

IMPLEMENTATION OF POLICY INITIATIVES TO FOSTER PUBLIC SECTOR INNOVATION IN MALAYSIA: THE NEED FOR MEASUREMENT

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Abstract

The emergence of public sector innovation in the last two decades has been an important aspect of the solution for pressing global economic and social problems. There is rapidly growing interest for measuring innovation in the public sector as part of the goal to improve its overall performance. In the context of Malaysia, the public sector has been dedicated to fostering innovation through the implementation of various policy initiatives. Despite this dedication, there remains a lack of measurement strategies for public sector innovation performance. The existing performance measurement strategy mostly focuses on efficiency and object centric, while the current focus of performance measurement in leading governments such as the United Kingdom, European Union and Australia is shifting towards measuring the effectiveness and capability of public innovation to deliver expected public values. This situation established a critical need for a holistic approach in measuring Malaysian public sector innovation performance, through the implementation of subject-based innovation performance measurement. The existence of such a measurement will be able to provide indicator of achievement, as well as valuable insights to support policy formulation processes, debates and the evaluation of existing policy initiatives.

Keywords: Innovation Policy, Measuring Innovation, Public Sector Innovation

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■ 1.0 INTRODUCTION

Innovation is a traditional activity in human history. Since the past 70 years, the pace of innovation has accelerated tremendously, attributable to advancement of technology and changes in trends of demand (Cullahan and Muegge, 2003). The term ‘innovation’ was originally derived from the Latin word “innovare”, meaning to introduce something new to the existing realm and order of things, or to change the yield of resources (Chaplam, 2003). Over time, the interest toward innovation has flourished from economics to many disciplines of knowledge (Kallas-Zelek, 2014; Bugge and Bloch, 2013; Nauta and Kasbergen, 2009). Conventionally, innovation was synonymous with private sector. However, recent decades have witnessed a growing interest in public sector innovation, both in research literature and practice in public sector organisations. Today, public sector innovation has become the key feature of high performing governments in both developed and developing countries. However, there has been little rigorous empirical research on the manner in which innovation occurs in the public sector (Arundel and Huber 2013).

The multi-perspectives associated with public sector innovation has given rise to various definitions of public sector innovation, ranging from the public sector being a passive adopter of innovation, towards it being a proactive source of new ideas and inventions (Arduini et al., 2013; Bloch and Bugge, 2011; Djellal et al., 2013; Nursani, 2004). Moore et al. (1997) define public sector innovation as something new to the organisation, being sufficiently large and durable to appreciably affect the operation or character of the organisation. According to Mulgan and Albury (2003), public sector innovation refers to the creation and implementation of new processes, products, services and methods of delivery which result in significant improvements in terms of outcome efficiency, effectiveness or quality. The ideas must be at least in part novel (rather than improvements of previous ones); they must be taken up (rather than just being ‘good ideas’); and they must be useful. Bugge and Bloch (2011) suggested innovation in the public sector to comprise of new or significant changes to products (tangibles and intangibles), processes, organisations, concepts and policies, or the manner in which the organisation communicates with clients. Innovation must be new to the organisation, despite having been previously developed or implemented elsewhere. It also worthy to note that innovation can either be the result of a decision within the organisation, or a response to external factors such as new regulation or policy measures (Bugge and Bloch, 2011). To complement this, Gault (2013) defined innovation as the implementation of new or significantly improved products or services by whether they are “made available to potential users”. Considering this, public sector innovation here refers to the introduction or implementation of a new or significantly improved product (good or service), process, organisational aspect, communication method policy or conceptual innovation by public organisations, with the objective of improving overall performance of the public sector.

Innovations in the public sector are capable of stimulating the drive for delivering better quality public services and enhancing productivity among public servants to deal with dynamic challenges of the global environment (Hughes et al., 2011; Borins, 2001; Curry, 1999). These well-established strong demands for dedicated policy initiatives flourish and foster innovation in the public sector. The policy initiatives in this context may refer to a specific policy, regulation, circular, programme or activity which directly or indirectly contributed towards the advancement of innovation capabilities, activities and innovation performance of the public sector. Edquist and Hommen (2008) compared the national innovation system in fast growing countries (Taiwan, Singapore, Korea, Ireland and Hong Kong) and slow growing countries (Sweden, Norway, Netherlands, Finland and Denmark), and suggested that the presence of innovation policy is needed to support and stimulate innovation related activities in the country such as development and diffusion of innovation.

The implemented policy initiatives need to be measured to gauge current performance, as well as to improve our understanding of public-sector innovation. The need for measures of public sector innovation has been stressed in many countries and international organisations such as the OECD and the EU (Bugge and Bloch 2011). In policy formulation and debate, relevant information and analysis of many aspects of public sector innovation could be generated. This would thus place governments in a strong position to deal with specific policy issues that may arise.

■ 2.0 POLICY INITIATIVES TO FOSTER PUBLIC SECTOR INNOVATION IN MALAYSIA

The policy commitment by Malaysia in driving innovation has started as early as 1970, during which Malaysia's National Pillars or "Rukun Negara" have revealed the vision of the country to build a progressive society by harnessing modern science and technology (Rahman, 2013). The advent of the New Public Management (NPM) in the early 1980s had been capitalised by the government to implement major administrative innovations in the Malaysian public sector (National Institute of Public Administration, 2006), especially for establishing better governance mechanisms and achieving greater public sector efficiency and effectiveness (Siddiquee, 2007). Consequently, various innovative policy initiatives and efforts have been introduced in the 1980s to 1990s, including Privatisation Policy (1980), application of government computer systems (1980), Look East Policy (1982), The Malaysia Incorporated Policy (1983), Quality Control Circles (1983, 1991), Total Quality Management (1992), Client and Service Charter (1993) and Key Performance Indicators (1993). With the unveiling of Vision 2020 in 1991, and Multimedia Super Corridor (MSC) established in 1996, the public sector spurred with the implementation of e-Government initiatives to improve governance and service delivery of public sector. The initiatives call for reinventing the government using information communication technology to achieve a greater level of efficiency, effectiveness and responsiveness (Siddiquee and Mohamed, 2009). Following this, many e-government initiatives were introduced such as myGov Portal, e-Perolehan, e-Syariah, e-Tanah and SMS 15888. The e-Government initiatives not only improve efficiency and effectiveness of the public sector, but also transform the operation of public service, culture of service and client interaction (Tahir et al., 2010). Moreover, initiatives to promote innovation in the public sector were intensified with the objective of transforming the public sector in Malaysia towards world class public service (MAMPU, 2010).

Towards achieving the status of a developed nation by year 2020, the Malaysian Government in its Ninth Malaysia Plan (2005-2010) intensified their commitment to enhance national innovation capabilities and nurture first class mind-sets among Malaysians through various policy initiatives and programmes (Rahman, 2013). The Ninth Malaysia Plan (2005-2010) layered a foundation for innovation to be undertaken in the public sector of Malaysia. Following this, the concept of '1Malaysia' (People First, Performance Now) were introduced by the government. The concept served as a government manifesto toward providing inclusive citizen-centric services and achieving the aspiration of a high performance government. In addition, the announcement of the Government Transformation Programme (GTP) initiatives in 2009 also manifested serious undertaking to implement innovative and high-impact programs by the public sector in specific national key results areas, including education, security, social well-being and public transport.

The agenda of innovation was continued in the Tenth Malaysia Plan (2010-2015) as among the instruments to strengthen the performance of the government through the implementation of various innovative policy initiatives such as the New Economic Model (2010), Agensi Inovasi Malaysia (2010), Circular on Guidelines to Enhance Culture of Innovation in Public Sector (2010), Innovating Malaysia Framework (2011), Public Sector Innovation Hub (2011), Public Sector Innovation Day (2012), Public Sector Transformation Initiatives (2012), and the National Science, Technology and Innovation Policy (2015). The implementation of various policy initiatives indicate that the Government of Malaysia demonstrated a strong commitment to foster innovation in all sectors, including the public sector. An assessment of policy initiatives found that the public sector mainly involves innovation through various strategic roles and functions. To date, the involvement of the Malaysian Public sector in innovation is attributed in two forms: the driver or supporter of national innovation ecosystem (NEM, DSTIN, Innovating Malaysia Framework), and the innovator only (HISA, Innovation Day, Circular on Guidelines to Enhance Culture of Innovation in Public Sector).

The public sector in Malaysia through the New Economic Model and Innovating Malaysia Framework plays a crucial role in transforming the nation towards a highly innovative country and driving the creation of new wealth. Manifestation of these roles requires the public sector to consistently stimulate innovation activity and develop innovation capability. While navigating the innovation agenda of the country, the public sector also embraces the responsibility to serve the public and other stakeholders. As highlighted in the National Innovation Strategy (2011), the role of public sector innovation is vital to ensure improvement in public service delivery, and increase client satisfaction and value of services. The innovative public sector will contribute towards the development of national innovation capabilities and drive national innovation performance. Implementation of various public sector innovation policy initiatives in the 10th Malaysia Plan have resulted in several achievements in terms of efficiency and effectiveness of services, as well as cost saving and organisational

effectiveness (Economic Planning Unit, 2016). The achievement is expected to improve the capability, activity and performance of public sector innovation in the country.

As Malaysia moves into the 11th Malaysia Plan (2016-2020), the innovation agenda of the country has been identified as a source of growth and sustainability, and served as a crucial competency for achieving the status of a high-income country by the year 2020 (Economic Planning Unit, 2016). The public sector was expected to become more citizen-centric and focused on enhancing the productivity of the public service (Economic Planning Unit, 2016). To achieve this, five areas will be the focus the period of 2016 to 2020, including enhancing service delivery with citizens at the centre; strengthening talent management for the public service of the future; rationalizing public sector institutions for greater productivity and performance; capitalizing local authorities for quality services and enhancing project management for better and faster outcomes (Economic Planning Unit, 2016). The aspiration demands the public sector to be more innovative throughout 2016 – 2020. Therefore, it is timely for the public sector to overcome any weaknesses identified during 2010 – 2015. The exposed flaws call for an in-depth understanding of performance of public sector innovation in Malaysia. As highlighted by the Economic Planning Unit (2016), implementation of innovation-related policies is challenging due to unclear policies, redundancy of authority and absence of a systematic monitoring system (Economic Planning Unit, 2016). Consequently, the implemented policy failed to achieve the aspired objectives. These situations call for a systematic approach to measure public sector innovation in Malaysia.

■ 3.0 RATIONALE FOR MEASURING PUBLIC SECTOR INNOVATION

The needs for measuring public sector innovation performance have been raised in various international platforms such as the OECD and EU (Bugge and Bloch, 2011; OECD and EuroStat, 1997; OECD, 2010; Sørensen and Torfing, 2012), and not only in Malaysia. Firstly, the measurement will provide indicators of achievements of public sector innovation policy initiatives as well as assist in the evaluation and continuous improvement of the success of the innovation agenda in the public sector.

Secondly, public sector organisations would operate within framework conditions and budget constraints. Basic issues and prominent concerns of the public sector organisation include maximising societal welfare, security, political aspects, economic aspects and environment sustainability, as well as quality of public services through public investment (Hughes et al., 2011). In other words, the public sector must do more with fewer resources (Bloch, 2013). They are consistently under pressure to resolve many domestic and international issues such as the increase in operating and development costs, the rise in citizens and business communities' expectations towards services, demographical change and development, achieving environmental and economic sustainability, as well as solving regional and global challenges. Therefore, measuring innovation will ensure accountability of the public sector toward the use of resources and provide vital information to the contribution of innovation in addressing these challenges.

Thirdly, Bloch (2013) highlighted the importance of measuring public sector innovation that is not only based on interest in innovation, but is also driven by the need for data for organisational, national and international consumption. The existence of credible information on innovation would contribute towards the improvement of knowledge and understanding of the density, rate and degree of innovation in the public sector, as well as the motivation factor, challenges, processes involved and impact of innovation. Furthermore, the findings of the study would be able to serve as a systematic and standard representation for international comparison.

Moreover, initiatives to measure innovation would be able to provide vital information and analysis output to feed the policy debates and improve decision making and policy formulation processes (OECD and EuroStat, 1997; OECD, 2005). The process of measuring innovation would establish a wide range of credible sources of information and indicators, which could in turn help to improve the implementation of innovation in the public sector (European Commission, 2013). For example, the OECD report on "Measuring Innovation: A New Perspectives" (OECD, 2010b) has provided important information and analyses for key policies to take place and become implemented around the world. The output has been discussed in many platforms and benefited the development of new strategies, comparison of the status of implementation and the reorientation of existing strategies (Gault, 2013).

Measuring innovation performance would also provide valuable indicators for future improvements in public sector innovation. The indicators help organisations to better understand the nature of innovation beyond input and output. It will answer important questions such as the way the public sector innovates, capabilities to innovate, knowledge management, and activities to promote innovation (Bugge and Bloch, 2011). The indicators of innovation will be used as an instrument to change the behavior towards expected performance (Gault, 2013). The implicit assumption is that the behavior will be beneficial to the economies and societies for which the indicators have been developed. Therefore, the indicator of innovation should be used as a basis for strategic intervention by organisations, and it may be in the form of financial assistance, regulatory change, capacity and competency building programs.

■ 4.0 MEASURING PUBLIC SECTOR INNOVATION

Initiatives to measure innovation in the private sector have contributed towards the enrichment of understanding and knowledge on innovation in that particular sector. As a result, interests for measuring public sector innovation have gradually begun, and have thus intensified the demand for a better tool to measure innovation in the public sector (Bloch, 2013). Larger-scale studies on measuring public sector innovation are relatively recent, with almost all publications appearing after the year 2000 (Arundel and Hollanders, 2010a; Bloch and Bugge, 2013; Mustafid and Anggadwita, 2013). Arundel and Huber (2013) identified three measurement techniques that have been used

since 1994, namely, (i) object-based approach (examines specific innovations introduced by public sector organizations); (ii) business practice approach (examines specific innovations introduced by public sector organizations); and (iii) subject-based approach (innovation survey on practice and performance of innovation).

An object based approach examines the performance of specific innovation projects. The approach is usually adopted in the evaluation of a project for an innovation award or developing the profile of an innovation project (Arundel and Huber 2013). Borins (2001), in the assessment of 321 American and 83 Commonwealth innovation projects for innovation awards, was an example of a research adopted object – based approach. The National Accounting Office (2006) also conducted an object-based approach by asking 85 central government departments in the United Kingdom the characteristics of implemented innovation. Generally, an object-based approach collects data about specific innovation in term of sources of innovation, nature of innovation, implementation barriers and drivers, impact of particular innovation, cost of innovation and time scale for innovation.

In the Malaysian public sector context, the object-based approach of evaluating innovation performance has been implemented through the Anugerah Inovasi Perdana Menteri Award. The initiatives started in 2006 with the issuance of the Malaysian Administrative Modernisation Planning Unit (MAMPU) Circulars on the Guidelines of Innovation Award in Public Sector. The circular defined innovation as the implementation of creative ideas in any aspect which contributed towards the improvement of quality and productivity of an organisation, and resulted in efficiency and effectiveness of service delivery. Innovation in this context may be in the form of system, procedure, methodology or technology (Malaysian Administrative Modernisation Planning Unit, 2006). To enhance the existing recognition system and stimulate higher impact innovation projects, the government of Malaysia, since 2010, has practiced two level public service innovation recognition systems.

The first level is the Prime Minister's Innovation Award (AIPM). An innovation project nominated for AIPM would be assessed based on four criteria, namely, innovativeness of the project, relevancy of the project to the national agenda, significant contribution and impact in the local and international context, and effectiveness of the project. The AIPM's winner will be rewarded a cash prize of RM1 million, a trophy and a certificate (Malaysian Administrative Modernisation Planning Unit, 2011). The second level recognition is the Public Sector Innovation Award (AISA), which recognises public sector innovation in four areas, namely, ICT Management, Financial Management, District Administration and Local Authority Management. Each winner carries a cash prize of RM 300,000.00, a trophy and a certificate (Malaysian Administrative Modernisation Planning Unit, 2011). As highlighted by Arundel and Huber (2013), the object based approach aims to focus on a specific group of people and stakeholders who interact in order to support the success of the implemented innovative project. Thus, it limits overall understanding of innovation performance of a particular organisation and element that influences the overall innovation performance (Arundel and Huber, 2013).

The business practice approach, on the other hand, asks public managers about their use of specific innovative business practices and technology (Arundel and Huber 2013). There are several innovation performance exercises that have adopted this approach in Australia (Palmer and Dunford, 2001), Canada (Lonti and Verma 2003), the United States (Damanpour and Scheneider, 2006) and the United Kingdom (Walker 2006). Their respondents vary, including human resource managers in public organisation, unit managers, municipals' and local authorities' managers. Previous research adopting this approach asked respondents about a practice of new organisational practice, flexible work design, e-government, process of innovation adoption and diffusion of innovation.

Malaysia has also adopted the business practice approach in measuring innovation performance through the incorporation of innovation criteria in the Malaysia Public Sector Star Rating Assessment (SSR). The SSR served as a healthy avenue for the public sector to compete in terms of practicing high standards of governance and continuous improvement. The SSR evaluation is conducted once every two years, and the evaluation criteria consists of three dimensions, i.e., management, core business and customer management. Starting from 2012, the innovation dimension has been integrated in SSR criteria. The purpose of the decision is to evaluate innovation management which is supposed to form as foundation for public sector excellence. Among the sub-criteria of innovation are existence of innovation strategies, implementation plan of innovation strategies and revision of implementation strategies. In 2015, the innovation criteria in SSR were improved to cover a specific theme of innovation such as innovation management and social innovation (Malaysian Administrative Modernisation Planning Unit, 2015). Although initiatives to incorporate innovation dimension in the SSR have been implemented, they were insufficient to serve as a holistic performance measurement of public sector innovation in Malaysia, as the whole SSR assessment instrument focused on management excellence, and only a small part of SSR focused on innovation, which only contributed part of the total SSR assessment.

The third option that is available for measuring public sector innovation performance is the subject – based approach (Arundel and Huber; 2013; Smith, 2005). The approach adopted the survey design and asks respondent features or climate of innovation in organisations in terms of input, process, output, outcome and types of innovations that were implemented over a defined duration (Arundel and Huber, 2013). Previous research also found that, since 1994, the research approach of measuring public sector innovation evolved from object-based and business - practice studies to subject-based approach innovation surveys (Arundel and Huber, 2013; Bugge and Bloch, 2011; and European Commission, 2010). Among the works that adopted a subject-based approach in measuring innovation are the Korea Government Innovation Index (2006), Measuring Public Sector in Nordic Country (2010), European Innobarometer (2010), UK Innovation Index (2011) and Australia Public Sector Innovation Index (2012)

There are several justifications for this shift in techniques of measuring public sector innovation. Firstly, the public sector has shifted its innovation focus from an imposed policy-driven change to solving internal problem capabilities (Fuglsang, 2010; Siddiquee, 2007). Secondly, the object-based approach and business-practice approach are limited and focused to only on specific innovation projects or practices. The approach is able to provide answers on a single innovation, but is unable to describe effects and linkages across organisations in general (Bloch, 2013). In addition, the approach is also biased towards the best and most successful innovations, and often intentionally selects successful innovations (Arundel and Huber, 2013). Moreover, the techniques disallow the exploration of the elements that influence the all innovations that are implemented by public sector organizations (Arundel and Huber, 2013). In contrast, innovation surveys are able to collect data on processes within the public sector organisation to support innovation and avoid the bias issue by collecting information on a wide range of different types of innovations (Arundel and Huber, 2013; Hughes, Moore and Kataria, 2011).

In the context of Malaysia, the subject-based or innovation survey approach has been adopted in the National Innovation Survey and National Corporate Innovation Index. Malaysia initiated the National Innovation Survey to serve as a periodic monitoring mechanism to ensure the high performance of innovations in the private sector. The measurement provides indicators of achievement as well as assists evaluation and continuous improvement in ensuring the success of the innovation agenda. Since 2006, the Malaysian Government through Malaysian Science and Technology Information Centre conducted six National Innovation Surveys to measure innovation in the manufacturing and service sectors (Malaysian Science and Technology Information Centre, 2012). To enable international benchmarking and comparison, the survey adopted the Oslo Manual guidelines published by OECD (Malaysian Science and Technology Information Centre, 2012). In 2011, Unit Inovasi Khas (UNiK) initiated a survey on public-listed companies in Malaysia to measure their innovation management strategies, processes, systems and impacts. This project was known as National Corporate Innovation Index Phase I. The study brings forward the needs to develop a new innovation policy that is more contemporary, broader, and is focused on value creation (Pawanchik et al., 2011). As a continuous effort to stimulate and drive innovation in the private sector, AIM in 2014 embarked on the National Corporate Innovation Index Phase II, which was launched by YAB. Dato' Seri Mohd Najib bin Tun Razak, Prime Minister of Malaysia on 29th August 2014. The National Corporate Innovation Index Phase II was developed by AIM with the collaboration of NESTA, UK (Utusan Malaysia, 2014).

Investigation on the various approaches of measuring innovation indicates that Malaysia has adopted more than one approach for measuring public sector innovation, involving the object-based approach and the business-practice approach. However, there was no indication that any Malaysian public sector agency was given the mandate to take charge in conducting a subject-based approach for measuring public sector innovation in Malaysia. These situations established gap of knowledge to understand public sector innovation in Malaysia from the subject-based approach. As more focus was given to measure private sector innovation through the implementation of the National Innovation Survey, National Corporate Innovation Index Phase I and National Corporate Innovation Index Phase II, the situation would continuously lead towards scarcity of knowledge and data on Malaysian public sector innovation performance. The absence of credible data would risk policy implementation, evaluation and formulation of new policies on public sector innovation. The situation also minimised practical insights pertaining to public sector innovation, including jeopardising the potential of moving public sector innovation towards advancement. Thus, the need for a subject-based approach of public sector innovation in Malaysia is crucial to further strengthen the innovation agenda in the Malaysian public sector. The expected measurement may include factors influencing innovation performance such as capabilities, activities and the performance of implemented policy initiatives in the form of organisation performance, financial performance, service delivery performance, satisfaction and trust performance.

■ 5.0 CONCLUSIONS AND RECOMMENDATIONS

The above discussion offered a clear understanding that the Malaysian Government has implemented various direct and indirect policy initiatives to foster public sector innovation in the country. The implementation of these policies has resulted in several improvements in terms of service delivery of the public sector such as speed of delivery, reliability, assurance of service as well as quality of service rendered to the client. To further improve public sector innovation in Malaysia, this article established the need to measure public sector innovation in Malaysia in a more holistic approach, which goes beyond the expectations of effectiveness and efficiency of services. The measurement should be holistic to cover various dimensions of public sector innovation performance and factors influencing innovation performance. A discussion on the approaches of measuring public sector innovation performance highlighted various strengths and weaknesses of each approach. Although the trend evolved from object – based to business-practice and currently object-based approach, the selection of the best approach finally lies behind the purpose of measurement. The public managers in this context must decide which approach is the best approach to be adopted based on their objective of conducting innovation performance measurement exercises. Acknowledging the Malaysian experience in conducting an object-based and business-practice approach of measuring public sector innovation as well as the limitations of both approaches, the subject-based approach or survey of measuring innovation performance could be the best approach for measuring public sector innovation in Malaysia. As suggested by Arundel and Huber (2013) and Hughes et al., (2011), subject-based approach can collect data on processes within the public sector organisation to support innovation. The subject-based approach is not biased towards the best and most successful innovations (Arundel and Huber, 2013). The approach also enables exploration of the element that influences all innovations that are implemented by public sector organizations (Arundel and Huber, 2013). The existence of such a measurement will provide indicators of achievement as well as assist the evaluation and continuous improvement in ensuring the success of the innovation agenda. The data from the findings will help policy makers and researchers to understand the climate of innovation in the public sector and factors affecting the performance of public sector innovation in Malaysia.

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