

# Factors Influencing Public Sector Innovation Performance in Malaysia: Structural Equation Modelling Approach

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DOI: 10.6007/IJARBSS/v7-i2/2671 URL: <http://dx.doi.org/10.6007/IJARBSS/v7-i2/2671>

## Abstract

Acknowledging the potential of innovation in transforming government into high-performance government, the Malaysian has intensified their commitment to the public sector innovation through implementation of various policy and initiatives. However, knowledge about the current level of performance of public sector innovation in Malaysia is still very much lacking. Thus, using sectorial innovation system theory as a pillar, this study examines the relationship between innovation capability, wider public sector condition for innovation, innovation activity as the independent variable and innovation performance as the dependent variable. The Structural Equation Modelling analysis conducted on 456 data set found that innovation performance was influenced by innovation capability, wider sector condition for innovation and innovation activity. The implication of the study concludes the need for dedicated policy and strategic intervention for improving the innovation performance in Malaysia by focusing on innovation capabilities, wider public sector condition for innovation and innovation activities.

**Key words:** Public sector innovation, Innovation

## 1. Introduction

Public sector organisations operate in a bureaucracy framework with limited resources and budget constraints (Bloch et al., 2009; Bommert, 2010). They are consistently under heavy pressure to resolve many emerging domestic and international challenges such as maximising societal welfare, security, political, economic and environment sustainability as well as ensuring a better quality of public services (Hughes, Moore & Kataria, 2011a). In other words, the public sector must deliver the best results with fewer resources (Bloch, 2013). Considering this situation, public sector organisations must innovate to ensure success in fulfilling the country and people's expectations. Therefore, the needs to strengthen public sector innovation capabilities, framework conditions, activities, and performance is clear. This state of affairs calls for a better understanding of the public sector innovation ecosystem. Extensive study on measuring private sector innovation has provided better knowledge, understanding, analysis and creation of new strategies to move the sector's innovation towards advancement and progression. However, the scenario of innovation in public sector is different. There is

inadequate knowledge available to understand performance of innovation in public sector (Bloch & Bugge, 2013; Hsieh, 2008), studies on measuring public sector innovation are still in the stage of infancy [Bloch et al., 2009], and the lack of quantitative evidence accounts for the limitation to understand and promote public sector innovation (Arundel & Hollanders, 2011).

This study aims to offer theoretical, methodological and contextual contributions which extend the current knowledge on innovation in the public sector. Theoretically, this study enriches innovation performance literature by linking it with innovation capabilities, wider public sector condition for innovation, and innovation activities. By applying innovation system theory, this study attempts to examine the influence of innovation capabilities, wider public sector condition for innovation and innovation activity on innovation performance. The initiatives to established a link between the innovation capabilities, wider public sector condition for innovation, innovation activities and innovation performance has been adopted in various public sector innovation studies such as Bloch & Bugge (2013), Hughes, Moore & Katarina (2011a), and Arundel & Huber (2011). However, their studies were focused on developing an indicator or metric for innovation in the public sector, thus the effects between the constructs were not part of the research objectives. Despite the importance of the subject, the innovation performance of the public sector is regarded as an under-researched area of investigation (Gault, 2013; Mulgan & Albury, 2003).

Methodologically, this study incorporated several existing measurement instruments for measuring innovation performance of the public sector in Malaysia such as Australia Public Sector Innovation Index (Australian Government, 2011), United Kingdom Public Sector Innovation Index (Hughes, Moore & Katarina, 2011b), and Measuring Public Sector Innovation in the Nordic Countries (Bloch, 2011). The attempt will broaden the application and scope of the related measurement instrument and the validation of the scale will also contribute to the greater acceptance of scale by a larger academic and practitioner audience. Three approaches were adopted in previous research of measuring innovation, namely *subject based approach*, *object-based approach*, and *business practice approach* (Arundel & Huber, 2013).

Previous initiatives to measure public sector innovation in Malaysia employed an object-based approach which assesses the specific project of innovation and business approach which ask public managers on the application of specific innovative business practices and technologies. Meanwhile, this research adopted a *subject based approach* in measuring public sector innovation performance. The approach allows exploration of factors influencing innovation in organisation and the scope of activity followed by examining the output and effect of innovation. These *subject-based approaches* are designed to represent innovation in organisations so that the result can be compared to organisations or sectors (OECD, 1992).

## **2. Innovation system perspectives in measuring public sector innovation performance**

Definition of public sector innovation varies from a passive adopter of innovations to a proactive source of new ideas and inventions (Bloch & Bugge, 2013; Arduini et al., 2013). For measurement purposes, Gault (2013) suggests defining innovation as the implementation of new or significantly improved products or services by whether they are “made available to potential users”. However, innovation in this study refers to the *implementation of the product*

*(good or services) innovation, process innovation, organisational innovation, communication methods innovation, policy innovation and conceptual innovation with the objective to improve the performance of the public sector.*

The initiatives to understand public sector innovation performance to some degree is challenging due to limited theory dedicated to public sector innovation (Bommert, 2010; Bloch & Bugge, 2013; Mulgan & Albury, 2003). Despite that, the insight from innovation system theory may be relevant to structure understanding on public sector innovation performance. Innovation systems theory postulated that the players and process involved in innovation could be identified and characterised. Innovation from innovation system point of view is a result of interaction between many players and does not occur in isolation (Bloch & Bugge, 2013; Freeman, 1987).

The theory stresses that innovation is a result of interaction between many relevant actors that play different roles in an innovation process, thus verifying innovation does not occur in isolation (Lundvall, 1992). Instead, innovation flourish through complex relationships among actors in the system (Godin, 2002). Thus, the actors involved could be identified and classified according to their role, and the processes leading to innovation may be characterised (Bloch & Bugge, 2013). Certain aspects of the institutional surroundings of the innovation system play their roles in shaping the condition for innovation within the system (Bloch & Bugge, 2013). Innovation in public sector are interdependent with its wider societal and systemic context as many programs are mostly knotted with other entities and institutions including the central agency. Therefore, when trying to understand innovation performance and how innovation happens in the public sector, the exercise should not neglect its wider innovation system (Allman et al., 2011). It is important to have a good understanding of innovation system. Such understanding is useful for policy makers to identify leverage points which will help in enhancing innovative performance and overall competitiveness (OECD, 2008).

### **3. Hypothesis development**

#### **3.1 Innovation performances**

Due to growing innovation activities in the public sector, public service organisations were pressed to identify indicators of success by measuring the performance of innovation (Mustafid & Anggadwita, 2013). Thus, the measurement exercise needs clear demarcation as the objectives of public sector innovation differentiate the performance of public sector innovation from private sector (Paul Windrum & Per Koch, 2008). According to Mustafid & Anggadwita (2013), public sector innovation performance is measuring organisation's activities to produce an innovation, which also consists of organisation's capability and the impact created by doing innovation. The impact of innovation activity on organisation's performance can occurs in various forms including performance, service delivery, economic value, satisfaction and trust (Hughes, Moore & Kataria, 2011a). To simplify, innovation performance is the outcome of significant improvement implemented by the public sector such as efficiency, effectiveness and quality outcomes (Albury, 2005).

Other than that, innovation performance may also be viewed as a set of indicators used to diagnose the accomplishment of broad and specific objectives of innovation. Broad objectives usually include improvement in efficiency, quality and user satisfaction. Specific

objectives may include addressing social challenges, fulfilling new regulations, and improving working conditions (Bloch & Bugge, 2013). Examples of innovation impact in public sector are simplified administration, faster service delivery, increased user access to information, improved user satisfaction, improved employee satisfaction, and reduced cost (European Commission, 2010). For the purpose of this paper, innovation performance refers to the effect of innovation on organisation's performance in term of organisation performance, service delivery, financial, satisfaction and trust.

### **3.2. Innovation capabilities**

Innovation capabilities refer to a set of resources that generates and generalises innovations for organisations (Hurley & Hult, 1998). Zheng (2009), Lokshin et al. (2009) and Shavinina (2011) suggested the concept of innovation capabilities should not only cover the ability to create new idea but should include the ability to implement new ideas. Neely et al (2011) mentioned that innovation capabilities has shown the prospective of organisations to generate innovative outputs. Furthermore, the dynamism of the concept undeniably will lead towards the complexity of understanding (Olsson et al., 2010). However, for the purpose of this study, innovation capabilities refer to the key underpinning organisational capabilities that can sustainably influence innovation in an organisation.

Several studies have also examined the effect of innovation capabilities on performance (Huang, 2009). Klomp & Van Leeuwen (2001) reported a positive impact of innovativeness or innovation capabilities on organisation performance such as productivity lead-times, quality and flexibility. Chapman (2006) mentioned the strong relationship between innovations and financial success. In the assessment of green product innovation, Iker (2012) revealed that firm's product innovation capabilities positively affects performance. Likewise, Mafini (2015) also concluded that innovation capabilities of the public organisation in South Africa positively influences and has a predictive impact on the performance. Camisón & Monfort-Mir (2012) also confirm that organisational and technological innovation capabilities can lead to superior organisational performance.

Acknowledging the established relationship from the literature, the following hypothesis is proposed: *Innovation capabilities have a positive and significant effect on innovation performances*

### **3.3. Wider public sector condition for innovation**

Wider public sector condition for innovation refers to how well the system in which public sector organisations operate help public sector organisation to innovate (Hughes, Moore & Kataria, 2011a). The variable contains factor which could hinder or stimulate innovation. The factor is beyond the control of public sector organisations, but still within the control of the central agency or other policy makers. The traditional view on organisation innovation which is centred on the internal systemic relationship (input for innovation, the process of innovation and output of innovation) has shifted towards the complex interaction between internal and external factors of innovation (Coyle & Childs, 2008). In this context, organisations draw on external resources, so their performance is affected by their environment, and the external

factors can enable or hinder innovation (Fagerberg, Mowery & Nelson, 2006). Public sector, as other organisations, also operate in an interdependent environment which requires interaction with its wider societal (Hughes, Moore & Kataria, 2011a; Australian Government, 2011).

The relationship between wider public sector condition for innovation and innovation performance has been studied in several research contexts. In a case of the private sector, Ramanathan et al. (2016) found that government regulations positively influence financial performance of industrial sectors. Beerepoot & Beerepoot (2007) for example claimed that government policy as wider sector condition influences innovation performance of the energy industry, particularly in terms of efficiency improvement. In addition, the previous study on sectoral condition for public sector innovation such as political culture and structure (Aiken & Hage, 1968), intergovernmental relation (Bingham, 1978), vertical integration and service provider competition (Walker, 2006), and human and political capital (Hoyman & Weinberg, 2006) may influence innovation performance.

Based on the relationship found in the literature the following hypothesis is proposed:  
*Wider public sector condition for innovation has a positive and significant effect on innovation performances*

### **3.4 Innovation Activities**

Successful innovation is the result of integrated innovation process or activity. Roger (1995) and Kimberly & Evanisko (1981) describe innovation as a process through which new ideas, objects, and practices are created, developed or reinvented. Innovation activity is a complex concept that consists of sequencing activities that involved new idea being created and implemented, and that particular idea is new and novel to the unit of adoption (Aiken & Hage, 1971). Based on the above definition, innovation activities is commonly presented in phases or stage forms of processes in a management literature (Hartley, 2013; Tidd & Bessant, 2009). Thus, innovation activities in this study refer to the process of an innovative idea flowing through an organisation until implementation (Hughes, Moore & Kataria, 2011a).

Empirical evidence support that the presence of innovation activities in the organisation has a positive influence on a number of key organisational performances such as economic performance, productivity (Ramstad, 2005), organizational learning (Carmeli, Gelbard & Gefen, 2010; Jiménez-Jiménez & Sans-Valle, 2011), organizational performance (García-Morales, Jiménez-Barrionuevo & Gutiérrez-Gutiérrez, 2012), strategic fit and process performance (Liao & Wu, 2010), knowledge management (Evangelista & Vezzani, 2010).

Based on the literature, the following hypothetical relationship is proposed: *Innovation activities have a positive and significant effect on innovation performances*

### **4. Research Methodology**

Applying quantitative approach, 1,000 sets of self-administrated survey questionnaires were distributed to heads of units and divisions of 21 Federal Ministry and Central Agencies in the administrative, security, social and economic sectors in Malaysia. In terms of accuracy, self-administered survey grant is a more accurate response as there is no influence and interruption from researcher and respondents may answer at own convenience, thus eliminate social

desirability and common method bias (Zainuddin, 2012). In addition, the self-administered survey questionnaire is suitable for finding out respondents' thoughts, opinions and feelings as well as collecting data relating to beliefs, attitudes and motives. Stratified random sampling was employed as the sampling technique for this study due to various sizes of organisations in the public sector and ensuring sufficient representation from all industries.

The scale comprised 72 items and was administered in the English language. There were 22 items on Innovation Capability (IC), 15 items on Innovation Activities (IA), 16 items on Wider Public Sector Condition for Innovation (SC) and 19 items on Innovation Performance (IP). Table 1 tabulated the number of the item used for each construct and sub-construct. The items for IC, IA and IP were measured on interval scale ranging from "1=strongly disagree" to "5=strongly agree" and "1=not important" to "5=very important" for SC.

**Table 1. Number of Items for Each Construct and Sub – Construct**

<b>Construct</b>	<b>Sub - Constructs</b>	<b>Number of Items</b>
Innovation Capabilities (IC)	Leadership	5
	People Management	6
	Strategy	6
	Reward	3
	Resources	2
	<b>Sub Total</b>	<b>22</b>
Innovation Activities (IA)	Ideation and Selection	7
	Development and Implementation	8
	<b>Sub Total</b>	<b>15</b>
Innovation Performance (IP)	Organisational Performance	6
	Service Delivery Performance	5
	Satisfaction and Trust Performance	4
	Financial Performance	4
	<b>Sub Total</b>	<b>19</b>
Wider Public Sector Condition for Innovation (SC)	Central Agency Strategy	4
	Incentives	4
	Autonomy and Access	4
	Policy and Regulation	4
	<b>Sub Total</b>	<b>16</b>

456 returned questionnaires were received in a usable form with an effective response rate of 45.6 percent. Based on the returned questionnaires, descriptive analysis was conducted to assess the level of innovation capabilities, wider public sector condition for innovation, innovation activities and innovation performance. All four constructs were rated at moderately high level by the respondents. Confirmatory Factor Analysis and Structural Equation Modelling using AMOS 21 were conducted to test the measurement model and the effect of exogenous on the endogenous construct.

## **5. Results**

### **5.1 Demographic analysis**

The respondent of this study represented all sectors of public services in the central government of Malaysia. The largest group of respondents was from Social Sector (36.6 percent) followed by Economic Sector (31.4 percent), Security Sector (16.4 percent) and Administrative Sector (15.6 percent). From all the respondents that participated in the survey, more than half were female, representing 52.0 percent (237), while the remainder were male at 48.0 percent (219). The dominant age group of the respondents was 31 to 40 year old, making up 55.9 percent. This was followed by respondents in the 41 to 50 year old category (21.7 percent), while the smallest number of respondents was from respondents in the age category less than 30 years old (11.20 percent) and 51 years old to 60 years old (11.20 percent). A large proportion of the respondents had an undergraduate degree (55.30 percent), while those who had master's degree represented 38.3 percent. Only 3.7 percent of respondents were Ph.D. holders and those with other educational backgrounds made up 2.2 percent. In term of working experience in public sector, majority respondents were from group category of 5 years to 10 years, followed by 10 years to less than 15 years (41.7 percent), 20 years and more (12.9 percent), 15 years to less than 20 years (11.8 percent) and finally, group category with working experience less than 5 years (2 percent).

**Table 2: Demographic Profile of Respondents**

	Frequency	Percent
<u>1. Sector of Service</u>		
Administrative	71	15.6
Security	75	16.4
Social	167	36.6
Economic	143	31.4
<u>2. Gender</u>		
Male	219	48.0
Female	237	52.0
<u>3. Age</u>		
Less than 30	51	11.2
31 - 40	255	55.9
41 - 50	99	21.7
51 - 60	51	11.2
<u>4. Experience</u>		
Less than 5 years	9	2.0
5 to 10 years	190	41.7
10 to 15 years	144	31.6
15 to less than 20 years	54	11.8
20 years and more	59	12.9

## 5.2 Explanation on Structural Equation Model

Structural Equation Modelling is a second generation multivariate technique which offers powerful analysis capability (Zainuddin, 2015). According to Zainuddin (2015), the development of SEM was due to the limitation of Ordinary Least Square Technique which does not have the ability to analyse latent construct efficiently and model the interrelationship among constructs simultaneously in a model. Structural Equation Modelling technique employs the combination of quantitative with the correlational and causal assumption in the model (Zainuddin, 2015). Thus, the technique permits the researcher to examine the relationship between exogenous and endogenous construct simultaneously (Zainuddin, 2015).

## 5.3 Validation of the measurement model

Four constructs were employed in this study namely Innovation Capabilities, Wider Sector Condition for Innovation, Innovation Activities, and Innovation Performances. All constructs were operationalized as the second-order reflective construct. Thus, all of 72 items



were subjected to a confirmatory factor analysis (CFA) procedure to validate the measurement model. The pooled CFA was used for testing unidimensionality, validity, and reliability of measurement model. The methods were conducted by performing CFA for all latent constructs at once in one measurement model (Zainuddin, 2013). According to Zainudin (2013), pooled measurement model method is more recommended in consideration of it being able to clear the issue of model identification problem when there are less than four items for each construct.

The result of pooled CFA found that all scores for the items exceeded the minimum required level of factor loading of 0.5. These results further confirm the unidimensionality of the measurement model. In the assessment of construct validity, convergent validity, and discriminant validity, the computation of fitness indexes of measurement model shows a good fit, with RMSEA = 0.54 , CFI = 0.908 , TLI = 0.905 and NORMED CHI-SQUARE ( $\chi^2/df$ ) = 2.316 ]. The result fulfilled the minimum required level for absolute fit, incremental fit, and parsimonious fit thus, confirming the construct validity.

The convergent validity was examined through Average Variance Extracted and the assessment found all AVE values are more than the cut-off point ( $\geq 0.5$ ) set by Zainuddin (2015) ranging from 0.504 to 0.751. Hence, the convergent validity of the measurement model is confirmed. Meanwhile, the Discriminant Validity was examined through Discriminant Validity Index Summary. In this research, context the square root of AVE represented in the diagonal value of each construct is larger than its corresponding correlation coefficient pointing towards adequate discriminant validity (Zainuddin, 2015). Since the square root of the AVE between each couple of factors as presented in Table 3 was higher than the correlation estimated between the factors, this confirms its discriminant validity.

**Table 3: The Discriminant Validity Index Summary**

Construct	IC	SC	IA	IP
Innovation Capabilities (IC)	<b>0.822</b>	-	-	-
Wider Public Sector Condition for Innovation (SC)	0.290	<b>0.881</b>	-	-
Innovation Activities (IA)	0.760	0.280	<b>0.906</b>	-
Innovation Performances (IP)	0.640	0.360	0.680	<b>0.895</b>

In order to confirm the reliability of the measurement model, the composite reliability values (CR) and AVE were computed. Table 4 shows all the values of CR and AVE are exceeding the required level of 0.6 and 0.5 as suggested by Zainuddin (2015) respectively thus confirm the reliability of the measurement model.

**Table 4: Reliability of Latent Construct**

Construct	Item	Factor Loading	CR	AVE
IC	C1	0.76	0.925	0.713
	C2	0.93		
	C3	0.90		
	C4	0.78		
	C5	0.84		
SC	S1	0.90	0.933	0.777
	S2	0.92		
	S3	0.91		
	S4	0.79		
IA	A1	0.96	0.902	0.822
	A2	0.85		
IP	P1	0.90	0.942	0.802
	P2	0.92		
	P3	0.90		
	P4	0.86		

**5.4 Structural model analysis**

The structural model analysis was conducted after the measurement model had been validated. The analysis served as the hypotheses testing procedure for the study. Table 5 explains the significance of the particular path. The result revealed that Hypothesis 1, 2 and 3 are supported (Significant at 0.005, 0.001, 0.001) thus promoting the notion that innovation capabilities, innovation activities and wider public sector condition for innovation have a positive and significant effect on innovation performances.

**Table 5: The Path Coefficient and its Significance for Hypothesis Testing**

Path	Est	S.E	C.R	P-Value
IP < IC	0.191	0.080	2.387	0.017
IP < SC	0.126	0.033	3.784	0.000
IP < IA	0.488	0.086	5.696	0.000

## 6. Discussion

This study was motivated by the needs to expand the theoretical understanding of public sector innovation performance through integration of innovation capabilities, wider public sector condition for innovation and innovation activities. Hence, the study established the link between the four constructs as the previous research on innovation performance of public sector were focused on developing the indicator rather than studying the impact of the constructs.

The result revealed that the three proposed hypotheses have been well supported. In relation to the influence of wider sector condition for innovation on innovation performance, the result of path analysis in the structural model indicated that for every one-unit increase in wider sector condition for innovation, its effect would contribute 0.126 unit increase in innovation performance. More importantly, the effect of wider sector condition on innovation performance is significant at 0.001 significance level. This result confirms the finding of previous studies which identify the influence of external factor performance on public sector innovation performance such as Aiken & Hage (1968), Walker (2006), Moon & Bretschneider(2002), and Hansen (2011). According to the analysis conducted using SPSS, the result of the descriptive study of wider public sector condition for innovation showed that the overall mean score was 5.1009 (moderately high mean). The result indicated that moderately high mean score of wider sector condition for innovation positively influenced innovation performance of the public sector.

The finding also suggested that innovation capabilities influenced innovation performance. The result proved that innovation capabilities has strong positive and significant effects on innovation performance of the public sector in Malaysia. Moreover, the result of path analysis in the structural model specified that for every one-unit increase in innovation capabilities the effect would contribute 0.191 unit increase in innovation performance. The result of the study is consistent with the result obtained by Mafini (2015) which concluded that innovation capability of the public organisation in South Africa positively influences performance and has a predictive impact on the performance. Besides, Subramanian & Nilakanta (1996) found that different kinds of innovation capabilities have an impact on different fields of performance. In addition, Armbruster et al (2008) found that organisation innovation capability resulted in better performance in term of efficiency, coordination and cooperation in the organisation. The moderately high mean score of innovation capabilities in this study (mean = 4.7610) had positive consequences on innovation performance.

As highlighted by Oslo Manual 3<sup>rd</sup> Edition (OECD, 2005), the need for measuring innovation activities is vital for developed and developing countries including the public sector (Nauta & Kasbergen, 2009; OECD, 2010a; and OECD, 2010b). As projected through the assessment of previous research, the result analysis found that innovation activity has strong positive and significant effects on innovation performance of the public sector in Malaysia. The result of path analysis shown that for every one-unit increase in activities, its effect would contribute 0.488 unit increase in innovation performance. The result of this study is in line with the result obtained by the previous researcher which found that innovation activities can significantly influence innovation performance (Camisón & Monfort-Mir, 2012). In addition,

Mairesse & Pierre (2001) and Ana Ma Serrano – Bedia & Garcia-Piqueres (2012) also confirmed that there is a positive relationship between innovation activities and innovation performance. Using the second Community Innovation Survey (CIS-2) for the Netherlands, Klomp and Van Leeuwen (2001) also discovered that the implementation of innovation activity contributes directly to organisation's sales performance and employment growth. Furthermore, organisational innovation activity also improved coordination and cooperation in the organisation which may lead towards better results in efficiency measures. The result of the descriptive study found that the mean score of innovation activities was moderately high (mean = 4.5773) and it had positive consequences on innovation performance.

## **8. Conclusion**

Application on Structural Equation Modelling in this study had established understanding on the positive influence of innovation capabilities, innovation activities, and wider public sector condition for innovation on innovation performance in the context Malaysian public sector. While, majority of the research on public sector innovation performance were carried out in developed countries such as Korea Government Innovation Index (Yoon, 2006), Measuring Public Sector Innovation in the Nordic Countries (Bloch, 2011), European Innobarometer (Arundel & Hollanders, 2011), UK Public Sector Innovation Index (Hughes, Moore & Kataria, 2011b) and Australia Public Sector Innovation Index (Australian Government, 2011). The findings presented reflect developed countries' context of innovation but does not help to explain or represent the nature of public sector innovation in the developing countries. The data will be useful as a basis of comparison, however, there is a limit due to different capabilities, innovation system, governance structure, mind-set and culture, experience in innovation as well as resources allocated between developed and developing countries such Malaysia. Thus, this research moves the frontier to measure public sector innovation performance from developing country, namely Malaysia. The research expects to provide new findings which reflect public sector innovation in non-Western and developing countries.

The established relationship between innovation capabilities, wider public sector condition for innovation, innovation activities and innovation performance in this study should serve as guidance to further foster public sector innovation in Malaysia. The implication of the study concludes the need for dedicated policy and strategic intervention for improving the public sector innovation performance in Malaysia, through enhancement of innovation capabilities of public organisation especially by nurturing innovative human capital, strategizing high impact innovation activity, intervention by central agency in form of policy and strategy, incentives package and autonomy.

Despite the fact that this study makes significant contributions, it still presents a certain limitation. There is still a limitation in terms of research methodology, whereby the location selected for the data collection was limited to Federal Government Administration Centre and did not include other locations in Malaysia. Therefore, for future research, it is strongly recommended the collecting of cross-national data which include multi-levels of government such as local government, state government and federal government agency.

At the end of the day, the researcher expects that the findings will contribute significantly to the facilitation of the ongoing debates on the issue of innovation performance in the public sector. The contribution is also expected to stimulate a desire to explore other aspects of the performance of public sector innovation for developing a stronger body of knowledge in this field.

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