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MACRO PLANNING UNDER DATA CONSTRAINTS:
Some reflections on recent experience
in Tanzania and Uganda

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*Assumptions about nature of planning
model & planning/data requirements*

".... the Second Plan document is very different from the First. It is much more a statement of strategy and its projections into the future are not always as precise. This does not mean that we have made no forecasts; planning is impossible without them. But the general targets and forecasts are given as a basis for a continual process of progress assessment; they will enable necessary adjustments throughout the economy to meet particular changes."

p. ix.

(from President Nyerere's introduction to Tanzania's Second Five Year Plan).

Macro-Planning; The Consciousness^I of Failure.

To argue that macro planning in the absence of dependable micro and macro data is logically impossible and practically counter-productive has become fashionable. In part, this represents a reaction to "pseudo planning" and unsuccessful serious planning, in part of a liberal reaction against planning (and a fortiori planned economies), and in part an academic distaste for the inelegance and imprecision which necessarily characterise operational macro planning under data constraints. Certainly macro planning has often been a cover for inaction, a force for bureaucratic elitism, sometimes arcanelly elegant at the expense of real content, at others slipshod and careless, and so vague - even when broadly correct - as to have little operational significance. To discuss the reasons for failures in macro-economic planning would require consideration of the political and administrative context even more than technical economic questions. This paper attempts nothing so ambitious. It is concerned with the more narrow question of what the professional economist could contribute, when other conditions are favourable, through macro-economic planning when data are scarce, their availability greatly lagged and subject to substantial margins of inaccuracy, and professional planning staff are few and hard-pressed.

The Real Nature of Operational Planning

This paper attempts to offer some possible answers to this question,

drawing on the experience of macro-planning in Uganda and Tanzania, in recent years. While concentrating on the data problems which are the subject of this conference, we do not claim that the quantitative and professional aspects of planning are the most important, but neither are they irrelevant.

Macro-planning is not the construction of sophisticated econometric models; whether these have a place in it depends on their potential operationality and reliability. Nor is macro-planning purely quantitative - policies and programmes, social goals and economic interactions contain elements which have defied acceptable and operational quantification in any circumstances.

Determining strategic areas for action (e.g. secondary and higher education development), and critical linkages (e.g. a forestry based complex), using tools which are inherently macro-economic (e.g. foreign exchange budgeting), redirecting efforts in appropriate areas (whether by altering agricultural prices or by encouraging and supporting "ujamaa village" ⁽¹⁾ creation), may not require econometric growth models; ^{but} they do require an understanding of political and economic forces, and technical factors, many of which are presentable in numerical form. The effects of many policies, of course, are not quantifiable and must be studied qualitatively. ^(By whom? electoral plans) One important judgment will be of the areas where quantitative work is inappropriate. To say of a plan that it was elegant and consistent but had errors in its assumptions is a very different, and more damning, judgment than the same comment on a ^{theoretical} growth model. However, inadequate and approximate data can be useful if some reliance can be placed on orders of magnitude and directions of change.

Macro-economic planning is much more than writing a plan or even a series of five year, annual, or sectoral plans. Planning is an ongoing process beginning with a rough draft of aims and main means and proceeding by iteration and aggregation to a coherent and consistent set of policy, programme, and project instruments

designed to attain the (now refined and interrelated) aims. It is this which appears as a Plan. In conditions of inadequate data, insufficient personnel, and uncertainty, completion and revision of the Plan must inevitably continue during implementation. Plans - including annual operating plans - provide occasions for bringing together and organising what is known, identifying strategic decisions, critical bottlenecks, and important inter-relationship and for producing an operating agenda - for policies and programmes as well as projects - so as to maintain an overall course while undertaking detailed revisions. The occasions of plan drafting are times during which macro planning is particularly important.

This is exactly what the better quality models try to do.

At least six roles can be served by macro-planning:

(1) Formulation itself is a learning process, both for the planners themselves (defined as all those taking a sustained interest in plan formulation, not merely the technical staff of the Planning Ministry) and also for larger groups in the society.

Identification of objectives & priorities

(2) An overall framework is necessary to permit sensible allocation of resources and to allow implementation adjustments to be made in a coherent way. In principle, a set of policies and projects chosen at the micro level and cross checked against each other without an overt macro framework might be optimal if the planner's projection of exogenous events (including new data) were 100% correct, but it would prove impossible to alter in the face of changed conditions without either recreating the formulation stage in its entirety or facing a serious loss of consistency and efficiency from ad hoc adjustments.

(3) Macro planning allows the fitting together of micro data and, sometimes, the filling of gaps by more reasoned estimation or extrapolation than would otherwise be possible. Incomplete national accounts, for example, can on occasion be manipulated to give approximations of missing data.

(4) Projections (and cross checks among projections for consistency with each other, with the plausible, and with the recent past) are

needed for a number of aggregate series (e. g. foreign exchange availability, consumer manufactured goods imports, personal consumption of manufactured goods, domestic value added and output of manufactured goods). Even when these could be produced by adding micro data the result would be a macro projection. Testing against related aggregate projections would necessarily involve macro forecasting and analysis. For example, in formulating the Tanzanian Second Plan the projections of personal consumption, imports of consumer manufactured goods, and domestic consumer manufactured goods output were cross checked to see whether personal consumption, foreign exchange, and industrial output targets were consistent. These tests would not have been carried out, except as part of the projection side of macro planning.

(5) Macro planning during formulation provides an opportunity to identify strategic issues ^{and major investment projects} which are of a magnitude, a time scale, and an inter-sectoral nature, rendering them unsuitable for micro planning identification. ^x Proposals for studying the potential power output of Stiegler's Gorge and the Liganga iron and coal deposits as a basis for a new industrial growth pole, and for a major industrial strategy commission to formulate a long term approach to industrialisation derived from the macro planning work on the Second Tanzanian Plan. Similarly, the wages and incomes policies ⁱⁿ proposed the 1966-1971 Uganda Plan and the proposals of the Tanzania Government Paper on Wages and Incomes Policy (1967) were set in a macro framework.]

(6) During implementation macro-planning is required not simply to keep check on the limits of the possible, but also to co-ordinate the alterations made at micro level to accord with these limits. The lack of adequate implementational macro planning in Uganda after 1966 clearly played a part in allowing resource gaps and public sector deficits to escalate dangerously.

The Nature of the Planning Task. II

If macro-economic planning is considered in these terms, what are the major data handicaps confronting practitioners? The examples of Uganda and Tanzania are chosen for this paper because ~~the authors have had direct experience of working in them in recent years.~~ They are interesting examples, because the data situation is typical of the economies of tropical Africa and, no doubt, not dissimilar from situations elsewhere. The problems of data use, and the solutions attempted are not particularly original; no doubt those who have worked in planning in other countries would offer *adopt a* similar ^{procedure} accounts. We have not attempted to emphasise originality, but to give a rather matter-of-fact account of the existing situation in practice. *It person*

Although we are concerned with data and technical questions, it is very far from the case that these are the dominant problems confronting economic planning in Africa, nor the most interesting aspects of the evolution of economic policy-making in either country. But they are more important, and much more potentially useful work can be done, than might be suggested by the tendency to pursue the fashionable, the exciting and the unusual. Development economists tend to be as fashion prone as dress designers. One season the concern is agriculture and educational planning, another employment and export promotion, and no doubt in due course urbanisation and big push industrialisation will reappear. A large part of the work of a practising planner, however, must be concerned with a rather humdrum range of ongoing concerns. Fashions in development thinking do no great harm if they refocus attention on an area which has been neglected in practice, but can become destructive when they undermine work on problems which persist and which will only yield to solution as a result of a patient and sustained long-term effort. This is nowhere more true than in the development of data systems and the increase in the effectiveness of handling data in policy making.

Although it is not the subject of this paper, a brief note on the context in which planning has taken place in the two countries will be useful in understanding the subsequent description.

The Uganda Second Five Year Plan 1966-1971 ("Work for Progress"), to which reference is made here, was the first post independence plan. There had been a number of earlier planning documents, including an imaginative ten year plan produced in 1946 (by a biologist, E.B. Worthington) and a five year plan 1961-66, which was predominantly a public sector capital budgeting exercise. "Work for Progress" was produced with a greater input of professional economic work than previous efforts, in part drawn from a team of research economists at Makerere University College, led by Professor Paul Clark. Apart from any weaknesses in the economic analysis in the Plan itself, there were considerable political problems in Uganda which made it difficult for the government to give high priority to the development of an effective planning machinery. At the time of the completion of plan formulation there was a major political crisis, involving imprisonment of a number of members of the Cabinet, a state of emergency a change of President and constitution, and a brief, but sharp, outbreak of fighting. Plan formulation had mobilised the involvement of large numbers of civil servants, academics and members of the private sector and at the early stages the top political leadership had also actively directed the work through the Planning Commission. At the final stages of Plan preparation, however, the central concerns of the politicians lay elsewhere. Five years later, in the final six months of the Plan period, there was a military coup which installed the regime now in power. Although Dr. Obote, first as Prime Minister and then President, had a commitment to the development of an effective planning structure, it is doubtful whether he ever found himself in a position to take the administrative and political steps necessary to develop it.

The circumstances surrounding the completion of the First Tanzanian Five Year Plan (1964-69) were in one sense hardly more propitious than in the case of "Work for Progress", with an army mutiny in early 1964 and the revolution on Zanzibar. However, the Cabinet and senior civil servants spent considerable time relating the Plan to national priorities, for example, in education and manpower development. Since then the government has been in a

written in a sympathetic
political framework 7.

secure position, and has been able to pay increasing attention to the creation of an effective planning structure. During the First Plan considerable attention was paid to plan evaluation. The Second Plan was produced at an opportune time as it came after a period of systematic redefinition of political and economic goals (in the Arusha Declaration of 1967) and of major institutional innovation. Both the bureaucracy and the top political leadership were able to give considerable attention to plan formulation, the economic committee of the Cabinet playing the major (and a most arduous) role in shaping the character of the Plan. Thus, although the Plan had many undoubted weaknesses, some of which were explicitly recognised in the Plan documents, it did not fall into that category of documents which are technical exercises formulated remotely from the real decision-making processes. This paper is mainly concerned with the ^{formulation of the} Tanzanian Second Plan.

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III The Data Constraints

The data situation in the two countries is fairly similar.

There are official G.D.P. series (but not continuous) going back to the early 1950's. The G.D.P. series had tended to be most complete on the side of product by industry of origin, most sketchy on the expenditure and income sides. There are much longer series for foreign trade and for some crops (mainly the larger export crops). In neither case were the results of an agricultural census available at the time of plan formulation. Data on food crop production was particularly sketchy. Complete population censuses were conducted for the first time after the Second World War; demographic information was becoming increasingly available, but was still very shaky even on such questions as the overall population growth rate. There had as yet been only very limited demographic analysis of urban-rural movements. Surveys of manufacturing have been conducted for some years in both countries, but changing coverage and methods have tended to make intertemporal comparisons difficult. Balance of payments series are now being greatly improved, but at the time of formulation of the Uganda Second Plan, they were only available on a very rough basis and even by the time of the Second Tanzanian Plan there were serious weaknesses and little basis

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(1)

for analysis of trends over time. While employment series are available over a number of years, there are significant areas of employment which are not covered. Fixed capital formation series were seriously incomplete in coverage of rural investment and offered no breakdown by industry. There were no series for investment in inventories.

Although the gaps may sound alarming to those working in industrialised economies, it must be remembered that the structure of these economies is quite simple (although in certain respects it may not be so - a smallholder agricultural system may have a highly complex internal logic). The analysis of foreign trade data, of readily available series such as cement sales, and the qualitative judgments of those in direct contact with economic activity can provide a good basis for interpreting movements in economic activity and assessing the reliability of shaky aggregate indices. *(with the monetary sector)*

The problems arising from data inadequacy may be summarised under six headings: quantity, quality, form, lags, length of series and use.

To. 1 Quantity

As we have seen, the quantity of data is inadequate. An important example of such inadequacy is the estimation of the output of the "subsistence sector". At the time of formulation for both the Tanzanian Second Plan and of "Work for Progress" the available estimates were very sketchy, arrived at largely by applying assumed fixed growth rates to a base secured from incomplete and inaccurate surveys. Although this left important gaps in the estimation of levels of rural welfare and of relative shifts in income between town and country, it could be argued that public policy was not attempting to influence that sector in any very specific way, so the gap was not serious. However, it should be noted that the Tanzanian government was concerned that benefits from growth should flow to the rural sector and the inability either to record what was happening to an important element of rural incomes (particularly important, of

(Ordering of sub-sections)

course, in the poorer areas) was certainly unsatisfactory. Moreover, marketed agricultural output is often no more than the tip of the iceberg. The availability of crops or livestock in the market would be greatly affected, in ways difficult to predict, by the performance in the unmeasured sector. This is not only true for sales of a food crop, like maize (where marketed output is always a small proportion of total output) but is even true where the crop in question is entirely marketed but is produced in combination with a subsistence crop. Thus, not only is it likely that growth performance is wrongly measured but the factors affecting the availability of cash crops are difficult to identify.

A serious data gap related to the balance of payments. In neither case did serious capital account balance of payments data exist. This and other gaps are being filled by statistical development programmes, responding in part to the needs of the planner. But some gaps can only be filled satisfactorily by a sustained effort, involving substantial new survey work - for example, no East African country has yet produced a useable, broadly based household budget survey; filling this gap requires a solid data collection exercise, repeated over the years.

A long list of "gaps" could be compiled. The situation is steadily improving, however. In Tanzania, for example, there is now a statistical development programme in operation which should fill some of the more serious gaps during this Plan period, as the capacity of the statistical office is built up. All three East African countries have now produced much more complete and less inaccurate sets of national accounts, based on revised data and more useful classification.

The improvement process itself posed dilemmas in plan presentation, because the reconstruction overlapped formulation periods: Uganda ultimately used a preliminary version of the new accounts for 1966 in the Plan but did not formally compute and publish them until 1969; Tanzania noted and used completed bits of the new accounts in planning and plan analytical sections but used as a base for the main published

Plan tables figures projected from the old series,

quality

The quality of data varies widely. Even some supposedly accurate sources, such as International Trade returns have been known to contain weird errors, e.g. a VC-10 was once recorded as valued at about £10. Many exports are listed at a nominal or anticipated proceeds figure which subsequently bear only an approximate resemblance to their price. *Related to quantity problem. (Additional data often bad)*

In a number of cases, problems have arisen from the inappropriate way in which available information has been handled, as much as from gaps in basic data sources. The Tanzanian estimates of real output in the service industries, for example, were based on a crude labour input measure even where available data could have produced a real output estimate (e.g. in relation to health and education). A zero estimate of productivity growth was justified by one person on the basis that "zero is an unbiased estimate of the mean of an unknown population".

The East African Community and Corporation items in balance of payments statistics are handled in an inconsistent (and in key cases clearly erroneous) way, and confuse current and capital items.

B.P.P. reference area of deficit

Even series which had been assumed to provide a good, if rough, guide to orders of magnitude sometimes prove to be much shakier than was supposed as additional data sources become available.

When the National Provident Fund went into full operation in Tanzania, over 100,000 more persons were found to have accounts than are recorded as employed (even though the National Provident does not cover civil servants, while the employment enumeration does).

Employment because of its nature creates difficulty

Form

The form of data available also raises problems. Both the Uganda and Tanzania Plans projected investment allocated by industry. Neither country had (or has) any systematic data compiled on that basis, partly because investment is estimated from major investing unit returns (which would be readily sectorally allocable) buttressed by construction and import data (which would not). Similarly, the division of investment between public and private

sector is erratic. In Tanzania cooperatives and residual unidentified investment are lumped with the private sector, giving far too high a total for that subsector, too low a one for the parastatal sector (determined from returns), and none at all for cooperatives; hardly a satisfactory situation for macro-planners activity concerned with shifts in (and indeed with shifting) the mode of production. *& rural dev.*

Lags

Lags in preparation of data, even though the planner at least is usually spared the added months or years to publication, are particularly frustrating. The macro calculations for the Tanzanian Sales Tax

Provisional & Revised Trade of currency & accuracy (introduced at the beginning of the new 1969-74 Plan) had to be estimated from a 1965 survey of manufactures and 1967 Import data buttressed by a few specific industry series and at the last minute, 1968 Import data and total (but not product line) manufacturing sales and value-added data. Perhaps by accident, however, the projected yield (which was then deliberately marked down by 20% because of doubts about accuracy of estimation) for the first year was only about 5% out. More generally, few 1968 data were available to macro-planners seeking to derive base 1969-70 estimates for use in formulating the 1969-74 planning frame. As events turned out this resulted in over-estimation of several base figures because of poor growth in 1968-1969. More serious than simple errors in plan figures were the resulting over-estimates of resources (including tax revenues and foreign earnings) likely to be available over 1969/1971. These over-estimates - aggravated by further lags in 1968-69 and 1969-70 government account outturns becoming available - led to dangers of both external and internal imbalance in 1970-71 and the need for implementation revision, credit and foreign exchange control measures and a 1971/72 consolidation budget.

Time Periods & Consistency.

The period for which data are available in a consistent form is often distressingly short. National accounts data in any relevant format for Tanzania and Uganda do not exist before the early 1950's. Ironically, the improvement of coverage, form and quality has tended to shorten comparable series. Rarely are existing series recalculated to provide a linked period with both old and new basis quantities.

Some attempt has been made to deal with this problem with the new Tanzania National Accounts. Estimates for 1966, 1967 and 1968 were recalculated on the new basis and 1964 and 1965 are being recalculated to give a consistent series from just prior to the inception of the first plan.

Use Perhaps the greatest single data handicap, however, is their use. Two quite different problems arise. // The first is the unexamined use of figures without checking how they were collected or estimated, the assumptions adopted or evaluating their apparent plausibility, internal coherence, and relationship to logically linked data. One East African example is the subsequent use (academic as it happens) of the private housing investment "guesstimate" of the Tanzania Second Five Year Plan as a hard figure suitable to be a foundation for plans for an elaborate financial structure to support far reaching changes in housing patterns. Quite clearly, the figure was a residual derived by subtracting all other investment from a roughly estimated total housing investment required, to get a private investment estimate. The private investment estimate was roughly divided into sub-groups including housing, with a rough plausibility check made against recent past levels of private investment and private construction investment respectively. That was hardly the type of figure on which to base detailed micro or sectoral policy and finance proposals, as was attempted.

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The other problem is in a sense the inverse of the first; to assume that incomplete and inaccurate data preclude any useful analysis.

Statisticians are often reluctant to publish scientific guesses because of lack of evidence but It is, much better to be able to indicate directions of change than *sometimes* nothing and better still to be able to give approximate orders of magnitude - or to conclude that no plausible change would be large enough to have a significant macro-impact. *While there may be obvious dangers* To be able to indicate that one result will be very much more likely than another is better than no conclusion. *x* (To estimate revenue growth at constant tax rates within 5-10% of actual (e. g. between 7% and 8.5% when, in fact, *it is the real, in* figure " 7.5%) is by no means a useless contribution.) A positive contribution

f footnote

to planning under data constraints depends not on the elegance or even retrospective accuracy of estimates, but on whether better or worse assumptions would have been used and greater or lesser problems in implementation arisen in their absence.

Macro-Economic The Planning Framework.

III IV

Given the data inadequacies, what are the prospects of providing a legitimate basis for the quantitative macro-economic planning? Scepticism regarding the possibilities of an affirmative response to that question are compounded when we note the character of the economic phenomena the data inadequately describe. The structure of the economies is such that short and medium term economic performance (i.e. annual and five-year observations) are strongly influenced by factors which are both exogenous, and unstable. Most notably, uncertain world market ^{& financial} conditions and climatic factors are important determinants of fluctuations in export earnings, which in turn are such an important source of income and foreign exchange. *The high proportion of private foreign investment in the economy poses other problems.*

Yet the answer to the question posed must be affirmative, because certain tasks are unavoidable. Inadequacy of data and uncertainty of underlying behaviour should always be allowed for in choosing appropriate planning methods, but cannot be a justification for avoiding the attempt. *They exist and although planners may dislike them, they cannot be ignored.*

A pervasive problem is that numbers arrived at in the formulation of the Plan will typically be specified as single values, when at best the range of possible values must remain wide, even if policies are successfully implemented and the Plan contains a correct specification of the structure of the economy.

If the Plan is to provide some standard against which to test performance, then it would be appropriate to separate out the effects of those elements which are exogenous and quite outside the influence of public policy. ⁽¹⁾ And, even before the event, it would be desirable

This may mean excluding a large part of the ec%

to build in flexibility to allow for the high degree of uncertainty. This needs to be done whilst maintaining a straightforward enough presentation for the Plan to remain intelligible.

In the Uganda case an attempt was made to do this by specifying macro-investment targets by a range around a trend - a floor ^{concept} representing a minimum target which would be pursued even if export fluctuations were strongly on the low side of the projected trend, and a ceiling in the alternative, ^{more favourable} happier case of fluctuations above the expected trend. The range chosen was based on a subjective interpretation of past behaviour. This method had the virtue of making quite explicit the uncertainty of projection, but the disadvantage of leaving it quite ambiguous as to what was the target for capital formation.

The only ^{concession} bow in this direction in the Tanzanian Plan was that in relation to the particularly unstable cotton crop. A distinction was offered between a trend projection and a physical target, the latter being the desired output under favourable climatic conditions.

The wide annual fluct^{uations} in agricultural output pose a range of difficult problems for target formulation. For example, the most reasonable base for a five year target is not any actual year but a trend-adjusted value, ^{both for output & prices} [A number of projections for Tanzania (but not those of the Second Plan) treat 1966 as a normal year, when in fact the most favourable weather conditions for over two decades made it a shaky basis for analysis and an unfortunate base year for the constant price gross domestic product series for which it is officially used.] [↑]

In practice a good deal can remain imprecise, even be quite wrong, without any great harm resulting. Much of the judgment required in building up the macro-quantitative part of the Plan goes into deciding what elements do require the most careful estimation. What is built up is a quantitative framework which is formally comprehensive but only some parts of which are of real operational significance.

Estimates of the availability of some crucial inputs will be important. For example, a lot of work will go into estimating the likely resource constraints on the capital programme. The estimation of recurrent resources available to the public sector is an important exercise. Gaps and inadequacies in data may well mean, however, inter-relationships are not always what they might appear. For example, in East African plans some effort is put into projecting agricultural output growth and also, of course, investment programmes in agriculture are included in the planned investment programme. There is remarkably little relationship between these two procedures, however, as a large part of output growth comes from activities in which little investment is recorded, while projected investment is concentrated in a limited range of projects (often the more mechanised) which account for but a small part of total output growth.

Time
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Similarly an important element of the public investment programme falls in the transport sector and is estimated with some care. Many transport investments, such as roads, do not give rise to specific outputs (indeed under existing methods of measuring services on a recurrent input basis, successful road investments ^{reducing repair-maintenance costs} could reduce estimated output). The projection of transport output in the gross domestic product tables is done in a rough and ready way in the macro-economic projection - nothing much flows from that particular projection (although projections at a more micro level may be important, e.g. those of railway or port utilisation levels). In practice the quantitative framework of the Plan is put together by ad hoc methods, adjusted to the needs and possibilities of different elements that fit together to give the macro-economic frame.

In principle, the task of creating a frame (or model) poses the macro-planner with two basic options: to seek to build up a sophisticated (or semi-sophisticated) model or to opt for a more ad hoc approach. Superficially the Ugandan and Tanzanian Plans embody opposite choices - the Clark model in Uganda, and an ad hoc framework in Tanzania.

However, this is somewhat misleading. The operating framework in the formulation of "Work for Progress" was ad hoc, while the model was used as an independent check on values derived from, or projected in, the ad hoc framework, and dropped completely out of sight during implementation and review.

The problems of sophisticated frame creation in East Africa are formidable. The forms and contents of individual equations and, *unsatisfactory* indeed, the overall model must be tailored to fit available data.

The ingenuity in Paul Clark's work came very much from the utilisation of the gross domestic product by industry of origin table as the core of his projection model. Even so, in some cases data must be "forced" to fit the frame - especially in the case of time lags and leads not corresponding to periods at which data are produced. To remain operational the model must be simplified to the point at which it is unclear whether the key characteristics governing the results illustrate real characteristics of the economy or merely result from peculiarities in the specification of basic assumptions.

Same plans
 Paul Clark's work (done at Makerere in 1963-1965), for example, *have* had to be based on assumptions regarding the likely values and the constancy of a large number of parameters which demanded *herosim* only justifiable for the pioneer.

This is not necessarily a good case for abandoning the attempt to devise quantitative macro-planning models of use in applied economic planning. Unfortunately, while subsequent academic exercises in model building in East Africa have been more sophisticated mathematically, they have also become more artificial in basic assumptions, and totally devoid of figures or the possibility of fitting figures. However, a sensible formal planning model could provide a check on the key conclusions from a more ad hoc framework. Only by experimenting with and improving a model over more than one planning cycle is it likely that a more generally usable model will be derived.

In the 1968-69 Tanzania plan formulation exercise a formal model was seen as desirable, but was eventually dropped as not essential and not possible given other calls on the limited professional capacity available.

The use of ad hoc methods requires iteration to secure consistency. If such work is built upon some basic understanding of the economy it will have implicit in it some schematic view of the development process. In that sense the Tanzanian Plan is implicitly framed in a modified version of both the Seers' Zambia model and Clark's Uganda model, altered to take account of the socialist transformation in process.

The working method in the case of both Plans was to work on parallel lines on three basic tables - gross domestic output by industry of origin, capital formation and balance of payments. While particular elements in each table were related to items in one or both of the other two tables, no effort was made to define a comprehensive simultaneous system. As work proceeded, information was derived from these basic tables for other projections, notably public recurrent expenditure, and employment. Exercises were also required in selective disaggregation to deal with specific problems and to engage in useful cross-testing. Thus rough estimates of growth in private income and population were used to derive a range of estimates for growth in demand for manufactured consumer goods, which were checked against projected growth in domestic manufactured output to test the practicability of the goal of holding consumer imports at a constant level, for balance of payments stabilisation purposes.

Projections of gross domestic product were built up using a mixture of techniques. The starting point was an estimated overall growth rate, initially chosen in discussion as a balance between the desirable and practicable - the desirable being a conception of the growth performance which will eventually be required in order to satisfy social aspirations, the obviously practicable being the growth rate already achieved.

Can
one
formalise
the system?

The concept of a longer term desired or required rate of growth as one starting point does not imply a simple output maximization objective. It does, however, recognise the truth that a range of social goals (e.g. in health, education and employment) are only likely to be achievable as a result of growth in productive capacity; perhaps more urgently, some underlying pressures, (e.g. deriving from demographic changes, employment and income aspirations, etc.) are likely to lead to a deterioration in the social situation in the absence of growth.

It should be noted that in relation to the overall growth target, an ambiguity as regards purpose exists, as with many other target figures. Realism, for example, demands that the chances of achieving targets should be very good. However, a five year plan also provides a statement of, and an eventual check on, progress towards the achievement of longer term social goals. If targets are set beyond what can obviously be achieved, but at levels the failure to achieve which will be indication of the continued gap between performance and required effort, then they provide a standard the society can use to take stock and to identify the need for new initiatives. This is a difficult question to talk about in the abstract. In practice the sorts of targets eventually appearing in East African plans, after passing down during formulation, of between 6-7% p.a. growth in gross domestic product, in economies with population growth of the order of 3% p.a., and urban growth of 6% p.a., or higher, still only permit the achievement of minimal social goals over very long time horizons. One may question whether growth targets any lower are politically realistic or socially acceptable. The attempt to mobilize development efforts to bring this desired growth rate within the bounds of realism becomes one underlying theme of plan formulation work.

However, short-term growth objective as such never became the overriding goal. Adjustment during formulation came both in response to recognition of physical constraints and, implicitly, because of the assertion of priorities which might be at variance with short-term maximisation.

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The detailed steps set out in the following paragraph relate to work on the Second Tanzanian Plan. The method was similar in the case of the Uganda Plan, but the specific examples would be different.

How much of this is necessary (too specific)

The first, hypothetical growth rate was tested against the possible performance by individual industries. While the nature of this exercise could be set out formally, what took place in practice was a process of continuous adjustment over plan formulation by methods which were modified as the availability of data changed, and an increasing firmness of detailed sectoral plans.

In agriculture, specific targets for leading cash crops were derived and were continually adjusted. These "targets" would vary crop to crop. For example, in the Tanzanian Second Plan in meaning from targets for tea and tobacco related to specific development programmes to expand output capacity which featured prominently in planned public agricultural expenditure. Sisal targets represented a decline in output, and represented a judgment regarding the likely deterioration in the world market situation. Coffee targets represented a ceiling on growth which was defined by the maximum reasonable market, given the International Coffee Agreement; if anything policy efforts are likely to be required to constrain growth within that ceiling. For some crops, such as cotton and cashew nuts, there was neither an operative market constraint, nor was output growth predominantly related to specific public expenditure programmes, although extension, price and related policies might exercise some influence. In these cases, projection involves an interpretation of underlying supply conditions, at its most inadequate a simple extrapolation of growth trends, but hopefully based on additional information concerning the determinants of output growth. By such means projections were derived for all major "cash" crops.

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For a residual, but significant element in agricultural output, made up of estimated subsistence production and a number of minor "cash" crops, there was no basis for specific projections, except to use the national accounting convention that subsistence production would grow in line with population growth, and that those elements in

marketed output not specifically analysed would grow on average at the same rate as overall marketed agricultural output.

We have dealt at some length with agricultural projections, both because they form such an important element in the total and also because the diverse means used illustrate the complexity of the process. The totals which represent outcomes of public programmes involve judgments about administrative constraints, the availability and effectiveness of technical personnel, and the capital resources which will be available for the project concerned (partly a matter of domestic choice and partly of external agency decision.) Other projections basically represent an analysis of world markets (including the operation of commodity arrangements), while others may represent projections of growth trends little influenced by public expenditure or policy. In many cases the projection exercise may involve a mix of all these elements.

Adjustments during formulation may be quite dramatic if there are sharp changes of external circumstances. The largest Tanzanian export of the early 1960's, sisal, experienced a dramatic reversal in market prospects over a very short period in Spring, 1965. If this had been during plan formulation great readjustments would have been required. The most important part of Plan preparation is the effort to mobilise programmes and adjust policies so as to make some of the targets feasible. Marginal adjustments will be made as programme designs are evolved and discussions proceed with implementation agencies.

While, in principle, projections for manufacturing can be more precise, as outputs require specific physical capacity and related financial outlays, in practice, precision will not be as complete as might be expected. In the past this was because a large proportion of manufacturing capacity lay in the private sector; even following expansion of the public sector in Tanzania many projects involve partnership with foreign enterprise.

In making industrial projections a difficult, but in some ways useful element is the long lags involved. During a five year period, a

substantial proportion of output growth comes from capacity which is either already in use or under construction at the beginning of the Plan period. For example, during the Tanzanian Second Plan period the largest source of output growth is in textiles, but predominantly from projects in the First Plan. Even new projects in the early years of the new Plan result from decisions made before work on the Plan was set in motion. Projection for manufacturing is therefore based on a mix of techniques as is the case for agriculture. Some elements are based on demand analysis, others on estimation of the impact of large projects, while the growth of processing industries is based upon the projected growth in agricultural output. Rates of growth in physical output for several industries are then weighted by base year estimates derived from earlier surveys of manufacturing, adjusted by estimated shifts in relative output since the date of the survey. Miscellaneous industries for which no specific projections are offered, are projected using rough assumptions (basically that they will grow at the same rate as overall gross domestic product).

In this sector, certain inter-sectoral linkages ^{sometimes assume} take on importance. The relation between processing and agriculture has been mentioned. A relation between growth in urban incomes and some sorts of demand (e. g. beer and milling products) may be hypothesised. Cement production is related to the level of investment in housing and construction. Petroleum processing to the expansion in transport (and the expansion of capacity in Zambia, the existing export market). Overall, the growth in domestic supply of consumer goods must be checked for aggregate consistency against the growth in personal income and the target for consumer goods imports.

Construction expansion depends upon phasing of investment demand, which in the past has been strongly affected by administrative constraints in the public sector and has been highly cyclical in the private sector. An intriguing sectoral question, where macro and micro elements are enmeshed, has been whether pressure on capacity of the construction industry is likely to appear. Such pressure has been identified in the past by sharp rises in construction costs

and delays in completions, but has been difficult to predict. The nature of the constraint on the industry was the subject of some analysis during the First Tanzanian Plan and the Second Plan formulation.

The service industries estimates are derived, by and large, from assumed relationships with overall growth, or from specific information about the activity in question. Thus transport expansion was projected on the basis of the past relationship observed between transport and overall growth, with some adjustment for the special effects of the growth in Zambian trade. The growth of public services reflected the projected growth in public employment, resulting from planned expansion in services, as constrained by the expected growth in recurrent revenues. Growth in the demand for electricity was based on studies undertaken in connection with planning an expansion of capacity which took account of specific industrial needs and the tendency of general consumption to grow faster than gross domestic product. Estimates of commerce trade and private services were assumed to grow at the same rate as marketed gross domestic product.

Very little of the projected growth of gross domestic product during the Plan period depends upon specific allocations of capital, and, in practice, in both Plan documents little effort went into the analysis of industrial or aggregate capital/output ratios (and even less into any effort to identify production functions), except where this was inherent in the projection of a particular element. The capital formation projections were related to the output and balance of payments tables mainly through efforts to estimate resource availability. While the income side of the accounts were only sketchy, aggregate estimates based on the output tables could be used as a basis for assessing the appropriate order of magnitude for capital formation. A similar result was achieved by the method of projecting from existing investment levels by a planned growth rate, derived from an assessment of the degree of mobilization achieved during the First Plan and the overall rate of growth in gross domestic product during the Second Plan.

The nature of the investment projection problem at the time of the Second Tanzanian Plan was quite different from that faced by those working on the First Plan, and in some ways much easier. At the time of the formulation of the First Plan the proportion of resources going to capital formation was very low, so that a very substantial increase in capital formation was required. The initial constraint on the rate of acceleration was a financial one, but when this was overcome through fiscal innovation, limited administrative capacity checked the growth in investment. As a result there was a considerable shortfall in the early Plan years, which meant that targets were not achieved. However, by the end of the Plan, investment had been boosted to annual rates in line with the original objectives. In the Second Plan, such dramatic increases were no longer required to achieve desirable rates of capital formation - the growth in investment was planned at levels only modestly above the planned growth in output. However, it was now more likely that the availability of foreign exchange would become the operative limiting factor on the growth of investment.

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This had two implications. On the one hand, the appearance of a real resource constraint on investment meant that an important part of the Plan effort was passing down government and parastatal investment programmes to match total resource availability, while on the other hand, analysis of the foreign balance took on crucial importance.

No comment is necessary on the tailoring of the government capital programme to fit existing resources, as it followed familiar enough lines, involving a mixture of the assertion of technical and economic criteria, bureaucratic bargaining and, crucially for a number of large decisions, political choice. The parastatal budget was more difficult, as the various state corporations were in many cases quite new, and a system of central budgeting for them was only then in the process of creation. Development of a better system of integration of the parastatal into the central planning and budgeting system was an important task undertaken subsequently as an annual planning system was introduced. At the time of the Plan formulation there was still only inadequate information on past levels of investment by the

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companies which were now incorporated in the state sector. In the event, one mistake in the Second Plan was to underestimate the speed with which the State corporations would expand their investment spending. Nevertheless, in principle the corporations were coming under central control and had to provide five year capital programmes to be discussed, modified and included in the Plan.

The remaining private sector was another matter. A lot of the activity remaining in the private sector was still in private hands because it was small scale and unorganised (e. g. residential housing, road transport, retailing.) This was not always the case; large construction contractors still operated, including a number of foreign firms. For example, much of the construction financed by external public funds was undertaken by private contractors. These firms would invest in construction equipment. In agriculture, as we have noted, much investment is not recorded, but there were significant amounts of agricultural equipment imported privately. There was little basis for estimating the performance in this range of activities, except to make very conservative projections from what could be pieced together from fragmentary data on past experience.

Estimation of the foreign balance position is derived in part from projection work on gross domestic product and capital formation. Perhaps the weakest links in projection work derive from problems of estimation in this area. For the critical factor of export prices little more than a cautious assumption about overall trend was made, although there were specific projections for some individual crops for purposes of output programming. In a small planning office little independent work can be attempted on the world market situation, so that this exercise is heavily dependent upon results available from, for example, international agencies. On the import side, projections are derived from output and capital formation growth estimates; imports are one key variable which can be readily influenced by available policy tools. Invisible projections derive partly from output plans (e. g. for tourism), partly from financial projections (interest and profits), and partly from little more than adjusted extrapolations from the pretty shaky base provided by current estimates. Surprisingly

enough, the capital account is probably more straightforward than current account transactions. Private capital outflows remain a problem, but as the relative importance of the private sector declines and exchange controls increase in effectiveness, this should not unsettle the overall picture. Private inflows are increasingly related to joint projects with the public sector. The long lags involved in the negotiation and disbursement of public aid and the fairly stable pattern of commitment now established provide a basis for a five year projection which may well turn out to be fairly accurate - in contrast to the First Plan, when soon after independence the likely availability^{of}/aid from non-U.K. sources was still a highly speculative question.

Within this overall framework a number of subsidiary exercises were conducted. One of the most important was the work on the recurrent accounts of the public sector. This is important for the financial consistency of the Plan and for the planned expansion of certain public services which are indirect inputs into production (e.g. agricultural extension), or, as public goods, represent policy objectives (e.g. health and education). The recurrent budget has to be consistent in three ways: at the aggregate financial level, with overall resource availability; at the programme level, with planned capacity expansion (i.e. the recurrent implications of the capital programme); and with manpower availability. Surprisingly, it is in recurrent expenditure planning that long term planning horizons seem particularly relevant. The maintenance of a balance between technical manpower training for the public service, the pursuit of social goals (e.g. universal education, public health service provision), the availability of resources, and the income structure of the public service involves planning beyond the five-year plan period.

Another element which has become increasingly important at the macro-level, has been the pursuit of employment and income objectives, through a fairly successful overall incomes policy. At the time of plan formulation, this did not yet involve systematic efforts at the micro-level to adjust factor inputs, or the use of shadow prices for unskilled labour.

There was, however, an overall incomes policy introduced before the plan began. In the plan itself efforts were incorporated to limit "urban bias" and ensure a more satisfactory relation between the growth in urban and rural incomes. Urban employment growth was not a major objective; employment estimates were derived consistent with the output targets and the implications of the incomes policy, but in the iterative procedure of plan formulation adjustments were not made to influence the urban employment objective.

This brief outline is aimed to give some understanding of the range of work involved in putting the Plan together. There were a number of other, subsidiary quantitative exercises, but rather than continue ad nauseum, the sketch above can be used to give some idea of the flavour of the work involved

In the imprecise world we are describing, the planner will be only too well aware that some crucial figures are shaky and so uncertain that a subjective element of choice remains regarding the type of error to risk. It should be remembered that there is no simple test of the utility of a planning target. Superficially the achievement or over-achievement of a target might be taken as a sign of success, in which case success could come easy, with targets set sufficiently low for their achievement to be virtually unavoidable. Likewise the failure to achieve a target does not demonstrate that it was wrong, if its pursuit has called forth a better result than would otherwise have occurred.

How the limitations affected the Plan & Dev.

To date, meaningful operational targets have been defined mainly in relation to input, or mobilisation goals (e.g. capital expenditure). In most cases output targets have not yet been used as direct operational tools, though there are significant exceptions (such as educational planning); they are used to evaluate overall performance, but there is, as yet, little use of physical output targets derived from the central planning process in production programming.

A typical problem, which will probably be familiar to planners with experience elsewhere, is that of allocating a resource gap which emerges in plan formulation. It may be quite legitimate to set five year

plan targets somewhat higher than the obvious resource availability, in part to promote additional resource mobilisation effort during plan implementation. It would be unusual to leave the gap explicit in the published plan. One solution popular in many plan exercises is to allocate the excess to foreign sources, on the twin grounds that estimates for foreign capital availability are difficult to make (and check) and that the resulting estimates provide a nice basis for negotiating with potential donors. Insofar as the plan becomes an effective operational guide, however, emphasis on foreign resource mobilisation can only too easily detract from an appropriate emphasis upon the unpleasant task of increasing domestic resource availability.

The use of a variety of ad hoc and possibly subjective methods of adjusting data and generating Plan estimates is justified if the work incorporates a sensible interpretation of the operation of the economy. However, with raw data so fragile and projections based on approximate, even if useful, methods, it would be statistically and practically dangerous to engage in further sophisticated statistical manipulation of resulting estimates, in that the nature of the underlying methods and possible biases are likely to be obscured.

An appeal for the use of basic economic understanding as a prerequisite to the practical application of simple quantitative analysis might seem superfluous. Yet in practice one comes across numerous examples of attempts to use data in silly ways which could have been avoided with straightforward economic reasoning and an attempt to understand the institutional setting.

There are instances, however, where even an understanding of the underlying process at work is of little use in judging the acceptability of a projection. Perhaps the most serious source of error which could be significantly reduced as a result of greater data availability, is that which occurs when there is a turning point in a long-term trend in the output of a crop. In a number of instances, growth trends in output persist over long periods until some limit on growth appears (e.g. land or labour availability). With only sketchy quantitative

evidence on the input side, the knowledge that, in principle, a ceiling on further growth may appear is of little help in identifying at what output level and at what date the turning point will occur. In preparing "Work for Progress" it was noted that the stagnation in cotton output over the post-war period had resulted from a combination of output decline in Buganda and steady increases elsewhere. It was projected that the steady increase would continue, and that the effect of the decline in Buganda would exhaust itself as the contribution from that part of the country dwindled into insignificance. The expansion was to be spurred, it was hoped, by improved seeds and insecticides. The order of magnitude of projected growth did not seem unreasonable, being consistent with past trends. In the event it proved to be a quite erroneous estimate. The trend in the previous growth areas decelerated sharply and the target output was not approached - a significant error, as a large proportion of export growth was expected from this source.

Similarly, while economic reasoning can suggest the direction of the impact of agricultural price adjustments, there is, typically, little evidence for the estimation of the strength of effects. This tends to be of greater importance for annual planning, for which agricultural price policy is a potent tool, than in formulating the five year plan, although even in the five year context the likely effectiveness of price policy will have a bearing on the feasibility of agricultural programme objectives.

The technique used to build a consistent and reasonably effective macro-framework from a set of ad hoc estimates is essentially that of repeated iteration. Starting with a set of base year estimates of quantities, an inventory of institutions and policies, the projected values of exogenous variables and a tentative set of goals, the required use of policy instruments, investment targets and institutional modifications are sketched out. From this framework a series of adjustments are made, involving technical analysis (particularly checks on internal consistency), administrative bargaining and political choice.

The starting point for this process can be quite arbitrary, providing an appropriate flexibility is maintained at later stages. To begin the process, for example, with a set of target gross domestic product growth rates, does not imply that maximisation of the growth of gross domestic product in the plan period is the critical objective. Deriving macro-estimates of the gross domestic product table in the first instance can be useful in that it begins the process of defining the orders of magnitude feasible for the growth in a wide range of other variables - domestic markets, public revenues, domestic finance, etc.

The most critical gap in macro-planning usually lies in the specification of policy and institution requirements. Overall agricultural pricing, wages and credit allocation policies are as much part of a macro-frame as export growth projections and are rather more susceptible to alteration and development through government action. Both the Second Uganda and the Second Tanzania Plan (and the 1971/72 Tanzanian Annual Plan) are significantly more policy and institution oriented than is sometimes the case. The Uganda Plan very clearly lays down a frame for an incomes policy and relates it to the objectives the planning exercise was to further - a frame which did affect at least certain wage award structures made soon after plan publication.

Another example of the use of macro-planning to develop sectoral policies relates to urban development. The Second Tanzania Plan posed issues and presented tentative policies and procedures for achieving a series of regional growth roles and avoiding over-centralization of large scale economic activity in the capital, Dar Es Salaam, without incorporating a detailed programme to implement the Plan objectives. There was not the time and technical capacity to complete the necessary programme before Plan publication. But the Plan has led to considerable further detailed planning of institutions, incentives and procedures and has already led to the result that at least 80% of major industrial investment planned from 1969 on (including a major plant location switch) is or will be in the development towns. The system proposed was institutionally possible in Tanzania given a pattern of effective inter-ministry coordination and the dominant role of the public sector.

At the time of plan formulation, it was recognised that a set of effective policy instruments did not yet exist to achieve the desired quantitative impact in redirecting urban development - goals were accepted which were beyond the capacity of the existing battery of tools, with the explicit recognition that one of the creative activities during the Plan period would be the development of new policy tools in this area.

One crucial weakness of the macro-formulation in the ad hoc fashion outlined in both cases was that too little attention was addressed to the task of recording the various methods adopted and specifying the resulting framework in such a way as to allow partial modification in the light of subsequent shifts in policy or deviations between projection and performance in the early stages of the Plan. In principle the virtue of a more formal, simultaneous equation model is that it would allow subsequent manipulation - although if it were achieved at a high cost in terms of rigidity and unrealistic assumptions it is unlikely that policymakers would persist with such a model during the implementation period. However, even in the case of a more ad hoc, and iterative approach, a systematic exposition of methods of estimation, assumed interrelationships, and sources for projection could be attempted.

In part this is an argument for publishing - at least for internal government use - far more of the working papers than is normally the case. For example, the published data in the resource balance sections of the Tanzania Plan rested on a five year sectoral bank credit allocation projection which was not published. Had it been, the divergence of actual from planned levels and distribution of banking system finance could have been identified more easily and earlier, leading to a 1970/71 Credit Plan rather than the late 1970 interim measures and a formal plan in 1971/72 adopted in practice. For the planner engaged in implementing macro plans - especially if, as is often (and unsatisfactorily) the case, he was not involved in formulation - it is imperative that the institutional, policy, and process assumptions underlying the macro-frame be readily available. Only then can he engage in a renewed iterative process, fitting in new data and new assumptions.

Equally it is desirable that there should be a fairly explicit indication of which policies and projects are critical, which are important but not individually critical and which are peripheral to the macro results. Otherwise any exercise in rephrasing must either involve a total macro planning rerun or - more probably - be a partial reformulation without such a frame. The 1971/72 Annual Plan in Tanzania was able to operate from the 1968/74 Five Year Plan in some areas, but in others - including credit and foreign exchange planning - it was necessary to construct a new macro-sectoral framework.

In the foreign exchange case the problem lay partly in the highly abbreviated form of the macro-projection frame actually published, and partly in that, while devising an improved and adjusted version of officially published data, no mechanism had been created for generating further estimates on the same basis to compare actual and planned evolution. This type of non-operationality was even more evident in the Uganda Plan which produced a 1988 GDI estimate derived on a national accounting basis not adopted for the officially published series until 1968, in which both the sectoral distribution and growth rates of output were so different from the old series as to render operational cross checking well nigh impossible. In retrospect, this must be admitted as an error. Improved one shot estimates are sometimes necessary for frame formulation but their use - unless backed up by a mechanism for recreating them annually - renders orderly evaluation and modification of the frame during the implementation stage much more difficult.

IV

What tentative conclusions and recommendations can be drawn from the record of macro planning under data constraints in Uganda and Tanzania ?

Macro planning including quantitative macro planning has served and can continue to serve several useful purposes. It provides

the only known method of formulating a framework for consistency and trade-off tests - an increasingly important role as the overriding constraint in Uganda and Tanzania has moved from implementation capacity to foreign exchange and internal finance constraints on development and recurrent expenditure, and as planning has attempted to encompass a much wider range of policy instruments. It can serve, and has served, as a way of identifying and highlighting strategic issues.

In each case the Plan volume was only able to present a sketch of the issues, options, and lines of action, but it provided a base for further planning. The Tanzania 1971/72 Annual Plan, Budget Estimates, and Budget Speeches clearly indicate that macro planning is now being embodied in the implementation and review process.

Macro planning is a highly valuable input into planning itself. It is the most effective learning device for planners to use in developing an understanding of an economy and in determining the strengths, weaknesses, and gaps in available data. The macro exercise must be combined with micro-analysis, but it does provide a foundation and a check. Similarly, if only by showing gaps, it offers an agenda for statistical policy and institutional development.

It is possible to move over time towards more sophisticated macro planning. Models similar to - and building from - those developed by Seers (Zambia) and Clark (Uganda, Tanzania) can be formulated and used initially to check a framework reached by ad hoc iterative processes. If the model's projections are then compared over the period with actual results it should be possible to refine the model to increase its predictive accuracy. By the end of two or three planning cycles it should then be useable as a basic framework for plan formulation, subject to ad hoc checks and adjustments. During the same period the collection of statistics and their analysis could be related to providing the inputs needed for a more realistic operational model.

A number of steps could improve substantially both the quantity and quality of the available data and its useability within a short period

and without an implausible expansion of scarce human and financial resources allotted to statistical services. A phased programme would include investment data by economic sector, income distribution and consumption patterns, agricultural output series based on a comprehensive base census and sample census follow-ups, coherent consolidated data for parastatal bodies put on a comparable basis and subdivided by economic sector, and flow of funds accounts. These additions could be made over a five year time span. In the case of all such series clear statements of assumptions, techniques, and methods of estimation should be printed with the series along with an assessment of its probable degree of accuracy or inaccuracy and any likely biases. Publication of additional series readily derived from existing ones should be instituted (e. g. Real GDP series adjusted for domestic price and external terms of trade effects, and sectoral purchasing power series adjusted for market price changes and for direct taxation shifts can be derived from existing GDP and related data - indeed are being computed in Tanzania on a preliminary, limited circulation basis). Finally, improved or adjusted series should be calculated back for at least four years or to the base year of the current planning cycle, whichever is the longer, to avoid undue loss of comparability of data.

The concerns and standards of the practicing planner are worlds removed from those of the vast majority of academic builders of growth models and writers on planning theory. The planner lives by operational relevance, realism and approximate accuracy, the academic by precision, elegance and sophistication. So long as this remains true the gulf between practicing planners and the main body of academic economists will continue to broaden even if many macro planners are in fact also academic economists.

This is an unfortunate situation. Academic economists should be able to relate effectively to applied political economists and vice versa. An approach which does explain reality and allow economic results to be influenced is surely relevant to the main body of economics. At the same time precision and sophistication are valuable in unearthing possible lines for improving applied political

economic work, including macro planning.

One particularly annoying aspect of the present dichotomy is the failure of actual planning techniques and operational results to receive adequate academic analysis. To say - as one reviewer did - that the First Tanzanian Plan was more technically sophisticated than the Second is to fail to realise - or consider irrelevant - that the former's macro frame was only peripherally related to its project sections because the intermediate programme and policy planning was incomplete and because the refinement of the macro frame imposed more weight on the data than it would bear, whereas the latter - whatever else it may be - is a reasonably integrated whole. Indeed, academic economists do not even seem very interested in evaluating the ex post performance of their own simplified models to test their realism, projective power, and avenues for improvement - where is any ex-post analysis of the Seers or Clark models for example ? In the reverse direction academic writers tend to produce highly simplified free versions of complex theoretical concepts and brand applied political economists as "anti intellectual" for not immediately applying them. Almost a whole sub-literature of essays of this kind exists in the field of effective protection for East Africa alone, including at least one supposedly serious international organisation study.

The route to resolving this conflict does not lie in mutual recrimination or in mutual indifference. A dialogue is needed with planners paying more attention to theoretical and would-be applied writing and academics taking more interest in the experience of planning. Planning is the weaker for not having a sufficient body of incisive, informed outside critics; growth and planning theory is in danger of becoming a branch of metaphysics because of its remoteness from operational planning and from an understanding of what it is and why.

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Dear Brian,

Greetings from your successor! At least since you were the last PIGPAG planning economist I suppose that is one correct way of putting it. How are you now and how is Latin America?

I ran into a snag on your man. Neither the Economics Department nor the Princec Devplan could trace any record of him! As I was by then packing I had to give up.

Something did turn up while packing. "Macro Planning Under Data Constraints: Some Reflections on Recent Experience in Tanzania and Uganda" which I now recall we did together in the summer/fall of 1971. Did you ever publish it? If so where and how can I acquire a copy?

Have completed a massive IDS Communication on income distribution policy, strategy, instruments, operations, results, limits, prospects in Tanzania. Or rather I still have to do the selected references and summary and then send to typist. This is a multi-purpose document. Original 50 mimeoed copies in Dar were a planning input. The strategy has always had the weakness that the President philosophically and in terms of scrutinizing and backing proposals (up to and including willingness to call a general election when MP's tried to throw one out), A.M. Jamal and (to a lesser extent) C.D. Msuya at political economic coordination level, and R.M.G. at technical coordination level were the link "institutions." Oddly this didn't make anything unreal, merely fragile--there was and is fairly broad commitment, fairly wide inputs of ideas, quite wide operation (and understanding) of individual components. The long paper tries to bring all this together so that the Treasury can continue to be a coordinating agency in this field (Devplan has never shown the slightest operational interest as you know...even the Bank of Tanzania is more concerned, perhaps by infection from its parent Ministry!). Also I may well try writing this up as a separate book from Tanzanian planning (the process not the book) over 1964-74. Shall send you a copy as soon as it appears.

What are you working on now? Have you been back to Dakar? I was there last month/beginning of this on Multinational Corporations in Africa (paper for that should appear early next year as Prof. Widstrand has taken over editing, insisted on papers by November 1 and has a fast publisher) and was also at their Population and Development Seminar in Cairo in April (why I was an expert on that I do not know--it made me organize my thoughts to write a paper I agree). Next month...err first of December I mean-- off to Tunis for their Tourism and African Development Seminar. (Again I am baffled as to why I'm an expert--my TTC involvement hasn't been that great--but on the other hand the people with an interest broader than

tourism and tourism expertise of any kind is probably very low indeed in Africa. Did you see the rather awful TFM Volume Shivje edited. Mitchell pro and much of the University group can were enough read by themselves to bring one to conclusions but quite the opposite of their intentions! Provoking to thought, perhaps, well argued-no.) I've actually done a piece on how to go from aims through sectoral interlocks to planning a sector to units in the sector with a format for evaluating at sectoral level and have used tourism for the sector. It isn't a bad paper. In August did "A View From The Extreme Periphery" on the current international economic chaos (crisis no long as you realize I'm not using the term in technical Marxist sense...unlike Samir I do not expect to see the socialist revolution sweep into London, Paris, Washington next year) for Gerry H's seminar at Dag Hammarskjold Foundation in Uppsala. As you may have noticed in Economist, EEC thinks we are one of four worst hit countries on feed/oil combination. While I'd agree if it had been ten to get us in four suggests to me either bias by Cheysson (2 Asia, 2 Africa and 1 Africa Francophone and one Anglophone perhaps?) or a much better than par job on our formal presentation to UN Emergency Fund. (No-we didn't write it so much because we believed in the Fund but because UN would presumably distribute it to all members and UN specialized agencies. I think it is basis of Brussels evaluation as I gave it to their man who came out to talk and the three hours with him were talking from and amplifying it.) Frankly I'd have thought Sri Lanka and Menduras (evidently for slightly different reason) were at least as hard hit.

Europa has finally pestered me into redoing Cameroon chapter. (No-I did collect a rather large lot of new data.) It seems that Sir K. Merrill and I are only two living Anglophone economists ever to have written much of anything on overall Cameroon economy. At this rate I'll be seduced into going back. As I did a good deal more work than the Robson-Lury chapter could hold in 1965-6 there is a case for spending some time a decade later and seeing if enough comes into, place to do a volume. (After that presumably I won't go back again although my ambiguity about where that state is going remains. Of Francophone states it really does rank as the least mentally dependent of the sea-radicals is other than Guinea and perhaps Malagasy but Malagasy looks radical because Tsiranann was the other extreme. It really is probably at least as far "left" in practical terms as Congo or Mauretania or Mali. However, I think it really is groping toward a somewhat more honest, somewhat more interventionist version of Kenya. (It is making standard error of taking minority in all banks and not consolidating them. Actually has 100% in one and 60% in one but will end with 30% odd in other four; a pity even from a national capitalist viewpoint or indeed a Francophone planning system model standpoint properly transplanted.)

Am across the hall from your old office which is now Jake Jacobs. He maintains there is still a scorch mark on his desk from my pyro-technic display. Still living at IDS (still-four weeks in two lets) looking at houses (small ones) in Lewes. Will jointly with Roland (who has left Peter Shore and come back to us) be running a study seminar on ~~Economic Negotiations, Economic~~ "Business Negotiations, Productive Sector Transformation and Development". This is-as I fancy you will recognize-part of your Public Corporation seminar's ground. Have you any new thoughts in that field? Would you like to take a session? On what? It will be January 1976, almost too much warning.

Regards to all.

Cordially,