

GAPS IN SOCIO-ECONOMIC AND FINANCIAL MARKET DATA FOR ANALYSIS AND POLICY MAKING

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1. Introduction

Policymakers around the world are challenged by the need to formulate effective economic and financial-management policies as well as good business practices that are both globally strategic and relevant to their specific countries. Malaysia is no exception: its policymakers endeavour to improve data quality as well as disseminate reliable statistical information to meet international standards while, at the same time, present a comprehensive database of macroeconomic and financial statistics for evidenced-based policy making.

The profound impact of the global financial crisis, shifts in domestic and regional economic structures, as well as the increasing and deepening regional economic integration have changed the relationships between the national authorities (such as the Ministry of Finance (MOF), Bank Negara Malaysia (BNM), the Department of Statistics Malaysia (DOSM), and the Malaysian Investment Development Authority (MIDA) and other regulators) and economic agents (such as investors, analysts, consumers and businesses), as well as the financial system.

Forward-thinking policymakers or regulators face the challenge of coordinating the activities of their various national statistical institutions in order to build a comprehensive statistical database, provide accurate information to the decision-makers enabling them to formulate sound policy decisions, and make available comprehensive aggregate data for researchers, scholars and other users. This paper attempts to look at data gaps from two perspectives, that of the user and of the producer.

2. The Importance of Comparable Data

The importance of reliable statistics and comparable data in supporting the socio-economic and financial markets development process of Malaysia and its presence in the regional sphere cannot be overemphasised. Yet, despite the increasing recognition of the significance of good statistics, Malaysia is still lacking in some areas. It needs to improve its statistical collection system in order to provide more complete and better quality information for evidence-based public policy and private decision making.

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In bridging the data gaps, we have to consider the issues from two perspectives: that of the user, and of the producer. From the producer's viewpoint, they should make available to stakeholders both relevant and reliable statistical information, and also be more responsive to new and emerging demands of data users including managing expectations better, like considering the implementation of new data collection, when necessary. The data producers also have to promote the use of advanced tools/techniques to process, generate as well as transform statistics into market knowledge and to encourage them to use these statistics to make informed decisions in an evidence-based policy environment. The user standpoint is driven by examining some of the constraints faced and identifying the data gaps and deficiencies in the framework of collecting data.

3. The Seven Principles of Data Collection

Good information is crucial to the success of any form of regulation, as it is to the efficient workings of any market and economic activity. But many features of economic and financial activity make the quality and timeliness of information flows even more significant for effective regulation. A range of data quality dimensions includes accuracy, coherence, frequency, reliability and timeliness.

A key aspect of enhanced market surveillance will be up-to-date and better quality information upon which policymakers can make credible decisions. There have traditionally been gaps in the data available to both government regulators and to market analysts. Over the past decades, Malaysia has made demonstrable progress in obtaining socio-economic and financial data through censuses, demographic and thematic surveys, and administrative returns. That said, there is scope to explore more data set and information flows that will help make informed macro-prudential decisions. There are two goals toward which agencies and regulators should be directed to improve data collection and analysis. 1) To ensure that supervisory agencies have access to high quality and timely data that are organised and standardised so as to enhance their regulatory and market surveillance; and 2) To ensure that such data which are available to other government agencies, market analysts and academics are in an appropriate usable form so that policymakers, investors and the public will benefit from its publication.

We outline below the seven principles that underlie the collection of data for the financial sector as enunciated by Daniel K. Tarullo, a member of the Board of Governors of the United States Federal Reserve System. These principles are suggestive of an organisational framework for data collection and data usage.

Principle #1: Timely, precise and consistent. What is considered to be “timely” will depend on its purpose, and decisions about how timely the data should be made available. In doing so, one should not ignore the costs of collecting and making the data usable.

Principle #2: Data collection must be user-driven. That is, there must be engagement between the users and producers to ensure the stakeholders fully understand the inter-connectivity between statistics collection and financial markets oversight.

Principle #3: Standardisation of data is required. Standardised reporting to regulators in a way that allows aggregation for effective monitoring and analysis is imperative.

Principle #4: Data to reflect risk management. The data collected and the associated reporting standards and protocols should enable better risk management by the institutions themselves and foster greater market discipline by investors.

Principle #5: Data collection must be nimble, flexible, and statistically coherent. Be agile to collect new information promptly in response to the rapid pace of financial innovation.

Principle #6: Data-sharing and dissemination. There must be a well co-ordinated process flow for making the data available to fellow regulators, other government entities, and the public. However, there is a need to protect proprietary and supervisory information, particularly where specific firm-based data are at issue.

Principle #7: Any data collection and analysis effort must be attentive to its international dimensions as financial activities and risk exposures are increasingly globalised.

In summary, the most desirable feature of data collection and data usage is one that serves the end users and the regulatory agencies. The processes of data collection, processing, and publication must be reliable, timely and comprehensive, and up-to-date. The consequences of gathering incomplete, inaccurate, or unreliable data can be disastrous as they can stymie decisive policy action in a crisis.

4. Questions and Gaps in Socio-economic and Financial Data

Any statistical function of gathering economic and financial data must meet the interests of both the users (those who will use the data) and producers (those who collect the data). There are issues involved: 1) Operational issues refer to how data is collected, investigated, compiled, stored and transmitted; and 2) policy issues refer to what data is required, and from whom and to whom it can be transmitted. In addition, the cost of data collection must be justified.

For forward planning, we should look into the issues of what data gaps might be relevant. Below are a series of recurring questions that form part of the data producers' stock take of data gaps (the table in the next few pages outlines the data gaps).

- Where and what data exist?
- Who keeps and is accountable for the data?
- Can the agency and public be given the data?
- Is the dataset complete, well-defined or needs further fine-tuning?
- Is the data reliable and consistent?
- Can the agency publish the data in current form or in some other possibly aggregated form?
- Is the data sensitive? Or open to speculation?

Subject	Data Gaps
National account	Longer-dated Gross Domestic Product (GDP) data of the rebased year (2005=100), i.e. from 1980 onwards - quarterly and yearly. The current data starts from 2005 onwards.
(a) Private Investment	<ul style="list-style-type: none"> i. Domestic vs. foreign investment - quarterly and yearly data. ii. Domestic and foreign investment by sector - quarterly and yearly data. iii. Private investment by nature of investment, that is new or diversification/expansion investment and by type of assets - quarterly and yearly data.
(b) Public Investment	<ul style="list-style-type: none"> i. Public investment by type of assets - quarterly and yearly data. Currently, DOSM only publishes total Gross Fixed Capital Formation by type of assets. ii. The government-linked companies' (GLC) investments - quarterly and yearly data
(c) Change in stocks <ul style="list-style-type: none"> • Inventories are a critical component of changes in GDP over the business cycle. If the economy is slowing down or possibly entering a recession, the bearer of the bad news will often be an undesired accumulation of inventories. As consumers reduce their purchases, sales of goods and services slow, inventories build up, and firms slash production (laying off employees) to reduce unwanted (and costly) inventories. 	Inventories by type (i.e. finished goods, raw materials and intermediate goods).
(d) Private consumption	Private consumption by type of goods and services (i.e. durable goods, semi-durable goods, non-durable goods and services) - quarterly data.
(e) Construction	Construction data breakdown by civil engineering, residential sub-sector and non-residential buildings - quarterly data.

Subject	Data Gaps
<p>Banking and financial system</p> <p>(a) Outstanding loans</p> <p>(b) External exposures domestic banks</p>	<p>i. Mortgage loans breakdown by new loans and refinancing on monthly basis as far back as possible.</p> <p>ii. Business loans - overall and breakdown by large corporate vs. SMEs.</p> <p>iii. Further breakdown of personal loans by purpose (i.e. investment, healthcare and etc)</p> <p>iv. Loans from unregulated entities or non-bank financial institutions by household and businesses. This data will reveal risks from leverage and maturity transformation outside regulated financial firms.</p> <p>Financial institutions' exposures to global and regional banks by country.</p>
<p>Federal Government finance or national debt</p> <p>(a) Contingent liabilities of Federal Government</p> <ul style="list-style-type: none"> • To stress test the sustainability of the Government's financial balance sheet <p>(b) Total national debt (including private and public)</p> <p>(c) Government subsidy breakdown</p> <p>(d) Oil-related revenue contribution to Federal Government's revenue</p>	<p>Total government guaranteed loans (in total, domestic and external) should be published in BNM's MSB under the Federal Government finance section.</p> <p>Malaysia's total outstanding debt, including bank credit (external and domestic borrowings) of public and private sectors – quarterly and yearly data. Currently, BNM publishes national's external debt of public and private sectors. There is no official data of private sector's domestic debt, which includes bank credit, Private Debt Securities, and others.</p> <p>Include time series data on Government's subsidy by type in the Appendix of Ministry of Finance Economic Report.</p> <p>Include time series data of oil-related revenue by sources (PETRONAS dividend, royalty and etc) in the Appendix of Ministry of Finance Economic Report.</p>
<p>Consumer price index and house price index</p> <p>(a) Consumer price index (CPI)</p> <p>(b) House price index (HPI)</p> <ul style="list-style-type: none"> • To enhance market research on the housing sector 	<p>i. CPI by state in Malaysia.</p> <p>ii. Expand the weights of CPI items to 5-digit from 4-digit.</p> <p>i. HPI by primary and secondary markets - by type of property, by district on monthly, quarterly and yearly basis. Currently, HPI data for overall market by state and type of property is available on quarterly and yearly basis.</p>

Subject	Data Gaps
	<ul style="list-style-type: none"> ii. Computing the House Price Index requires information from large institutional lenders whose loans comprise a majority of the mortgages taken out to buy homes in Malaysia. Also survey the price information from major property developers, real estate consultants. iii. Total number of houses built under the Rakyat Housing Programme (PPR) on a quarterly and yearly basis by state, type of property and price range. iv. Also track the housing data under PR1MA and My First Home Scheme by state and type of property - quarterly and yearly data. v. Foreign ownership of property by state, type of property and price range – quarterly and yearly data.
<p>Other Indicators</p> <p>(a) Services sector and sub-components</p> <ul style="list-style-type: none"> • The prime mover of overall GDP expansion 	<ul style="list-style-type: none"> i. Total approved services investment projects by ownership, state, type of project and sector should be made available by MIDA on a quarterly basis, along with the release of manufacturing investment. Currently, MIDA only releases the overall approved services investment figures on a yearly basis in its Annual Investment Report. ii. Compile a leading index for services sector, covering all sub-sectors. iii. Tourism – Ministry of Tourism should resume the publication of monthly tourist arrivals data. The data is now available on a semi-annual basis. The longer time lag is not useful for real-time analysis. <ul style="list-style-type: none"> • Medical tourism data by country (where patients are coming from), state and type of medical treatment on monthly, quarterly and yearly basis. Such data are not disclosed in any Government's websites at the moment. • Publish regular data on tourist expenditure and tourist receipts by state, country, type of expenditure and average per capita on monthly and quarterly basis. Currently, only yearly data is available but no breakdown by state. • Total tourists' accommodation expenses by type (i.e. high-end hotels, budgeted hotels, motels and home-stay programme), state, country and length of stay on monthly, quarterly and yearly basis. The data available currently are overall tourist expenditure on accommodation by country on a yearly basis as well as general average length of stay by country on a yearly basis.

Subject	Data Gaps
(b) Manufacturing sector	<ul style="list-style-type: none"> i. Monthly or quarterly data of approved manufacturing projects (by ownership, sector, type of project, state, country and etc) should be made available instead of releasing year-to-date or cumulative numbers. MIDA should release its data based on a scheduled time table. ii. Monthly or quarterly data of realised investment projects (by ownership, sector, type of project, state, country and etc) should be made available. iii. Total manufacturing investment approvals by economic corridors, by source (domestic vs. foreign), type of investment (new vs. diversification/expansion projects) and by sector on a quarterly basis. iv. Capacity utilisation rate for the export-oriented and domestic market-oriented industries and also by major industries.

5. Timing of Economic Data Release

While we appreciate the timely releases of economic data by the respective agencies, we think that some fine-tuning in the timing of the data releases would be useful. This is especially the case for data that is not particularly market sensitive. Early releases will allow for a more rational digestion of the economic data.

The time gap between preliminary data and actual printed data should be eliminated, i.e. preliminary external trade numbers were released at 12:00 p.m. while the actual detailed of external trade figure will only be available at 6:00 p.m. on the same day. The time gap of data releases would give a bad impression to public that the government agencies lack of coordination.

Figure 1: Release time of monthly economic data by selected country

Key indicator	Kuala Lumpur Time (based on Bloomberg Terminal)					
	Malaysia	Singapore	Indonesia	Thailand	Korea	China
GDP	6:00 p.m.	8:00 a.m.	12:00 - 3:00 p.m.	10:30 a.m.	7:00 a.m.	10:00 a.m.
CPI	5:00 p.m.	1:00 p.m.	12:00 - 1:30 p.m.	12:00 - 3:00 p.m.	7:00 a.m.	9:30 a.m.
IPI	12:00 p.m.	1:00 p.m.	Not fixed	12:00 - 2:00 p.m.	7:00 a.m.	1:30 p.m.
External trade	12:00 p.m.	8:30 a.m.	12:00 - 1:30 p.m.	12:00 p.m.	8:00 a.m.	11:00 a.m.
Policy rate	6:00 p.m.	Not fixed	2:00 p.m.	3:20 p.m.	9:00 a.m.	Not fixed
BOP/CA	6:00 p.m.	Not fixed	4:00 - 5:00 p.m.	3:30 p.m.	7:00 a.m.	Not fixed

Notes:

- 1) Indonesia (Jakarta) time is KL time -1 hour.
- 2) Thailand (Bangkok) time is KL time -1 hour.
- 3) South Korea (Seoul) time is KL time +1 hour.
- 4) China (Beijing) time is same as KL time.

Press Statements, Publications and Information Materials

As part of the communication process to enhance the dissemination of information and data to users, we see the need to strengthen the analysis and content of the press releases and statements that accompany some of the economic data releases.

DOSM produces user-friendly information material as a way of popularising statistics to facilitate easy understanding among readers, thereby contributing to the goal of bridging the gap between users and producers of statistics.

As part of the data enhancement process, we think a regular review and assessment of the existing structure of data collection, compilation and publication is necessary to ensure that the data are still relevant to both the regulators and users, and that they also keep up with the pace of economic and financial transformation. Equally, the duplication of data is a waste of resources and man-hours.

6. Barriers to Effective Data Collection for Analysis

Once we have identified the data gaps and broad approaches to address deficiencies in the framework of data collection, the data producers will then have to study the practicalities of collecting and compiling the data requested by the users. Some of the barriers or issues to consider are: 1) the level of cooperation between the regulators and market participants (a case in point, financial regulators may be hampered by a lack of authority to collect and analyse information from unregulated entities); 2) how to balance the cost and benefit of data collection and analysis; 3) barriers can limit the quality of data collection and analysis as well as prevent the sharing of data due to privacy protection; and 4) to co-engage with private sector vendors to help fill the gaps in collecting market-based data such as for the real estate market.

7. Mechanisms for Bridging the Gap between Data Producers and Data Users

Given the diverse needs of data users and the limitations faced by data producers, we propose a single lead national statistical agency to provide statistical services that meet the needs of users in Government and general public. The agency will be tasked to coordinate the statistical services provided by monetary authority and government agencies so as to make the data they produce available and more accessible. The following mechanisms should be put in place to

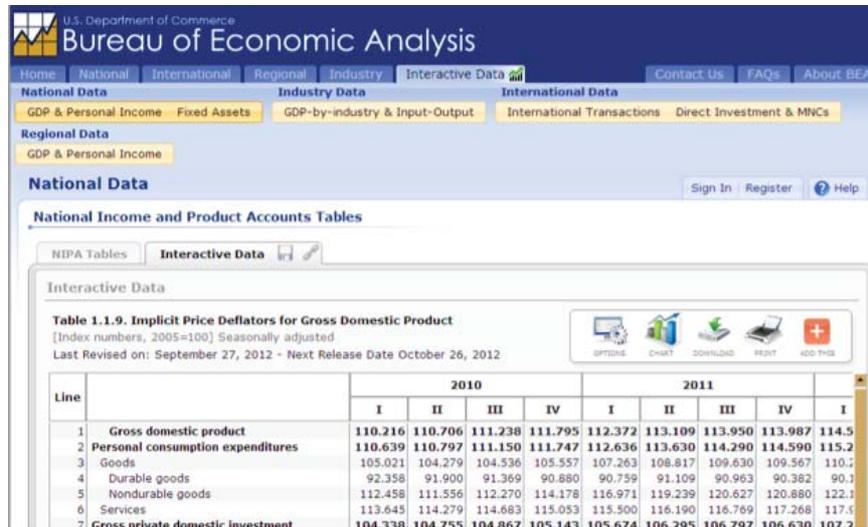
bridge the gap between data producers and data users: 1) inter-agency planning committees, technical working groups and advisory committees; 2) users' forums and press conferences by data producers; 3) advocacy programmes of statistical publications and information material; and 4) regular meetings between key users and producers of statistics who will work in partnership to resolve problems and narrow data gaps.

Secondly, we propose that the Government should leverage on a more advanced as well as user-friendly data download program or electronic data retrieval to ease public access to data online. This tool will help users to download time series data as far back as possible and hence, eases the government agencies' workload to serve multiple requests from users. Below are the screenshots of data download program provided by the US Federal Reserve and US Bureau of Economic Analysis on their websites.

Figure 2: A screenshot of US Federal Reserve's data download program (DDP)



Figure 3: A screenshot of US Bureau of Economic Analysis's Interactive data



On the unpublished data, which can be obtained from DOSM, subject to availability and confidentiality, a shorter time lag to meet the user's request would be greatly appreciated.

8. Conclusion

There are emerging challenges for DOSM and other key agencies, including regulators, in their attempts to strengthen data building capacities as they adapt to the constantly evolving demands of data users. The data producers are mandated not only to collect and compile data and statistical information to meet the needs of data users and stakeholders, but they also have to ensure that the data is reliable and of a quality on which the authorities can make sound and timely decisions.

Among others, these challenges call for: 1) a thorough review and reassessment of the existing structure of data collection and data usage, with a view of developing new, as well as enhancing, statistical data systems, such as providing more disaggregated data, in response to current socio-economic trends at the national and state levels and 2) leveraging on ICT to provide greater access to statistics for users.