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THE STATISTICAL ENVIRONMENT  
IN  
THE THIRD DEVELOPMENT DECADE

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## THE STATISTICAL ENVIRONMENT IN THE THIRD DEVELOPMENT DECADE

Looking back on the past ten years the observed differences in the statistical systems are differences in detail rather than in fundamental purpose or approach. In the absence of some intervention, the same differences can be expected for the decade of the 1980's.

We must examine what is likely to happen in the next ten years. We must project on the basis of the current situation.

In considering the current situation, we must consider two relationships and project them to the decade of the 1980's in our examination of the future. They are: -

- 1) Relations of statistical offices to the rest of Government and to other public authorities.
- 2) The relation of the Statistical Offices with non-Governmental groups and individuals, both as users and suppliers of data.

In the decade of the 1970's, in many countries, there has been a great growth in the scale of official statistics. There have been great increases in the amount of professional officers in these offices. In many countries, the percentage of public expenditure spent on statistics has increased substantially. The range of statistics collected directly or indirectly from administrative sources has increased tremendously, accompanied by gains in accuracy and timeliness. Statistical technology and ADP facilities have improved.

In the Caribbean, these improvements have not been as great as those witnessed in the more developed countries and the increases observed in some of the countries have been at the instance of international organizations. Partly responsible for this relative lag have been the factors of limited Government budgets, lack of qualified human resources and lack of Government appreciation of the importance of proper statistics. Any advances in the statistical systems (at least in the English-speaking Caribbean) have been the results of the initiatives of the official statisticians in the statistical offices, and not as a result of top to bottom policy implementation. The shift towards economic statistics

and the break in the emphasis on population statistics was the consequence of the thinking that occupied the minds of the statisticians at the turn of the decade of the 1960's. These professionals perceived the increasing need to monitor the movement in the economic variables that affected the economies and moved to develop their national capabilities in business surveys (or surveys of establishments as they were first called). The decade of the 1970's saw the further elaborations of economic statistics and the attempts by statisticians to monitor changes in the economic and social ethos by means of indicators. The achievement of enhanced capabilities through training and subsequent developmental work was a function of the Governments' budgets, and since these differed greatly in response to the same and to different external stimuli acting on the national resource base, the size and output distributions of the various statistical offices became more skewed. The current reality is that in the English-speaking Caribbean, only the more developed countries of Barbados, Guyana, Jamaica and Trinidad and Tobago have statistical offices of a size that permits the production of a wide variety of statistics. The statistical offices of the East Caribbean countries are woefully lacking in human resources and as a result, in the range of statistics produced. It is true that more and better statistics are produced in the Caribbean today than ten years ago, but with greater Government enthusiasm, statistical offices in the sub-region would have been able to better keep pace with improvements in the technology. In the Caribbean today, many countries are two years late in the publication of their Annual Trade Statistics reports. At the same time, statistical offices are faced with urgent requests for current data. There has been some opposition to the increasing demands made by the collectors of statistics. The next ten years will witness the need for more statistics of a wider variety, including statistics in new areas.

### The Government Environment

Governments are increasing their demand for more and better statistics to assist their decision-making. At the same time, there are two contradictory streams of demand.

1) People and Organizations, while calling for an increased role of Government in the production of goods and services, complain of excessive Government interference in their lives.

Government's appetite for official statistics will increase; so too will the public's resistance to requests for data in the coming decade. At the same time, the activities and importance of regional and local Government are likely to increase, and with it, the demand for small area statistics. Governments will have to solve this impasse through dialogue rather than through force.

Even if one assumes that ten years hence the Government environment will be such as to require at least as much statistical support as today, this does not imply an unchanged official environment for statisticians. It is possible that the continued Government demand for statistics will be set in a very changed context.

Firstly, at present, statistical resources are very unequal to the demands being made on them. The prognostication is that resources will continue to lag behind demands. Throughout the Caribbean, public expenditure will come under increasing scrutiny, and this will be a constraint to the increase in statistical personnel. The Caribbean countries have already experienced the consequences of economic pressures on their statistical output. The outlook for the 1980's is that foreign exchange will continue to be a problem and exert negative influences on the national capabilities to enhance the statistical infrastructure. This, together with the increased pressure on the statistical resources to produce data geared to the decision-making process, will probably result in a re-thinking of what the statistical offices should produce. This inequality of demand and resources will lead to:

1) The need for greater efficiency in statistical organization and production, and a greater reliance on administrative sources of data;

2) Greater need to establish statistical priorities, with statistical programmes being closely related to policy needs, and with the use of cost-benefit considerations applied to statistics. Also there will increase the need for both accurate and timely statistics. This would have ramifications on the present methods of production of statistics. The preoccupation will be to find simple summaries, key indicators and simple rather than complex models.

Policy-makers will be increasingly driven toward microstatistics, since more emphasis will have to be placed on improvements at the local level, and less emphasis be placed on overall national statistics which tend to be dysfunctional when viewed from the angle of distribution. Policy-makers in Government will increasingly expect from their statistical offices not so much the production of more data, as their analysis and interpretation. The trend in the 80's will be to collect less data and to produce more decision-oriented data. Advances in the statistical base for economic and social forecasting will become necessary. As a result of the new interpretative role to be played by the statistician, he will be expected to assign measures of reliability (quality labels) to the figures he produces. The statistician's new role as an interpreter will demand a more outgoing, policy sensitive approach that is not at variance with professional integrity.

Regular routine statistics will become less important while ad hoc surveys and analysis will rise to prominence. Statistical analysis will become more responsive to the problem of distribution which might at base be the generator of other economic and political problems. Social change and the social consequences of economic change will need to be analysed and quantified.

#### Ministerial and Geographical De-centralization

A continued movement towards devoted and dispersed Government seems likely in many large countries. Because of the already small nature of most of the Caribbean economies, this change would be slower in coming. The more likely phenomenon in the Caribbean would be the appearance of statistical sections of different Ministries. This will change somewhat

the context in which central statistical offices work. Small area data will be called for and there will be the need for coordination to ensure that what is collected and produced "locally" (or Ministerially) is compatible with national requirements. There will be organizational and methodological problems in how to link the statistical operations of local or ministerial statistical offices with their central counterparts. To the extent that the former have administrative autonomy, it will be the harder to sustain an integrated statistical system and organization. What would seem advisable would be the deployment of staff from the statistical office to various administrative locations (Ministries) where new data are to be extracted, in the interest of maintaining the integrated system. This approach will be jeopardized if Government budgets prevent the expansion of the statistical establishment.

Networks of local computer/data banks would rise to prominence in supplying comparable and prompt data.

#### The Public Environment

As regards dissemination and the two-way relation between statistical offices and the public, the environment ten years hence may be very different from now.

National Statistical Offices will increasingly be called upon to make the data on which policies are based more readily to the public at large. Greater openness will become the order of the day. Secrecy per se will not be tolerated. Statisticians will be expected to make available data collected at the public's expense and through their effort, in a form that renders them meaningful and useful to the public at large.

The public of the 1980's will be better educated, and more critical of Government's decision. They will need access to statistics to support their claims.

For the supply of detailed data, traditional methods of dissemination will not suffice and new technology will help. Computer terminal linkage to data banks holding anonymous aggregate data will become widespread in the more advanced countries and the use of user-oriented analytical

packages will further facilitate communication with the non-expert user. Detailed guides to the data available in this way will be needed.

In the Caribbean countries, the Governments will realize that the traditional means of retrieving data will no longer be satisfactory given the immediacy of the desire for the data. The more developed countries will move towards automated data banks and will design interfaces with the data bases in order to procure both data and analyses of the data. To the extent that this function is placed within the statistical offices, to that extent will the configuration of the statistical offices change. This activity is not likely to become very widespread in the Government service, by the end of the decade. The less developed countries will appreciate the usefulness of such storage and retrieval methods but will most likely not be in a position to utilize the technology singly. In this area, much reliance might be placed on the international organizations, who request the information and who at present assist in producing the information by way of UNDP-funded projects.

Because of increased analytical activity of non-Governmental institutions, national statistical offices may lose the near monopoly they enjoy now and there will be risks of duplication and confusion. Strong coordination by the central office will be required to avoid confusion.

Attitudes against form filling might harden and national statistical offices will have to ensure that the public at large does not consider itself to be excessively bombarded with questionnaires. National statistical offices will have to assume the role of clearing house for surveys through the mechanism of a Statistical Priorities Committee that functions. In Business Surveys, Statisticians and company accountants will have to forge closer links.

Data collection methods will seek to reduce the burden on the public, for example, in -

- 1) increasing use of sample surveys carefully designed to minimize sample sizes;
- 2) improving form design;

- 3) modifying business-oriented data to fit as closely as possible the data requirements of the economist, bearing in mind the differences in concepts between the two;
- 4) using administrative records as sources of primary data more systematically and generally.

In the Caribbean, the use of compulsory surveys will continue with relatively low response rates. There will therefore be greater emphasis on techniques of imputation to deal with the problems of non-response. However, 100% occasional surveys will still be necessary to provide data for "grossing up".

Privacy and Confidentiality will constantly be viewed by Statistical Officers as being pertinent considerations. At the present rate of progress, the decade of the 1980's will not find substantially softened positions on the part of the suppliers of data in the Caribbean countries. The statistical offices will face the task of allaying the fears of the public on confidentiality while making modest moves towards the linking of data and the creation of data banks, even though these banks pose a threat to the confidentiality of certain data. Within the data storage, retrieval and processing technology of the 1980's, assurances of confidentiality must be given if the statistical offices are to retain the support of the public.

#### The Technical Environment

Great changes in computer technology can be anticipated in the 1980's, with improvements in hardware and the likely predominance of minicomputers. Greater use will be made of optical character reading, microfilms, microfiche, etc. Processing should become faster and more efficient. The decade of the 1980's should witness the growing awareness on the part of Caribbean Governments of the need to computerize administrative records, with statistical outputs becoming a by-product of the system. To the extent that user-oriented computer systems assist in the achievement of this objective, they will be a real help. To the extent that they distract from this aim, they should be treated with caution.

#### The Professional and Academic Environment

The professional statistician must interpret his data, or others will do so for him. Statisticians must become more literate and administrators more numerate. There will be the increased need for interdisciplinary teams. The statistician will have to overlap with the functions of accountants, economists, EDP specialists, operational research specialists, but he will have to maintain the central core of his work.

Official statisticians will have to associate themselves more closely with the academic community and make use of advanced statistical techniques. On the other hand, University courses in Statistics should utilize to a greater extent the output of Statistical Offices. The hiatus between the official and the academic statistician will be closed to a great extent in the decade of the 1980's as they come together in the interest of a higher quality of statistical output.

The establishment of a Training Institute for Statistics in the Caribbean should become a reality in response to the need for increased efficiency of the statistical product.

#### The International Environment

The international environment for work of statistical offices will change in accordance with the organizations. Their influence will be felt mainly in the search for more comparable statistical concepts and in the development of accepted international standards and classifications. These objectives are likely to be intensified by the greater use of ADP and there will be increased pressure for the use of common coding systems in areas of mutual interest, for example, documentation concerned with international trade. Because international factors increasingly affect national environments, the pressures from international organizations for better and more coordinated data will intensify, but attempts will be made to more fully understand the national situation first.

Because of narrowed financial constraints that will face several small countries of the Caribbean in the decade of the 1980's, the national

Governments might not be able to provide the data demanded by the international organizations. These organizations may have to collect the new data by their own efforts, or sponsor the collection of new data for the purpose of inter-country comparisons through regional statistical projects or bilateral technical aid agreements with possible local salary support.

Since 1975, the third world countries have not been too enthusiastic to supply data to international agencies without seeing the need for such data. This attitude will persist in the 1980's, with the added inability on their part to provide the data requested because of resource inadequacies. Statistical activities sponsored by international agencies will therefore increase in the coming decade, partly to develop national capabilities and partly to ensure the provision of data needed by the international organizations. This aspect of the international environment does not seem to be at variance with the recent move towards decentralization of data collection activities away from the Statistical Office of the United Nations, to the Regional Commissions. A project is, by its very nature, temporary, and the Statistical projects in the Caribbean must come to an end, though the services provided should continue. In the coming decade, much of the responsibilities of the present statistical projects may very well have to be taken on by existing agencies such as CEPAL, through its Office for the Caribbean. The end of the second development decade has seen the beginnings of technical cooperation among developing countries. With the aid of the United Nations organizations, this aspect of self-help will be fostered in the decade of the 1980's, with the international agencies providing the services that might prove to be too costly or otherwise out of the immediate reach of the several sovereign states.

#### Conclusion

The continuation of foreign exchange difficulties and the increasing Government budgetary constraints seem to be the financial environment in which statistical offices in the Caribbean will have to function in the decade of the 1980's. The increased demand for decision-oriented

statistics and the lack of additional statistical resources will force the national statistical offices to be more critical of their output and encourage them to be more efficient. Many traditionally collected series will no doubt cease to be collected, while new and relevant series will appear. The shift towards more accurate quantification of increases in the quality of life will lead to new data on subject such as environment statistics. The need for automated storage, retrieval and processing of data will probably be met by heavy inputs from international organizations, because of the inability of the countries to provide that type of service in the medium term. The need for relevant, accurate and timely statistics will result in an evolution of the role of the statistical office in the planning system, and a better understanding of the local conditions, though the stimulus of heavy and urgent demand for statistics and relatively scarce statistical resources. The international organizations should be able to provide valuable technical assistance to the region, and promote the practice of mutual self-help through the mechanism of technical cooperation among developing countries.

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