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**International experience in setting up
an economic statistics compilation programme**

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Summary

In any country, the underlying quality of all economic statistics, and more particularly the national accounts, is influenced by the relevance of assumptions that are needed to produce them. These assumptions are only ever partly true in well endowed countries, and are unlikely to hold in less well endowed open economies. How far what happens in practice differs from what is assumed may lead to a different emphasis in what is measured at any time, as, for example, unpredictable events and external influences make continuity of series more difficult, and perhaps less relevant in less well endowed countries.

Less industrialised economies can contain geographically or culturally defined economic regions where money transactions determine economic well being, regardless of the control over economic resources of significance to the national and international economy. This is a more complex issue than those faced in economies where money is essential in economic exchanges both of personal or national significance.

The national accounts uses concepts, standards, classifications and statistical units that enhance measures whether they are contained in or outside of the national accounts framework. This may mean that some statistics, such as commodity and asset prices, contribute to a different mix of needs in less well developed economies, because of the distinctly open nature of these economies, the greater variety of economic regions they can contain, as well as perhaps less influence on price transparency of other influences on the integrity of markets.

Not all countries have the significant public service and revenue gathering infrastructure within government that exists in well developed countries. Using the survey design methods adopted by well endowed countries may bring about suboptimal solutions unless this infrastructure is in place. Technological change and statistical methodology can still add to the capacity to produce timely statistics of relevance to decision makers in government and business, but may involve rethinking how to best use the range of options considered to be relevant, in survey design and the role of technology in statistical processes. Emerging low cost technologies that use mobile phones, satellite mapping for example, may bring more immediate benefits to countries less well endowed with investments in traditional technologies.

Economic statistics, economic performance and public policy

The system of national accounts is a globally accepted framework for comparing economic conditions, the nature and sources of change, the dynamics of the economy and the consequences. National accounts are based on statistical concepts which simplify the myriads of statistical measures that summarise transactions and institutions in and around the economy, so that they can be summarised through a sufficiently small number

of ways that we can establish relationships, links and groups which allow us to make approximate comparisons over time, across countries across economic processes, within regions, industries and sectors of the economy. Through modelling current flows and balances we can measure the dynamics of economic processes, identify trends, imbalances and links that point to what the future might bring.

In all economies, regardless of their stage of economic development, the creation of wealth and its use and distribution are of both national and international interest, and this brings welcome and unwelcome participants in the economy. As a consequence, it is usual that:

1. Governments like to influence the competitiveness of national economies and the wealth generating capacity
2. Governments seek to redistribute some national wealth, provide public services, and finance what the government does.
3. Businesses invest in economic activity and make decisions based on the nature and level of wealth creating opportunities they can engage in, and they often need to plan in advance the duration and scale of investment they will bring to engage profitably in the national economy
4. Populations will seek to work and invest where they find the most successful balance between economic rewards and social obligations, often considering this in terms of their children as well

Globally, the establishment of priorities in economic statistics is strongly driven by the system of National Accounts, as the accepted framework for linking wealth creation production, with use of wealth and distribution of wealth and income. The national accounts present information about domestic output, trade in goods and services, savings and investment and taxes, and how all these variables are inter-linked to each other in a logical and articulated manner within the domestic economy¹. In the past two decades the continued evolution of national accounts reflects the impact of globalisation, deregulation of international finance markets, expansion of service sectors, impact of ICT on economic organisation and the growth in capital leasing services, and the extent to which activity of commercial and government organisations involved contracting out of functions. These same influences affect other economic frameworks, in consumer prices, the labour market, government financial statistics and the household economy.

These influences differ across countries depending on openness of economy, size, economic position of citizens, and potential and current sources of wealth, yet there is no common approach to balance the interests of all countries in deciding on what it is more important to measure well. Over recent decades, those developing the UN system of national accounts have not given comparable weight to the huge diversity of interests and concerns about wealth creation that exist across the globe. Instead, there has been more emphasis on the needs of those countries that dominate total world GDP, and who generally have huge commonalities in their concerns about

¹ Michael Ward, "An Intellectual History of National Accounting," *The Review of Income and Wealth*, 52(2) June 2006

measurement, statistical processes, conceptual relevance to contemporary policy frameworks and are similarly impacted by globalisation. Many things can not be measured well, if at all, which brings limitations on quality that imputation cannot diminish, with affects on timeliness and cohesiveness with distributional information and other statistics, such as the labour force.

Changing international market forces have continually transformed the economic statistics base of European economies, where the rapid assessment of changes in wages, prices, interest and exchange rates and the impact on imbalances between supply and demand in industries and sectors dominates the short term statistical programme. Productivity and competitiveness have become strongly visible goals of economic policy, yet we measure them poorly in all economies. They are often estimated as complex derived measures, with insufficient regard for the statistical base which informs them. Few countries have not had to change the quality, frequency, analytical depth or scope of their economic statistics sources to improve in this area. In international price comparisons, research and development and financial flows have advanced significantly, yet coherence across countries and timeliness are still major concerns.

Globalisation, often through the involvement of multinational corporations, has been associated with a significant and growing difference between GNP and GDP. Economic policy often places strong emphasis on wealth generation. Issues of the distribution of wealth and income, and the sustainability of wealth generating activities which are essential to comprehend economic performance are both more complex, expensive and demanding of the business and the public in statistical compliance. In almost all countries, statistical offices need a strong political interest, or a vigorous user community, to generate the commitment to provide resources for such activity. The wish to develop such statistics depends on the need to be well informed about the nature of societies and economies in the region. Even in the most well endowed statistical systems, balance sheets for natural resources have focused on those resources judged most significant to that country's future, (Oil, fish, minerals).

Integration between economic, social and demographic statistics has become a key focus of statistical system development, and is seen in the need to develop finer measures of labour inputs, the use of employment changes to assess migrant flows, establishing long term shifts in demand for public and business infrastructures as a result of population ageing, increased consumerisation of health, education and social care, economic impacts of shifts in family structure and form, and a growth in inequalities in all societies, whatever their wealth, through migration and economic change. Intergeneration shifts in attitudes and expectations, acceptance of technology, work and travel compound this trend. It can be argued that the emphasis of economic policy on managing inflation has narrowed the focus of national accounts and devalued the richness of their potential contribution to economic

management, because of the priority given to so few instruments in monetary policy².

Measurement complexity in less well developed economies

Well developed economies have statistical systems which generally assume high comparability in the economic circumstances of resident populations and resident economic activity units, in that economic transactions of significance are carried out through market mechanisms and have market values set by market processes. Less well developed economies can not make that assumption. There may be some economic regions, particularly those with international linkages where markets function similarly to well developed economies in the use of market mechanisms and where traded values are set by market processes. Other economic regions may have their economic activity dominated or significantly directed by non market exchanges, and this may include communal ownership of economically significant resources. There are many ways that the migration of people, tourism, and resource extraction can penetrate the processes of exchange in economic regions that are not primarily money based, so that economic regions can not be easily characterised. However, differentiation in the types of economic regions can bring distinctly different statistical challenges, as the custody of significant economic resources and the rewards they generate may not relate to the significance of money in economic transactions

To exemplify these differences, and how they may be recognised in designing statistical systems, I have oversimplified the differentiation in selecting four d for arbitrary examples.

1. *Marginally cash based:* Communal reciprocity dominates consumption in society where cash has growing importance, extending services and altering traditional power structures. It is exemplified by wider policy concerns of consumption and poverty alleviation. Mainly communal assets. Growth in money, and migrant transfers
2. *Labour and access rights traded for cash:* Communal asset base dominates but individual inequalities associated with separate adjustments to living standards as well as communal. There is diminished traditional control over long term assets that is not complemented by assurance of asset transfers at open market prices. Urbanisation brings greater within country mobility and accelerates cross national mobility and transfers. Growing number of migrant returnees with high cash levels. Policy focuses on increasing tradeable production and the protection of market integrity
3. *Dominant transactions monetised, with uncertain residual links to communal resources:* Communal activities less deep and well funded. Early income flows may reduce impetus for continuing education. Fertility declines, family form narrows. Effectiveness of day to day living not generally reflected in asset management and asset choices.

² Michael Ward see (1)

Communal assets are poorly valued and traded for short term gain sometimes offset by unrecognised depreciation Remain as asset renters as incomes. Self employment opportunities grow. Policy focuses on income/ redistribution by government

4. *Intergenerational issues managed within mix of communal and market frames of reference. Labour, finance commodities that reflect global conditions of exchange and risk management:* Limits to transparency of prices. Established return on investment for all key assets (land seabed, minerals, cultural) Policy focus on Investment returns/ Capital flows

Commonalities and differences that affect international collaboration

International experience in setting up an economic statistics compilation programme seems to inevitably focus on how systems, processes and practices can be transferred from well endowed countries to those that are less well endowed, often much less so. The transfer of concepts, methods, systems and technologies from well endowed countries to those that are less well endowed will not necessarily involve the same compromises in relevance, comparison with local alternatives, or adaptability to national situations. This occurs implicitly, in that the development of international frameworks, most particularly the system of National Accounts which is primarily based on the decisions of international organisations (OECD, IMF, UN) and the well resourced and highly industrialised countries of the North Atlantic and Europe, and Australia. The application of national accounts involves assumptions that can be difficult to meet in any economy. Four assumptions that are regarded as significant in this paper are

1. Even within the most well endowed economies, generally, economic/ population statistics fail at measuring major transformations in statistical processes e.g. the service economy, ageing migration, fertility shifts life expectancy, family form. In less well endowed countries, frequent large scale, multiple impacts from climate, commodity market volatility, financial instability, population flows, health events add to this uncertainty of what needs to be measured at any time.
2. The concept of closed economy enables expectation of equilibrium to underpin modelling and economic management, as markets clear. Again, even in well endowed economies, the limitations on statistical measurement that result from globalisation seen in activity of multinationals, global finance markets, deregulation, economic union, loose borders, heightened income inequality. More generally, in many less well endowed countries, the legal, land base and territory all can differ, and may be neither stable nor controlled. Where geographic interdependence is high (rivers, pollution, border management) this can complicate governance and concepts of resident activity.
3. Transparency in prices at the border and across sectors is fundamental to establishing added value. In all economies, the capacity to allocate fair share of economic activity to the country's industry, sector and

region undermined by reduced capacity to commodify and standardise activity and activity units. The rise in the share of national outputs made up of services is a good example of this. More often in less well endowed countries, price transparency in internationally traded activity is often difficult and complicates assessment of added value and undermines establishing asset values from income flows, related market transactions and valuations.

4. Public and commercial institutions are able to record, classify and manage financial and operational information so that it can be included in the sources of national accounts, to a standard comparable to that expected of official statistical surveys. Much of the information essential to measuring the economic position and performance of enterprise cannot readily be obtained by statistical survey, yet it is recorded in administrative processes of government. The effectiveness of national statistics in all fields, economic, social, demographic and environmental, is variously affected by the quality and efficacy of government processes, and how their work is recorded. Statistical frameworks, in particular national accounts but also that for government financial statistics, balance of payments, demographic statistics draw on administrative records for some significant element of the accounts. Record keeping and record management of the public sector overall may be more critical for the quality of statistical frameworks than what happens in the national statistical institute. In well endowed countries, the coverage, accuracy, timeliness and accessibility of administrative records is often a matter of serious concern. In less well endowed countries, the basic processes may not be in place.

Because the national accounts also brings a body of statistical thinking that involves classification, statistical units, concepts of residency, then the application of this thinking to single series that make up the national accounts gives them many of the fundamental properties of comparability and comparison that the national accounts brings. The methodology underpinning the economic statistics of well endowed countries involves a comprehensive mix of ongoing surveys of business, usually applying panel samples or through access to tax and other administrative records. Statistical survey systems tend to be very stable, and what is estimated is similar each period, in scope and reliability. Underpinning it all is the access to administrative records of business that inform national directories of business.

A national directory of business cannot be established without considerable commitment across government. The methods and processes that work best when a national business directory exists will not necessarily provide an optimal basis for survey design and operations when there is no national directory. Indeed other solutions may be preferred, until the long run goal of a comprehensive business directory is established.

Exchanging experiences across countries

This paper is intended to provide some context for that, by focusing on the significant concerns in statistical development among well those endowed

countries that have tended to shape global statistical programmes, and note where commonalities and differences might influence how those at this seminar advance further and African view of economic statistics imperatives.

Contemporary issues for all countries

There is a broad international consensus of what are the essential continuing elements of a good statistical system that makes an official statistical office an essential element of nation building. Influences on this convergence in statistical practice and structures result from

1. The significance of international comparability
2. Importance of international frameworks
3. The need to share developments and operations in complex areas (hedonic indexes, complex classifications)
4. The increased use and authority of policy and academic research and modelling
5. The economies of scale from IT
6. Cross national measurement processes in financial, goods and person flows, as interest in imbalances increases in importance (ICP)
7. The greater role of statistical methods and analyses that involve micro-data studies using information obtained from several sources

Experiences with systems of economic statistics

1. Business frames for statistical surveys been significantly enhanced by access to registers of tax payers, in particular those paying VAT. The tax thresholds have major implications for who is included in statistical system, and the capacity to measure change in small business in particular.
2. Having a consistent long term industry classification is becoming more difficult for economic enterprises, making panel surveys less stable. A common business frame for all surveys of business enables the consistent classification of enterprises within the economic statistics system, regardless of when the survey was designed.
3. In those countries with strong broad band connectivity, the internet is playing a role of growing significance in enabling the transfer of information, as much from firms to the NSI, as between household interviewers of the NSI and the NSI. In other countries, mobile phones have become common in a wide variety of applications, many of which share the purposes of an NSI in its information gathering and transfer activities. Just as the internet is of growing relevance to economies where broadband is pervasive, so mobile phones could yet provide valued changes in statistical processes, including perhaps in immediacy of access to results, as could digital mobile phone photography bring a capacity to monitor quality and scale of activity anywhere it occurs, at the time it occurs.
4. In business sectors where there is a very high turnover of activity units, such as building and construction, and retailing, the use of area frames, or the monitoring of activity consequent on some administrative

permit process, may be more cost effective than seeking to continuously monitor the activity units in rapidly changing industries.

Trends in the nature of economic surveys

5. The coherence that is now expected in well endowed economies of their short term economic statistics necessitates statistical sources being designed as a system of series, rather than as an accumulation of locally efficient distinct statistical sources. Few countries have made this transformation, as a consequence the methods currently in use will not meet the needs of countries redeveloping their statistical sources. The globalisation of economies and continued urbanisation has seen significant disparities in the regional economic impact, such that national measures of wealth and poverty, migration, public infrastructures and services and economic concentration need not reflect the position in even one region of the country. Regional economic statistics have become of growing significance, yet only in a few countries has the statistical system had its resource base increased to meet these needs. There has been a considerable growth in new methodologies, enabled by new technologies. Access to tax records has been necessary for significant progress to be made, but this brings limitations in applying concepts that are relevant at a national levels to regions limit the quality of measures.
6. Small businesses that are often not included in the tax system. Where they are of significance to economic policy in the country, the management of area frames through satellite mapping could give a timely, frequently updateable population frame This could extend beyond where the statistical office can readily engage, and embrace the whole territorial area of the country, including the seabed and geographic features shared with other countries such as rivers and lakes. Collaboration among countries may enable the methodologies most relevant to African countries to be developed more rapidly, and maintain a core of local expertise. Some of the processes that enable this information gathering and exchange may be developed already to meet needs elsewhere in the country.

The reliability of economic statistics

7. Measurement of price change increasingly complicated by the shift in the significance of the service sector, domestically and in international trade in services. The difficulty in assessing quality that this brings is extended into technology and other services where the multiplicity of options and additional services and price offers makes the concept of a national average price somewhat artificial, and rather fleeting. Along with the difficulty in establishing transfer prices, the significance of measuring price levels in economic policy has not resulted in a greater capacity to produce high quality measures of price change, despite developments such as hedonic indexes, and access to mass flows of electronically recorded transactions.

8. As official statistics are of increasing significance in informing policies which aim to influence and shape the context within which economic activity takes place, their timeliness is of great significance, and perhaps a more significant element in the competitive position of individual countries than governments usually recognise. In most NSI's, expectations of changes in timeliness are marginal, and in slow increments, whereas markets expect official statistics to be available to evaluate less tangible information of all sorts that is quickly generated. This has led to huge pressure for early estimates.
9. Coherence in economic statistics is increasingly dependent on integration of information obtained from individual large firms from different sources. Making balancing adjustments at industry or industry group level is of diminishing effectiveness as economic activity is concentrated in fewer enterprises, where coverage rates differ across surveys. In some industries, such as pension funds, the scale of inter-firm transfers is so large that it makes it difficult to estimate industry change in an unbiased manner. Coherence is improved by survey design, and most countries have a long way to go, in doing as well as they could. Much improvement is still possible in the way that statistical frames are adopted in individual surveys.
10. Household surveys have an increasing place in economic statistics, initially through extending the scope of well established sources such as the LFS and Family Spending Surveys.

Implications for the leadership of economic statistics

1. Bring together the validation and linking of the business activity of large enterprises at a micro level, to improve the quality of balance of payments, finance and banking, pensions statistics.
2. Whether a business directory exists or not, there is a need for a strong focus on complex business frame management and monitoring the changing structures of large firms
3. Simple survey designs and estimation methods may require larger sample sizes but they bring added flexibility where there are often differing circumstances which need to be adapted to.
4. Graphical methods of validation can enable outliers to be managed with greater certainty than traditional methods that necessitate ongoing oversight by changing personal.
5. Adopt a mix of ways to provide longitudinal element in economic sources (Panel surveys, tax records, retrospective questions)
6. Manage respondent burden to achieve timeliness, by sub sampling populations of interest, and rotation of firms in samples
7. Identify those statistics that can only be prepared effectively through using tax records. Tax records can be used not only to manage the survey frame through a business register, but to provide responses for small firms. Tax records such as VAT may be the most effective way enable regional analyses to be regularly prepared in a timely cost effective way.

8. Analysis of statistical records for special studies can be expanded significantly with partnerships involving academic researchers and policy ministries.
9. Investment in critical statistical infrastructures such as classifications, directories, processing and estimation systems and data collection systems can be designed to be generalised, reducing the marginal cost of new surveys.
10. In general the centralisation of survey taking in the NSI will lead to more effective application of scarce resources than if statistical survey taking were devolved across Ministries. Some countries design and run statistical surveys for Ministries which do the analysis and publication of research from the survey.