programme in this connection.... a whole-time administrator.....to be its Secretary and principal executive"; c) District Family Planning Board: "In each district, a District Family Planning Board should be constituted, with the Deputy Commissioner as Chairman and including the District Health Officer, Medical Superintendent/Civil Surgeon, Assistant Director of Basic Democracies, Publicity-cum-Executive Officer, and two ladies from public life interested in this programme"; d) Thana councils (in East Pakistan) and union councils (in West Pakistan) "should perform such functions as may be entrusted to them from time to time by District Family Planning Board....." [45, pp. 5-7].

The bulk of the work will actually be performed at the district level. Among the important tasks resting with the District Board are: i) establishment of the urban clinics, ii) supervision of the mobile units (one per district), iii) appointment of the "family planning doctors" for the thana and tehsil part-time family planning clinics, iv) registration of the village *dais*, v) ensuring distribution of conventional contraceptives to all local outlets, vi) undertake publicity of all types, vii) exercising general administrative and operational control over the programme at the thana/union council level in the district.

The thana council/union council level functions as the local distribution and financing agency. Their explicit duties include: i) insuring the registration of *dais* and their attendance at training sessions, ii) issuing conventional contraceptives to local outlets, iii) local publicity, iv) disbursing funds in reward for referrals and other services rendered, v) submission of reports to the District Board on conventional contraceptives distributed, IUD insertions and operations performed, vi) reporting on complaints from the public, vii) general supervision over the programme in the area.

The key people in the programme emerge as: i) the Publicity cum-Executive Officer at the district level. He will be equipped with a jeep and is designed to be the "trouble-shooter" for the programme in his entire district. ii) The Thana Family Planning Officer (Family Planning Supervisor in the West) at the local level. In the words of the Scheme, he is to "tour in the villages, disseminate information and motivate the public on this programme, and guide, supervise and assist the village *dais* and agents in their work. He will follow up and document cases and collect data for bringing about improvements and advise the

higher Family Planning Authorities to this end" [45, p. 7]. One jeep per tehsil in the West (one per two thanas in the East) is provided for the Officers (Supervisors). In the case of West Pakistan the Supervisors seem to be intended to report more directly to the District Board (although the Tehsil Development Officer is mentioned as the middle "tier" of supervision) while working with the union councils. In the case of East Pakistan, the officers are evidently more directly under the Thana Circle Officer for Development. In this latter case, due to the larger area covered, the Family Planning Officers are, as noted above, given three whole-time assistants.

Finally, the village *dais* are also key figures in the Scheme. Their duties under the programme are: *i*) to motivate people to accept the programme, *ii*) to supply conventional contraceptives, *iii*) referral of cases for IUD insertions [45, p. 7].

At the local level possible outlets (other than the *dais*) for conventional contraceptives listed include: village shopkeepers, stores, pharmacies, medical houses and all private, local bodies and government hospitals, and health centres, maternity centres and clinics; all retail dealers of whatever sort; and all chemists, factories and workshops [45, p. 6].

Within this rather elaborate apparatus, relatively few of the personnel are actually full-time salaried persons. At the Centre, the secretariat of the Family Planning Council and the research and evaluations units are staffed by whole-time persons. In the provinces whole-time personnel include the administrator attached to the Provincial Family Planning Board, the Publicity-cum-Executive Officer attached to each District Family Planning Board, the Family Planning Supervisors in the West and the Thana Family Planning Officer plus his three assistants in the East. The union council secretaries in the West will receive a small salary for working with the Family Planning Supervisor and also expense money. The selected village *dais* will receive a small salary in addition to their referral fees. On the more purely "clinical side" (as the Plan puts it) outside the urban areas there are no whole-time staff. The Plan calls for three family planning "doctors" (a doctor, a lady health visitor, or a registered midwife) per thana in East or six per tehsil in West. These are apparently to be mostly government doctors or private practitioners paid retainers of modest amounts in addition to the fees they may earn for operations or IUD insertions. These doctors will be registered and supervised by a District Technical Officer who is to be added to the District Health Officer's staff.

The Scheme calls for the establishment of 37 whole-time clinics in urban areas, 16 in East Pakistan and 21 in West Pakistan, and 718 part-time clinics, 400 in East Pakistan and 318 in West Pakistan. The part-time clinics will be housed in existing health facilities (health centres, hospitals and the like). The

clinics, whole and part-time, will concentrate on IUD insertions and vasectomies/tubeligations. With the exception of these whole-time urban clinics, the larger urban areas receive no special treatment or attention in the Scheme.

Within municipal, town committee and cantonment limits in West Pakistan the functions assigned to the Family Planning Supervisors and Union Council Secretaries will be performed by the District Family Planning Board through its whole-time staff and other personnel available already to Deputy Commissioners, Union Committees and the Civil Surgeon/Medical Superintendent. . . . In 16 cities of West Pakistan 21 urban clinics will have sufficient staff to cover the urban areas of those districts. Furthermore, the West Pakistan Family Planning Board may by reappropriation allocate up to 10% of the provision made for Family Planning Supervisors to rural areas to provide them for urban areas at the rate of one per 100,000 population and at least one for every district headquarters. . . . So far as East Pakistan is concerned, the entire area (inclusive of Municipal, Town Committee and Cantonment Areas) will be covered by the whole-time Thana Family Planning Officers and the male and female assistants appointed there [45, p. 8].

The Plan thus aims at widespread coverage and participation. Rather than emphasizing clinics and health centres as the means of reaching the people, the Scheme will use the local village *dais* as the chief agents, the regular political framework (district, thana and union council officials) as the administrative apparatus, and a host of medical, para-medical and lay personnel as the implementers of the Scheme.

✓ The Scheme recognizes that the "necessity for continued research cannot be over emphasized" [45, p. 20]. It provides for the continuation of the National Research Institute of Family Planning under control of the Centre, pursuing research of both clinical and socio-psychological sorts. Two existing "demonstration" action-cum-research projects, one in Lahore (Medical Social Research Project) another in Dacca (Dacca Health Education Project) are continued also under the Centre. Several training-cum-research institutes are also provided for under the two provinces. ✓

Training of most of the key people was handled under a forced-draft accelerated programme early in the life of the Scheme. Family Planning Supervisors (Officers) were trained at regional meetings under the guidance of a high-level group of experts and technicians especially assembled for the task. The Supervisors (Officers) in turn trained *dais* at the union council (thana) level, the *dais* receiving expenses for attending the sessions. The part-time family planning doctors were to be trained under similar arrangements, presumably under supervi-

sion of the District Technical Officer attached to the District Health Officer's, staff. In both cases, printed literature and visual aids were prepared for use in advance of the sessions. The Scheme also proposes to "hold annual refresher courses" and also occasional sessions for newly registered *dais*, doctors and others.

Perhaps the most important innovation in the Scheme is the strong emphasis placed on monetary incentives to all the part-time (or "volunteer") personnel connected with the programme.

For each vasectomy both doctor/lady health visitor/*dai* and the client will be paid Rs. 25. Insertions of IUDs will be free for the client. For each insertion doctors will be paid Rs. 8 and trained nurses/midwives/*dais* Rs. 4. Besides, *dais* will be paid Rs. 2.50 and other Rs. 2 for referring cases leading to an insertion. A 50 per cent rebate on the cost of contraceptives will go as commission to the sellers [44, p. 268]. ✓

Over 26 million rupees are allocated for fees connected with IUD insertions and vasectomies and tubelignations.

Payment for IUD insertion performed by the "family planning doctors" (doctors, lady health visitors, trained midwives) will be from the District Health Officer (in the cases of urban localities in both East and West the payment will come from the civil surgeon/medical supervisor). Vasectomies/tubelignations performed will be paid for by the District Family Board directly. Payment to *dais* for either referrals or actual IUD insertions will be made by union council secretaries or thana council vice-chairmen. The necessary *proformas* to be executed in claiming payment are prescribed by the Scheme.

We can now summarize briefly the main features of the Scheme:

- 1) The Scheme operates through the existing political and administrative apparatus. Of the numerous officials involved only a handful are full-time, the other persons serve either for part-time pay, fees or for no pay at all. The Scheme has thus avoided the Second Plan's difficulty of over-loading the Health Ministry people by resort to an equally risky administrative device—assigning important administrative roles in the plan to equally overworked political leaders—union council secretaries, deputy district commissioners and thana development officers.
- 2) The Scheme is an ambitious one which aims at largescale distribution of contraceptives to the rural as well as the urban population. A considerable logistic efforts is thus involved but the mechanics of distribution are not spelled out. Beyond the instructions that one month's supply must

be kept on hand as a minimum and the note that Supervisors (Officers) will order directly the supplies, nothing is said about the actual chain of supply. By the same token no effort is made to relate the supplies called for in the Scheme with the number of couples actually to be reached. A supplies coordinating section at the Centre (and for each province) would seem essential.

- 3) The Centre has limited control over the operation of the Scheme at the grass-roots. Even training and research functions are shared with the provinces. Evaluation is the most important task given completely to the Central Family Planning Division but even here the exact measures by which performance will be judged and evaluated are not spelled out nor are the means by which the Centre can force corrective action to be taken at the district level if the provinces do not.
- 4) The key people at the local level are the *dais*. Several recent studies of the *dais* have been made [17; 57; 58; 10] but we still know very little about their willingness to accept a rather sharp change in their basic orientation toward maternity. By making use of the *dais*, the Scheme also becomes female-oriented in basic approach, a perhaps questionable tactics in a male-dominated society.

The Special Problem of Evaluation

The problem of how to evaluate the success (or the lack of success) of the Family Planning Scheme is crucial. (There is, of course, a growing literature on the topic [7; 8; 23; also 50; 31]). The Scheme represents a gamble, or rather a series of judgements and guesses on the basis of which action is to be formulated and taken. But, the initial judgements and guesses may not be correct and the Scheme may require reformulation as it proceeds. The correctness of the original judgements will be known only according to some measure of whether the Scheme has or has not attained "goals". Only, in other words, according to some meaningful, objective evaluation of the success of the Scheme. Nor does the mere selection of goals guarantee useful evaluation. In fact, if the wrong goals or indices of success are used for evaluation it may be worse than using no indices at all. (At least one critical review of the Indian family planning effort has attributed their lack of success to use of either no specific goals, or the wrong goals, in their own self-evaluation [60]).

Now, the "success" of the present Pakistan Scheme can be looked at in three different ways. First, there is administrative success in meeting the quantitative targets and quotas set in the Scheme. Quite specific quotas are set at the district levels for IUDs to be inserted, number of contraceptives to be distributed, agents to be

appointed, persons trained, and so on. Second, the Scheme aims at disseminating among the general public information about contraception and at creating a greater awareness of family planning. The Scheme, in fact, suggests that people be brought along first to an awareness of desirability of family planning, second to practice through conventional methods and finally to a clinical method, the IUD, vasectomy, or tubeligation. The way of measuring this public awareness is presumably in terms of number of persons actually practising family planning but also in more general terms the attitude of the entire adult population towards the question. The importance of the opinion of mothers, mothers-in-law and other female relatives, who are themselves perhaps past childbearing, on the attitude and the practices of the women still in the fertile ages is well known. Thus, the propaganda must be aimed at them too and the Scheme can measure its success in terms of informational and attitudinal impact on the whole adult population. Third, the Scheme aims at the reduction of the birth rate and this is ultimate "payoff" or success on which the Scheme counts. The course of the fertility rates themselves must be traced if success is to be accurately measured.

Agarwala has termed the distinction between these last two measures as "attitudinal indices" and "resultant indices", a useful distinction which we will adopt [2]. In the former he lists: *a*) knowledge of the possibility of planning families, *b*) knowledge of contraception, *c*) attitude towards contraceptive practices. In the latter, he lists: *a*) number of persons practising contraception and the number of persons sterilized, *b*) pregnancy rate and births rate. To this second group ("resultant indices"), we would follow Freymann, and add: *c*) rate of contraceptive consumption by the public [2].

Let us consider each of these three measures of "success" in detail. Administrative evaluation is a simple matter of checking up to see that reports from lower levels are filled in time and that they reflect adequate progress toward assigned goals. Where these reports are not being filed in time or reflect failure to meet quotas, investigation is called for. These are essentially routine administrative procedures followed in any bureaucracy. Also required (even if only on a sample basis) is checking up to see that the reports filed are accurate.

To some extent the financial incentives scheme is self-checking since in order to claim their 50 per cent rebate on the sale of contraceptives, the distribution agents have to file a statement listing their sales; also the family planning doctors have to keep a register showing names and addresses of the IUD patients. In the case of the latter group, however, some follow-up (on a sample basis) is needed both to eliminate any possibility that IUD payments are being claimed when no insertions actually take place, and also as a clinical follow-up on IUD patients to determine the number and type of medical problems developing.

The "attitudinal indices" of success will involve surveys. To be meaningful these surveys must be drawn up and executed by experts in statistical methods and sampling. They must also be uniform from district to district if the results are to be comparable. For these reasons it seems clear that the surveys must be framed and directed from the Centre or at least the provinces. Logically, the Provincial Evaluation Units should undertake this task, with perhaps analysis of the results being undertaken jointly by the Evaluation Units and the National Research Institute of Family Planning. In any case, it seems clear that the local units, the district or thana councils, cannot be asked to evaluate their own impact. They lack the needed technical skills to do such research and they also lack the objectivity required to get reliable answers. In order to establish benchmark or "before" levels of present knowledge, attitude and practices, these surveys should be launched as soon as possible.

Under "resultant indices" we have suggested that consumption of contraceptives by the public, number of persons practising family planning, and the fertility rates themselves are all possible measures. The first of these is fairly easy to keep track of since the number and type of contraceptives distributed (sold or given away) must be known for administrative reasons. Levels of efficiency in use of contraceptives (particularly the conventionals) vary widely. One hundred condoms used by one couple in a year can provide near-perfect protection against pregnancy or it can provide no protection at all, depending upon the skill of the couples involved. Even more basically, until we know how many couples are involved in consuming the contraceptives we do not in fact know the per couple consumption rate. The distribution of 100 condoms to one couple provides at least the possibility of very good protection. One could also argue that if one couple does in fact use 100 condoms a year there is implied in this very fact considerable consistency and motivation on the part of the couple. However, if 100 condoms have been distributed to 10 couples the protection extended even under optimum-use conditions may be virtually nil. Thus, until one knows the number of couples consuming the supplies distributed one does not have even a clue as to the possible effectiveness of these supplies in reducing births.

In the case of "resultant index", couples practising family planning, there are even more difficulties. Where all the users are clients making regular calls for check-ups (in the case of the IUDs) or for supplies (of conventionals) one can get a rather good estimate of users. However, in a large-scale programme such as the present one in Pakistan, most of the users will be women who have been motivated enough to make one visit to a clinic or a part-time family planning doctor to have an IUD inserted or couples who have been acquainted with some conventional method and who have been led to obtain the contraceptives through the numerous commercial sources established.

The IUD clients are known to begin with at least and it would be possible and desirable (for medical as well as analytical reasons) to follow up a sample of these clients to determine how many remain users after specified time periods. (In others words, how many expulsions and removals occur outside the clinics). Such a sample follow-up will also make it possible to verify the accuracy of the insertion registers maintained by the doctors. That is, it will provide a check on possible fraudulent claims for insertion fees. This would also logically seem a function of the Provincial Evaluation Units.

Conventional users can be estimated only on the basis of surveys of the type already discussed which also probe attitudes and knowledge. Even with such surveys the problem of knowing effectiveness in use is seemingly intractable. For to know that a million couples are "practising" family planning tells nothing about the impact of this on the birth rate until we know with what effectiveness.

Thus, the third of the "resultant indices", the fertility rate as such, is also required if the Scheme is to be evaluated accurately.

Possible measures of the level of fertility include:

- a) births per thousand total population per year ✓
- b) pregnancy prevalence (per cent of fertile females pregnant at some point in time) ✓
- c) births by age of mother (age-specific fertility rates)
- d) births by parity of birth (for the purpose of selecting out the change in the number and per cent of target or high parity births)
- e) birth interval (length of time since last live birth or termination of last pregnancy).

One need not choose among these possibilities since a single survey or one registration system could collect all these data. In terms of refinement of measurement, total births per thousand population is the most crude. Previous changes in fertility and mortality which cause "bulges" or "gaps" in the age distribution can cause marked changes in the crude birth rate which do not reflect any underlying change in fertility. The same may be said of the pregnancy prevalence rate. The per cent of females pregnant may change if the number of females entering the fertile ages falls but this would be a temporary thing and would reflect no change in the completed size of family per female.

The other measures of fertility, which express birth by age of mother and parity, are more precise and less dependent upon extraneous factors. But, they also require more care and trouble for their collection. So also does the birth

interval which, in fact, requires the pregnancy histories of the females. The collection of the fertility histories would be useful for several reasons, however. There is no doubt that pregnancy wastage—foetal loss, due to stillbirths and spontaneous abortions—is presently very high, perhaps as high as 20 per cent of total pregnancies [59, p. 51]. This figure affects the average interval between births by lengthening the time period required for the female to produce a live birth. Since this foetal loss is the target of expanding maternal and child health programmes in Pakistan, there is every reason to think it will be falling over the next five to ten years. As it falls, with no other change in the underlying conditions, the average interval between full-term pregnancies would tend to fall, and the number of births per women over the entire fertile period to rise. Thus, using some measure such as the crude birth rate, one might conclude that the effect of the Family Planning Scheme was to increase the birth rate. Using more precise measures and looking at the detailed fertility histories, one might perhaps realize that average, interval was falling for women who previously had high foetal loss but also perhaps rising for women with little or no foetal loss who had begun practising contraception.

On balance, it seems clear that detailed fertility information is required—not merely numbers of birth, or number of women pregnant, but also births by parity, by age of mother and by previous pregnancy history of mother. Such information requires considerable expertise in sample design and execution. As they are constituted in the Scheme, the Provincial Evaluation Units would seem to have neither the staff nor the funds for such an operation. More properly, it should perhaps be handled by the National Research Institute of Family Planning, which has provision for a demographic section, in cooperation with the Central Statistical Office, the Population Growth Estimation Project, and other such agencies².

Summarizing, one can argue that evaluation should be organized as follows:

- 1) Evaluation of the administrative effectiveness of the Scheme involves
 - a) review of the reports received from the district to see if orders are being followed and quotas met, b) investigation in cases where goals are not being met or where other signs of trouble develop, c) spot-checking to determine the accuracy and honesty of the reports filed by the districts.

² Another approach would be to work within the framework of the existing vital statistics collection network. That is, a sample of primary units (union councils, thanas, or some such) could be selected and special efforts exerted to make more accurate the official registration figures in these areas. This would be a PGE-like approach but would involve a closer collaboration between the official registrars and the surveying agency, be the latter CSO, PGE or the NRIFP directly. For a full description of the theory and functioning of PGE, see [33].

This kind of administrative evaluation is best done by the administrators themselves with help from the provincial evaluation where follow-up investigations are required. Where *b*) involves the need for some studies of a technical sort, the National Research Institute at the Centre and the other specialized institutes in the provinces can be brought into the picture. (For example, if IUD insertions fall short because special bleeding problems develop, the NRIFP should look into this. For sample follow-up on all IUD insertions, the NRIFP and the Research Institutes in the provinces should be employed).

2) Evaluation of the knowledge, attitudes and practices of the public with respect to family planning require sample surveys and these are appropriately a job for the Provincial Evaluation Units. Special studies, such as the effectiveness of various communication media, should be undertaken by the NRIFP.

3) Evaluation of "pay-off" in terms of various fertility measures requires detailed information on fertility by age of mother, parity and previous pregnancy history of mother. This is needed on a fairly detailed basis if the Scheme is to be able to evaluate the impact at the district level. This calls for detailed sampling (or registration) and the Scheme does not seem to have either the expert manpower or the funds to undertake this. They should contact the Central Statistical Office, the Population Growth Estimation or some other such agency to undertake such studies.

Some of these matters have been discussed outside the Scheme document in semi-official papers but no definite statement on evaluation—objectives, duties and responsibilities—has yet emerged [1].

Family Planning Experience in Other Countries

Population control has become more and more important around the world and many countries have adopted policies and programmes of one sort or another. There is thus a record of actual programmes experience on which we can draw in our effort to assess the plan now being implemented in Pakistan.

Bogue, in summarizing the reasons for optimism over "a break-through to control" lists Taiwan, South Korea, Ceylon, and Puerto Rico and smaller-scale "successes" in India and Pakistan [5. p. 449]. There is also, of course, the case of Japan, where great demographic changes have occurred even without an explicit policy by government. Let us look more closely at some of these examples.

In describing the programme in Taiwan, which has succeeded in lowering the birth rate by some 20 per cent in five years (45 to 35), Freedman notes that the socio-economic context in Taiwan was especially favourable. "Not only has there been considerable change in the last decade, but the levels reached in many im-

portant indices of modernization and development are much higher than are found in most other developing high fertility countries" [12, p. 110]. As indices of change he lists: literacy, education, urbanization, non-agricultural employment, newspaper circulation and communications via the mail. He continues: "In each case (except for the per cent living in large cities) it would be possible to demonstrate that the levels attained by 1961 in Taiwan are far higher than the average for most developing high fertility countries. The extremely favourable health and mortality situation is also very relevant. Crude death rates fell slowly but steadily under the Japanese rule from about 33 at the beginning of the century to 19 by 1940-43. After the War there was a rapid fall in mortality with the crude death rate reaching 8 in 1957. Life expectancy is now somewhere between 60 and 65 years. Most parents can now expect all their children to survive to adulthood. This situation has existed in Taiwan for some years now so that there probably is a general awareness of it in the population" [12, p. 111].

Freedman thus attributes much of the success in Taiwan to the fact that considerable modernization had already occurred, including especially a reduction in the death rate which reduced or eliminated the traditional "need" for large number of births per couple³.

In South Korea experience has also been encouraging though not so dramatic as in Taiwan. Literacy and health standards were also quite favourable in this case. The programme is comparatively new in Korea and, from the beginning, has concentrated on clinical devices, particularly the IUD. It has the official sanction of government and works largely through existing health centres. Some 90,000 IUDs were inserted in 1964, the 1965 target was 200,000 and that of 1966 300,000. Keeny, one of the advisers, says: "...from the short experience to date, it seems likely that these targets can be met" [25, p. 4]⁴.

Among the other "successes" cited by Bogue are Ceylon, where the Sweden-Ceylon Family Planning Pilot Project has obtained in one of two study areas an appreciable drop in the birth rate since the programme got underway, 31.2 in 1959 to 21.9 in 1962 [28; 29]. The success in this area contrasts sharply with the unimpressive showing in the other study area however, where the birth rate in 1958 was 34.5 and in 1961, 33.6. The successful area was one in which literacy was high, the death rate low and the average age of females at first marriage already relatively high, 22.1 years. The birth rate for the district containing this area was already well below the national average even before the programme was launched. In the less successful area, on the other hand, literacy was lower, mortality higher and the initial situation much less favourable.

³ Other discussions of the Taiwan case include [13; 48; and 36, pp. 87-98].

⁴ See also [6; and 36, pp. 77-86].

Puerto Rico is also considered to have a successful family planning programme. The programme has been intensively studied from a variety of angles [20]. A recent study summed up: "A steady decline in the death rate has occurred over almost half a century but only since 1945 has the birth rate taken a downward turn. Most if not all of the fertility decline is attributed to the large post-War emigration which has drawn a disproportionate number of women from the reproductive ages. In 1960 the crude birth rate was 31.5, the crude death rate 6.7. The need for fertility control is recognized by government and by many individuals. Puerto Rico has one of the most extensive systems of public and privately sponsored birth control clinics in the world. In addition to other methods, postpartum sterilization is widely available and is an important means of limiting fertility" [62, p. 7]. Literacy, urbanization and other indicators of modernity are also generally favourable in Puerto Rico [36, pp. 43-56].

Field studies in particular areas or villages are also sometimes cited as "successes" and it will be worth a moment to review some of the best known of these⁵.

The Singur study is well known. It covers a group of eight villages in West Bengal, near Calcutta, with a total population of about 7,500. The area is a demonstration city of the All-India Institute of Hygiene and Public Health. It has been described as follows:

In sum, it might be fair to say that this is a reasonably representative rural population in such respects as family size and age of marriage, though somewhat advantaged compared to the rest of West Bengal or of India in occupation, economic status and literacy" [54, p. 3]⁶.

Mortality was also considerably below that of India as a whole and declined further during the experiment. A reduction of the birth rate was accomplished from 42.0 to 36.9 between 1957 and 1961. These results have been summarized as follows:

As the following data show, the decline, though not large, is consistent, and Singur is generally thought to be the first successful effort to lower the the birth rate in such a population through an educational programme. The birth rate did decline in the experimental area a year before the action programme began, but even if the educational effort only hastened a developing trend that in itself is an impressive as well as an important accomplish-

⁵ It can, of course, be debated whether the results of such intensive small-area studies have any relevance for large more extensive programmes. In such pilot studies there is often one full-time worker per 1,000 population or less. Such a ratio is inconceivable for a national programme in a large country.

⁶ See also [54; 61].

ment, especially when viewed against the earlier failures of action programmes using the same contraceptive methods [54, p. 3].

The India-Harvard-Ludhiana Study covered 16 villages in a rural area of Ludhiana District, Punjab Province, north-west India. Total population was about 16,000 in 1960. The initial birth rate was about 40 and the death rate about 20. Females married early (age 16 or thereabout) and had large families. Females were about 90 per cent illiterate and males about 50 per cent. Results were rather disappointing. "The outcome was below the target of project and insufficient to give a significant decline in the birth rate.... there was considerable evidence that actual use was not equivalent to reported use (of contraceptives)" [34, pp. 6 and 25].

Interesting pilot studies have also been undertaken in Pakistan in Dacca (the California Health Education Project) [9], Comilla (The Pakistan Academy for Rural Development) [26], and Lahore (The Medical Social Research Project) [22]. Unfortunately, none of these projects have been able to measure the impact of their family planning efforts in terms of birth rates. (It should be noted in all fairness, they have not seriously attempted to.) Comilla, in particular, has had good success in gaining acceptance of supplies and in eliciting expressions of interest in family planning from the target population [44]. But, as noted above, day-to-day practice may be another matter. In any case, the final results of these studies in terms of birth rate reductions must be considered uncertain.

To the list of "successes" could perhaps now be added Thailand. Within the last year to 18 months pilot family planning projects (emphasizing that IUD) have had considerable success in both urban (Bangkok) [55] and rural (Photharam District) settings [47]. Both programmes have found strong latent interest in family planning on the part of large number of women and found that with no publicity whatsoever, the word of the programme spread from one woman to the next. However, in Thailand as in the other areas reviewed, it would be difficult to characterize the people as truly "backward". Bangkok is a large prosperous, modern city and the clinic there has been drawing on primarily low-income females who for economic reasons have not previously had access to convenient and reliable contraceptive methods. (In other words, the implication can be drawn that middle to upper income females are satisfied with their present contraceptive practice).

Even the rural population shows some considerably "modern" characteristics. Thus, the deaths rate is 12 per thousand (with an infant mortality rate of 95 on the average between 1958 and 1962); 80 of the adult females have completed at least 4 years of schooling; 36 per cent of the households are not in agriculture as a primary pursuit [47, p. 2]; and pregnancy wastage is only 6

per cent of total fertility. Qualitatively, there is the fact that good roads connect Protheram with Bangkok (80 kilometers) and that the district is not in any sense isolated or static [19]. On balance, it is difficult to judge whether Protheram is a "typical" rural district for Thailand or for other Asian countries. The success here is, however, undoubtedly hopeful.

The family planning programme in India, while not listed by Bogue as an example of a "successful" programme, is nevertheless an old, well-established and widely known one. It is also relevant for present purposes since the socio-cultural setting in India and Pakistan have much in common.

The first Planning Commission report in India favourable to birth control appeared in 1952 but it was not before 1956 that the Central Family Planning Board was organized. The Family Planning Directorate was placed under the Central Health Directorate but has had from the outset a good deal of autonomy. As early as the Second Plan period, beginning in 1956, nearly 500 lakh rupees were allocated to the programme [50, appendix]. The programme was closely linked to the maternal and child health programme in both rural and urban areas and at least until very recently has stressed the conventional methods—condoms, foam tablets, and contraceptive jelly. India is a federal political unit and the individual states of the Indian Union have had considerable responsibility for the operation of the programme within their jurisdictions. The degree of effort generated has consequently varied from state to state. Some have pushed beyond the plan and placed more emphasis on clinic methods—particularly vasectomies.

Judgements vary about the achievements of the programme so far. Official statements stress accomplishments such as the creation of a greater sense of awareness by the public of the dangers of too large a family and also more widespread knowledge that something can be done about it. "Sound preparatory" steps are thus said to have been taken in the last decade [51; 36, pp. 13-26]. But as to actual reductions in fertility the achievements are, it seems clear, less impressive.

In terms of long-term objective it can be stated at once that India has not achieved any reduction in its birth rate. . . . All the indications are that no real down-turn in the birth rate has actually occurred and there is no sign that a downturn will occur in the next few years [17, p. 68].

Another recent study of the association between family planning effort (as measured by a variety of indices) and level of birth rates in the various states of the Indian Union has found that there is in fact virtually no association whatsoever. Relatively low-fertility states now were low-fertility states traditionally and varying state effort at family planning seems to have effected the regional fertility patterns very little [11].

A ray of hope may be seen, however, in the fact that fertility reduction has been achieved.... "by the heterogeneous population of Bombay City, where the birth rate.... has gone down to about 27 per 1000 population. The same trend is visible in other urban areas...." [51, p. 1]. More recently good results have also been obtained in the Calcutta area [24]⁷.

Now, from the above review of a wide range of evidence, what general conclusions can be drawn?⁸

First, nearly all the "successes" of family planning, large (Taiwan, Korea, Puerto Rico⁹) or small (Singur, Ceylon) have been in areas where considerable progress towards modernity had already occurred. Typically, death rates in these areas are low (10 or under), female literacy high (50 per cent or over) and education, occupational change, urbanization and such other factors rather far advanced. The studies also indicate that not infrequently the populations concerned were already beginning to practise family planning and that their initial, pre-programme fertility was already declining or at least below unrestricted fertility levels. The introduction of family planning as a policy seems then to have reinforced and accelerated trends already in existence.

Second, there is evidence that in the case of large-scale national family planning programme, conventional contraceptives have not proved the answer. In Taiwan, the "cafeteria approach" (as Freedman calls it) quickly led to the realization that the IUDs were the most favoured method. In Korea an early decision to emphasize the IUD has paid dividends. In Puerto Rico, clinical methods have played a very important role. Even where the socio-economic factors are favourable there appears to be a danger in expecting too high a degree of motivations and persistence on the part of still semi-literate population; and where initial motivation is strong, the IUD or other clinical methods are likely to be preferred from the very outset.

Third, in rural areas lacking any vestige of modernity, the degree of success has been limited. Expression of interest and willingness to accept supplies can not be taken as the same thing as a firm determination to practise birth control.

⁷ The programme has been centred in Hooghly District, West Bengal State. Early results have been encouraging in rural as well as urban areas. However, here too there are signs that the programme is thus far at least tapping the more "enlightened" segments of the population (nearly 60 per cent of the women accepting an IUD are literate compared to overall female literacy of 22 per cent) who are also extremely high parity (nearly two-thirds of the females accepting an IUD have four or more living children). See: [24, p. 8]; also [32].

⁸ Bogue also mentions Hong Kong and Singapore. But since both are wholly urban areas, their relevancy for Pakistan's mainly rural programme is doubtful. Likewise for the programme among low-income groups in the United States. Japan is omitted for the same reasons European countries are omitted: the fertility decline was not due to deliberate government policy.

⁹ For a more detailed review of the major programmes, see: [3;4].

India's population is, according to nearly all surveys, "ready" for family planning yet only in urban areas has the programme become a reality¹⁰.

The Socio-Economic Setting in Pakistan

Returning to Pakistan, the "setting" for family planning would appear to be mostly negative. Mortality according to the Third Plan is still at 29 per thousand and even if this be considered a high estimate it seems clear that it is not much below 20 per thousand. This probably means an infant mortality rate of 150 per thousand live births and that 25 per cent of children born will still die before age 10. At least some of "benefits" of (or need for) high fertility are unfortunately still present. Similarly, education has evidently done little except keep up with population growth in the last ten to fifteen years and female illiteracy is still the almost unvarying rule. Urbanization has proceeded at a relatively rapid rate but the country (and population covered by the plan) is still overwhelmingly rural [18]. In East Pakistan travel and communication within large parts of the rural area are always difficult and virtually impossible several months in of the year. Female seclusion (*purdah*) and male dominance makes it very difficult to reach females in the villages with the family planning message.

This totality of socio-economic-psychological barriers, the combination of poverty, ill-health and deprivation with strong religious and social values in favour of high fertility and strong resistences to any change, probably make the "setting" in Pakistan, one of the most difficult in the world for the successful introduction of a sudden large-scale family planning scheme¹¹. One might say that the Family Planning Scheme in Pakistan represents a good test of whether family planning can take hold in a situation in which the setting is basically adverse. It is also a test of how quickly vigorous, intelligent government policy and leadership can overcome these obstacles. That they must succeed ultimately cannot be doubted.

Summary and Over-view

In sum, what are the strengths and weaknesses of the Family Planning Scheme now being launched in Pakistan?

First, the "setting" is unfavourable. This Scheme represents a good test of whether firm, dedicated government-sponsored action programmes can take hold in a basically unfavourable environment.

¹⁰ Interestingly enough, some commentators on the future of the Indian programme, have begun to stress the importance of working through the socio-economic "setting" variables—literacy, health and the rest. See: [52].

¹¹ On the special problems of cultural resistance in Pakistan, see: Nafis Sadik [36, pp. 33-34]; Study Group C at the Population Quake Seminar in Pakistan in 1964 [37, pp. 59-71]; and Attiya Inayatullah [21, pp. 111 ff.]. Kirk has recently advanced arguments suggesting that Islamic social values as they have developed tend to favour high fertility [30].

Secondly, the emphasis in the Scheme on "non-clinical" methods, conventional contraceptives rather than IUDs, is also at first sight discouraging. The national programmes which have had the greatest success have been ones in which clinical methods came to play the key role in fertility reduction. Except in the relatively small-scale operations in Ceylon, Singur and one or two other places real reduction in fertility through the use of conventional methods have been shown time and again to be very difficult. On the other hand, the Pakistani Scheme does provide for IUD insertions and it is possible that, like the Taiwan case, the demand for IUDs will force a change in the emphasis of the programme as it develops. The IUDs will at least be produced and publicised, and should they "catch on" greater effort be placed into this aspect of the Scheme. The programme should for this as well as other reasons remain flexible, self-critical, and willing to learn by its experience.

Thirdly, evaluation has not been adequately spelled out. Evaluation of the progress of the Scheme must be realistic and must be couched in terms which are meaningful for the ultimate objective of the programme. Reports of the numbers of contraceptives distributed or the number of training courses held are useful but it is essential that from the outset the programme measure itself as successful in terms of fertility reduction as well as in terms of living up to administrative discipline. The Scheme wisely provides for evaluation unit in each province responsible to the Centre, but the budget and staff provided seems unrealistic and the exact responsibilities of these units are not clear in the Scheme.

Fourthly, it can be argued that the Scheme is excessively ambitious. It will require a massive administrative organization and must have the cooperation of a host of public officials at the district, thana (tehsil) and union council levels. The number of professional (whole-time, trained employees of the Scheme) is small and they are likely to be spread thin. One can argue that the Scheme might have been better advised to put its resources more into the urban areas where some of the setting factors are more favourable and where resources could have been concentrated. The possible "demonstration" effect of such programmes might, in the long run, have more impact on the rural areas than a widely diffused national programme[14, p. 3].

Fifthly, the supply apparatus is not adequately detailed. This should probably be a function shared by the Centre and the provinces but one in which a single group (or person) has ultimate authority to act for the entire Scheme.

Sixthly, insufficient attention is given to the whole question of publicity and propaganda. By making the district responsible for most publicity expenditures the Schemes tends to overemphasize posters, printed handouts and the like,

and underemphasize the mass media and in particular radio, cinemas and newspapers. An effective mass media campaign would almost certainly have to be province or division-wide in concept and operation, but there is no provision for the planning or operation of such a plan in the present Scheme.

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