

## The Effects of Employee Mindset on Employee Innovativeness: A Comparative Study Between Professional and Non-Professional Groups among Government Staff in Putrajaya, Malaysia

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### Abstract

This comparative study was conducted to identify the effects of employee mindset on employee innovativeness among civil servants in two ministries and one government agency in Malaysia, enabling a deeper understanding on the contributing factors of employee innovativeness in civil service in Malaysia. The findings revealed that there were significant and positive relationships among and between all dimensions of employee mindset and employee innovativeness among professional grade employees but only three dimensions of employee mindset (cognitive complexity, boundary spanning and adaptability) were associated to employee innovativeness among the non-professional group. Two other dimensions of employee mindset (cosmopolitanism and entrepreneurial mindset) were not found to be related to employee innovativeness for this group. In addition, it was found that all dimensions of employee mindset influenced employee innovativeness among the professional group of employees while for the non-professional group, only three out of five dimensions of employee mindset had significant influence towards employee innovativeness. It is recommended that employees in the non-professional group should be guided and rewarded for any innovative ideas they presented. Also, for the management to reinvent work processes to serve the people better. In addition, all civil servants should be allowed to use their own creativity to complete their work and not through the conventional, repetitive way of doing things.

**Keywords:** Employee mindset; Employee innovativeness; Cosmopolitanism; Cognitive complexity; Boundary spanning; Entrepreneurial mindset; Adaptability.



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### 1. Introduction

Innovation is a key driver to create new opportunities that generates greater value for society both economically and socially. It is also a process that involves the deliberate application of information, imagination, and initiative in translating excellent ideas or outstanding invention into new goods or services. Innovation is a critical element in Malaysia's development agenda as it raises productivity and competitiveness to be an advanced and inclusive nation. In recent years, innovation is considered as an important issue that people talk about. One of the main reasons is due to the Malaysian government's effort to push this society to become innovative to compete with the outside world; it will create competitive advantage as well as to enhance productivity and efficiency (Prime Minister Department, 2010). The reason for that is innovative and economic are equal, without innovation, economic could not sustain. Kirschbaum (2005), reported that innovation will make economies to expand and develop. Economies that do not add new kinds of goods and services continue only to do repetitive work and do not expand much. Innovation is important to the country to drive its economy further.

Innovation in the workplace is described as the latest combination of work implementation and involvement in the fields of human resource management, supportive technologies and work organization (Nicholls *et al.*,

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2015). According to [Kuczmariski \(1996\)](#), there are several reasons why an organization should develop workplace innovation. The first reason is the need to improve labor efficiency to sustain a level of social security and welfare in the future with the declining workforce due to aging population. Second, the skills and competencies are needed to develop potential workforce as well as to increase added work value in order to develop competitive and knowledge-based economy. Next, technological innovations can benefit both private and public organizations if they are implemented as workplace innovation.

According to [Misuraca and Viscusi \(2015\)](#) innovation can lead to a new product or a new work process that can reliably be identified as innovative thinking skill by experts. The changes management makes into new structures, processes, procedures and practices to achieve competitive advantages are called innovation ([Couros, 2015](#)). Employee Innovativeness includes self-regulation and motivation mechanism, which is beyond learning or modifying behaviors through reinforcing effects ([Man, 2001](#)). This is supported by [Ashourizadeh et al. \(2014\)](#) who defined management innovation as the creation and implementation of new practices, process, structures and techniques at the same time, promoting better quality of products or services.

## 2. Literature Review

### 2.1. Employee Innovativeness

According to [Pepler and Bender \(2013\)](#), innovation is an idea, approach, method, behavior, attitude, culture, technology, and capability that may constitute an innovation while [Amabile \(1996\)](#) defined innovation as a creative process of devising a useful product, service or mode of action from a pure concept located within a company. Innovation also occurs when individuals with high degree of existing creativity or knowledge make new and novel combination of this knowledge with new insights observed or learned through spillovers. Individuals require a high degree of existing expertise to engage in innovation for several reasons ([Knudsen, 2007](#)).

According to [Byrne et al. \(2007\)](#) innovativeness can lead to a new product or work process that can enhance one's work value. Employee Innovativeness includes self-regulation and motivation mechanism, all of which are going beyond learning or modifying behaviors through the reinforcing effects ([Mazzucato, 2016](#)). This is supported by [Mol et al. \(2008\)](#) who reported management innovation as the creation and implementation of new practices, process, structures, techniques and at the same time, encourage to attain the organization in terms of quality form and state where the changing made is a novel or totally diminished from the past ([Hargrave and Van de Ven, 2017](#)).

### 2.2. Employee Mindset

Employees Mindset refers to the behaviors, disposition, attributes and attitudes that relate to creativity, innovation with a view to capture opportunities in the business environment for organizational success ([Manral, 2011](#)). Employees Mindset is the mental process and inclination toward capturing opportunity by being creative and innovative in favorable or turbulent times ([Rufat-Latre et al., 2010](#)). It is the opinion and readiness of individuals or organizations to quickly discover, take action when the need arises both in conducive and turbulent situations with the intention to exploit business prospects. Employees Mindset is about the distinctive mental ability of an entrepreneur and the skills to quickly exploit opportunities in either new market or existing market that facilitate creations of new products and markets ([Chew and Chew, 2003](#)). In other words, it is a way of thinking and an approach to capturing business opportunities and the willingness to allocate resources to ventures with a high expectation of gains.

#### 2.2.1. Cosmopolitanism

According to [Ritter and Mostert \(2017\)](#), cosmopolitanism can be considered one of the key competencies for the twenty-first century. Cosmopolitanism allows the employee to remain flexible in this complex and fast-changing world. Cosmopolitanism is the production of novel and useful ideas by an individual or small group working together to create innovation in the organization. Cosmopolitanism is the ideology that all human beings belong to a single community based on a shared morality ([Rabelo and Bernus, 2015](#)).

#### 2.2.2. Cognitive Complexity

Cognitive complexity is a psychological characteristic or psychological variable that indicates how complex or simple is the frame and perceptual skill of a person ([Zhang et al., 2015](#)). People with high field of independence are able to analyze the relevant aspects of the situation without being distracted by irrelevant facets, whereas field-dependent people have difficulty separating less important aspects in his work. Cognitive complexity also is based on the structure of intelligence and is identified by the cognitive processes of fluency, flexibility, originality, and elaboration as essential to divergent production ([Asma and Abdellatif, 2016](#)).

#### 2.2.3. Entrepreneurial Mindset

[Barringer and Ireland \(2006\)](#), defined the process of entrepreneurial as an essential part of creativity and innovation which are needed in creating something new. Innovation and creativity in entrepreneurship serve as the starting point in running the business ([Baldacchino, 2009](#)). According to [Ritter and Mostert \(2017\)](#), entrepreneurship is a dimension of the mindset that has a unique way of seeing the world because it has the desire to achieve, create and thrive independently, hard work, desire for freedom and risk-taking.

### 2.2.4. Boundary Spanning

The concept of a boundary spanning role has been popular throughout academic research into innovation systems (Yip *et al.*, 2009). Boundary spanning involves generating alignment, commitment, and direction across five types of boundaries which are vertical, horizontal, stakeholder, demographic and geographic boundaries (Lau and Lo, 2015). Among the five challenges, the most challenging boundary is horizontal boundary because it involves handling expertise and functional groups, followed by geographic, demographic, stakeholder and lastly vertical boundaries (Padilha and Gomes, 2016). Manral (2011), stated that boundary spanning mindset and boundary spanning behavior are related in which the boundary-spanning mindset serves as the cognitive state that is responsible for the employee boundary spanning behavior.

### 2.2.5. Adaptability

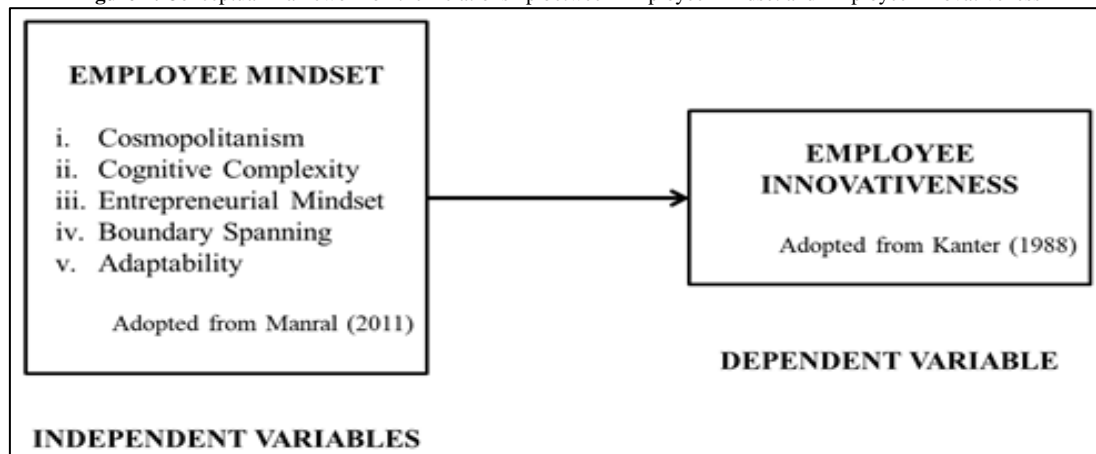
In the life sciences, the term adaptability is used in various ways. At one end of the spectrum, the ordinary meaning of the word suffices for understanding as it is Conrad (1972). Fonseca (2014), stated that innovation is the adaptive process in which the organization adapts the new ways of doing things. However, the adaptive process is not an easy process to perform because it is related and being controlled by other agents (Plsek, 2003). The major problem in the implementation of innovation is the firm's likelihood to refuse in responding to the innovation in terms of the changes to be made because it requires people or the activities to incorporate the innovation (Cui and Wu, 2016).

## 3. Research Objectives and Hypotheses

Figure 1 shows the conceptual framework of the relationship between employee mindset and employee innovativeness. Two research objectives were formulated for this study which are: (1) To identify the relationships between dimensions of employee mindset on employee innovativeness and (2) To identify the effects of employee mindset on employee innovativeness. Besides, researchers have also formulated several hypotheses for this study which were:

- H<sub>1a</sub>**: There is a relationship between cosmopolitanism and professional employee innovativeness.
- H<sub>1b</sub>**: There is a relationship between cognitive complexity and professional employee innovativeness.
- H<sub>1c</sub>**: There is a relationship between entrepreneurial mindset and professional employee innovativeness.
- H<sub>1d</sub>**: There is a relationship between boundary spanning and professional employee innovativeness.
- H<sub>1e</sub>**: There is a relationship between adaptability and professional employee innovativeness.
- H<sub>2a</sub>**: There is a relationship between cosmopolitanism and support staff innovativeness.
- H<sub>2b</sub>**: There is a relationship between cognitive complexity and employee support staff innovativeness.
- H<sub>2c</sub>**: There is a relationship between entrepreneurial mindset and employee support staff innovativeness.
- H<sub>2d</sub>**: There is a relationship between boundary spanning and employee support staff innovativeness.
- H<sub>2e</sub>**: There is a relationship between adaptability and employee support staff innovativeness.

Figure-1. Conceptual Framework on the Relationship between Employee Mindset and Employee Innovativeness



## 4. Methodology

The data was collected in two ministries and one government agency in Putrajaya, Malaysia. The three ministries and agencies were Prime Minister Department, Ministry of Education and Royal Custom Malaysia, Putrajaya. One Human Resource executive for each organization was identified to disseminate the questionnaires. 306 employees from both the professional and non-professional groups answered the questionnaires through convenience sampling. Out of that 135 were from the management and professional group, while 171 respondents were from the non-professional group or better known as the support staff. Instrument for employee mindset consisting of 21 items by Manral (2011) was used while employee innovativeness was measured by 47 items developed by Kanter (1988), encompassing a total of 68 items for a complete instrument for both employee mindset and employee innovativeness. A five-point Likert scale was used in this instrument with the values ranging from 1=Strongly Disagree to 6=Strongly Agree.

## 5. Results and Discussion

### 5.1. Reliability Analysis

For employee mindset, two dimensions were reported to have Cronbach's Alphas of >0.7, which can be considered as acceptable (Hair *et al.*, 2010; Sekaran, 2005). The two dimensions were boundary spanning and adaptability, while all other dimension had Cronbach's alpha of 0.8 and above. According to Ng and Coakes (2013), Cronbach's alpha refers to the average correlation of dimensions within a test if the dimensions are standardized. Otherwise, it is based on the average covariance among the variables. Cronbach's alpha can be interpreted as a correlation coefficient, which ranges within 0 to 1. Then, if the alpha value is found bigger than 0.6, the research instrument is reliable for the purpose of data collection for this study (George and Mallery, 2003).

**Table-1.** Pearson-Correlation (Comparisons between Professional and Non-Professional Groups)

Categories of Employees	No	Variables	1	2	3	4	5	6
Professional Grades	1.	Cosmopolitanism	1					
	2.	Cognitive Complexity	.320**	1				
	3.	Entrepreneurial Mindset	.953**	.385**	1			
	4.	Boundary Spanning	.653**	.499**	.750**	1		
	5.	Adaptability	.607**	.742**	.650**	.831**	1	
	6.	Dependent Variable Employee Innovativeness	.973**	.370**	.980**	.727**	.678**	1
Non-Professional Grades	1.	Cosmopolitanism	1					
	2.	Cognitive Complexity	.380**	1				
	3.	Entrepreneurial Mindset	.506**	-.301**	1			
	4.	Boundary Spanning	.139	.626**	.508**	1		
	5.	Adaptability	-.040	.876**	-.234**	.651**	1	
	6.	Dependent Variable Employee Innovativeness	.060	.897**	.011	-.839**	-.945**	1

\*\* Correlation is significant at 0.01 (2-tailed)

Table 1 shows the findings on the correlation between employee mindset and employee innovativeness among professional employees in the government sector. These findings were interpreted using the correlation guidelines by Cohen (1988). The result pointed out that all five elements of employee mindset were found to be significant and positive towards employee innovativeness which were cosmopolitanism ( $r=.973$ ,  $p<0.01$ ) cognitive complexity ( $r=.370$ ,  $p<0.01$ ) entrepreneurial mindset ( $r=.980$ ,  $p<0.01$ ) boundary spanning ( $r=.727$ ,  $p<0.01$ ) adaptability ( $r=.678$ ,  $p<0.01$ ) respectively. In interpreting the findings for the support group, it was found that there were on large positive relationship (cognitive complexity  $r=0.897$ ,  $p<0.01$ ) and two large negative relationships (boundary spanning  $r=-0.839$ ,  $p<0.01$  and adaptability  $r=-0.945$ ,  $p<0.01$ ) respectively.

These findings indicated that in order to be innovative, all elements in the employee mindset need to be present among the professional group of employees, while for the support staff, only cognitive complexity is positively related to employee innovativeness. It was further discovered reversed relationships which were boundary spanning and employee adaptability towards innovativeness. This signifies that support staff did not think that the latter variables are the scopes needed to enhance their innovativeness.

**Table-2.** Summary of Hypotheses Findings

Hypotheses	Hypotheses Statements	Findings
H <sub>1a</sub>	There is a relationship between cosmopolitanism and professional employee innovativeness.	Accepted
H <sub>1b</sub>	There is a relationship between cognitive complexity and professional employee innovativeness.	Accepted
H <sub>1c</sub>	There is a relationship between entrepreneurial mindset and professional employee innovativeness.	Accepted
H <sub>1d</sub>	There is a relationship between boundary spanning and professional employee innovativeness.	Accepted
H <sub>1e</sub>	There is a relationship between adaptability and professional employee innovativeness.	Accepted
H <sub>2a</sub>	There is a relationship between cosmopolitanism and support staff innovativeness.	Rejected
H <sub>2b</sub>	There is a relationship between cognitive complexity and employee support staff innovativeness.	Accepted
H <sub>2c</sub>	There is a relationship between entrepreneurial mindset and employee support staff innovativeness.	Rejected
H <sub>2d</sub>	There is a relationship between boundary spanning and employee support staff innovativeness.	Accepted
H <sub>2e</sub>	There is a relationship between adaptability and employee support staff innovativeness.	Accepted

Table 2 summarizes the hypotheses findings for this research. As explained earlier, all elements in employee mindset were found to be significantly related to employee innovativeness, while among the support staff, only one element which was cognitive complexity was significant and positively related to employee innovativeness, while two other dimensions which were boundary spanning and adaptability were significant and negatively related to employee innovativeness.

Table-3. Multiple Regressions (Comparisons between Professional and Non-Professional Groups)

Independent Variables	Professional Group				Non-Professional Group			
	Standardized Coefficients Beta	Sig	Collinearity Statistic		Standardized Coefficients Beta	Sig	Collinearity Statistic	
			Tolerance	VIF			Tolerance	VIF
Cosmopolitanism	.339	.000	.072	13.921	.005	.684	.338	2.954
Cognitive Complexity	-.088	.000	.366	2.735	-.090	.001	.069	14.507
Entrepreneurial Mindset	.629	.000	.057	17.533	.160	.000	.070	14.347
Boundary Spanning	-.095	.000	.176	5.693	-.565	.000	.047	21.279
Adaptability	.209	.000	.143	6.978	-.461	.000	.082	12.168
R Square	.984				.992			
F	1647.799				3892.167			
Sig. of F value	.000				.000			
Durbin Watson	2.066				1.512			

Table 3 shows comparative multiple regressions findings for both professional and non-professional groups in analyzing the influence of employee mindset towards employee innovativeness. For professional group, it was found that  $R^2$  was 0.984, in which all elements such as cosmopolitanism, cognitive complexity, entrepreneurial mindset, boundary spanning and adaptability explained 98.4% of the variance for employee innovativeness, with the significant F value of 0.000. The analysis also revealed that entrepreneurial mindset was the most influential component of employee mindset ( $\beta=.629$ ,  $p<.05$ ) towards employee innovativeness. Consecutively, cosmopolitanism, adaptability, boundary spanning and cognitive complexity were found have the influence on employee innovativeness ( $\beta=.339$ ;  $\beta=.209$ ;  $\beta=-.095$ ;  $\beta=-.085$ ,  $p<.05$  respectively). Other than that, elements of boundary spanning and cognitive complexity were found to have negative influence towards employee innovativeness among professional group.

For non-professional group, the result indicated  $R^2$  was 0.992, which all independent sub-variables which were cosmopolitanism, cognitive complexity, entrepreneurial mindset, boundary spanning, and adaptability explained 99.2% of the variance towards employee innovativeness, with Sig. F value of 0.000. In addition, the value for Durbin Watson was 1.512 which was good as it was in the range for acceptable value of 1.5 to 2, complying with one of the assumptions for bivariate and multivariate correlation analysis. Table 3 demonstrated that boundary spanning had the greatest negative influence towards employee innovativeness ( $\beta= -.565$   $p<.05$ ). Following that, the elements of adaptability, entrepreneurial mindset and cognitive complexity were also found to be affecting the dependent variable ( $\beta=-.461$ ;  $\beta= .160$ ;  $\beta=-.090$ ,  $p<.05$  respectively). Nonetheless, cosmopolitanism was the only element of employee mindset that has no significant influence towards employee innovativeness among the non-professional employees ( $\beta= .005$ ,  $p>.05$ ).

In comparisons, employee innovativeness can be influenced differently by employee mindset based on the employees' service grades. This study found that among the professionals, all five elements of the employee mindset can impact the employee innovativeness, while for non-professionals; only four elements were found to have the influence, leaving out the element of cosmopolitanism. In terms of the effect of each element, the professionals' employee innovativeness was greatly influenced by entrepreneurial mindset while non-professionals were greatly influenced by the element of boundary spanning. However, if both elements' beta-values were compared, professionals' entrepreneurial mindset was slightly higher by 0.064 from non-professionals' boundary spanning element. These differences may be due to the employees' nature of work, organizational hierarchy, chain of command and other organizational factors. Hence, the organizational management needs to ensure that the corrective actions need to be taken differently according to the employees' service grade.

This discovery was knowingly supported by Manral (2011), who claimed that the features of successful ideas may have more to do with the likelihood of gathering political support than with the likelihood of the idea to produce results. It is, therefore, the responsibility of an employee in terms of the entrepreneurial mindset to successfully develop a coalition of allies that determines whether the innovation takes off the ground (Baron, 2007). Similarly, the influence of boundary spanning element was also emphasized. According to Gavetti and Levinthal (2000), who carried out a study in 2009 on boundary spanning, found that the element was 92% influencing the organizational strategies on driving forward innovation aspects in the government sector. Moreover, Manral (2011) suggested the same outcome who stated boundary spanning can improve the innovativeness of employees by making them involved in the process of brainstorming new ideas. Furthermore, researches have considered adaptability element as an association to employee innovativeness in a way on how it enables an employee to facilitate the adoption of innovation into organizational practices (Swan, 1997).

Employees with adaptive mindset are able to cope with changes and adapting themselves to the innovation of organizational objectives embodied in the strategy and structure of the organization. In fact, according to Griffin and Guez (2015), more than the technical virtues of the innovation, the social arrangements of organizational structure to patterns of practice are the major determinants of the adoption of innovation. Additionally, cognitive complexity is much alike as adaptability in terms of handling changes. According to Manral (2011), cognitive complexity is the best solution in solving problem related to become innovative. This is also supported by Greve (2008), who stated that cognitive complexity enables problem in management by linking the problem to the latest ideas generated within the organization. Therefore, the need to possess the quality of cognitive complexity is very crucial for every employee.

Despite being recognized by this study as no influence factor to employee innovativeness among the non-professional group, other researchers discovered otherwise. According to Pogge (2017), cosmopolitanism played a major role in developing employee innovativeness. Besides, previous studies have indicated that innovativeness can influence the way people with cosmopolitanism ability to successfully lead other people (Ahern, Leavy & Bryne, 2014). Therefore, it can be summarized that every element of employee mindset can be the determinants of employee innovativeness especially among the professional group.

It is worth mentioning that cognitive complexity, boundary spanning and adaptability were found to influence innovativeness negatively, despite many studies that suggested that these elements are needed to enhance innovativeness among employees. Supervisors for the non-professional group need to do something to enhance these three elements, failing which, innovativeness among support group in the government sector will not be materialized. One is to make the staff to understand what they are supposed to do and to provide the necessary assistance when needed. That way, staff cognitive value is heightened. Next, boundary spanning among support staff needs to be elevated as well. Boundary spanning is simply translated to employee commitment. Hence, if they are not committed, innovativeness among support staff will vanish in thin air. Finally, the element of adaptability which is simply translated to employee willingness to adapt to new work structures or changes, it was found that support staff were not inclined to adapt to new ways of doing things. It is of utmost importance that the management provides the necessary training before any new work structure is introduced so that the support staff will have the required skills and knowledge to complete a task.

It is not an uphill task to be innovative especially among the professional group; however, it is quite difficult to ask the support staff to be innovative because of the negative effects of the three sub-variables mentioned above. The management or those responsible for training the support staff should take the findings of this study seriously to drive this country to be innovative and remains competitive among its neighbors.

## 6. Recommendations and Conclusion

Several recommendations are derived from this study to enhance the innovativeness among civil service employees.

- i. Firstly, government needs to take serious action on developing non-professional employees toward innovativeness employees. The need for them to become creative and innovation is very crucial. While conducting this study, the researchers realized that non-professional employees should be encouraged to conduct and complete their work in any manner they prefer and not only through the conventional way of doing things. For example, employees who want to make their work more efficient should be allowed to do that.
- ii. Support staffs who propose a new way of doing things to make it more effective, should be rewarded.
- iii. Education and training can contribute to the promotion of employee innovativeness. Hence, more training and courses should be extended to both the professional and non-professional groups to keep them abreast with the latest technology.
- iv. Next, as innovation practices have become part of the government priority in order to improve their efficiency and productivity, the government sector can also provide awards such as non-monetary incentives, bonuses and promotion for the non-professional group, so that this effort would encourage them to generate the idea of innovation and apply it in the workplace.

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