

# **Individual Characteristics Influencing Employee Innovative Behavior with Reward as Moderator in Universiti Teknologi Malaysia**

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## **Abstract**

Today's organizational success are highly related to the value of competitive advantage through innovation. Innovation is one of the vital elements that contribute to the growth, competitiveness and survival of organizations in a world full of change. Supporting literatures proves that organizations becomes more innovative when they boost up and capitalize on their employee's ability to innovate. One of the factors affecting innovation through individual is individual characteristics. Perceived by certain moderating agent, employee's individual characteristic has important implication on how they react in innovative behavior. At the same time reward is said to play a vital role in boosting positive innovative behavioral among employees. This study aims to study on the individual characteristics of UTM Registrar Department employees and its effect on innovative behavior with rewards as the moderating factor.

## **Keywords**

Individual characteristics, Employee innovative behavior, reward, innovation

## **1. Introduction**

An individual is always influenced by their culture, sub-culture, social class, reference groups, family, personality, and psychological factors (Orji *et al.*, 2017). Thus, understanding individual characteristics in an organization are crucial for continuous innovation and improvement where innovation proven as the crucial factors for the organizational financial result and economic sustainability (Monteiro, *et al.*, 2017). To prove the interrelation between individual characteristics and employee innovative behaviour, this paper will serve as a report on the findings of innovation studies in UTM Registrar Office, and its impact to employee's willingness to be innovative.

In Malaysia, the Malaysian economy has evolved from solely based on production-based to knowledge-based economy to stay relevant with international achievement (Grapragasem *et al.*, 2014) where education sector is recognized as one of the new economic engines to generate income and for sustaining economic development in Malaysia. The idea of practicing innovation in education sector is viewed as an important entity where it involves contribution to the individual competency to understand and implement implementation process of innovation, and how employees interact and communicate with others (Ujang, 2009). It is often the viewpoint of employees that

creates opportunities for the organization to innovate, and that promoting and encouraging innovative work is argued can contribute to long term organizational survival.

Employees stands are viewed as the backbone for an organization, where the individual characteristics play as a key role to generate innovation, and creative ideas, to products and services (Yesil *et al.*, 2013). Employees served as an agent to implement change, applying new knowledge, and to improve overall organizational performances based on their ability and willingness to contribute ideas for the organization. Therefore, the employee is regarded as one of the important components for innovation practise in an organization.

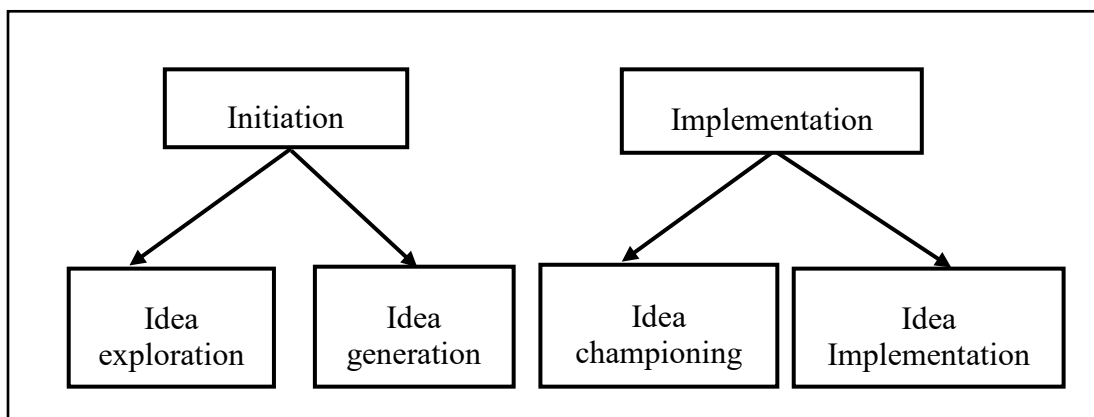
Nowadays, reward plays a vital role in determining significance performance at work (Manam, 2016). Reward are proven to positively related to motivation, and often used to boost morale and improve organizational performance through employee's behaviour (Danish and Usman, 2010). Malik *et al.*, (2015) and Patterson *et al.*, (2009) discussed extrinsic rewards such as bonuses, awards, and promotions may influence innovation. Thus, this paper serves to discuss the linkage between individual characteristic and employee's innovative behaviour through reward as a moderator to cultivate relevant innovation in organizational performance.

## 2. Literature Review

### 2.1. Innovative Work Behavior

As discussed, the ability to continuously innovate and improve products, services and work processes nowadays are crucial for organization. Individual employees need to be both willing and able to innovate if a continuous flow of innovations is to be realized (Janssen, 2000). The idea of the importance in individual action to be involved with innovation and improvement is not only discussed in academic of literature on innovation, but also taken seriously on several other management principles such as total quality management, and corporate sectors (de Jong, 2008).

Innovative work behaviours (IWB) was first defined by Farr and Ford (1990) where IWB as an individual's behaviour that aims to achieve the initiation and intentional introduction of a new useful ideas, processes, products, or procedures. When it comes to the study of IWB, there are ample numbers of literature discussing its dimensions, which are often linked to various stages of innovation process (de Jong and Hartog, 2010). However, most studies to date have focused on the generation of innovative ideas and creativity rather than the behaviours involved in championing or implementing these creative ideas. De Jong (2008) then established a nomological network to cover the overlapping dimensions from previous studies and came out with a new model for IWB based on the two stages of innovation.



**Figure 2.1:** Model for Innovative Work Behaviour  
**Source:** De Jong and Hartog (2010)

Figure 2.1 shows the two stages of innovation, which are initiation and implementation. Every stage of innovation has two dimensions that are related to initiation and implementation phase. IWB concept is related to problem recognition, idea championing, and idea implementation, while employee creativity was only focused on idea generation of employee itself (de Jong and Hartog, 2010) which will be discussed next under Employee Innovative Behaviours (EIB).

### **2.1.1. Employee Innovative Behavior**

Innovative behaviour is referred to as the process of bringing new problem-solving ideas into use, thereby enhancing a product, service or process (Carmeli *et al.*, 2006). Most innovation outcomes at the individual level are focusing on the concept of innovative behaviour which is defined in terms of coming up with a new idea and working on how to implement them (Seibert *et al.*, 2001; Balau *et al.*, 2013). Individuals often produce novel ideas that are useful and appropriate according to a given situation (Amabile, 1983; Balau *et al.*, 2013).

De Jong (2010) IWB model came out with four phases of innovation process as stages of EIB in workplace. Exploration process is a phase where idea starts when an employee tries to look for an opportunity in the organization to generate the idea in order to solve existing or arising problem. The exploration phase consisted of observing and looking for ways to improve current processes, products, services or work relationship or trying to find a better-preferred solution in alternative ways (Basadur, 2004).

After employee's exploration phase in paying attention to the source of opportunity, diagnosing, and gathering information or data to find better solution, the second phase flows in as an idea generation. The purpose of this phase is to generate ideas or solutions based on the problem and to find ways in order to improve the performance in the current work process. This phase involves idea combination or reorganize the information and making change existing concepts to turn up with a solution for the problem (Mumford *et al.*, 2003).

The third phase refers to idea championing. It becomes a relevant aspect in EIB when the individual already generates the ideas. During this phase, idea generated will then be promoted to the organization. Most of the ideas proposed by the employees are able to fill the gap of the performance in an organization. Innovative individual will then take up the responsibility and putting commitment to those ideas in order to influence the others to agree with the ideas (Kanter, 1988).

Lastly, the implementation phase highlights on implementation and applying those ideas in developing a new product or the work process. Implementation can be explained as improving existing product, process, and method by using the ideas that were proposed to the organization as developing innovative ideas into work practices. These includes activities such as making innovation part of regular work process, and new behaviours to be adapted in daily working activities (Kleysen and Street, 2001).

## **2.2. Individual Characteristics**

In a working scenario, individual differences often can affect IWB. Jalil *et al.* (2015) indicated that individual characteristics may influence work performance and may change the workers' responses to them. This study uses three individual characteristics that influence Employee Innovative Behaviour (EIB) which are self-leadership, self-efficacy, and proactive trait.

Self-leadership can be defined as the individual process of motivating oneself controlling behaviour and leading oneself by using some cognitive and behavioural strategies in order to achieve personal and organizational goals (Manz, 1986). Employees who enrich in self-leadership motivate themselves that directly impact their performance, regardless of the situation either favourable or not (Stewart *et al.*, 2011) and closely related to perceptions of self-benefit (Lovelace *et al.*, 2009). Furtner *et al.*, (2011) mentioned that self-leadership can be observed at team level as well as individual level. On Individual level, Houghton *et al.*, (2012) conceptualize self-leadership as a multidimensional measure consisting of three strategic categories, which are behavioural focused strategies, natural reward strategies, and constructive thought pattern strategies. Behavioural-focused increase self-awareness and self-managing behaviour of individual by initializing the methods such as self-goal, self-reward, and self-observation (Neck and Houghton, 2006). Natural rewards can help people to build pleasant and enjoyable features into individual daily activities so that the tasks naturally rewarded indirectly (Manz and Neck, 2004). Constructive thought opens numerous ways of positive thinking that ultimately replace the destructive self-talk into optimistic self-talk (Neck and Houghton, 2006). To relate with this study context, self-leadership has the significant and direct impact on employee's innovative capabilities and act as a focal point in facilitating innovation at all organization levels.

Self-efficacy is the imparting psychological tool for positively motivating human resources as a needed approach to motivation theory and practice (Idrus and Salleh, 2017). The core principle of self-efficacy refers to one's belief that he or she can successfully execute the behaviour necessary to accomplish a specific task at the desired level (Bandura, 1997). This goes along with cognitive theory by Wood and Bandura (1989) which stated that the definition into three components that involved in the self-efficacy are judgment, dynamics, and mobilization. Self-efficacy beliefs not only determine how much effort individual make, but also how long to preserve in the face of difficulties as the outcomes that people expect can reflect their own judgments (Hsu *et al.*, 2017). The individual dynamic includes the attributes of individual creativity such as willingness to take risks, having broad interests, intuition, and high self-confidence. This self-efficacy used to define self-perception of one's capacity to be creative when faced with the possibility of innovation in the workplace (Tierney, 1997). People who believe that specific tasks or situations exceed their capabilities tend to avoid them, but if they possess high self-efficacy, they believe that they can succeed and, consequently tend to mobilize the task. To conclude, employees who believe that any specific tasks or situation will exceed their capabilities, they will be more likely to avoid them. Contrary to this, if the employees perceive strong self-efficacy, they will look forward for a challenge and tend to take on a task.

Proactive Trait is defined as the individual's predisposition toward proactive behaviours or tendency to affect environmental change or take initiative (Bateman and Crant, 1993). Proactive individuals tend to pinpoint and solve problems, actively seek opportunities, step in to discuss the action for continuing their learning and improving their ability to reach certain goals (Li *et al.*, 2010). Parker and Collins (2010) indicated that proactive trait that bring positive consequences for people and organization includes innovative behaviour among the individuals such as taking charge, voice, and problem hinderance. As a context for this study, proactive personality is important in ensuring the innovativeness of the employees as an individual. The individual innovation behaviour was considered as proactive work behaviour enabling proactive action to make a difference especially when it comes to idea execution (Parker and Collins, 2010).

### **2.3. Individual Characteristics and Employee Innovative Behavior (EIB)**

According to Seibert *et al.* (2001) and Balau *et al.* (2013), employee innovation behaviour includes the behaviour of employees that directly and indirectly stimulates the development and introduction of innovations in the workplace. In this study, the present researcher has chosen three elements as the factors of individual characteristics that influence EIB.

Previous studies (Tartan, 2013; Hauschildt and Konradt, 2013) showed positive relationship between self-leadership and organizational performance. The studies also noted that self-leadership positively related to innovative behaviour. DiLiello and Houghton (2006) on the other hand showed positive linkage in their study on self-efficacy and EIB. Idrus and Salleh (2017) confirmed that the level of self-efficacy depends highly on the difficulty level of a task, with high self-efficacy are more likely to engage in higher levels of creativity in their work. Amo (2005) and Seibert *et al.* (2001) studies reported proactive employees tend to be innovative as proactive traits are an important feature associated with innovation.

### **2.4. Reward**

Reward is considered as one of the most influential factors that motivate the employees to contribute in organizational performance (Aktal *et al.*, 2012) that can be classified into two types; intrinsic and extrinsic rewards (Mahaney and Lederer, 2006). Intrinsic rewards refer to rewards derived from the job such as passion, autonomy, and accomplishment. Extrinsic rewards perceived importance of rewards that are external to job experience such as income, and security (Mortimer and Lorence, 1979). Based on expectancy theory, employees are highly motivated to perform well following the system reward-performance (Aktal *et al.*, 2012). Thus, both intrinsic and extrinsic reward will be used as moderator to explain the linkage between individual characteristics and EIB for this study.

### 2.4.1. Reward as Moderator

Employees are more likely to engage in innovative behaviour when they expect such behaviour to improve their performance. De Spiegelaere *et al.* (2013) stated that installing performance related incentive systems would increase the attention of the employees to the rewards whether in terms of intrinsic and extrinsic rewards. Empirical findings from previous research (Ramamoorthy *et al.*, 2005; Eisenberger and Rhoades, 2001) showed that rewards stimulate creativity and the innovativeness of the employees. This is supported by expectancy theory which explained that people are motivated for better work performance when the job promised worthy rewards (Malik *et al.*, 2015). The effect of rewards on the creative performance of employees also depends on their personal traits, which play significant role in the interpretation of the rewards (Malik *et al.*, 2015).

Based on the discussion above, the hypothesis developed:

*H1: Reward moderated the relationship between individual characteristics and employee innovative behaviour.*

## 3. Methodology

A quantitative approach was used to the suggestive hypotheses. This approach was chosen as it offers the possibility of providing statistical confirmation of conceptual model and the relationship between variables. To test the hypotheses, a questionnaire was designed to collect data from the respondents and to get their perception of rewards through their individual characteristics and innovative behaviour. The structure of questionnaire for this study consisted of four sections; demographic data, individual characteristics, rewards, and EIB. A five-point Likert-scale is used to measure the data. Construct for individual characteristics was adapted from Carmeli *et al.* (2006), Pratoom and Savatsomboon (2012) and Baumann (2011), construct for rewards was adapted from Malik *et al.* (2015), and construct for EIB was adapted from DeJong (2007) and Kleysen and Street (2001).

This study has been designed in line with survey research using data collected from employees in an academic sector. The population of this study comprise of UTM's Registrar Office employees with a total of 260 employees. Since the total population of UTM's Registrar Office employees are small, a benchmark sample size needed from population target determined by using Krejcie and Morgan (1970) sampling method. Based on Krejcie and Morgan table, 155 samples are needed to get good data. To achieve response rate by 155 respondents, Fincham (2008) suggested that the usual return survey is 60% from total distribution. Therefore, this study distributed survey to whole UTM registrar office population to achieve that 60% response rate.

Table 1 shows the descriptive statistics of the demographical variables from 162 data collected. The table indicates that almost 76 percent of the respondents comes from males, and 80.9 percent respondents are SPM/STPM holders with most respondents have less than 10 years or service in UTM.

Table 1: The demographical descriptive statistics

Variable name	Category	Frequency	Percent
<b>Gender</b>	Male	123	75.9
	Female	39	24.1
<b>Age</b>	20-30	67	41.4
	31-40	64	39.5
	41-50	15	9.3
	>50	16	9.9
<b>Education</b>	SPM/STPM	131	80.9
	Diploma	19	11.7
	Degree	9	5.6
	Master's Degree	3	1.9
<b>No. of years of service</b>	<5 years	69	42.6
	6-10 years	50	30.9
	11-15 years	25	15.4
	>15 years	18	11.1

#### 4. Data Analysis

Based on the data analysis, it was discovered that the level of individual characteristic of employees namely self-leadership, self-efficacy, and proactive trait at UTM's Registrar Office is high at mean value 3.72. The level of employee's innovative behaviour at UTM's Registrar Office is also high at mean value 3.63. However, the level of rewards offered by UTM showed medium level with mean value of 3.23. Research question to identify the individual characteristic that mostly influence employee's innovative behaviour showed that the self-leadership as the most influencing individual character to perform innovative behaviour

Table 2: Hierarchal Regression

Model	Equation	Individual Characteristic			
		R	R <sup>2</sup>	▲R <sup>2</sup>	▲Sig. F
1	$EIB = i_1 + b_1 TotalMean(IC) + e_1$	.650 <sup>a</sup>	.422	.380	.000
2	$EIB = i_2 + b_2 TotalMean(IC) + c_1 Reward + e_2$	.666 <sup>b</sup>	.444	.429	.002
3	$EIB = i_3 + b_3 TotalMean(IC) + c_2 Reward + d_1 IC \times Reward + e_3$	.679 <sup>c</sup>	.461	.444	.006

Research objectives on rewards as moderator in Individual characteristics and EIB based on the hierarchal regression analysis revealed that there is significant impact of individual characteristic and EIB in UTM's Registrar Office. Table 2 shows the findings which explain the R<sup>2</sup> and  $\rho$  value toward three model; model 1 (R<sup>2</sup> = 0.422,  $\rho$  < 0.05), model 2 (R<sup>2</sup> = 0.444,  $\rho$  < 0.05) and model 3 (R<sup>2</sup> = 0.461,  $\rho$  < 0.05). The adjusted of R<sup>2</sup> in model 1 is 0.380 and it shows the effect of the individual characteristic (independent variable) towards employee innovative behaviour (dependent variable) is 38.0 %.

However, when individual characteristic and reward (moderator variable) are inserted in model 2, R<sup>2</sup> value increased by 6.4% to 0.444. Then in model 3, individual characteristic, reward and individual characteristic times reward are inserted and the R<sup>2</sup> value increased by 1.7 % to 0.461. Overall R<sup>2</sup> value in model 3 are (R<sup>2</sup> = 0.461,  $\rho$  = 0.006).  $\rho$  < 0.05, which explain that the relationship is significant, and hypothesis one is accepted. This proves that reward moderates the relationship between individual characteristic and EIB among workers in UTM Registrar Office.

#### 5. Discussion

The purpose of this study was to assess the relationship between individual characteristics and employee innovative behaviour as moderated by rewards. To achieve this, five research objectives were raised.

The first objective is to study the level of individual characteristic of employees namely self-leadership, self-efficacy, and proactive trait in UTM's Registrar Office. The objective was achieved because the findings revealed that self-efficacy contributes the highest significant level under individual characteristic in this study where most employees in UTM Registrar Office believe they can succeed with their capabilities regardless of the task given to them. Proactive trait shows high mean value which prove that employees in UTM Registrar Office are able to pinpoint the problem and solve it, look for opportunities to improve working system and individuality, and willing to show initiative and bringing change into the company. Similarly, individual characteristic in UTM Registrar office showed positive value on self-leadership which probably as a result the respondents that participated have served UTM for more than six years and have been exposed to many tasks.

The second objective of this study is to study the level of employee's innovative behaviour in UTM's Registrar Office. Result from the findings shows that the EIB in UTM registrar office is high. This shows that UTM employees has the ability to innovate products, services, and work processes. To improve performance, it is crucial for organization to ensure their employees are willing and able to innovate products, services and processes in workplace. It is because EIB not only generates new idea, but the idea also significant in idea implementation and

indirectly will improve both individual and business performance. In line with the study, it is concluded that UTM's innovation are highly related to employees EIB. Thus an encouragement of EIB in UTM's working culture will increase innovation for overall performance.

The third research objective is to study the level of rewards offered by UTM. The findings indicated that the level of rewards offered in UTM Registrar Office is medium with average mean of 3.23. In education sector, innovation and creativity are crucial in order to create dynamic traits among employees to support competitive advantage. Studies from previous empirical research shows that the innovativeness of the employees increase when rewards and recognition are offered to them (Eisenberger and Cameron, 1996; Eisenberger and Armeli, 1997; Pratheepkanth, 2011). Thus, this study found that employers should offer suitable rewards and recognition to improve employee's motivation.

The fourth research objective is to identify the individual characteristic that mostly influence employee's innovative behaviour by using multiple regression analysis. Based on data analysis, the result emphasize that individual characteristic did affect EIB. Self-leadership has significantly the highest impact in influencing EIB in UTM ( $\beta = 0.397$ ), followed by self-efficacy ( $\beta = 0.218$ ), and proactive trait (0.190). The finding of this objective proved that self-leadership plays an important role in influencing employee's behaviour to be innovative. This is supported by Tastan (2013) who discovered that self-leadership was positively related to innovative behaviour on non-manager workers of SMEs in Izmir. Self-efficacy showed significant effect which is supported by Tierney and Farmer (2004) who found that employees with stronger self-efficacy are more likely to be engaged in higher levels of creativity in their work. Proactive shows the lowest factor that influence in EIB but with strong significant relationship in UTM Registrar Office. This was supported by Amo (2005) who argues that the impact of employee and organizational characteristic towards employee innovative behaviour is positive.

The result of the finding in the last research objective that is to investigate whether reward system moderates the relationship between individual characteristic and employee's innovative behaviour showed that there is moderating effect of reward on the relationship between individual characteristic and EIB. This is consistent with Malik *et al.* (2015) who tested whether reward moderates the relationship between extrinsic reward for creativity and employee performance. Findings of this study is also relevant with Eisenberger *et al.* (1999) which revealed that reward can influence employee's behaviour when the target perceived reward is valuable and relevant.

## **6. Conclusion**

Based on the above discussion, there are several implications in this study. This study contributes to the theoretical implication for knowledge enhancement in individual characteristics and employee innovative behaviour in the context of education sector. This study also proven that rewards play an important role to moderate the relationship between individual characteristics and EIB. Thus, UTM as an employer should provide systematic reward policies and procedures that will enable them to attract, motivate, retain, and satisfy their employees.

From the practical aspect, there are several implications to be discussed. The finding shows that the employees of UTM have high individual characteristic, which means the employees are aware of their capabilities to solve problems at the workplace. The employees also have high innovative behaviour and showed that they have to ability to explore, generate, and implement their ideas for UTM. Due to reward's key role that moderate the relationship between individual characteristics and EIB, employer of UTM Registrar Office should stress the importance of good remuneration and other types of reward to motivate employees.



## References

- Aktar, S., Sachu, M. K., & Ali, M. E. (2012). The impact of rewards on employee performance in commercial banks of Bangladesh: An empirical study. *IOSR Journal of Business and Management*, 6(2), 9-15.
- Amo, B. W. (2006). The influence from corporate entrepreneurship and intrapreneurship on white-collar workers' employee innovation behaviour. *International journal of innovation and learning*, 3(3), 284-298.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman and Company.
- Carmeli, A., Meitar, R., & Weisberg, J. (2006). Self-leadership skills and innovative behaviour at work. *International Journal of Manpower*, 27(1), 75-90.
- Danish, R. Q., & Usman, A. (2010). Impact of reward and recognition on job satisfaction and motivation: An empirical study from Pakistan. *International journal of business and management*, 5(2), p159.
- De Jong, J. P., & Den Hartog, D. N. (2008). Innovative work behaviour: Measurement and validation. *EIM Business and Policy Research*, 1-27.
- De Jong, J., & Den Hartog, D. (2010). Measuring innovative work behaviour. *Creativity and Innovation Management*, 19(1), 23-36.
- De Spiegelaere, S., Van Gyes, G., & Van Hootegem, G. (2013). Rewards Work? Researching the Relation between Monetary Reward and Employee Innovativeness. In *Proceedings of the 8th European Conference on Innovation and Entrepreneurship* (Vol. 1, pp. 204-211).
- Eisenberger, R., Pierce, W. D., & Cameron, J. (1999). Effects of reward on intrinsic motivation: Negative, neutral and positive. *Psychological Bulletin*, 125, 677-691
- Eisenberger, R., & Rhoades, L. (2001). Incremental effects of reward on creativity. *Journal of personality and social psychology*, 81(4), 728.
- Farr, F. and Ford, C. (1990). *Individual Innovation. Innovation and creativity at work: Psychological and Organizational Strategies*: Wiley.
- Fincham, J. E. (2008). Response rates and responsiveness for surveys, standards, and the journal. *American Journal of Pharmaceutical Education*, 72(2), 43-55.
- Furtner, M. R., Rauthmann, J. F., & Sachse, P. (2011). The self-loving self-leader: An examination of the relationship between self-leadership and the Dark Triad. *Social Behaviour and Personality: an international journal*, 39(3), 369-379.
- Grapagasem, S., Krishnan, A., & Mansor, A. N. (2014). Current trends in Malaysian higher education and the effect on education policy and practice: An overview. *International Journal of Higher Education*, 2(1), 85-93.
- Hamzah, H. (2016). UTM obtains 5 stars rating and announced as second place winner for best records management award for public universities. Retrieved on 20 January 2018 from <https://news.utm.my/>
- Hauschildt, K., and Konradt, U. (2012). Self-leadership and team members' work role performance. *Journal of Managerial Psychology*, 27(5), 497-517.
- Houghton, J. D., & DiLiello, T. C. (2010). Leadership development: the key to unlocking individual creativity in organizations. *Leadership & Organization Development Journal*, 31(3), 230-245.
- Hsu, D. K., Wiklund, J. and Cotton, R. G. (2017). Success, Failure, and Entrepreneurial Reentry: An Experimental Assessment of the Veracity of Self-Efficacy and Prospect Theory.
- Idrus, H. and Salleh, R. (2017). Perceived self-efficacy of Malaysian ESL engineering and technology students on their speaking ability and its pedagogical implications. *The English Teacher*, 15.
- Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of Occupational and organizational psychology*, 73(3), 287-302.
- Jalil, S. W., Achan, P., Mojolou, D. N., and Rozaimie, A. (2015). Individual characteristics and job performance: Generation y at SMEs in Malaysia. *Procedia-Social and Behavioural Sciences*, 170(27), 137-145.
- Kanter, R. (1988). When a thousand flowers bloom: structural, collective, and social conditions for innovation in organizations. In Staw, B.M. and Cummings, L.L. (Eds), *Research in Organizational Behaviour* (pp. 169-211)
- Kleysen, R. F., & Street, C. T. (2001). Toward a multi-dimensional measure of individual innovative behaviour. *Journal of Intellectual Capital*, 2(3), 284-296.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educ Psychol Meas.*
- Li, N., Liang, J., and Crant, J. M. (2010). The role of proactive personality in job satisfaction and organizational citizenship behaviour: A relational perspective. *Journal of Applied Psychology*, 95(2), 395-404.
- Lovelace, K. J., Manz, C. C. and Alves, J. C. (2007). Work stress and leadership development: The role of self-leadership, shared leadership, physical fitness and flow in managing demands and increasing job control. *Human Resource Management Review*, 17(4), 374-387.

- Malik, M. A. R., Butt, A. N., & Choi, J. N. (2015). Rewards and employee creative performance: Moderating effects of creative self-efficacy, reward importance, and locus of control. *Journal of Organizational Behaviour*, 36(1), 59-74.
- Manam, A. A. (2016). Individual characteristic influencing employee innovative behaviour with reward as mediator in J-Biotech company. University Teknologi Malaysia.
- Manz, C.C. (1986), "Self-leadership: toward an expanded theory of self-influence processes in organizations", *Academy of Management Review*, Vol. 11 No. 3, pp. 585-600.
- Manz, C., Houghton, J. D., & Neck, C. P. (2003). Self-Leadership and Super leadership: *The Heart and Art Facilitating Shared Leadership*.
- Monteiro, F., Mol, M. and Birkinshaw, J. (2017). Ready to be open? Explaining the firm level barriers to benefiting from openness to external knowledge. *Long Range Planning*, 50(2), 282-295.
- Mortimer, J. T. and Lorence, J. (1979). Work experience and occupational value socialization: A longitudinal study. *American Journal of Sociology*, 84(6), 1361-1385.
- Mumford, M. D., Gaddis, B. H., and Connelly, S. (2003). How creative leaders think: Experimental findings and cases. *The Leadership Quarterly*, 14(4), 411-432.
- Orgi, M. G., Sabo, B., Abubakar. M. Y., and Usman, A. D. (2017). Impact of personality factors on consumer buying behaviour towards textile materials in south eastern Nigeria. *International Journal of Business and Economics Research*, 6(1), 7-18.
- Patterson, F., Kerrin, M., & Gatto-Roissard, G. (2009). Characteristics and Behaviours of Innovative People in Organisations. *Literature Review prepared for the NESTA Policy & Research Unit, London: NESTA*, 1-63.
- Parker, S. K., & Collins, C. G. (2010). Taking stock: Integrating and differentiating multiple proactive behaviours. *Journal of Management*, 36(3), 633-662.
- Pratheepkanth, P. (2011). Reward system and its impact on employee motivation in commercial bank of Sri Lanka Plc, in Jaffna district. *Global Journal of Management and Business Research*, 11(4).
- Pratoom, K., & Savatsomboon, G. (2012). Explaining factors affecting individual innovation: The case of producer group members in Thailand. *Asia Pacific Journal of Management*, 29(4), 1063-1087.
- Ramamoorthy, N., Flood, P., Slattery, T., & Sardessai, R. (2005). Determinants of innovative work behaviour: Development and test of an integrated model. *Creativity and Innovation Management*, 14(2), 142-150.
- Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behaviour: A path model of individual innovation in the workplace. *Academy of management journal*, 37(3), 580-607.
- Seibert, S.E., Kraimer, M. L. & Crant, J. M. (2001). What do proactive people do: A longitudinal model linking proactive personality and career success? *Personnel Psychology*, 54, 845- 874.
- Stewart, G. L., Courtright, S. H., & Manz, C. C. (2011). Self-leadership: A multilevel review. *Journal of Management*, 37, 185-222.
- Tastan, B. (2013). The Influences of Participative Organizational Climate and Self-Leadership on Innovative Behaviour and the Roles of Job Involvement and Proactive Personality: A Survey in the Context of SMEs in Izmir. *Journal Social and Behavioural Sciences*, 75, 407-419.
- Tierney, P. (1997). The influence of cognitive climate on job satisfaction and creative efficacy. *Journal of Social Behaviour & Personality*, Vol 12(4), Dec 1997, 831-847.
- Ujang, Z. (2009). *Universiti Kreativiti Inovasi*. Universiti Teknologi Malaysia: Kuala Lumpur, Malaysia.
- Wood, R., & Bandura, A. (1989). Social cognitive theory of organizational management. *Academy of management Review*, 14(3), 361-384.
- Yesil, S., & Sozibilir, F. (2013). An empirical investigation into the impact of personality on individual innovation behaviour in the workplace. *Procedia-Social and Behavioural Sciences*, 81, 540-551.

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