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EVALUATION OF THE  
GE-TEMPO PROJECT

A Report Prepared By:

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AN EVALUATION OF THE GE-TEMPO PROJECT FOR  
POPULATION/ECONOMIC GROWTH ANALYSIS AND PRESENTATION

Introduction

The evaluation of the GE-TEMPO project has been an unusual one. The scope of the project is diverse, involving three contracts and six task orders; the technical output is great; and the number of countries where GE-TEMPO has been involved is considerable.

The GE-TEMPO project was started in 1968 with the principal objective of developing an economic-demographic model suitable for developing countries. The original single sector model, referred to as TEMPO I, was augmented in 1971 by a more sophisticated construct termed the Human Resources and Budget Allocation Model, or TEMPO II. Both models serve to assist development planners in integrating population implications into national and sectoral planning.

The purpose of the project was modified over time. The earlier emphasis to "expand and improve the view of population growth as a policy variable in carrying out LDC macro-economic development analysis and planning" has led to refinement of development models for country applications. In the most recent PROP (December 1974), the purpose has been restated to "establish institutionalized capacity, in Goal Two priority countries, to carry out economic-demographic analysis of development policy and planning issues". The focus here is in developing an institution to serve within each priority country as an authoritative source of economic-demographic analysis of development issues for that country. As to studies undertaken, the stage has been reached where fewer theoretical constructs are needed. More attention is being paid to micro-economic considerations, for testing hypothesis in the field, and for application of earlier developmental work on actual country situations.

Through FY 75, slightly over \$3 million in AID funding has been obligated for the three GE-TEMPO contracts, including six Task Orders. The summary of dates for these contracts and Task Orders and of their respective costs are shown below.

AID Contracts/Task Orders and Summary History

<u>Contract Number</u>	<u>Effective Date</u>	<u>Expiration Date</u>	<u>Input (x\$000)</u>
csd-1936	6-25-68	8-25-69	\$134
csd-2611	4-01-70	12-29-74	2109
C-1081	12-30-74	11-30-75	<u>767</u>
Total thru FY 75			\$3010

Task Orders under csd-2611

<u>Task Orders</u>	<u>Began</u>	<u>Ended</u>	<u>Input (x\$000)</u>
#1	6-70	12-71	\$ 162
#2	6-70	11-70	60
#3	6-71	10-74	824
#4	6-71	10-72	155
#5	6-72	8-73	265
#6	7-73	12-74	<u>643</u>
TOTAL			\$2109

General Approach

The first month of this evaluation was spent interviewing all available members of the GE-TEMPO group. These included Richard Brown, Henry Cole, Ramon Daubon, John Palmisano, John Turner, and Douglas Maxwell. Although no longer involved on the project, William McFarland and David Holmes, both of whom have had major responsibilities and extensive experience with the project, contributed valuable insights and perspectives. GE-TEMPO staff members extended the fullest cooperation and courtesy. All members are of high professional competence as attested by the quality of the various reports and publications which have been produced.

A project, particularly one as extensive as GE-TEMPO, cannot be evaluated in isolation. The degree of success or usefulness of the project is affected by the ability to coordinate with and receive support from both host country and AID officials. The relevance of the project must be placed in the context of both overall AID assistance efforts and strategy and of specific AID-sponsored country activities. An understanding of what constitutes host country goals and priorities is also needed. Project success is also affected by problems of coordination and guidance between home and field operations, and between the field and Washington based Contractor and AID personnel. The relationship between the host country counterparts and other key officials of government is also very important.

Given the time constraints for this evaluation, it has not been possible to visit host country officials. Colombia and Venezuela have been suggested as two countries where GE-TEMPO's efforts have been most extensive and where indications of their impact would more likely occur. Actual field visits not being possible, views were solicited from AID officials having direct knowledge about overseas population operations. In addition to discussions with Carl Hemmer and other members of the Population Policy Division, insights and opinions were drawn from James Brackett, Charles Johnson, Louis Gardella and Clay Miracle. The last three persons named have responsibility for directing population activities in Latin America and Africa and are familiar with the views and operational problems of Population Officers in those areas.

As a result of discussions with both contract and AID personnel, plus a careful review of the project files and of GE-TEMPO publications, a number of strengths and weaknesses of the project emerged. An assessment of these is reflected in the recommendations which follow.

## I. NATURE OF SERVICES OFFERED AND TECHNICAL ADEQUACY

The four main services which GE-TEMPO is prepared to offer are: (1) country studies and intensive economic-demographic analysis of country or regional development issues; (2) consultant services to host country and AID officials; (3) training in demographic economics primarily through use of DEMOS (Demographic-Economic Models of Society); and (4) staff studies designed to provide additional educational materials in furtherance of outputs 1-3 through directed in-house research.

### A. Country Studies.

1. Model Development-TEMPO I. A series of computer projection models have been developed by GE-TEMPO over the span of the project. Under the first contract in 1968, an economic-demographic model was constructed to explore the relationship between demographic change and economic development. This model, now termed TEMPO I, was first formulated by Stephen Enke and Richard Zind in 1967 with a computer program and write-up developed by William McFarland in 1968. A set of social sectors were added by McFarland in 1969 and the model has remained essentially unchanged since that time.

The claim is made by GE-TEMPO, in The TEMPO Models As A Basis For Development Planning, that TEMPO I has been applied to 30 countries on five continents. Some of the applications are fairly limited since GE-TEMPO's own documentation (Survey of TEMPO Economic-Demographic Studies - July 1974) lists only 19 countries, and five of these countries list no TEMPO participants.

What is important is that TEMPO I is a simple, yet adequate, model to demonstrate the importance of demographic variables in development planning. The contractor has stated, "Though the model was at first used basically as a means of emphasizing the positive effects of fertility decline, it is now used for highlighting the importance of demographic factors in the long-term planning processes of a broad class of less developed countries." TEMPO I has also helped in the evolution of more country-specific models (as has TEMPO II). Materials based on TEMPO I have been prepared to produce an inter-active computer program and manual to be used in teaching the demographic effects on economic and sector development. (DEMOS).

In getting countries to more explicitly recognize the consequences of population growth in the planning process, there is still need to produce materials which will bring about a real sense of population awareness. Frequently such materials produce a kind of surface awareness which may cause persons to view the future with alarm. How useful this concern may be without a better understanding of the factors and relationships that cause these consequences is questionable. TEMPO I, if properly used, can be very useful in bringing about this needed understanding.

It is suggested here that on future "selling" trips to LDC's, country-specific materials generated by GE-TEMPO be more widely employed. The TEMPO models are well designed, the data produced is of adequate precision, and the construction employed is methodologically correct. The limits of TEMPO I, because it is highly aggregated and somewhat oversimplified, are also its strengths since basic demographic-economic interactions can be demonstrated without being obscured by undue model complexity.

TEMPO I, however, is also a teaching model and the results produced for country presentations are consistent with those produced by DEMOS. This is an important link, because no real consideration to demographic factors in planning can be given without provision of trained personnel in various ministries of government, particularly in those agencies for which population and population growth has the greatest impact. An awareness presentation using TEMPO materials can serve as a means of initiating training through DEMOS. Those persons receiving instruction in demographic-economic relationships through DEMOS can, in turn, help influence those in more direct policy or planning capacities.

It may be appropriate at this point to enter a minor caveat about the use of TEMPO I, or any other demographic-economic model. In some countries, there have been adverse reactions to overselling the economic benefits derived from fertility reduction. As the former director of GE-TEMPO, Stephen Enke was probably the chief advocate of this approach. His writings have been credited with inspiring the statement in President Johnson's State of the Union Message in 1965 that investment in birth reduction programs would be 100 times more effective in increasing per capita income than the usual type of investment. While not denying the basic thrust of such arguments, overstating claims of this sort have hurt the credibility of the argument of advancing economic progress through the curtailment of births.

Some of the simplified assumptions and somewhat biased parameter estimates (very low value of marginal product compared to average product; probably substantial under-estimation of the costs of a prevented birth) have been or can be overcome in the present TEMPO I and TEMPO II models. There is now sufficient sophistication to recognize that family planning programs do not initiate fertility declines, but are more likely to accelerate the fertility decline already taking place. The TEMPO models have tended to assume that fertility would remain high and constant in the absence of organized fertility reduction programs with the consequence that benefits accruing to slower population growth rates may have been overestimated.

In any case, there is a danger in trying to oversell the idea that population alone is the critical factor in development. This contention was thoroughly rejected by a majority of developing countries at the World Population Conference at Bucharest in 1974. AID has been charged with attempting to foster development primarily with the idea that adoption of effective fertility reduction programs alone will help bring about economic progress. This ignores the continuing need for economic and technical assistance, and LDC's are unlikely to buy the argument of fertility control if other needed inputs to development are ignored.

Given these limitations to the use of economic models, prudent and appropriate use of TEMPO models and materials can still be made in highlighting awareness about population problems. It is important that the consequences of population growth on social and economic development be clearly demonstrated as a major justification for incorporating demographic factors into national and sectoral planning, and of undertaking large-scale family planning efforts.

TEMPO I is, on balance, better fitted for such purposes and, because it is an integral part of DEMOS, is well suited for training both third country and AID personnel.

2. Model Development-TEMPO I. The TEMPO II model, also referred to as the Human Resources Budget Allocation Model, was developed by Enke, Bennett, and Brown in 1971, with additional documentation by McFarland. Some ten applications of TEMPO II are claimed for the model with additional modifications noted for Peru, Venezuela, and Colombia.

Several of the shortcomings of TEMPO I have been overcome in TEMPO II, principally by: 1) provision of an explicit public sector; 2) feedbacks from the government education and family planning programs into the model; and 3) disaggregation of the economy into rural subsistence and urban (modern) sectors. Other kinds of sectoral disaggregation have been attempted with varying degrees of success. There are problems of clearly identifying sectors and obtaining appropriate data; nevertheless, TEMPO II makes possible some sectoral analysis previously not possible. TEMPO II is also considerably easier to modify both in regards to options desired in the computer program and changes in formats, variables, and parameters.

As described by GE-TEMPO (Cole, Brown 1975), the purpose of TEMPO II is quite different from TEMPO I. The two major uses of TEMPO I are "to show that fertility decline increases growth in per capita income of LDC's under a wide variety of circumstances" and to provide "instruction of economic-demographic interaction". The purpose of TEMPO II is "to make available a flexible tool of analysis which mid-level government planners in developing countries can use to study the long-range, country-specific implications of economic-demographic interactions."

The emphasis of TEMPO II is on long run implications of rapid population growth and on long range tradeoffs between investment in physical capital and human resources, and consumption by various sectors of the economy. While marking an advance in sophistication over TEMPO I, there are a number of factors operating which tend to reduce its usefulness.

Political decisions are primarily made in the short-run. AID, too, is under pressure to demonstrate accomplishment of objectives within a reasonably short period of time. While it is true, of course, that the effects of changes in fertility become increasingly important over time, the results of models showing these effects are harder to translate into shorter-term policy.

A principal objective of AID is to demonstrate the implications of population growth for development. The explicit recognition of demographic factors can greatly improve the quality of the planning process. This improvement in development planning, desirable as it may be, is nonetheless secondary to the purpose of

encouraging and supporting population policies and activities designed to reduce the rates of population growth. The more elaborate the model, and the more emphasis given to development planning, the less supportable the activity becomes in terms of AID objectives and goals.

This is not to say that TEMPO II cannot be appropriately used. It is simply that sufficient cognizance should be given to the fact that the funding that AID is supplying is for population activities. GE-TEMPO has suggested four possible policy areas for which TEMPO II can be applied: fertility control, employment, education, and urban vs. rural development. All these have major population components. Each of these policy areas, probably in descending order, are of interest to AID, but again primarily insofar as implications in each of these areas can support or encourage programs aimed at reducing excessive population growth.

3. Applications to Specific Countries. Attempts to modify TEMPO I or TEMPO II models to better fit specific country situations have been somewhat less than successful. The effort in Venezuela took so long that the values of many of the parameters and coefficients were questionable by time of completion. The most ambitious model, SERES, developed cooperatively with the Corporacion Centro Regional de Poblacion (CCRP) in Colombia, is believed by some to be more sophisticated than can be supported by the quality and adequacy of the data which is available. Colombia, whose central statistical agency has benefitted from AID project assistance, is better than many countries in providing adequate data. Many other countries of interest, particularly those in Africa, are not near the stage of development that can properly utilize models such as TEMPO II.

The conclusion that the further development of macro-economic or social models is not warranted has already been adopted by GE-TEMPO. Within the context of appropriate applications, however, some suggestions can be made to increase the acceptance and utilization of both TEMPO I and TEMPO II.

Certainly all attempts of "selling" the demographic-economic approach should be based on specific country data. Agreement should be secured with host country officials about which data should be used. Country data should be obtained from the International Statistics Program Center (ISPC) which will normally represent the

best informed opinion of adequate data. If there are indications that a particular country prefers to use its own census or vital statistics data, then such data should be utilized. Before any preliminary country population impact statement is prepared, it is highly desirable that country source data, especially if used officially, be obtained by GE-TEMPO.

If for anything other than preliminary or exploratory purposes, collaboration of appropriate host country personnel is indicated. If at all possible, projections and production of data should be done on-site with host country facilities. Many times there will be programming problems or difficulties in gaining access to computer facilities. These considerations notwithstanding, it is strongly urged that all processing be done in the host country. Anyone who has been associated with KAP surveys or census projects can attest to the unsatisfactory situation of long delays and problems of communications because of lack of feedback and of having to wait for periodic visits. Developing the capability of being able to prepare population projections and being able to determine their impact on economic and social indicators is far more important than the assessment itself. The need to create institutional capabilities and encourage the growth of local resources should definitely outweigh the convenience of easier preparation at the home office. There is great training value in having host country personnel perform all data gathering and processing which is lost if the projections are done for them in Washington.

The writing of country reports on the consequences of population growth on development should be as non-technical as possible. It is far more desirable to have host country personnel take the lead responsibility for the preparation of studies. If possible, reports should be written in the language of the country. Even a very good translation from English seldom approaches the style and mode of expression in the vernacular. Attempts to translate reports from Spanish or French to good English without using stilted or awkward phrasing is extremely difficult, as those who have attempted this can attest.

The quality of some of the GE-TEMPO country reports is disappointing. The first major effort was Declining Birth Rates in Chile: Their Effects On Output, Education, Health, and Housing, (1971). The conclusions of this study are that GNP is relatively unaffected by fertility changes, but that expenditures

in both absolute and proportionate amounts for education, health, and housing decline with greater degrees of fertility reduction. All this is nicely summed up on one table. The conclusions are not particularly remarkable, they confirm what numerous studies have concluded since the classic Coale-Hoover study of India in 1958. What seems unfortunate is not that results were obtained as expected, but that virtually nothing was included to translate these findings into operationally useful policy. Will slower population growth promote increased enrollment ratios? How may this affect unemployment and underemployment? What sectoral changes is this likely to encourage? In what ways may this affect wage rates, imports, and the use of more capital-intensive technology? How are manpower needs for health and education affected?

The country study titled Disaggregation of Urban Populations into Modern and Traditional Categories: A Methodological Note and Application to Venezuela (1974) is essentially a paper on methodology--how to disaggregate an urban population into a modern sector (low fertility; high productivity) and a traditional sector (high fertility; low productivity).

There are problems of definition and identification of working age populations. It is presumed that age-specific activity rates and age-specific sex ratios are known. Certain cut-off points are made based on the estimated percentage of males having six or more years of schooling and classifying occupational subgroups above and below this point as "modern" or "traditional". Little empirical evidence is given to support these assumptions and the values derived cannot be used in other countries without additional supportive data.

Even if all the assumption and data could be fully justified, the Venezuelan study remains of little direct value in furthering AID aims and objectives in the population area. The paper is a study of manpower and it concludes that 26 per cent of the urban male labor force in Venezuela is in the modern sector according to the education approach, as contrasted to 45 per cent using the occupational approach. The best estimate probably lies somewhere in between. The point, however, is what, if any, implications for population policy does development of such a methodology have for AID or for the host country.

In general, as far as "country studies" are concerned, several basic recommendations can be made. First, make such studies real applications and not a theoretical exposition where a country "application" is added as a

means of providing face validity. Secondly, "application" should be taken beyond determining certain data estimates. This is not application. What is needed is to estimate certain key demographic factors and assess their impact on economic and social development. Third, make sure that a study is relevant to perceived needs, both in terms of AID and a specific country. Disguised manpower studies, unless they can be tied with operational population policy, should not be supported. Fourth, country studies should include local collaboration. Lack of LDC involvement means that the insights of those most knowledgeable about country conditions are not included, with the result that the study is likely to be less valid and complete. The failure to experience first hand local conditions and to involve country officials is detrimental to acceptance of the findings within the country. Fifth, many of the studies are overly academic, even when host country officials are involved. A persistent problem is identifying in advance the purpose of the study and for whom the study is intended. If the results of the study are to convince decision makers to adopt certain policies, there is a need to simplify and make explicitly clear the findings of the study. Perhaps what is needed in certain cases are two versions of a report; i.e., one for decision makers (and for the general public), and one for economists and demographers who wish to have a technical discussion of the study.

B. Consultant Services.

Two lists were provided by GE-TEMPO concerning consultant services. These listings cover the period from mid-1972 onward and do not include the many other services provided prior to this date. Included in these listings are 23 presentations to USAID personnel and 46 meetings, discussions, or comments provided in "support of AID Washington and AID Missions". These efforts are commendable and worthwhile. They include DEMOS demonstrations, presentation of materials, arrangements with international groups and missions on use of GE-TEMPO, attendance at seminars, and provision of technical supports.

The listings do not include short term consultant services to host country officials, although this is implicit in some of the discussions and presentations. Added to this are the longer term collaborative efforts involved in specific country studies and projects. It is difficult, of course, to respond directly to requests from LDC's because of the need for establishing working

relationships and the laying of necessary groundwork, usually through AID Mission auspices. Indications in the past year of a more active role by both AID and GE-TEMPO to inaugurate new population-economic projects are encouraging and should result in greater utilization of consultant services in the LDC's.

C. Training.

The issuance of the DEMOS Manual in mid-1974 represents perhaps the most important contribution that has been made to the population field by GE-TEMPO. The development of DEMOS is an outgrowth of earlier efforts, notably Calculating the Benefit of Slower Population Growth: A Short Method and Workbook (1970). Both manuals are based on the TEMPO I model, with the earlier publication designed to be used primarily with a desk calculator. The amount of time needed to perform projections without the assistance of a computer was found to be too time consuming for widespread use, so a wholly computerbased instruction manual was developed, DEMOS. It is still too early to assess the impact of this Manual on teaching demographic-economic relationships, but potentially there should be considerable demand for its application, especially in LDC's.

DEMOS is not a course of instruction in demography, although its materials could well be integrated into such a course. It does not cover historical background, the demographic transition, or some other concepts and measurements. DEMOS focuses instead on projection techniques and how future demographic developments have impact on the socioeconomic context of policy making. An understanding of these inter-relationships is vital for all those concerned with planning and policy making responsibilities, whether in AID or the developing countries.

The materials are well prepared and are exceptionally relevant to the objectives of furthering socio-economic development. There is a general paucity of material in demographic-economics and the preparation of this comprehensive, policy oriented system of instruction has high operational applicability. The first two chapters of the DEMOS Manual, Introduction To Population Projection And Analyses, and Age-Sex Composition And The Demographic Future, give a good understanding of the dimensions of the population problem--absolute size, rate of growth, and momentum. For officials whose time is limited, but who wish to gain a real understanding of the demographic consequences of population growth, even this limited usage of DEMOS is very effective.

PARTS II and III of the DEMOS Manual deal with education and manpower, and with relating demographic change to economic development and public expenditures. Of priority interest in most LDC's are the chapters on the impact of demographic change on the demand for education, and its effects on labor force and unemployment. A description of an aggregate economic model is given (TEMPO I) which measures the effects of fertility on various measures of economic activity, such as, gross national product, labor force and employment, capital, consumption, and investment. Other modifications of the model cover government expenditures and tradeoffs within the government budget.

The importance of DEMOS, and of the whole TEMPO demographic-economic approach, lies in the fact that the adverse impact of excessive population growth on economic development can be readily demonstrated. A knowledge of why this is so and in what ways demographic changes affect economic and social development is essential in implementing national population policies aimed at reducing rates of population growth. Demographic-economic studies, when applied to specific countries, constitute an extremely persuasive and effective argument for initiating or increasing government actions to adopt programs of fertility control.

DEMOS not only provide this basic understanding of demographic and economic relationships, but equips LDC officials with the methods and materials to incorporate population implications into national planning.

#### Staff Studies.

GE-TEMPO has produced a number of in-house studies on population related issues which do not specifically tie-in with any specific country or countries. Many of these studies are technically sophisticated and make real contributions to the field of demographic-economics. Several of these same studies in their present form are of limited usefulness to developing countries. It is suggested that further support for general population research should be made conditional on overcoming certain major difficulties in the strategy and approach of most GE-TEMPO in-house studies.

The first difficulty is in the choice of topic. Most topics have some relevance to developing countries; many, however, have only marginal usefulness for operational application. Part of this may stem from

lack of understanding by GE-TEMPO on the aims and objectives of AID population policy. More basic is a lack of knowledge by GE-TEMPO personnel of planning and developmental processes in LDC's. The assumptions underlying some of these studies are so artificial as to have little resemblance to reality. Later studies have improved in this respect, although a number of highly academic reports were issued even in 1974.

As an example of a study with great potential, but with disappointing results, is Old Age Insurance with Fewer Children (1972). The potential usefulness of the report is in devising five possible birth control strategies that might be adopted to accelerate economic growth while maintaining a high probability of old age support by surviving sons. The assumptions, however, are very artificial--postponement of marriage age for 2 1/2 years; extended contraception following birth of a son; sterilization once the desired number of sons for old age insurance is obtained. The action of people cannot be regulated in this fashion, for if people could be made to follow the prescribed assumptions that country would be so well-informed and orderly that the situation of excess rates of population growth would not have arisen in the first place.

Studies such as these are sometimes one-dimensional on concentrating on economic effects to the virtual exclusion of other factors. There are, for example, several writings on the risks involved in determining sex prior to birth and of preference for male babies. Practicing contraception or sterilization following a male birth, as suggested in the GE-TEMPO study, will raise the sex ratio in a given country. A greater proportion of males may result in higher levels of aggression or violence. The probability of a greater number of males being unable to find mates may increase the incidence of homosexuality. There are several other social and behavioral aspects relating to imbalance of the sexes which can also be cited. The point, however, is that little or no cognizance is given in most GE-TEMPO reports that such factors even exist.

Even those studies which devise strategies which have operational implications for population policy efforts being supported by AID and LDC's do not make an assessment of the feasibility of adopting such strategies. Findings should be translated into proposed population policies, but an assessment of feasibility from the political, administrative, and cultural points of view should be

included. If GE-TEMPO staff members lack informed knowledge of other dimensions of the development process, it is even more important that close collaboration with host country officials be enlisted. Failure to do so well tend to result in reports that are excessively academic and of marginal value to developing countries.

Several other studies are also deficient in failing to suggest how specific ideas can be operationally applied. Examples of this sort are Cost Analysis of Family Planning Systems or Economic Incentives: A Strategy for Family Planning Programs. Some of the material is very good, but too little attempt is made to bridge the theoretical observations with country operational programs. The value of these studies could be much enhanced if their findings or recommendations were assessed in terms of feasibility for specific countries or groups of countries.

Either the material produced by GE-TEMPO has application or it does not. If it is assumed that it does, then GE-TEMPO in conjunction with appropriate AID personnel should try to make practical applications. A first step would be to explicitly direct these studies toward host country personnel. Virtually all writing is directed at Americans and, in particular, American economists. LDC personnel are most always referred to in the third person, an approach which is resented by host country personnel because of its patronizing attitude. The tone of most reports, with the implied superiority of the "enlightened experts", is certainly not conducive to informing or persuading host country officials.

Again, the suggestion is strongly made to involve the collaboration of host country personnel in applying the findings of these studies. Even so, most reports could benefit from someone assigned the function and possessing the talents of a good editor. It does not matter how technically well written a study is if no one understands what the study is about.

An example is the sentence on page 2 from Population Growth and Economic Growth (Keeley, 1974). "When the capital-labor ratio times the rate of population growth equals savings per laborer, there is no change in the capital-labor ration since  $k=0$ , and when an economy reaches the point it is in a steady state, stable equilibrium, and output, capital and labor all grow at the same rate  $n$ , the rate of growth of labor." Another example appears on page 9. "Since the elasticity of  $d$

( $d=P/L$ ) with respect to  $n$  is greater than zero for a rapidly growing population with a relatively short life expectancy, assuming  $(1 + \epsilon) < 1$ , implies that  $EY^*IE_n < 0$  and  $|EY^*/E_n|$  is considerably larger the greater either  $\xi_1$  or  $\xi_2$ . However, since the fraction saved changes, consumption per worker would rise only if the economy's saving rate were less than the golden rule rate, which is often the case in LDC's."

The intent is not to belittle this particular study, as innumerable citations could be made of far worse examples of unintelligibility from some of the other reports. The point is, however, that many studies are deficient because: 1) topics have little or no relevance to LDC situations, 2) the intended purpose of the report has not been defined, 3) the language is much too technical and "jargon laden", and 4) the approach is not appropriate for LDC personnel.

GE-TEMPO has furnished a list of papers and publications prepared by members of the Population Studies Group. (See Appendix A) (Included in this group are Spanish and French translations of certain studies). The remainder are primary "spin-off" articles which have been submitted to various professional journals for publication. Some studies have been rewritten and with slight variation in content have been sent to one or more periodicals for publication.

This is not to condemn all such practices. But it is necessary to demarcate just what studies and publications are in direct fulfillment of AID-funded objectives and purposes and not to claim credit for work which is only incidental to these purposes. Perhaps what should be more roundly condemned is the undue emphasis of "publish or perish" so prevalent in academia. Despite the tendency for triviality, fragmentation of thought, widespread collusion (especially in co-authored articles), publication credit is still avidly sought by most persons seeking academic credentials. What is clear is that the desire of staff members to get publication credit has not always worked in the best interests of the project. When dealing with persons in the host countries, the key benefit should be the acceptance of concepts or ideas. It is much more in the interest of both AID and host countries to allow local personnel to receive primary credit, even if the work is largely the result of American efforts. Even if it is not feasible to involve local participation, a low profile by Americans is still generally a better strategy for acceptance.

These comments should not be construed by anyone as not recognizing the need for professional development and growth. A rigid insistence on "relevance" may not produce the best results. On balance, however, greater emphasis can be given to studies more in line with AID aims and objectives without sacrificing the ability to be "professionally academic."

As a major recommendation, written approval of in-house studies to be undertaken by GE-TEMPO should be secured from the Population Policy Division before any substantive work be undertaken. Probably half of the studies produced are almost totally academic with little or no relevance to AID objectives or policies. It should not be the function of an AID-funded contract to underwrite studies of this sort.

## II. SUMMARY OF RECOMMENDATIONS

Many of these recommendations have previously been recognized by GE-TEMPO and changes have already been adopted. Other recommendations may involve AID rather than TEMPO actions.

1. Concentrate on country studies.
  - a. Make such studies real applications and relevant to perceived needs.
  - b. Define the purpose of the study and for whom the study is intended.
  - c. Devise strategies which have operational implications for population policy efforts being supported by AID and LDC's.
  - d. In certain cases, issue two versions of a report--one non-technical for those whom one is trying to influence and one for those who wish to have a technical explanation.
2. Prepare a non-technical "selling" document to inform AID Missions and potential LDC users of the availability and uses of GE-TEMPO services.
  - a. Employ country-specific materials.
  - b. Do not oversell economic claims for reducing fertility.
  - c. Make sure services support AID objectives and goals.
3. Increase GE-TEMPO contacts with AID and with international organizations dealing with population matters in LDC.
  - a. Increase number and time of staff in field.
  - b. Utilize others more effectively to serve as sources of information.
4. Accelerate movement of TEMPO research to micro and sectoral studies.
  - a. Macro models are frequently not supportable by level of available statistics and data.
  - b. Micro studies are more effective in persuading family decision making.

5. Encourage use of DEMOS computer-assisted learning system: install at cooperating LDC institutions.
  - a. Key to training personnel affected by demographic economic implications.
  - b. Helps institutionalize the importance of population considerations to development.
  - c. Can lead to requests for other types of planning assistance, especially country applications.
6. Require AID/PPD approval for staff studies undertaken.
  - a. Choice of topic needs to be relevant.
  - b. Should be able to have operational implications.
  - c. Need to be in accord with AID aims and objectives.
7. Involve local LDC personnel to a greater degree in project actions and direct studies explicitly to needs of LDC officials.
  - a. Acceptance greater, good training value.
  - b. Better insights due to knowledge of local conditions.
  - c. Do most computer processing on site.
  - d. Get agreement on country source data.
  - e. Write report in local language, if possible, rather than by translation.
8. Employ or assign editing responsibility for preparation of materials.
  - a. Special care needed for clarity and simplicity of presentation.

Appendix A

TEMPO  
POPULATION STUDIES

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P. Anglim	Some Political Aspects of Educational Policy in Africa
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