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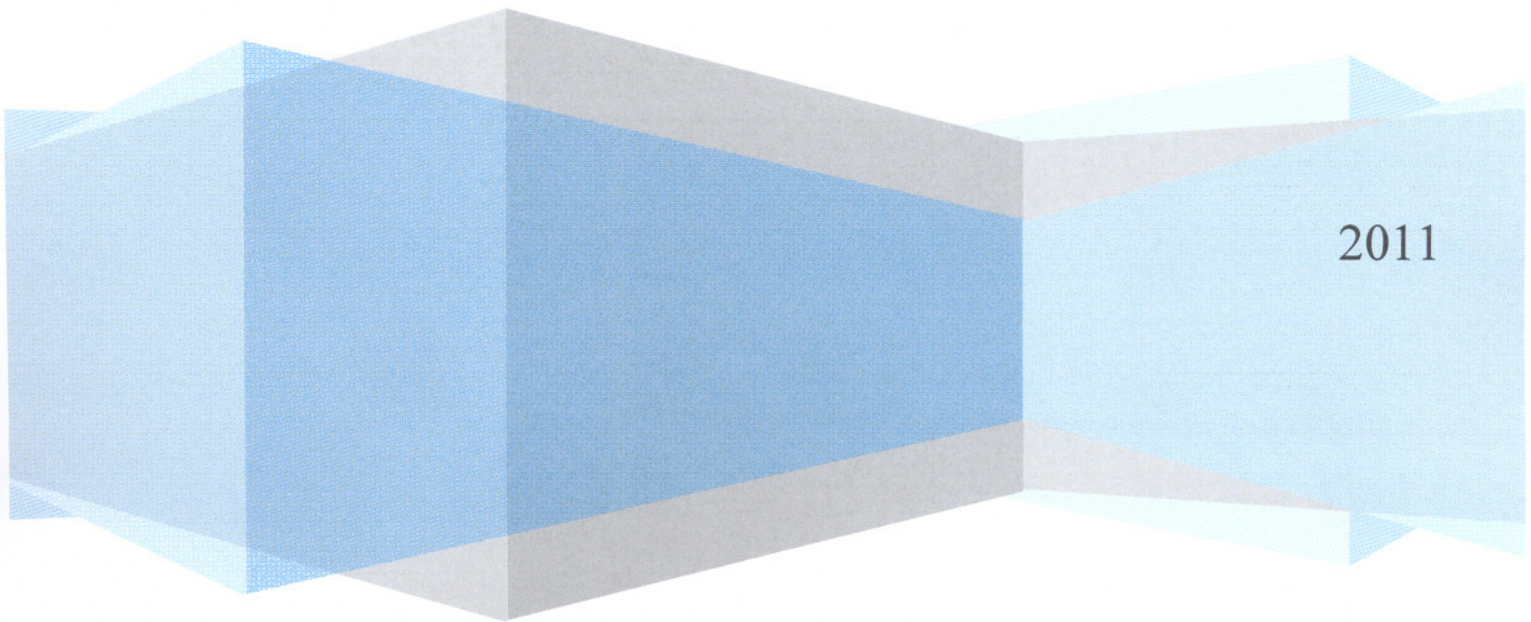
In Greater Appreciation of Statistical Data



In Greater Appreciation of Statistical Data

Madam Chairman, distinguished guests, conference participants, good morning. It is an honor to be here this morning to speak on the important and relevant topic of statistics. In one of the workshop documents, I noted that it is STATIN's responsibility "to promote and develop integrated social and economic statistics pertaining to Jamaica..." The document also stated that statements contained in the development plan for Jamaica, Vision 2030, will drive the production and dissemination of baseline statistics required for the monitoring and evaluating of the achievements under the plan. Vision 2030 envisions a stable macro economy, an enabling business environment, strong infrastructure, energy security and efficiency, internationally competitive industries, and a technologically-enabled society.

The immediate question these statements pose is how can statistics facilitate monitoring and evaluation of these outcomes? It is important at the outset to note the typical decision circle includes the recording and compilation of data, the analysis of these data, and the use of these analyses in decision-making processes, which eventually produce

additional records for compiling. The central message I would like to impress on you today is that the recording and compilation of data is as important (some would argue maybe even more important) as the two other aspects involved in the decision-making process. This would imply that we should pay as much attention to the statistics produced as to the analysis of these statistics (a different field of study), and as to the decisions that are based on them. We all know the phrase "garbage in, garbage out."

The desired outcomes in Vision 2030 ultimately will reflect the decisions of institutional units in the domestic economy and the rest of the world. Because these decisions are based on available information, the timely production and dissemination of statistics in Jamaica will be vital for the proper execution of all the desired mandates within the plan. Therefore, the success of this workshop and equally importantly the utilization of the lessons learnt from it becomes a key component of the Vision 2030 plan.

Statistics – use and definition

Statistics are used widely by researchers, corporations, and households. Policy makers use them to decide on policy, assess the success of past

policy decisions, and to forecast and make medium-term plans. Some even suggest that there is a correlation between the advanced use of statistics and countries' economic development, and given the importance of statistics in planning this is likely the case. In what follows, therefore, I will focus on the recording and compilation of economic statistics, but the argument can be easily extended to other statistics.

To begin, what is economic statistics? At its most basic level, the compilation of statistics is like re-assembling a giant picture from a zillion bits. The bits are the transactions institutional units undertake in a market economy. By combining similar bits or ones that fit together we can view a part of the picture (for example, the government statistics), but to get the whole picture we need to be able to match where the chunks of the picture mesh together (e.g., the link between fiscal and monetary accounts, or between the balance of payments and the monetary accounts). Needless to say if the joining points are not mirror images of each other, we will not be able to join and create the whole picture. How do we translate that concept to the world of statistics?

The System of National Accounts (SNA)

As indicated earlier, statistics is the gathering of information for conceptualizing, analyzing, and making decisions. How do we generate statistics? *The System of National Accounts 1993 (SNA93)—and the 2008 revision*—provide an integrated and consistent framework for the measurement of the market economy. The System of National Accounts consists of an integrated set of macroeconomic accounts, balance sheets, and tables based on internationally agreed concepts, definitions, classifications and accounting rules. Together, these principles provide a comprehensive accounting framework within which economic data can be compiled and presented in a format that is designed for purposes of economic analysis, decision-taking, and policy-making. The SNA does not attempt to provide comprehensive compilation guidance on how to make estimates or how to address every situation. However, it embodies a number of key propositions, with direct implication for some information gaps that arise, most recently during the global financial crisis

A key building block of the SNA is that institutional units undertake transactions. Transactions are economic flows between (by mutual

agreement) institutional units[1]. Economic flows record (on an accrual basis) when institutional units **C**reate, **E**xchange, **T**ransfer, **E**xtinguish, or **T**ransform economic value (which are rights, obligations, and risks of holding economic assets). They record changes in an institutional unit's assets and liabilities and are reflected in changes in balance sheet positions (stocks). Thus the completeness of a statistical database depends on its ability to distinguish among types of flows within and between institutional sectors. Such a database would record for completeness the following dimensions of a transaction: **Who** (units) does **What** (transactions) to **Whom** (units) **When** (time) **Where** (location) at **What Price** (valuation) and for **What Purpose** (objective, behavior).[2] As a result, each transaction leaves a unique footprint.

This allows not only for drilling down to specifics (where data are available), but also to provide insights into transmission mechanisms

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[1] An institutional unit is an entity capable in its own right to acquire assets, incur liabilities, engage (subject to rules and regulations) in economic transactions with other entities, and have a complete set of accounts, including its own balance sheet. They are grouped into five mutually exclusive institutional sectors: general government, financial corporations, nonfinancial corporations, households, nonprofit institutions serving households.

[2] This is well illustrated in the financial account of the balance of payments which presents transactions by functional purpose (direct investment, derivatives, reserves assets), type of instrument (equity, debt, loan—debit and credit), domestic sector, maturity of instrument. Importantly, functional classification highlights the fact that risks and motivations are different, implying different implications for analysis.

and channels of contagion - for example, shifts in patterns of intermediation from banks to other nonbank financial institutions, or sources of financing for corporate debt. To do so, macroeconomic statistics are presented in analytical accounts (e.g., the general government account) which present the position of that sector versus the other sectors, with a view to interpreting well-defined concepts of macroeconomic significance (e.g., domestic credit, net foreign assets; government revenue; overall fiscal balance; external current account; exports).

A comprehensive measure (retrospective and prospective) of the economy needs to recognize that economic agents undertake transactions in markets that follow a system of rules. As such, the nature of these transactions, the functioning of the markets - including rules of conduct and operation, and the interlinkages across markets and agents are material, and each of these aspects needs to be measured. While the nature of economic transactions and linkages are at the core of the set of sectoral macroeconomic accounts, the functioning of markets tends to evolve, driven proactively by innovation and reactively by events (leading to a modification of rules and regulations). A prospective

view therefore requires not only data on activity, but also a data on the functioning of markets, including the impact of rules and regulations.

Boundaries of the SNA

The SNA itself redefines activity within a production boundary, and a financial asset boundary. As such, compilers recognize the need for supplementary sets of data. Of relevance, environmental accounting records the interaction between the economy and the environment, allowing analysis of the implications for sustainability of different patterns of production and consumption, or the development of industries that use environmental resources. By extension, efforts should be made to measure activity in the non-observed economy.

The global crisis highlighted that a crisis can originate (or be exacerbated) in any sector (including the household sector) and underscored the relevance of balance sheet analysis, the need to monitor evolving channels of intermediation, and the importance of information disclosure and oversight (corporate governance; regulatory and prudential). The crisis also highlighted the role that complete

recording of transactions could play (more information disclosure) in understanding the full extent of vulnerabilities.

What are the attributes of good statistics? In a phrase - timely quality data.

How do we measure quality? The IMF's Data Quality Assessment Framework provides a structure and common language for good practices and internationally accepted concepts and definitions in statistics, including those of the United Nations *Fundamental Principles of Official Statistics* and the IMF's Special Data Dissemination Standard and the General Data Dissemination System. The methodology helps to identify and document in a systematic manner, practices in statistical production, ranging from institutional arrangements to data collection, compilation, and dissemination. Through regular updating, the framework reflects internationally recognized good statistical practices as they evolve.

The framework has five dimensions--assurances of integrity, methodological soundness, accuracy and reliability, serviceability, and accessibility. It also covers institutional environments, statistical

processes, and characteristics of the statistical products. The broad framework has been applied to each of several dataset-specific frameworks: national accounts, consumer price index, producer price index, government finance statistics, monetary statistics, balance of payment statistics, external debt statistics, and household income in poverty analysis.

Standards and codes are benchmarks of good practices. The IMF and the World Bank have recognized international standards in 12 areas related to their work (accounting; auditing; anti-money laundering and countering the financing of terrorism (AML/CFT); banking supervision; corporate governance; data dissemination; fiscal transparency; insolvency and creditor rights; insurance supervision; monetary and financial policy transparency; payments systems; and securities regulation). In assessing countries' observance of these standards, and helping them implement reforms where needed, the IMF and World Bank aim to improve the functioning of the economy as well as investors' decisions, and ultimately to promote greater financial stability and help prevent financial crises.

So how can we produce good quality statistics? I propose the concept of an organic statistical system.

First there must be a comprehensive legislative environment to provide the legal foundation for the compilation and dissemination of the data, free of influence to maintain integrity. The **institutions** need to be independent, established with adequate resources (physical, human, information or knowledge management architectures, including systems and procedures), and committed to confidentiality, impartiality, and objectivity. Because of the multiplicity of collection points, the **information architecture or process** must embody coordination. To be effective, the collection points need to subscribe to harmonization of principles, so that the whole can be a seamless aggregate of the parts; the outcomes must be interpretable so as to inform the vision and intent; streamlined yet comprehensive in scope so that initial, secondary, and ancillary linkages can be traced; and dynamic and flexible to adapt to the changing needs of users. This can include widening coverage perimeters as needed, updating national accounting principles, monitoring financial instruments outside the financial asset boundary, and gathering information on counterparties.

The **compilers** must be trained in the highest standards of methodology, be diligent in execution, and be subject to monitoring or self regulation according to best practice standards and codes. A peer review system can periodically assess the effectiveness of the system, with a view to identifying recommendations for improvement and enhancing credibility. Of note, costs of compilation as well as the burden on respondents cannot be ignored.

To build trust (acceptance) in the data disseminated, the **users** must be educated so that they can act with minimal uncertainty and provide feedback on new or evolving needs so that the compilation process can serve the purpose of the foundation of decisions.

The ensuing system perpetuates the organic growth of institution, process, compiler, and user. It is my hope that that you will strive to honor that ultimate vision. I wish you success in your deliberations over the next two days.

Thank you very much