

EFFECTIVE NATIONAL STATISTICAL SYSTEMS: ESSENTIAL REQUIREMENTS

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Abstract

The current global economic crisis is an unprecedented period of turbulence and restructuring. The crisis follows an extended period of optimism, the sense of knowing (or being close to having) all the answers, and we are now in the midst of great uncertainty. The main social, economic, and environmental concerns are exceedingly complex, multi-faceted, and pose challenges to the very foundations of the capitalist system. These concerns must be tackled whether or not the relevant statistical information and analysis are available. Rational policy development, and decision making based on quantitative measures, will demand the availability of a strong and healthy statistical system that is capable of supporting effective responses. In fact, one might assert that, given the magnitude of our problems, the leverage of the right kind of statistical information system has seldom been as great. Increasingly, national information systems are being challenged to illuminate issues, not just to monitor them; by the ability to evolve in response to needs; indeed, by their ability to be aware of priority information needs and by the ability to set priorities. Such a system must have a high level of public credibility, since few in society can verify national statistics and therefore most have to rely on the public reputation of the agency providing the statistics. As part of that credibility, the statistical system must be seen to act transparently and be seen as free from undue political interference.

The paper addresses the question of what conditions must be satisfied for the statistical system to evolve to become an effective system. The paper describes the circumstances and arrangements that are essential for the system not only to function well, but to evolve in a healthy manner.

The major determinants of sustainable statistical evolution can be broadly considered under the following headings: the character of broad institutional and legal arrangements; policies to protect core values; arrangements to safeguard non-political objectivity; approaches to assess and meet national priorities; approaches to assess and meet other users' priorities; mechanisms for coordination; systems and mechanisms used to balance overall priorities; dissemination approaches tailored to meet the different needs of client groups; and the character and success of efforts to generate a supportive environment.

The paper concludes with a brief evaluation of the achievements of the Malaysian statistical system over its 60 year history. Its rich heritage provides a firm foundation for its further development. The paper notes the need to address a number of emerging

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issues and offers some suggestions on how the system could be made even more effective.

Introduction

It is a singular honour to have been invited to deliver a Keynote Address on the occasion of the 60th Anniversary celebrations marking the establishment of the Department of Statistics; an important national institution dedicated to the ideal of illuminating public policy issues through statistical measurement. Over its sixty year existence, the Department has been an important player in nation building. As we mark this very important milestone, it is appropriate to acknowledge the contributions of countless individuals who served in the Department to make it what it stands for. It is with a sense of both pride and tremendous respect that I dedicate this address to them. With great humility, I would like to recall my association with the Department, in one form or another, over a period of 51 years. As the first Malaysian to have occupied the prestigious position of Chief Statistician, I am justly proud of that association and what has been achieved by my successors in nurturing and developing this institution. As I look around this hall, I see a whole new generation that is committed to the furtherance of building and sustaining an effective statistical system to serve our nation as it pursues the goal of attaining developed country status by 2020.

I have been a personal beneficiary of the two decades during which I served with talented colleagues in this Department. That experience has served me well and shaped my entire professional career and outlook on statistical issues. Lessons learnt then have enabled me to make modest contributions elsewhere on the global scene. Allow me then to take this opportunity to thank those colleagues – too numerous to name.

The current global economic crisis is an unprecedented period of turbulence and restructuring. The crisis follows an extended period of optimism, the sense of knowing (or being close to having) all the answers, and we are now in the midst of great uncertainty. The main social, economic, and environmental concerns are exceedingly complex, multi-faceted, and pose challenges to the very foundations of the capitalist system. These concerns must be tackled whether or not the relevant statistical information and analysis are available. Rational policy development, and decision making based on quantitative measures, will demand a strong and healthy statistical system that is capable of supporting effective responses. In fact, one might assert that, given the magnitude of our problems, the leverage of the right kind of statistical information system has seldom been as great. Increasingly, national information systems are being challenged to illuminate issues, not just to monitor them; by the ability to evolve in response to needs; indeed, by their ability to be aware of priority information needs and by the ability to set priorities. Such a system must have a high level of public credibility, since few in society can verify national statistics and therefore most have to rely on the public reputation of the agency providing the statistics. As part of that credibility, the statistical system must be seen to act transparently and be seen

as free from undue political interference. These attributes are not unique but must be seen as universal in nature. It is thus appropriate to address the question: what are the conditions for the evolution and maintenance of a statistical system such as that described above. The answer needs to emphasize the circumstances and arrangements that represent the capacity of the system not only to function well, but to evolve in a healthy manner.

New Challenges Faced by Statistical Systems

There are a number of new challenges that impact on national statistical system. Key challenges are:

- **Globalization** – In a highly competitive world, markets demand information; the East Asia Crisis and the current crisis demonstrate how markets react when credible information is not available; following the 1998 crisis the IMF responded via new data standards in an attempt to address one dimension, namely of data transparency.
- **Civil Society pressures for accountability and greater transparency-** The demand for reliable data has been accentuated by the information revolution represented by the internet. Metadata has become an important component of the overall output of statistical systems.
- **Pressure to adopt Evidenced Based Decision Making** – Governments are relying on Poverty Reduction Strategies and Programs; Donors demand data for target setting, (MDG, poverty maps, key economic indicators etc)
- **Response Burden:** Concerns about privacy, together with the cost of responding to official data requests, are increasingly impacting on response rates.

National statistical systems are meeting these challenges by an increasing reliance on administrative datasets, a greater degree of information sharing and via the use of information technology in all stages of the statistical process from data gathering, processing, storage to dissemination. Malaysia has made progress but may need to pay greater heed to these issues in the near term.

Hallmarks of a Good Statistical System

While there is no single model of a successful, effective and efficient statistical system, there are nevertheless a number of features that contribute to the emergence of a system that is sustainable and fulfills the primary mandate. Key amongst these attributes is:

- System must have a high level of public credibility – accuracy, making data available in a timely manner; transparent methods that contribute to a greater trust in the data;
- Credibility has to be built on perceptions of freedom from undue political interference safeguarded by legal frameworks that establish political independence of the statistical system
- Professional excellence based on the use of sound methods and tools
- Responsiveness to changing needs
- Use of modern management tools

These underlying attributes are broadly incorporated in the IMF's two data standards - Special Data Dissemination Standards and the General Data Dissemination Standards to which countries subscribe on a voluntary basis. Subscription carries a commitment by a subscribing member to observe the standards and to provide certain information about its practices in disseminating economic and financial data.

Countries are well served by the adoption of these frameworks as they are built around data characteristics, quality, access, and integrity -- and are intended to provide guidance for the overall development of macroeconomic, financial, and socio-demographic data. Important benefits arising from the adoption of the IMF standards include: building the confidence of the user community in official statistics, providing a framework to systematically evaluate and improve the statistical system in a comprehensive and prioritized way.

The major determinants of sustainable statistical evolution can be broadly considered under the following headings: the character of broad institutional and legal arrangements; policies to protect core values; arrangements to safeguard non-political objectivity; approaches to assess and meet national priorities; approaches to assess and meet other users' priorities; mechanisms for coordination; systems and mechanisms used to balance overall priorities; dissemination approaches tailored to meet the different needs of client groups; and the character and success of efforts to generate a supportive environment.

Countries that have good functioning statistical systems share certain common features. Their statistical systems have:

- Sound institutional and legal arrangements empowering the statistical system enshrined in a Statistics Law
- Policies to protect core values;
- Arrangements to safeguard non-political objectivity of data to give credibility to data
- Approaches to assess and meet national Government priorities;- consultative processes for interactions with key users; awareness of policies
- Approaches to assess and meet other users' priorities – interactions with the private sector and the research community
- Mechanisms for coordination – a National Statistical Council;
- Systems and mechanisms used to balance overall priorities- development of strategic plans and annual work plans;
- Sound dissemination approaches tailored to meet the different needs of client groups – Pre- announced calendar for statistical releases and subscription to the IMF SDDS or GDDS ;
- Character and success of efforts to generate a supportive environment – close relationship with the media to promote statistics.

Most statistically advanced countries have moved ahead in these directions. Malaysia has made considerable progress in developing these features and incorporated these into the governance framework of its national statistical system.

Legal framework

The first element of an overall structure is, of course, the legal one: who are designated as the main players within the statistical system, what are their mandates, what legal enforcement powers do they have and, most importantly, how strongly and unequivocally protected is the confidentiality of individually identifiable information.

The Malaysian Statistics Act establishes a mandate for the Department and empowers it to virtually collect all information from individuals and business. However, unlike in Canada, whose statistical system is rated as the best in the world, the DOS does not have explicit powers to access individual records in the possession of other government entities. It should be noted that Statistics Canada has full access to all records held by governments, and specifically identifies all taxation and customs records, as well as records of courts. These are very strong legal provisions and indicate the high importance attached to good statistical information.

Unlike the Canadian Act, the Statistics Act of Malaysia does not specify that all information collected has to be published. This has been interpreted as ruling out the publication of certain kinds of information. To heighten the credibility and authority of the DOS, it may be appropriate to consider adopting the Canadian practice.

There appears to be a fundamental need to strike the right balance between the right to collect and the right to publish. The global trend towards access to information and freedom of information requires a review of current practice. This is not to suggest that the confidentiality provisions governing individual records should be overturned or weakened.

Chief Statistician

It is generally the practice in most statistically advanced countries that the Chief Statistician has a somewhat unique status. In many countries the method of appointment and removal is such that there is a high degree of political independence. Although there is no explicit provision in the legal framework, the Chief Statistician in Malaysia enjoys security of tenure and freedom from political interference by virtue of the non-political nature of the public service. More generally, a major role of the Chief Statistician is to co-ordinate the statistical system -- for which tools are needed. They involve the authority to establish classification schemes, the establishment of arrangements for joint collections, and the authority to consult with all other agencies involved in statistical activities. By established practice, the Chief Statistician also has full authority for setting priorities. It permits him to guide the evolution of the statistical system along a set of medium term priorities; it provides him with flexibility to mobilise resources for priority objectives; and it permits the elimination of duplication across the system.

Protection of core values

The core values of an effective statistical system are legitimacy and credibility. Credibility of statistical information should be seen as a fundamental attribute. Since information that is not believed is useless, it follows that the intrinsic value and usability of information depends directly on the credibility of the statistical system. That credibility is dependent on the satisfaction of two primary conditions: the use of sound and appropriate methodology, and the absence of political biases. Because statistical agencies must make daily choices involving program priorities, questionnaire design, release texts, and these choices are unavoidably value laden. It is all the more crucial that they should strive to make such choices demonstrably free of political biases.

The issue of core values is an overarching one and has several dimensions. It is appropriate to begin by addressing the issue of confidentiality before moving on to other aspects.

Confidentiality

The Statistics Act provides the basis and spells out the obligations and the personal liability of all employees. Ensuring that the law is enforced, demands that staff are trained; physical security is in place; a specially secure computing environment exists and makes it physically impossible to dial in, and therefore prevents access by potential hackers; and an extremely strong tradition culture which is passed on from generation to generation.

The existence of uniform confidentiality protection however should not be used as a device to limit data dissemination. Individual records should be protected; disclosure should however be permitted via anonymization of records. It avoids duplication and hence represents a most important source of efficiency. Uniform confidentiality protection also makes the linkage of records between data systems more and publicly defensible. This, in turn, opens up the possibility of substantially expanded use of data holdings.

These issues require close attention and demand a fresh approach in the current environment in Malaysia.

Privacy protection

As a rule all statistical surveys are an intrusion of privacy, justified on the basis of the need for a public good, namely information. Thus, it is important that questionnaire content is minimally intrusive, that respondents are informed of the purposes of the survey, and that the total reporting burden imposed on the population is regularly measured and adjusted.

A special issue relates to the very sensitive topic of record linkage, the formal review and approval methods used, and their likely success in maintaining a sensitive balance between the competing public goods of privacy protection and the value of the information that can be derived through linkage. In the Malaysian context these issues have yet to emerge fully but are likely to become issues for debate. For instance, should the Electoral Rolls be linked to National Registration Department records and further linked to taxation records or other data sets? What new procedures should be developed? These are issues on which the DOS should take a lead by drawing on the experience of other countries that have moved towards record linkage within a centralized statistical system.

Use of sound methodology

Most countries attempt to make choices between the use of international and national concepts /definitions and standards. While national frameworks may in some instances be most appropriate, their use limits the ability to make cross-country comparisons through the use of indicators. The importance of such comparisons cannot be underestimated particularly for countries that are open economies with strong linkages to the rest of the world. The ideal involves maintaining a balance that represents, in some defined sense, an optimal balance between domestic and international comparisons. While Malaysia has generally adhered to the use of international standards and concepts, there are nevertheless areas in which it has adopted practices that deviate.

A key issue facing the Malaysian DOS in the near term will be the extent and speed with which it moves towards the greater use of international standards for instances in the measurement of FDI flows, the determination of poverty lines, the methods for estimation of poverty head counts etc. The adoption of standard international concepts is important in the context of ASEAN integration, fulfilment of obligations under the SDDS subscription. It is also important that international standards are employed to support deeper analysis, and sharply focused decision making. The development of a strong methodology function with a determining influence on the work of DOS will in the longer term contribute to the building of sustainable capacities, and enable the adoption of innovative practices. By acting in this manner, the Department will be acting in a manner consistent with its history when it pioneered the estimation of a Social Accounting Matrix; the development of an HIES etc.

DOS should also ensure that there is a reasonable level of funding for methodology research, indeed to try to ensure that methodology research is integrated with methodology practice. Statistical systems in many countries e.g. Australia, Canada, Hong Kong, and a number of EU countries etc have arrangements for funding methodology research and there is no reason why Malaysian should not emulate these countries.

Objectivity & Integrity

In general the credibility and trust in the Information supplied by a statistical agency is dependent on the reputation of the agency. While few users can validate directly the data released by statistical offices, the reputation of the agency matters much. It must be stressed that information that is not believed is of little value. Hence, the intrinsic value and usability of information depends directly on the credibility of the statistical system. That credibility can however be challenged at any time because statistical agencies must make daily choices involving program priorities, questionnaire design, release texts, and these choices unavoidably involve the exercise of judgment. It is all the more crucial that such choices are seen to be objective and free of bias.

Resisting external pressures depends, first and foremost, on the broad institutional and legal framework, on how confident the agency is of its own worth, the professional standing of the key officials serving in the Department. Other policies and practices include the following:

- the statistical agency must retain professional control of survey content and questionnaire design thus carrying the imprimatur of the agency;
- the existence of a transparent planning process, including a strategic plan which explicitly identifies longer term priorities for public scrutiny.
- the legal requirement to publish what is collected is a significant safeguard against possible pressures to keep some findings away from the public eye. A policy of pre-announced release dates provides additional protection.
- the regular provision of analytic output reinforces a public image of relevance and helps to make the statistical office an independent entity. In many countries with a strong statistical tradition all data releases are accompanied by a media friendly analytic summary which highlights the significance of the data in the context of broad economic and social developments.
- Objectivity demands that the analysis avoids policy advocacy, stating assumptions, and highlighting major findings whether or not these reflect on the current or preceding policies.

In the Malaysian context, there is a general acceptance that statistics generated by the statistical system are objective. The Department's integrity has not been directly challenged. The Department has followed international best practice. That said, it must be stressed that safeguarding a hard earned reputation demands perseverance and vigilance. There are improvements that can be made to further enhance the reputation of the Department. The practice of having other ministries and agencies release particular statistical information compiled by the Department is not conducive to promoting the image of the Department as a fully independent agency. It would thus be appropriate to revisit the current procedures and make modifications that reflect international best practice.

Establishing Priorities

A national statistical agency serves multiple clients. These include official agencies of the government, private sector institutions, civil society and the academic and research community. The statistical agency needs to engage each segment of its clientele if it is to be in a position to set priorities. A close and formal bilateral relationship with key departments and central agencies is essential. In the Malaysian context interactions in the past, for instance with the Ministry of Finance, the Economic Planning Unit, Bank Negara Malaysia were conducted through the Inter-Agency Planning Group. Other committees and bilateral discussions were important and productive to both sides.

It is somewhat more challenging to develop and maintain productive relationships with the private sector, civil society and the academic and research community. Ad hoc consultations together with a policy of maintaining an open dialogue is essential. The Department should under no circumstances insulate itself as it would then be less able to serve all segments of society.

There exists a school of thought that argues that statistical offices should only aim to meet the needs of government. In an era where data plays an important role in all aspects of a nation's life, this is a too narrow concept about the role of a statistical agency. It can be argued with force that non-government users need separate attention and that there are a number of specific and productive mechanisms which can be used to keep abreast of their needs. The extent to which these are actually used is an intrinsic characteristic of a statistical system.

The range of non-government client groups is, of course, varied, so a large variety of mechanisms have to be used to gain an understanding of their needs. Some approaches that are commonly used are:

- Professional advisory committees.
- A National Statistics Council
- Client oriented program evaluations based on a systematic and through evaluation of the extent to which existing statistical programs meet the needs of key clients.
- Interactions with professional and business associations. An explicit goal of these contacts is to seek out the views of actual and potential clients about their statistical information needs.

DOS appears to have reached out to its key clients. It however needs to take a more systematic and proactive approach if it is to achieve stronger links with the variety of clients it serves.

There is an additional dimension of priority setting that needs attention. This concerns the issue of what part of the current output should be continued, at what level, with what frequency. Determining the introduction of new initiatives can and should be pursued; these can impact on the character of the entire statistical system: both its realized outputs and its intrinsic capacity. For this reason, attention needs to be paid to issues such as: does the statistical system lend itself to establishing overall priorities; what prerequisites are essential for priority decisions to be implementable; what are the longer term priorities which must be given weight on a permanent basis; and finally what can be said about planning as a process?

Longer term priorities need to be factored in. While the main business of statistical offices is to provide current statistical information, in the longer term their ability to be sustainable is dependent to a very large extent on their ability to evolve and adapt.

Therefore, special attention must be paid to those structural priorities which contribute to survival even at the price of significant reductions in current output. There are several aspects that require special attention: continuing to support analysis, innovation and experimentation, maintaining professional infrastructure by constant attention to skill renewal, keeping the operational infrastructure made up of classifications, business registers and sampling frames in good repair, and ensuring a strong capacity for client inputs.

In brief, long term sustainability depends to a large degree on maintaining a spirit of innovation. Investing in the future is thus not a choice but a prerequisite. Thus, resources need to be set aside for conceptual and developmental work, experimenting with new methodology, trying out new analytic and dissemination approaches, and implementing pilot surveys to demonstrate the workability and relative advantages of collecting new types of information. A failure to do so guarantees longer term decline.

Co-ordination of the statistical system

The statistical system in most circumstances consists of more than the national statistical office. Line ministries, other agencies, including the central bank are important entities that are in the business of data collection either via special surveys or through administrative operations. These collectively constitute the statistical system.

The co-ordination of the components of the statistical system to act as a coherent whole is important to ensure effective functioning of the system. Such coherence includes the ability to minimize duplicative efforts, reduce response burdens, use standardized concepts and classifications to enable data comparability, to meet broad priorities, to deploy people according to overall needs, to exploit possible synergies (e.g. creating new information through record linkage), to take advantage of possible efficiencies (e.g. using common tools, registers, field staffs), and to ensure that the outputs of the system are coherent. These aspects require attention irrespective of whether the system is centralized or decentralized. In the majority of countries the agency designated as the national statistical office plays the role of a coordinator. In the few cases where the system is wholly decentralized e.g. the United States, the coordination function is assigned to a special entity. In the case of the US, the function is discharged by a unit in the Office of Management and Budget.

An important dimension of coordination relates to administrative records used for statistical purposes. It is important that other agencies use the same concepts and classifications to facilitate data comparability and to permit fuller analysis. Adherence to common standards is often facilitated via the National Statistical Council. However, effective formal tools are insufficient. The standing and strength of the national statistical office can impact favourably to ensure that changes to administrative records will not do irreparable harm to statistical information derived from them. Thus, the higher

the profile, the more likely it is that important allies can be mobilized, should it be necessary to promote and apply common standards.

The Malaysian experience has generally been satisfactory. There is a sufficient degree of coordination in the system. This is in part attributable to the deployment of staff from a central pool of professional staff to key line ministries and agencies. This staffs is subject to professional supervision from DOS. Further improvements are both feasible and desirable. Control over the reporting burden (approval of statistical forms, i.e. the clearance function as it is called in the United States, China and the Philippines) would contribute to closer coordination.

Some Key Management Issues

Good information on project costs is important to managing the statistical system. Such information is critically important to decisions concerning new activities and also in assessing the savings achieved through the elimination of current activities. The cost of proposed new activities cannot be estimated reasonably without good information on current project costs. Statistical offices that have shown strength have the internal information systems that track costs closely. The systems in place are comprehensive, and are based on time budgeting of staff inputs. The system must identify all projects about which decisions might have to be made. For example, it is not sufficient to know the total cost of monthly industry surveys since one is very unlikely to make a global decision about them. Instead, one needs to know the cost of each of them, as well as a sufficient decomposition of the total to permit the simulation of alternative cost cutting measures, such as the reduction of sample sizes, reducing the frequency of surveys. A country that has made effective use of such a system is Canada. Statistics Canada has had a system of this type for well over twenty years; the high status of Statistics Canada is in part accounted for by its strong management practices.

Flexibility in being able to redeploy personnel as required by new priorities and planning decisions constitute another prerequisite. A planning system is ineffective unless management can carry out needed changes. A variety of mechanisms are needed to encourage and facilitate the flexible and regular redeployment of staff -- partly to assist them in their own personal development, partly to give effect to the changing mix of project priorities. Career planning represents an important tool for improving productivity. In many statistical offices there is a tendency to have staff specialize. However, there is a downside reflected in the development of narrow perspectives, flagging motivation, creation of cells which may or may not work together harmoniously, and an inward looking orientation. Overcoming these negative aspects demands mechanisms to bring about the desirable level of personnel development. The use of project teams made up of staff from different units is a well tested means. A well developed training and development program is a critical element.

The complexity of many statistical projects demands careful project planning. Project planning tools used in the corporate world can be used to great advantage to ensure that project implementation remains on track, within budget and outputs are defined. Accountability of the staff involved is ensured.

An aspect of Human Resource management meriting special attention is that associated with reward systems and corrective mechanisms for improving performance of staff with poor performance through training and coaching. Efforts in this regard are important investments in the most important asset that a statistical office possesses --- its human capital represented by its staff.

Data Dissemination

Data dissemination is an important part of the statistical function. National statistical systems exist to collect, compile and serve their multiple clients. The data dissemination function is perhaps the single most important of the responsibilities discharged by these entities. Thus, an ultimate test of the statistical system is the extent to which it is able to satisfy the needs of its clients. Client orientation in data dissemination is essential if the system is to meet expectations. It is in this context that three key issues arise:

- Can clients avail themselves of a single point of access for their entire statistical information needs?
- How easy is it to search the data holdings of the statistical system in order to identify the information that might be relevant to particular requests?
- What incentives are there to foster client orientation?

For reasons of efficacy and ease, it is highly desirable to have a single point of access. This is particularly important for nearly all clients, as they do not have a detailed knowledge of the internal roles and responsibilities of different components of the statistical system. A single access point to an overall data bank which holds all the non-confidential data of the statistical system and has a good search capability becomes an essential tool to engage in effective data dissemination. All major statistical offices have made advances in recent years as information technology has developed rapidly.

In some instances a single entry point may need to be supplemented by more specialized databanks to serve the needs of special clients. While a variety of different arrangements are needed to meet the needs of different client groups, all access points should act as overall entries to the entire system. A key observation can be made: developing the infrastructure to support such a system represents a large sized

investment and a commitment to maintain and improve the facility. However, in this day and age, statistical offices cannot evade responsibility for developing the infrastructure to support dissemination.

Well developed statistical systems hold far too much information to be effectively searchable in an ad hoc manner. Metadata assumes greater importance. Countries such as Australia and Canada and a number of EU countries have made significant investments in systems to support metadata.

Ease of access involves more than the ability to identify what relevant information is available. It also involves the capability to retrieve needed information and to do so fast. Although many national statistical offices have developed websites and uploaded data, much of the data are in the form of static tables and indicators. A few countries have gone beyond these rather rudimentary arrangements and have created websites that enable interactive access and downloading of data.

While all statistical offices aspire to have a client orientation, the concept has remained somewhat abstract. There has existed in many statistical offices a notion that “We know what clients want”. Improving client orientation demands an outreach. Consumer satisfaction surveys are a tool that have come into use and are encouraged under the IMF’s SDDS framework.

Building Support

All Statistical systems are vulnerable and are dependent on public support. The legal authority that they enjoy is by in itself inadequate to permit them to carry out their mandate. Ultimately they depend on the willing cooperation of households and individuals who are the primary suppliers of social and demographic information.

Similarly, they depend on businesses for the large majority of input needed to produce economic statistics. General political support is crucial to obtain funds needed to carry out their functions. Loss of support can be crippling. Vulnerability is linked to accidents caused by errors in the data released. Thus, building and retaining support is an important determinant of the success of national statistical systems. A mix of measures is needed. Past performance alone is insufficient for building robust support. Statistical offices need to be alert and constantly address the following: non-political objectivity, maintaining the relevance of the product line, upholding professional practices and reputation, service orientation in delivery. Some further elaboration is in order.

The decisive determinant of public support for any government program is a perception that it is important and fulfils a societal need. Continuing relevance is therefore a necessary condition for a positive public perception of the statistical program. It is

therefore essential to have an effective public information approach that presents statistical outputs on a continuous basis via media releases and reporting. Frequent news releases in the context of important issues (such as inflation, economic growth, or unemployment to mention just a few), undoubtedly contribute to a perception of usefulness. This advantage is predicated on the statistical office having departmental or self-standing agency status, so that the statistical releases identify the Agency, and not some other department of which it might be a part. In this regard, the Malaysian practice under which GDP growth rates get released by Bank Negara have the effect of down playing the role of DOS.

Other measures of a defensive nature that can contribute positively to building support include the consistent application of the legal provisions pertaining to confidentiality of individual records. This is crucial to obtaining truthful responses.

Statistical offices need to take account of cultural sensitivities and respect for privacy. Survey topics and questions must be socially acceptable. Topics which, while legitimate subjects for government research that are deemed too sensitive, should be avoided.

There is generally a greater risk of offensive behaviour than of offensive survey questions. An active program of training interviewers in courteous behaviour is a strong foundation for maintaining public cooperation and high response rates.

To many businesses demands for data are a burden and entail costs. To them the dominant issue is the reporting burden. Statistical agencies deal with these concerns by a combination of approaches that include: actively minimizing the reporting burden through the exploitation of administrative records, sampling, and abbreviated questionnaires for small sized enterprises.

Measuring Success

What are the measures for assessing success?

Statistical systems are complex entities. However, it is easy to identify the main indicators of success:

- a. How effectively does the system meet the priority information needs of its users? But this is a static question. The underlying dynamic question is how adaptable is the system in adjusting its product line to evolving needs?
- b. How effective is the system in exploiting existing data to meet client needs?

- c. How credible is the system in terms of the statistical quality of its outputs and its non-political objectivity?

While responses to these questions might indeed provide a measure of success, the paper has focused on the operationally significant issue of the determinants of these desirable outcomes and on how such outcomes may be brought about. Among the many considerations that have been outlined, the following emerge as having critical importance:

1. It is essential to have a single overall system which is: adaptive in determining program priorities, in mobilizing resources, able to ensure the use of harmonized concepts, service clients and operate efficiently in order to fund the substantive requirements.
2. It is important that the head of the system has strong tools to be able to manage -- particularly strong ones if he or she does not have formal line authority. These tools determine the effectiveness of the management of the system.
3. The greatest substantive challenge to the system is to foster the evolution of its outputs to evolving needs. The key operational determinants of success in this regard are effective interactions with clients, and mechanisms for synthesizing these needs and mobilizing resources to meet them.
4. Adaptive systems need to be able to evolve. This involves giving very high priority to developing and maintaining a strong analytic and research capacity, and a capability to respond to client needs.
5. A high public profile provides awareness of statistical information and its utilization. It helps in achieving high response rates and hence better data quality, it contributes to the effectiveness of productive feedback mechanisms with client groups, and furthermore it enhances the protection of the system from political interference. Effective public profile depends on name recognition achieved through effective dissemination of data and analytic outputs.
6. The single most important determinant of client convenience and satisfaction is the availability to engage in "one stop shopping". This implies not only a single formal point of access, but also effective tools to carry out the task.
7. Cost effectiveness of the statistical system should not be ignored. Avoidance of duplication of effort is essential. The system should profit from potential synergies and benefit from available infrastructure.

Concluding Remarks

This paper has attempted to provide an overview of the characteristics of effective statistical systems. The review has touched on the multiplicity of complex conditions that need to be met to achieve effectiveness. Reference was made in passing to a number of aspects that are of particular significance and relevance for the Malaysian statistical system at this unique point in its history. The paper did not attempt to evaluate the strengths and weaknesses of the system. It touched on a few issues which merit special attention. It is, however, appropriate that the paper conclude with a few remarks that touch on the Malaysian statistical system.

- The Malaysian statistical system has a rich heritage and can justly take pride in what it has achieved over the six decades of its existence. Its legacy includes the fact that it pioneered and carried out complex sample surveys and censuses, engaged in statistical tasks that were path breaking e.g. SAMs, other activities that are the norm in statistically advanced countries and it has participated in high level decision making processes in the government.
- DOS enjoys a high profile and has gained the respect of its clientele both in the public and private sectors. Its dissemination efforts are generally viewed with satisfaction. The product range meets the wide spectrum of data needs in the economic, social and demographic fields even though some gaps exist.
- DOS is well funded and has invested heavily in both its physical and statistical infrastructure (Sampling frames and business registers). It is well supported in budgetary terms to enable it to carry out its extensive work program.
- The human resource pool at the disposal of the Department contains the skill-mix essential to the functioning of an effective statistical system. It is also noteworthy that the Department has been successful over time in renewing the needed skills.
- The Department enjoys strong political support and is thus well positioned to carry out its mandate.

These are some of the contributory factors that account for the success it enjoys. However, the incumbent managers do recognize that no institution can afford to rest on its laurels. There is a need to constantly look to the future, innovate and renew. In that spirit, this paper would like to offer a number of suggestions, which if acted upon, will provide the means to seize opportunities and ward off threats.

As a first step, the Department would be well served by undertaking a full and comprehensive assessment. The IMF's Data Quality Assessment Framework (DQAF) is viewed as a tool for assessing data quality. Indeed, the IMF works with member countries in carrying out such assessments. Its Reports on the Observance of Standards and Codes (ROSC) have been helpful in identifying areas of strengths and weaknesses. The reviews look at particular aspects of data quality as defined in the DQAF framework. The assessment covers key data series that are of critical importance for sound macro-economic management. Typically, the reviews deal with statistical practices in the areas of the national accounts, prices, government finance, money and banking, and balance of payments statistics. Beyond a review of the status of the series in question, the reviews deal with aspects of the institutional environment and organizational dimensions of the statistical regime. Following the completion of a DQAF review, it would be appropriate for the Department to prepare a Statistical Master Plan (SMP), using the guidelines developed by the World Bank and PARIS21. The SMP has become a widely used means whereby countries chart appropriate strategies for pursuing the goal of building sustainable and effective statistical systems.

In the context and spirit of this paper several issues merit attention by DOS. It should with advantage address the following questions:

- Are there sufficient arrangements within the overall statistical system for data sharing? Does DOS have unimpeded access to detailed data generated by other agencies?
- Are the present data dissemination systems (e.g. website) adequate and meet the objective of "one stop shopping" and incorporate user friendly tools providing access to users?
- Is the current practice under which certain data e.g. GDP are release by other agencies appropriate? Is this practice consistent with international best practice? Should DOS assume its rightful role as the publisher of its own outputs?
- While confidentiality of individual records as prescribed by the Statistics Act is a bedrock requirement, can and should DOS adopt the means to release annonomized data, as practiced in other countries, to enable deeper analysis?
- Can data linkages, with adequate safeguards, be developed to permit fuller exploitation of data holdings?
- While DOS takes account of international concepts and methods, deviations exist e.g. use of seasonal adjustment, determination of poverty lines and estimation of poverty head counts etc., can and should DOS move to the fuller use of international usage to promote greater data comparability and improvements?
- Can DOS move towards fuller development of a metadata system in keeping with best practice in the statistically advanced countries?
- Are the present arrangements for coordination adequate to ensure minimization of duplication and response burden? What further

institutional arrangements would contribute to greater and more effective coordination?

- Sustainability of the statistical system demands investments in experimentation and methodological research. Is DOS in a position to engage in these activities?

These are a few of the multitude of issues that demand attention. In the final analysis, the Malaysian statistical system, like that in other countries will encounter challenges, threats and opportunities. It must therefore equip itself with the relevant planning and management tools to develop responses that are based on strategic considerations.

It is with a high degree of confidence that I can see a bright future for the Department. I would like to extend my best wishes to all who, with pride, serve in this institution.

References

1. Chander, R : Statistical Capacity Building: A Fresh Approach, Paper for ADB Manila, 2002
2. Chander, R : The World Bank Guidelines for Statistical Capacity Building, World Bank, 2002
3. Chander, R : Statistical Master Plans (Afghanistan,China,Lebanon, Ukraine, Russian Federation, Sri Lanka, Yemen) 2002-2008
4. IMF: Data Quality Assessment Framework
5. Fellegi, I.P: Characteristics of an Effective Statistical System, Statistics Canada 1995