

Zeti Akhtar Aziz: Statistical science for a better tomorrow

Keynote address by Dr Zeti Akhtar Aziz, Governor of the Central Bank of Malaysia (Bank Negara Malaysia), at the International Statistical Institute Regional Statistics Conference 2014 “Statistical Science for a Better Tomorrow”, Kuala Lumpur, 18 November 2014.

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Introduction

It gives me great pleasure to welcome you to this inaugural International Statistical Institute Regional Statistics Conference. This conference takes place at a time of major transformative change in our region and in the world. The contribution of statistics in this new and rapidly changing environment has become of even greater importance. In this increasingly complex world, the availability of high quality statistics is vital in facilitating decision making for both the private and public sectors. The world is also seeing greater demands for higher levels of transparency. This has become key for building trust and confidence regardless of the line and nature of business. The statistics community has responded to these changes. Immense progress has been achieved in developing the methodology for generating consistent economic and financial statistical systems. In a world that has also become more globalised, such progress has brought great benefits to businesses and policymakers in terms of the availability, comparability, and broad consistency of economic data across countries. For any economic and financial community, detailed and comprehensive data are highly important to understand the implications of the developments taking place. This has prompted greater international collaboration across the world to contribute towards a greater understanding of the implications of this trend. Underpinning this is also the high level of professionalism and integrity of statisticians at national and international agencies.

It is in this recent two decades, that the global economic and financial environment has become more interconnected, more complex and more competitive. It has resulted in greater economic and financial integration and more intricate interconnectivities. At the same time, the world has also become more unstable and less predictable with frequent shocks and crises. This new and more challenging environment has significant implications for business and for public policy. Economic agents need to have an appreciation of the multi-faceted shifts in their environment in order to form the appropriate assessments and make informed decisions. For policy makers, it highlights the importance of having reliable, relevant and high-quality statistics to support and pave the way for sound policy decision making. For statisticians, the challenge is to continuously improve the statistical science towards facilitating the foundation to build a better future.

My remarks today will be from the perspective of a central banker. Timely and high quality statistics is one of the important prerequisites for central banks to effectively achieve our goals of monetary and financial stability, and of fostering the development of a sound and progressive financial sector. Based on my experience as a central banker for more than 30 years, it requires a deep understanding of the economy and the financial system to make the right policy decisions. Such policy formulations needs to be based on rigorous assessments that provides the insights that will guide the decision making process. This is aided by relevant statistics, and complemented by sound judgement.

Central banks are therefore not only major consumers of statistics, but also producers and disseminators of monetary and financial data. More importantly, central banks, have placed much importance on providing sufficient analysis and assessment in conjunction with the release of statistics. This aims to provide context, avoid misinterpretation and reduce uncertainty for the economic agents.

Key global trends shaping the universe of statistics

As the world evolves, two key trends have emerged and in turn, created new and diverse demands, challenges, and opportunities in the field of statistics. First, the steady liberalisation and deregulation of economies and financial markets have resulted in intricate interlinkages within domestic financial systems and spanning across borders. While financial markets have become more interconnected globally, capital and labour mobility across borders have also intensified while trade and investment barriers have been dismantled. This has resulted in closer proximity to growing markets and facilitated the creation of globalised supply chains by corporations.

These developments have had wide ranging benefits, including better risk diversification, improved efficiency and greater economies of scale. However, it has also increased the risks for cross-border contagion and accelerated the transmission of external shocks. The rapid transmission of the financial crisis in the major advanced economies in 2008 to other parts of the world demonstrates the significance of these contagion effects.

These increasingly complex global networks have given rise to demand for new sets of data to enhance our understanding of the interlinkages and to assess the implications. While many global initiatives on enhancing statistics were the result of financial crises that happened in the 1990s, we now find ourselves recognising that far more needs to be done following the much worse and devastating global financial crisis that has resulted in significant costs around the world. The recent crisis has tested policymakers to the limit and has placed greater demands on the community of statisticians.

While the lack of data was not the root cause of the global financial crisis, it did reveal serious data and information gaps in key areas that might have helped the authorities to measure, understand and respond better to risks in the international financial system. Even for the most advanced statistical systems, such as in the US and Europe, the crisis highlighted “black holes” in data that now need to be addressed. Closing these information gaps involve an important and heavy work agenda for the years to come. More efforts are now underway to strengthen cross-country data collection and close these information gaps. The BIS international banking statistics is for example being expanded and refined to capture the entire balance sheet of internationally active banks on a consolidated basis, and with greater granularity. On-going initiatives by the Financial Stability Board (FSB) and the International Monetary Fund (IMF) to close these information gaps, particularly at the individual bank level for systemically important global banks, are also significant steps in this direction.

Another key global trend that has elevated statistical science to a new level is the rapid innovation and advances in information and communication technology. It is staggering that 90 percent of the world’s data was created in this recent two years alone¹. With the rapid expansion of data storage capacity², growing global connectivity which includes almost 3 billion internet users worldwide and double-digit growth rates in the mobile broad-band market, there is no doubt that the swift pace of technological developments has not only facilitated the rapid collection of new statistics but also led to more effective measurement of information.

Improvements in technology have brought tremendous benefits to most segments of society. Amid the wider availability of information on financial planning products, households now have the potential to make better savings and investment choices. For businesses, the

¹ Source: IBM Watson Foundations: <http://www-01.ibm.com/software/data/bigdata/>.

² According to IDC, between 2013 to 2020, the “digital universe” which measures all the digital data created, replicated, and consumed in a single year, will grow by a factor of 10– from 4.4 trillion gigabytes to 44 trillion.

improved availability of timely and granular information has been a crucial enabling element for companies to anticipate new trends, gauge market viability and customise products and services to changes in market conditions.

Innovations in Statistical Science have enhanced social welfare and policy formulation

From the central bank's perspective, it is clear that advancements in the statistical field have spurred an even more rigorous and scientific approach to surveillance and policy formulation. Given that policymakers are often faced with wide-ranging, difficult and significant trade-offs, sound statistical analysis has a fundamental role in managing both short- and long-term policy challenges. In the current environment, forward-looking macroeconomic and financial surveillance is more important than ever to detect potential risks early, so that pre-emptive policy action can be taken. Of importance, is the need to be aware of rapidly changing information sets amid increasing financial innovation and greater global interlinkages. Policymakers have therefore developed tool kits that have not only taken into consideration baseline forecasts, but crucially, on other plausible scenarios. In this aspect, larger and more diverse data sets that are complemented by more sophisticated analytical tools have allowed policymakers to improve the effectiveness of macroeconomic management. Through more rigorous scenario analysis exercises, authorities are better able to identify challenges, and form a more complete view of future conditions. This is well exemplified by the recent emphasis on the need for regular stress testing to understand the effects of shocks on the solvency of individual banks, the stability of the entire financial system, the broader economy and, more importantly, the feedback effects. The roles of granular statistics and sound stress testing methodologies have become vital.

While the recent global financial crisis has necessitated a substantial policy focus to address short-term challenges, policymakers also need to keep sight of the economy's long-term vision. Continuous structural reforms are needed to strengthen fundamentals and improve economic resilience. This involves measures to remove structural bottlenecks, improve productivity and promote innovation and enhance competitiveness. Formulating such structural policies to improve growth prospects hinges on rigorous empirical research in these areas. For Malaysia, the economy is currently undergoing a transition towards becoming a higher value added economy. This has involved setting clear, time-bound and measurable targets, to allow for the policy approach to be focused. This has depended heavily on the availability of good data and statistics that capture developments across all sectors. It also enables us for the monitoring of the progress and the effectiveness of the policies. It is also now widely recognised that economic growth can only be sustainable if it is inclusive. Growth will only slow as income disparities widen. It is also recognised that financial inclusion is an important contributor towards achieving such a more inclusive economic development. Bank Negara Malaysia has therefore over the decades implemented initiatives to extend and improve the access of quality financial services to all segments of society.

Advances in data collection and computation methodologies has been a crucial enabling factor in the progress made on financial inclusion not just in Malaysia, but also in many other countries. Unconventional information is now often used to assess a person's credit worthiness when there is insufficient traditional information to build a credit score. This can range from electronic records of past utilities bill payments and even reputations on social media³. This has led to vast improvements in access to credit for the previously excluded segment of population. Meanwhile, the compilation and analyses of detailed data on the financially underserved is a significant area that underpins international cooperative efforts to advance the global financial inclusion agenda. The Alliance for Financial Inclusion (AFI)

³ For example, Lenddo in the Philippines, Mexico and Colombia.

comprising of more than 90 member countries established the need for measurable national goals based on a set of quantifiable and time bound common indicators among its membership. These results serve as an objective basis for the AFI members to share experiences on the effectiveness of their policies.

Statistical enhancements for a better tomorrow

Great strides in the field of statistics have resulted in significant economic benefits. However, as the world further transforms, new challenges emerge and much more needs to be done going forward. The increase in availability of data and information is not without risks. While the wealth of new data has indeed made markets more efficient and has supported better decision making by the private and public sectors, it has also brought about new risks of fraud, theft and invasion of privacy. Therefore, existing confidentiality policies, regulation and data governance need to be reviewed and updated to account for these new risks, so that innovative activities can thrive without threats to individual safety and interests.

Additionally, in managing the increase in global interconnectedness, greater international collaboration and coordination in the field of statistics is needed to enhance cross-country data coverage, promote greater standardisation of data and, more importantly, to create a shared understanding of cross-border risks and transmission of shocks. The dynamic nature of the global economy and financial system implies that the relevant set of data needed is a constantly moving target. Therefore, continuous and concerted efforts by both the users and compilers of statistics to close data and information gaps are indeed crucial.

Finally is the need for the continued emphasis on capacity building of human capital. From researchers and academicians, to statistical compilers and policymakers, there is an urgent need to ensure that further enhancements in the field of statistical science continue to advance. Policymakers and statisticians today need to be at the forefront of the advances in statistics to identify new linkages and risks in order to calibrate effective policy responses. In a similar vein, economic and market participants must invest in the statistical systems and expertise required to generate the wealth of information inherent in their operations to allow for greater appreciation and understanding of their implications on the overall financial system and economy.

Conclusion

As we move forward, the changing contours of the global landscape will increase sharply the demand for higher quality and more comprehensive statistics from both the private and public sectors. This also needs to be accompanied by sound analysis in order to draw the implications. From the compilers of statistics, to the developers of statistical applications and the users of statistics, there will be many challenges, but also immense opportunities ahead.

On this note, I wish you a productive and successful conference. By sharing your ideas, knowledge and insights in statistics, we will together contribute to drive the statistical science for a better future.