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Training and Development on Innovative Work Behavior among Public Organization Managers: The Mediating Effect of Intrapreneurial Competencies

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Abstract: ***The impetus of this article is to examine the position of training and development on employees' innovative work behaviour, with intrapreneurial competencies mediating function. This study used quantitative method by distributing 284 survey questionnaires to managers at a public organization. PLS has been used to evaluate the information gathered. Based on analysis of variance accounted for (VAF), the study showed the consequence of mediating, intrapreneurial competencies are 55% of the rapport concerning training and development and innovative work behavior. Mediating role of intrapreneurial competencies towards connection among training and development and innovative work behavior are also significant. In previous research, employees were recognized as a major source of innovation. However, systemic empirical research was not fully implemented to investigate the impact of mediation of intrapreneurial competencies on the connection between training and development and innovative work behavior. This implies that the results can have a significant impact on the public sector by offering hints for technology enhancement to organisations and these findings will ultimately add to the companies quality, efficiency and continued competitive advantage. This can contribute to a rise in jobs in those fields if organisations conduct faster. In addition, the response to the research question may be helpful for educators in the field of innovation. Education where innovation is essential could be tailored to the intrapreneurial skills mediating that boost the link between creative work behavior and training and development that perform a part in this phase. A commitment to the science globe will be produced in relation to the practical significance of this research. A donation to the current literature will be produced by gaining fresh perspectives on these subjects.***

Index Terms: ***human resource development, innovative work behaviour, intrapreneurial competencies, public sector, training and development***

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I. INTRODUCTION

The increasingly complex technological advancement and trends in demand (Callahan & Muegge, 2003) have made the elements of innovation an important element in a country's conversion phase. The importance of innovation is supported by the statement of The Global Innovation Index 2017 that states that future creation and sustainability will succeed if a country is capable of developing innovative-oriented new sources (Dutta et al., 2017). Malaysia is also no exception in the face of these processes and challenges. Since independence, the Malaysian public sector has undergone various management innovation processes. Vision 2020 and TN50 have led Malaysia towards developing more an agile, efficient and credible public service. In addition, the public service should also be sensitive to the evolution of the role of public service in retrospectively, examine current developments and analyze major trends that will give a new definition to the features and functions of the country's public service (Abdul Razak, 2017).

However, there is evidence showing that public administrations is still facing some challenges in its innovation capabilities especially the ability in inculcating creative ideas among the managers. The organizations has to use external consultation services to implement some of their projects. This problem has interest the researchers to explore the issue. Hence, the role of creativity needs to be understood as to push innovation activities among the manager in the organizations. This will allow them to become competitive enough in their undertakings.

Innovation is part and parcel in any organization. Many studies had shown the importance of innovation in the organization (Gumusluoğlu & Ilsev, 2009; Luoma-Aho et al., 2012; Sarros et al., 2008; Soltani et al., 2011). However, most of the researchers observed private sector organizational excellence and development (Polston-Murdoch, 2015). Studies focusing on innovation at individual level are seen to be under-indefinitely attentive (Vargo & Lusch, 2004) particularly towards public sector organizations. Innovation studies in existing public sector organizations (Borins, 2014; Damanpour, Walker, & Avellaneda, 2009; Hartley, Sørensen, & Torfing, 2013; Brown & Osborne, 2013) more conceptual than empirical (De Vries, Bekkers, & Tummers, 2016).

Therefore, understanding role of innovative personal work behavior (Amabile, 1988; George, 2007) in the public sector is important. Innovative work behavior has become the focus of this study because some literature shows inconsistent results when associated with other factors (Janssen, 2005). While most studies show significant relationships among managing human resources and innovation, the relationship is only at the organizational level (Janssen, 2005) and most of the studies were conducted on middle managers; more likely to look at the context of corporate and business organizations only (Hornsby et al., 2002; Ren & Guo, 2011). The objective of this research is to complete this empirical divide.

II. LITERATURE REVIEW

A. Innovative Work Behavior (IWB)

By intentionally incorporating and applying fresh thoughts, procedures or products, IWB is described as employee conduct (Janssen, 2000). The above definition is parallel to Yuan & Woodman (2010) and Nijenhuis (2015) which describes IWB as an individual who generates, processes, and executes new ideas. In addition, IWB is an activity involving physical and cognitive, whether individually or collectively aimed at achieving the goal of innovation development (Messmann & Mulder, 2012). In entrepreneurial literature, opportunity discovery is seen as an idea-generating behaviour (Krueger et al., 2000; Shane, 2003). The following four dimensions of IWB are described in detail by means of De Jong & Den Hartog (2008).

Exploration of opportunities. At this point, the innovation process takes place when fresh possibilities are found by staff (Krueger et al., 2000). A individual recognizing possibilities begins the development of something fresh (Parnes et al, 1977; Basadur, 2004). Opportunity exploration is characterized in this research as finding fresh possibilities.

Stage of Initiation – Generation of Idea. Idea generation is all about conceptualizing techniques of enhancement and answers to issues recognized (Van de Ven, 1986; Amabile, 1988). The concept of generating thoughts seems to begin with the restructuring and mixture of data and current thoughts for problem fixing and/or efficiency improvement (Rothenberg, 1996).

Stage of Implementation – Promoting Ideas (Championing). The phase of implementation is described as a convergent creative work behavior that includes attempts to champion (concept advancement) and apply (concept execution) (Mumford, 2000).

Stage of implementation – Implementation of the Idea (Application). Championing or promoting thoughts is described as a personal political behavior involving the mobilization of resources, suggestion, bargaining and risk-taking situations that are component of the method of realizing future thoughts, alternatives and innovations (J. De Jong & Den Hartog, 2010).

In this research, the four stages of IWB distinguished by De Jong & Den Hartog (2010) were adopted. These four distinct stages could help to establish issues in this study. IWB portrayed irregular and interrelated practices involving individuals into these exercises at any time (Scott & Bruce, 1994). Therefore, employees' behaviors might have a major impact on organizational innovation.

B. Training and Development (TD)

Knowing the benefits of employee innovativeness in upholding their competitiveness is crucial for government industries in Malaysia. TD is undoubtedly one of the major contributes to the innovation of staff (Dul et al., 2011; Mumford, 2000, De Jong & Den Hartog, 2010). In addition, TD, from a hierarchical point of perspective, has chosen to differentiate, ensure and assist construct the key skills around its ability to learn, educate, train and develop human assets (M. T. Khan et al., 2012).

According to Dessler (2011), training is a process employed by employees to master the basic work skills required to perform their duties. Development operations vary from education and training operations because they do not simply concentrate on work-related problems alone. Development activities promote organisational requirements to improve operating life quality, efficiency and responsiveness (Schuler & Jackson, 1987). Hence, development activities provide learning opportunities to encourage such growth.

The chief goal of an organization is to cultivate the growth of the employee by equipping employees with the knowledge and skills to face any unforeseen expectations in the future that may affect the organization. The value of TD among public organizations has long been acknowledged. Bysted & Jespersen (2014) specified that TD as a competence development action for drive of improving competent employees in order to trigger innovative work behaviors; increasing employee innovativeness which in return leads for a higher competitive advantage.

C. Intrapreneurial Competencies (IC)

Since competence is a word has lengthy been used in leadership literature, its function and significance has only been recognized in the last century. According to Spencer & Spencer (1993), competency is a hidden normal for those casually identified as standard referenced with powerful and predominant execution in an occupation or circumstance.

IC is defined as an entrepreneurial attribute of an individual in an existing organization (Bosma et al., 2010; Nandram, 2015), the process of demonstrating entrepreneurial quality in a strong organization (Kuratko et al., 2001). Additionally, Anu (2007) highlighted the behavior of an employee who did not like the status quo (Donald & Goldsby, 2004) and internal entrepreneurship is also said to be a driving force for opportunities to look for fresh goods, economies or techniques (Kuratko et al., 2005; Srivastava & Lee, 2005).

Here, Man's (2001) entrepreneurial competencies model was chosen as the starting point for developing and validating a cross-cultural model pertaining skills to creative work behaviour. The model offers behavior ranking that can be properly situated in distinct competency fields. Furthermore, "Organizing and Leading" is labeled for greater description of this field. The eight types of entrepreneurial skills suggested in this research are therefore the aspects of Strategic, Commitment, Conceptual, Organizing and Leading Opportunity, Relationship, Learning and Personal.

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For this research, IC relates to strategic (competence linked to organizational strategy development, evaluation and implementation); organizing and leading (competency related to plan development, allocate resources, motivate and guide employees, coordinate activities, delegate tasks, and also ensure that organizations are running smoothly) and personal (competency related to self-belief).

D. TD, IWB and IC

In the context of entrepreneurship, Sarwoko et al. (2013) showed that the connection between entrepreneurial features and company results was affected by variable entrepreneurial skills. The greater the skill, the greater the output of the company would be. Business owners that capable of exploring new ideas are willing to take risks, monitor the development of new ideas, seize opportunities, develop rapports and long-term relationships, able to learn and apply good management practices, capable of identifying weaknesses and strengths of business, will contribute to business performance. This finding is also as reported by Man et al. (2002) as well as Ahmad et al. (2010).

Additionally, studies by Izquierdo & Buelens (2011) showed that mediating variables of entrepreneurial self-efficacy had influenced the connection concerning entrepreneurial intents and students' competence in addition to explain that student behavior towards entrepreneurial action affects their intentions to open a business. Findings by Ahmed et al. (2003) shows that the mediating variable of the organization's competence is partially mediated business. Subsequently, Kong et al. (2012) noted that the connection between hotel job leadership and job happiness is affected by the mediating skills of professional expertise.

Overall, studies that make IC as mediating variables between TD and IWB are still poorly implemented but most studies only make one of the dimensions of IC as mediator. Based on the findings of past studies showing significant relationship between TD, IC and IWB. Hence, there is a possible IC as a mediator as suggested by Alipour et al. (2011).

H1: There is a relationship of mediating IC on the relationship between TD and IWB

III. FRAMEWORK

Researchers have proposed a conceptual framework to suit the purpose of the study. This conceptual framework involves IC as the mediating variable, IWB as dependent variable and TD as the independent variable (Fig. 1).

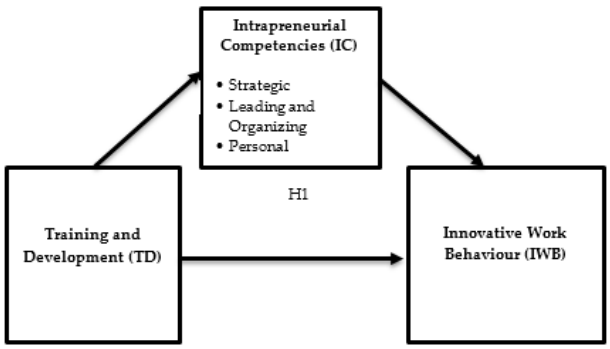

Fig. 1 Proposed Conceptual Framework

– Source Authors

These three IC have been selected based on the expert validity. This outcome was in proportion to the result from past study indicates that strategic competencies, organizing and leading competencies and personal competencies exhibit top three high correlation among eight intrapreneurial competencies. Therefore, personal competencies, strategic competencies and organizing and leading competencies are selected to be tested in this research.

IV. METHODOLOGY

This research utilizes two data types, main and secondary data. Primary data was collected through direct surveys, post and email. The data obtained will be analyzed for the testing of hypothesis and research questions developed. This study looked at the entire population respondent. Secondary data consists of articles from journals and books as well as official website of organizations. Questionnaire is an instrument used to collect data in this study. Quantitative data obtained through questionnaires in this research where the researchers had selected a total of 284 managers in an organization. The independent variables of the research was focused on a questionnaire containing closed item scale of seven (7) score. The data collected then tested for their effect on the dependent variable. In this learning, the research practice starts with defining research problems. Generally, the problem statement is generated through literature analysis highlights studies on TD, IC and IWB. Based on the analysis, further understanding to comprehend the determinants of the workers is needed. Eventually, from these information, the research questions, the research model, hypothesis could be developed positively. An initial draft questionnaire was developed based on a literature review and discussions with top management of the organization as well as academic experts who had significant TD, IC and IWB application experiences. Both validated items from prior studies were included in the questionnaire. The questionnaires opened the same items to customize the responses for each batch of participants with only minor changes. These statistics provide information on the demographic profile of respondents who took part in the survey.

A total of 284 managers participated in this study. Overall, 95.1% (270) of the respondents were male, 4.9% (14) of the respondents were women. 66.5% (189) of the respondents have a formal education. 14.8% (42 participants) have Sijil Pelajaran Malaysia (SPM), Sijil Tinggi Persekolahan Malaysia (STPM) 0.7% (2), Diploma 10.6% (30 participants) and 7.4% (21 participants) degree. The majority of respondents, 76.8% (218 participants) aged between 50 to 59 years, 8.5% (24) are 40 to 49 years, 12% (34 participants) are 30 to 39 years, and 2.1% (6) are 20 to 29 year.

V. DATA ANALYSIS

Scientists guided by Partial Least Squares Regression (PLS) performed an Exploratory Factor Analysis (EFA) assessment to appraise the legitimacy of the constructs of the model and the interactions between the constructs.

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PLS is well adapted for evaluating predictive models in both immediate and indirect routes with extremely complicated multi-item constructs. PLS conducts an assessment of the prediction (exterior) system to determine the general psychometric characteristics of the scales used to evaluate the factors of the model and a spatial (internal) system assessment to determine the significant interactions between the factors. PLS can manage tiny sample dimensions and does not provide information with multivariate demands for normality and homogeneity. These PLS elements are essential because our actions are based on ordinary information that may not fulfill the criteria of homogeneity and normality.

A. PLS Measurement Model Results

Analysis of the factor was performed with factoring of the main shaft and oblimin rotation. To determine whether the factor analysis was suitable for the data set, The Kaiser – Meyer – Olkin (KMO) testing adequacy metric and the Bartlett sphericity sample were examined. KMO 0.620 statistics were above 0.500, indicating the information was appropriate for factor analysis. In addition, the experiment conducted by Bartlett led in an extremely important chi-square statistics (x2= 927, p-value= 0.000), showing an appropriate correlation between the products. Thus, for the current information collection, factor analysis was suitable. Build legitimacy, determined by the existence of convergent and discriminating values, shows how well the measuring objects connect to the constructs. There were three experiments used to show convergent legitimacy: product reliability, composite performance, and obtained median variance. Reliability of items was determined by examining the loading of items in the construction. Overall, loads at or above 0.5 show sufficient accuracy of items. All products exceeded 0.500 loads (Table 1).

Table 1 Item Loadings for Construct – Source Authors

Construct/ Dimension	Item	Loadings Factor
Innovative Work Behavior	IWB 12	0.846
	IWB 13	0.824
	IWB 15	0.809
	IWB 17	0.858
	IWB 4	0.775
	IWB 6	0.826
	IWB 7	0.870
	IWB 9	0.840
Idea Championing	IWB 12	0.928
	IWB 13	0.924
Idea Implementation	IWB 15	0.917
	IWB 17	0.927
Opportunity Exploration	IWB 4	1.000
Idea Generation	IWB 6	0.894
	IWB 7	0.915
	IWB 9	0.898
Intrapreneurial Competencies	IC 11	0.765
	IC 13	0.706
	IC 16	0.750
	IC 18	0.768
	IC 19	0.756
	IC 20	0.783
	IC 38	0.788
	IC 39	0.822
	IC 40	0.784
	IC 42	0.793
	IC 48	0.853
	IC 49	0.797
	IC 50	0.845
	IC 67	0.758
	IC 78	0.696
	IC 81	0.795
	IC 82	0.817
	IC 87	0.756
	IC 89	0.763
Organizing & Leading	IC 11	0.849
	IC 13	0.829
	IC 16	0.832
	IC 18	0.879
	IC 19	0.856
	IC 20	0.882
Personnel	IC 38	0.875
	IC 39	0.874
	IC 40	0.856
	IC 42	0.854
	IC 48	0.895
	IC 49	0.870
	IC 50	0.908
Strategic	IC 67	0.867
	IC 78	0.808
	IC 81	0.861
	IC 82	0.884
	IC 87	0.843
	IC 89	0.843
Training and Development	TD 1	0.732
	TD 14	0.731
	TD 2	0.742
	TD 6	0.753
	TD 7	0.763
	TD 10	0.750
	TD 3	0.745
	TD 4	0.655
	TD 8	0.755
Training	T 1	0.836
	T 14	0.718
	T 2	0.824
	T 6	0.836
	T 7	0.847
Development	D 10	0.875
	D 3	0.813
	D 4	0.770
	D 8	0.849

Since PLS is a non-parametric method, bootstrapping has been used to carry out loading significance testing. The t-statistics for the loadings on their latent constructs of the measuring items were all significant at the level of 5 percent, except for the item from the construct of industry practice.

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It was maintained, however, because it was near to the split, therefore it was considered significant. This choice was further verified by the efficacy assessment using PLS. The alphas of Cronbach also given proof of the accuracy of the composite and the price above 0.6 shows that it is appropriate. All the construct composite reliability was above 0.7 and all alphas of the Cronbach are above 0.6 (Table 2).

Table 2 Convergent Validity Analysis – Source Authors

Construct/Dimension	Composite Reliabilities	Cronbach's Alphas	AVE
Innovative Work Behavior	0.934	0.916	0.624
Intrapreneurial Competencies	0.967	0.964	0.608
Training and Development	0.914	0.894	0.543

Finally, the derived median variance (AVE) reflects the quantity of variance that a structure captures through its items compared to the quantity of variance owing to the mistake of estimation. The obtained variance of each construct is discovered to be above the suggested score of 0.5. In short, there was adequate convergent validity in the constructs.

B. Mediating Effect of IC

Based on Variance Accounted for (VAF) analysis, study showed influence of intermediating IC is 55% of the relationship between TD and IWB; meaning that the variable of IC is considered as part of mediating variables (partially mediating) with the VAF, where, VAF ≤ 20% ≤ 80% (Hair et. al., 2011). Hence, the path of mediating role of IC towards relationship between TD and IWB is also significant and fully supporting hypothesis 1.

VI. DISCUSSION AND CONCLUSION

This study's results provide assistance for IC's position in fostering TD and IWB job. Based on the three dimensions of the IC, only personal competencies have the similarity between this study and some other authors such as Izquierdo & Buelens (2011) which look at the aspects of self-efficacy, Kong et al. (2012) that examines career competence from proactive aspects of personality and Ahmed et al. (2013) view the competence of the organization rather than the aspect of individual competence. However, the strategic competency advances and leads into value added in this study and confirms that in enhancing the connection between TD and IWB, IC is a significant consideration.

Significant contribution of this research is to show that mediating roles of IC affecting 35 percent (partially mediating) relationship between TD and IWB. Sarwoko et al. (2013) found that factors of entrepreneurial skills had affected the connection between entrepreneurial features and company results in support of the current studies. However, this research is restricted to government organizations that may not apply the outcomes of this study to other types of organizations. In addition, both variables estimates are based on self-reported interventions that would render self-inflated reactions a problem to be regarded. The survey is anticipated to encourage more extensive research in the future despite these constraints.

As emphasized at the start of this section, change is now essential for organisation and an organisation's innovation capability lies in its workers intellect, imagination and creativity (Mumford, 2000) and their involvement and help is required for innovation growth and execution (Van de Ven, 1986). In view of these statements, it is important to investigate the development method and the related employee behaviors. Having highlighted the significance of more information on the subject of IWB in particular, it is moment to close down the viewpoint and emphasize the usefulness of responding the primary query. By answering the query how IC relate to TD and IWB shows how IC can be used to foster TD with the objective of promoting IWB.

First of all, there tends to be a common need to understand and manage entrepreneurship, and present study will add to this need. There is also restricted proof in the literature of the connection between the growth of human resources and innovation (Beugelsdijk, 2008; Laursen & Foss, 2003; Shipton et al., 2006). Scholars have concentrated solely on the impact of human resource development on organisational efficiency, but innovation is a significant efficiency predictor (Damanpour et al.,

1989). Hence, connecting TD and IWB with the objective of enhancing organisational efficiency is therefore important. Moreover, what human resource development is required to attain creative work behavior that effect innovation (Scott & Bruce, 1994) and what part intrapreneurial skills play here (Van de Voorde et al., 2007) is not yet widely researched. A donation to the current literature will be produced by gaining fresh perspectives on these subjects.

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