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THE NIGERIAN NATIONAL ACCOUNTS: ADEQUACY, PROSPECTS AND EXTENSIONS*

ABSTRACT

In the past, problems of a conceptual or methodological nature, or even of design, coverage and presentation have been the focus of criticisms of the existing national accounts system. These problems tend to recede in the face of the more fundamental issues relating to a lack of organisational and administrative machinery for carrying out continuous reform and perfection of the entire statistical system of which the national accounts is a part.

The use of *ad hoc* bodies for the production of national accounts estimates which only turn out to be different episodes in a long chain of largely unco-ordinated statistical development effort, is no longer adequate for the country's needs especially for development planning purposes. There is a strong case for professionalising national accounting and for providing necessary educational facilitation in this country.

Given the political will and consequent resource commitment, areas in which the present system can be usefully extended include the flow of funds, input-output tables, income factorisation and the development of appropriate SAMs, among others. Since development planning has become a centre-piece of economic management policies in developing countries, the development of the national accounts system might as well be discussed within the context of its usefulness in planning and plan implementation.

Introduction

Development plans are considered to be important instruments for harnessing national resources for improving the welfare of the people. In fact, development planning has become a popular activity of the governments of less developed countries since the end of the Second World War, almost becoming a way of life in some government ministries. Yet there is an expert opinion that the making of such plans is nearly the biggest failure of these governments and that there is no correlation between development planning and economic growth (Lewis, 1969, p. 37).

Whether or not this assertion is supported by facts in the case of any particular country is quite a different issue. But it drives home the important point that we cannot make presumptions about the success of any development plan; prudence dictates that we should rather be on the look-out for whatever deficiencies exist in design and implementation of past efforts that could explain out-right failures or massive under-fulfilment of development plan objectives.

If the aim of a development plan is to harness resources for the achievement of societal goals, then a thorough inventory of the nation's resources becomes a necessary first step in any meaningful planning exercise. Such stock-taking, to be useful, calls for the construction of a well-articulated system of national accounts which is relevant to the circumstances of the compiling country as well as have the flexibility to adapt to changing situations. This is because adequate information about the resource base sharpens the planner's appreciation of *where* the economy is so that his development plan can show *how* to get to the desired destination as defined by the plan's objectives and goals. It follows that an inadequate or deficient national accounting system immediately predisposes any development plan to failure because such a plan is bound to be based on insufficient facts and a significant amount of non-facts.

The attempt in this paper is to seek to identify some major inadequacies in Nigeria's national accounting experience as basis for making propositions for improvements and extensions, bearing in mind the national planning use of such accounts. The purpose is not necessarily to criticise the earnest, if inadequate, efforts of earlier years, but to enable us to see where the needs are greatest. The paper is organised as follows: In Part I there is an appraisal of the existing system with a view to highlighting its major inadequacies. In Part II attention is drawn to certain areas in which the present system can be usefully extended, with benefit to national development planners. Some bold suggestions are made in Part III for the improvement of the nation's accounting system. Part IV contains a summary and conclusion.

*I gratefully acknowledge the assistance of Mrs. J. O. Ashinze and Mr. F. O. Odoko in preparing this paper. Responsibility for any errors is mine.

PART I

An appraisal of Nigeria's national accounting system

There is hardly any need here to go into a detailed historical review of each *ad hoc* effort so far made and the problems it failed to solve. There is enough of such reviews in the literature (Nigeria, FMNP, 1981, ch. 2). The preference here also is to employ a narrower reference frame for the discussion thereby minimising generalisations which may only be useful for global application to less developed countries. Our greater interest is in such specific problems and issues which constitute a serious handicap in the use of Nigeria's national accounting results for policy management, especially in the context of national planning and plan implementation.

First, is the issue of what national accounts are supposed to do for the development planner in the Nigeria case. Only when this

is resolved can we begin to raise useful questions as to why the existing system has failed to achieve such objectives. One readily agrees with the belief expressed that "the primary function of national income accounting for a growing under-developed economy like Nigeria is the provision of an anatomic framework of the national economy in motion, by specifying the numerical parameters of that motion" (Nigeria, FMNP, 1981, p. 50). Obviously there are two important dimensions to this basic function of national accounts: Firstly, the accounting framework must be sufficiently explicit to leave no one in doubt about the magnitudes of the key parameters of the economic system. This implies not only a high level of disaggregation but also the construction of a number of separate but inter-related

tables which permit an in-depth analysis of the economy's characteristics from as many angles as possible. This is possible when there is an articulated and well integrated system of "social accounts".

A second dimension to the main function of an efficient accounting system is that there must be a built-in mechanism for continuity. Not only must there be adequate administrative machinery for handling extensions, innovations and perfection of the existing system, but there must also be sufficient professional interest and technical competence on the part of practitioners such that continuity and progress become a routine. That is the only way to really capture the economy in motion. Unfortunately the following lamentation which was made as an explanation of the phenomenon of sustained inadequacies in the Nigerian national accounting system is still true even in 1985:

"The approach has been, and still is, *ad hoc*. Special teams are set up each time, only to disperse after completing their assignment; and every effort hitherto made to leave a successor viable permanent professional organisation to carry on the task of analytical improvements and reformulation has failed to materialise. . . . Nigeria is still lacking in the existence of a proper organisational machinery to meet the challenge" (Nigeria, FMNP, 1981, p. 48).

Given this fundamental defect, there is little wonder that the following deficiencies, which are germane to an abiding lack of interest and competence in evolving a proper organisational machinery have survived more than three decades of national accounting in Nigeria:

Price Movements

One of the innovations introduced in the latest *ad hoc* effort was the explicit introduction of a study on price movements which, if continued, would form valuation basis for measuring changes in the gross domestic product. Such tables would also help in the study of inflation and the monitoring of impacts of monetary movements. As far as continuity and perfection of this initial effort are concerned, there is still a yawning gap.

The consumer price indices in current use have 1975 as base year. Of course, consumer incomes and tastes have not remained constant all these ten years. There is therefore a need to conduct a fresh national household expenditure survey in order to make the weights reflect the changing composition of the consumer basket. In the composite index, the weights are shared 82-18 per cent between rural and urban components. Needless to say, these weights may now be questionable as increased urbanisation and rural-urban migration have raised the proportion of total population dwelling in urban centres.

The Gross Domestic Product (GDP)

With the greater disaggregation of the activity sectors of the GDP in the last *ad hoc* effort, more information is made available, especially as it affects the oil sector and the financial institutions. But there is need to harmonise the aggregate GDP series in this country. For example, between 1960 and 1984 three different GDP series were compiled based on 1962/63, 1974/75 and 1977/78 prices. Any development planner would agree there is great need to splice the GDP deflators in order to facilitate a historical analysis of changes in real output.

There is still much to be done to refine and improve on the methodology adopted for the preparation of some of the sector accounts, especially agriculture. Much needs to be done to narrow the error margin in the results obtained from the annual

Rural Economic Survey. Such methodological refinements will also eliminate any spurious imputations made with regards to such sectors as distribution and services.

With greater policy interest being shown in the subject of income distribution, there is great need to construct direct estimates of incomes with a view to preparing a detailed account of factor shares in national income.

The last *ad hoc* study only included "some direct estimates of incomes" (Nigeria, FMNP, 1981, p. 49) which may be viewed as a small beginning of what should be a comprehensive income approach as an alternative to the GDP estimates.

The Inter-Industry Account

After more than ten years of the last attempt to recalculate Nigeria's inter-industry transactions, there is need not only to up-date this important account, but also to improve the data base and reduce imputation. There is also a certain degree of incompleteness in the tables which, if excusable ten years ago, can hardly be tolerated in preparing the next national development plan. This again underscores the issue of continuity in refining and improving the accounts. The work done by the National Accounts Survey Team led by Prof. Aboyade was a remarkable improvement on the initial effort made by N.G. Carter who computed data for 1959. The National Accounts Survey Team's tables relate to 1973 and since then no refinements or improvements have been published. That, certainly, is a gap that needs to be filled.

The few areas discussed so far should be sufficient to illustrate the need for showing greater concern for the production of proper national accounts on a continuing basis with refinements and extensions to capture changes in the economic system. The lip service often paid to the "need to have accurate data" on the economy to facilitate planning has not been matched by concrete action along the line of developing an articulate and complete system of social accounts for Nigeria.

The Issue of Timeliness

In very recent times, some achievements have been recorded by the Federal Office of Statistics (FOS) by way of improvements in the currency of essential statistical data.

As an illustration of the "improved" situation the currency of statistics in some key areas is as follows:

	Time Lag
External Trade Data	2 years
Gross Domestic Product	2 years
Index of Manufacturing	2 years
Mineral Production Index	2 years
Consumer Price Index	4 months

It should be obvious that the term "improved" as used here only has meaning in the context of Nigeria's past statistical experience which itself is not independent of the general level of performance and accountability in the Society. If we were to look into some other areas, such as Government finances and population data, the story would be more pathetic. But luckily, that is outside the scope of this paper.

A development planner or policy adviser who has only outdated data as his source of information is necessarily handicapped in the efficient performance of his duty. He would be planning or advising with non-facts, as it were. Faced with this problem, some Government departments and parastatal organisations are forced to make do with their own estimates of key indicators thus raising issues of statutory responsibility and cross-sectional comparability when such data from different

sources must be put together to produce one national document, such as the Annual Budget. One hopes that the spurt of improvement recorded recently by the FOS will be sustained and that the various series, e.g. prices, will be linked meaningfully with the work done by the National Accounts Survey Team for the years 1973-1975.

In appraising Nigeria's national accounts system one is aware of the tendency to see only deficiencies and inadequacies as if there is nothing good in the system.

However, the motivation for spotlighting deficiencies is the desire to contribute towards further improvement of the existing system. Of course, there has not been a serious scarcity of suggestions and proposals for improving the system; the problem seems to lie more with inability, perhaps unwillingness, to expeditiously implement proposals for improvement. This situation, bad as it is, should not be allowed to spoil the appetite

for innovative thinking on the subject.

It must be emphasized, however, that successful solution of the issues raised so far and implementation of the suggestions for improvement to be made in this paper rest critically on the total and uninhibited fulfilment of one condition, namely:

The creation of a proper organisational machinery to be manned by technically competent personnel who are highly motivated by professional interest to spearhead refinements, extensions and innovations on a continuing basis.

Only then can the issues of coverage, methodology and relevance be tackled in a dynamic setting. In other words, the subject of Nigeria's national accounts should no longer be a matter for *ad hoc* committees nor should its administration be a mere adjunct that is treated peripherally (Nigeria, FMNP, 1981, p. 8). A quasi-autonomous Central Bureau of Statistics was proposed by the National Accounts Survey Team.

PART II

Extensions of the present system

Most of the proposals made for improvement of Nigeria's national accounts system typically centre around issues of coverage, definitions, methodology and the underlying assumptions as these relate to the quality of the results obtained from surveys. These issues are important and their resolution will certainly contribute to improvement. However, all such refinements may be considered a kind of qualitative "deepening" of the system. But in an economy that is undergoing continuous structural transformation and in which the over-arching social system is re-shaping, there is need to design an accounting system that will not only spell out the basic production and distribution framework, but also be amenable to capture the characteristics of the changing society. In other words there is need for "widening" the scope of the system itself. Some areas in which useful extensions especially of the "widening" type can be made to the existing system, will now be analysed.

The Flow of Funds

While introducing the flow of funds into Nigeria's national accounts system, the National Accounts Survey Team explained that "Nigeria's financial transactions have become increasingly complex and analytically challenging" hence the need to include the flow of funds as an integral part of the new system (Nigeria, FMNP, 1981, p. 49). As it turned out, the flow of funds has been well established as a social account, but not as an "integral part" of the national accounts system mainly because no administrative machinery for continuity within that system was set up. Instead, the Central Bank of Nigeria has fully developed it as an analytical tool and has since published regular data on Nigeria's flow of funds as part of general financial statistics (CBN, 1983)¹.

Before considering what refinements and improvements need to be made to the existing flow of funds accounts, there is a need to examine the relevance of the flow of funds to development planning. The main account of Nigeria's flow of funds is presented in the form of a financial flow matrix with sectors as columns and transactions as rows². The need to balance this matrix of independently constructed sector accounts forces a close look at inconsistencies which must be eliminated before a statistical balance can be achieved. Thus there is provided a very valuable network of inflow-outflow data that helps in tracing

patterns of inter-sectoral financing in the economy. Since all sectors of the system are included in the matrix, it immediately provides basis for tracing financial implications of macro policy measures.

A planner who sees a contradiction between a high level of *aggregate* savings and low investment in the economy will find the flow of funds accounts useful in identifying surplus sectors and the available channels for funds mobilisation in the system. Also because Nigeria's flow of funds accounts are the integrated type in which "real" and financial flows are measured side by side, the planner is enabled to see the link between investment and savings on the one hand and borrowing and lending on the other, on a sector-by-sector basis. This structural attribute of the Nigerian flow of funds also equips the planner to resolve the so-called "institutions – instruments distortion" (Okah, 1978, pp. 14-16) as the measurement of decision-making units is co-extensive with that of spending, borrowing and lending activities which affect interest rates. That way, the planner can easily link "real" changes with financial movements.

Having established the accounts and having set up the administrative machinery for ensuring continuity in production and presentation of results, the Central Bank is now undertaking further refinements of the system.

Separate oil sector and non-oil business sector accounts have been constructed and are being published side-by-side with the main accounts. Work has already started on the construction of a separate Government Parastatals account so that only the households and unincorporated businesses may be treated as residual. Work has also started on the production of a preliminary short-term forecasting model which, if perfected, will form basis for monitoring movements in monetary aggregates.

Understandably, the refinements being undertaken are mainly geared towards a better understanding of monetary and financial variables. If the right conditions had been created for it within the system of national accounts per se, the extensions would have been directed towards such variables as financing, funds mobilisation, general liquidity measurement and prices.

Input/Output Tables

At a recent regional conference of the International Association for Research in Income and Wealth issues were raised as to whether less developed countries can and should undertake the compilation of input/output tables. Suggestions were made that only an input/output *approach* be adopted for development planning in these regions in view of the many constraints facing these countries (IARIW, 1983, I, pp. 274-291). There is also the argument that since one of the objectives of development planning in less developed countries is to try and change the technical co-efficients in the direction of technological progress, there is a fundamental contradiction between the objective of the planner and that of the input/output model builder who assumes stability of co-efficients. So the question may be raised as to whether the input/output tables are in fact a desirable extension of the Nigerian national accounts system.

Both arguments can be effectively discounted, at least in the Nigerian case. The issues of constraints of data availability and limited resources for the development of articulate input/output tables reduces to that of priority and the political will to commit resources for the development of a useful tool for meaningful planning in a country which has virtually accepted development planning as a way of life. A systematic, gradual but steady approach to the development of this useful tool becomes feasible as soon as the necessary administrative machinery is set up and the manpower problem is minimized.

As to whether the planner's objective can be reconciled with any stability that may be assumed for input/output model building, the factual answer is Yes. First, no serious model builder would assume perpetual stability for his inter-industry technical co-efficients. He must re-calculate his co-efficients at reasonable intervals and ensure relevance to the changing structure of a growing economy. In fact, one of the attributes of an articulate social accounts system is to be able to adapt to the dynamics of the development process (Aboyade, 1971, pp. 34-71). Such periodic recalculations of the inter-industry co-efficients will enable the planner to know in what direction the economy is in fact moving and what structural changes are taking place.

It is unfortunate that the beginning was made by the NAS Team to compute input/output tables of the Nigerian economy for 1973 has not been built upon. No machinery seems to have been set up to continue to refine, extend and perfect that system. After twelve years that valuable work may now be considered out-dated. This again brings to the fore the issue of competent manpower and administrative mechanism for continuity.

Social Accounting Matrices (SAM)

One of the best ways to develop national accounting in any country is to set up a system of specialised accounts. If these accounts are presented in matrix form, they are bound to impose a certain level of statistical discipline by throwing up hidden errors in the data and ensuring statistical consistency.

Although the SAM as an accounting technique is relatively new and has not been widely used, there is no need to view the construction of SAMs as an impossible task for Nigeria. After all a SAM is only a working model and the flow of funds and input/output tables already discussed are in fact SAMs. Once it is agreed that a wider use of SAMs be developed for the presentation of Nigeria's national accounts data, all that would

be necessary is to relate the various individual accounts as different blocks of an overall SAM and all the blocks need not be developed and articulated at the same rate. Differences in data and resource availability will affect the rates at which different blocks are developed and articulated.

One advantage of the SAM presentation format is that it provides a statistical picture of the entire system at a glance and is a handy statistical basis for economic planning and econometric estimation. By showing empty cells and blocks, the matrix gives an immediate picture of the data availability situation of the country. The descriptive worth of a SAM and the statistical consistency which it enforces make the SAM a valuable framework for planning and executing statistical development programmes of any country. Of course, this can be possible only if the administrative machinery for it and the manpower are available.

It should be mentioned in passing that the SAM is neither an alternative to, nor a competitor with, the United Nations System of National Accounts (SNA). It only amplifies and complements the SNA.

Also, the frightful-looking, extremely detailed SAMs of some centrally planned economies should not scare away any country from developing a SAM. In principle a SAM can be made as simple as the designer wants it.

Factor Shares in National Income

The latest published attempt to factorise the national income of Nigeria is the NAS Team's inclusion of "some direct estimates of incomes" and this was the construction of estimates of household incomes as part of the Household Income and Expenditure Survey. There was attempt to distinguish between income in cash and that in kind and to separate other cash receipts from earned income. Only the urban household income earners were classified into wage earner and self-employed with a sub-division of each into lower, middle and upper income earners (Nigeria, FMNP, 1981, pp. 156-160).

The FOS produces estimates of domestic factor income which is the value added at producers values less indirect taxes and depreciation allowances. The data exclude incomes received by local residents from abroad but includes income paid to foreigners from local production. These data are disaggregated into compensation of employees and operating surplus, i.e. labour and non-labour incomes (FOS, 1979).

These efforts, while commendable, are obviously rudimentary and inadequate both in coverage and in depth of analysis. But both attempts can form basis for an extensive study of factor shares in Nigeria's national incomes with a view to the production of articulate and more comprehensive incomes tables that will provide statistical information for the formulation of realistic incomes policies.

As social factors become more important in the conception, design and implementation of development plans it becomes imperative that adequate data be provided to indicate which social groups are getting what share of aggregate income.

The broad division into labour and non-labour incomes should be viewed only as a first step. An articulate National Income Table by factor shares should ideally give time series data on shares of different categories of labour income, interests, rents, entrepreneurial incomes, and incomes of other groups. This is another area in which the national accounts may be usefully extended if the conditions are right.

PART III

Suggestions for improving Nigeria's national accounts

At a Joint Conference of African Planners, Statisticians and Demographers held in March, 1982, the Economic Commission for Africa (ECA) proposed the "National Accounts Capability Programme" (NACP) the essence of which is to promote co-ordinated development of basic statistics and the compilation of national accounts estimates by the national staff of the assisted countries (IARIW, 1983, II, pp. 608, 623-630). Our interest in the NACP is that it spells out concrete steps which may be usefully taken by any country which seriously wishes to develop a comprehensive system of national accounts. These seven steps may be followed, in principle, not necessarily in the same sequence in the development, improvement and extension of Nigeria's national accounts:

1. Examination of the current availability of data and their use.
2. Evaluation of future data requirements for short and long-term economic planning.
3. Preparation of a plan for a national accounts capability which is fully co-ordinated with basic data collection and processing activities.
4. Specification of related organisational arrangements for the national statistical system.
5. Training of national accounts personnel in co-ordination with those for other activities.
6. Preparation, at all stages of implementation, increasingly up-to-date national accounts estimates.
7. Consultation with planners regarding applications.

If viewed as a kind of Action Programme, the steps spelt out by the ECA can be sequentially re-arranged to suit Nigeria's present stage of statistical development, provided the political will is present. A critical study of the Nigerian case would convince anyone that the first and foremost line of action is what the ECA calls the "specification of related organisational arrangements for the national statistical system". One would add for Nigeria, the inclusion in such organisational arrangements the procurement of the services of technically competent professional personnel who are highly motivated and who see their job as a profession rather than an occupation.³ This calls for the creation of a quasi-autonomous institution manned by a corps of dedicated professional personnel ready to make a career in national accounts.

Once the organisational machinery is set up and suitably manned, the first major task for it would be a stock-taking exercise. That is what the ECA calls the "examination of the current availability of data and their use". The discovery will be made that a lot of administrative data is actually available in this country, except that much of it has not been properly organised, co-ordinated and presented.

Such an organisation will have to find ways of bringing some systematic order to the rather chaotic statistical landscape and to identify gaps that need to be filled through surveys. Depending on the findings of such an organisation, the strategies and

sequence for the development of the entire system will be worked out. This is what the ECA calls "preparation of a plan for a national accounts capability".

One important decision such an organisation will take in consultation with data producers and users, is the design of the overall framework for the presentation of national accounts data. The choice will be made either to follow the SNA thus emphasizing international comparability, or develop a system of SAMs with their advantage of versatility and consistency, or follow the traditional presentation methods, or any combination. The important outcome of that decision would be that Nigeria's national accounts will move from the era of *ad hoc* compilation of rough and ready estimates to a co-ordinated, sustained and systematic programme of development.

The strategy for the development of national accounts to be worked out by the proposed organisation will not be independent of the development planning needs of the country. There is bound to be close co-operation between the planning organisation and the statistical organisation. Such co-operation may not be achieved by sub-ordinating either one to the other⁴.

Manpower Development

The usual practice in most underdeveloped countries is to employ regular statisticians and give them on-the-job training in national accounts production. International organisations and associations have provided most of the in-service courses usually at Government levels. This is commendable but inadequate for Nigeria's needs in the area of manpower development for national accounts.

It must be admitted that no course on national accounts can adequately deal with all the different kinds of situations which a national accounts statistician is likely to encounter in practice while constructing a system of national accounts for a country like Nigeria⁵. Be that as it may, the proposed statistical organisation will find it useful to encourage higher institutions in Nigeria to include realistic and up-to-date national accounts courses in their regular programmes in statistics⁶. In the long run, the advantages of specificity will be reaped when Nigerians are trained in Nigeria by Nigerians to solve Nigerian Statistical problems.

It will be observed that no suggestions for improvement have been addressed to any specific problems of a conceptual or methodological nature. Even problems of design, coverage and presentation of results have not been directly dealt with in making suggestions for improvement of the Nigerian system. This is because of the strong belief that (1) there is enough awareness about the existence of such inadequacies, and (2) unless and until a proper institutional machinery is set up for the development of Nigeria's national accounts system, any proposals for solving any specific problems will be futile. Our problems are mainly institutional and human and until they are adequately tackled, no sustained improvement may be forthcoming.

PART IV

Summary and Conclusion

In this paper effort has been made to zero down on what the author considers to be the main issues underlying the poor performance of Nigeria's statistical system of which the national accounts is only a part. If a system is an integrated complex of interrelated, functioning, components, then what we have at present can hardly be called a system in that strict sense of the term.

All the same our statistical "non-system" can still be salvaged and made to function as a "system" if the key issues are resolved.

Arguments have been presented to show that the use of *ad hoc* bodies to produce national accounts estimates for the country, producing different episodes in a long chain of unco-ordinated statistical development effort is not adequate for the country's needs. There is need to professionalise national accounting both in terms of educational facilitation and in career development. It has also been argued that the right focus for sustained development of Nigeria's statistical system is the creation of proper institutional arrangements whose responsibility will be the development, extension and perfection of the statistical system. Therefore; "There is a great need to create a quasi-autonomous organisation, manned by competent and highly motivated professionals and charged with the responsibility for continuous development, extension and perfection of the country's statistical system, including the national accounts."

Only when the institutional and manpower problems have been solved, will there be a basis for resolving the specific technical, conceptual and methodological problems about which much has been spoken and written.

If the development planner is to avoid planning with non-facts, and if the quality of a development plan is not independent of the quality and quantity of statistical data available, then, a lot of planning effort should first of all be directed towards improving the statistical system which will in turn feed the development planner with better tools for his work.

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¹ See also issues of the CBN Economic and Financial Review since December 1980.

² There are seven supplementary Tables and five charts with focus on different aspects of financial relations in Nigeria.

³ It must be mentioned that a high turnover of statistical personnel can no longer be wholly explained by reference to the compensation package.

⁴ Perhaps this provides a clue to an understanding of the persistence of our national accounts problems.

⁵ See the paper by Dr. Iyengar (IARIW, 1983, I, p. 539).

⁶ Dr. Iyengar has proposed a curriculum for a formal degree course in national accounts.

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