



HOW DO INDIVIDUAL FACTORS AND WORK ENGAGEMENT DRIVE INNOVATIVE WORK BEHAVIOUR OF MALAYSIAN PUBLIC SERVANT?

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ABSTRACT

Compared to any other field, the research on the Innovative Work Behaviour (IWB) among Malaysian public servants has been a neglected area. Therefore, the purpose of this study is to investigate the determinant factors influencing IWB among public servants at Jabatan Kastam Diraja Malaysia (JKDM). Self-Determination Theory (SDT) was underpinned to determine the relationship between individual factors [self-efficacy (SE), intrinsic motivation (IM), proactive personality (PP)] and work engagement (WE). This study also included WE as a mediating variable in the relationship between individual factors and IWB. It is important to analyze how these dimensions tend to influence the IWB. Data for this study was collected from 111 public servant at JKDM and the collected data was analyzed by using Smart-PLS. The findings revealed that PP has an insignificant relationship with WE. Furthermore, WE was found to be insignificant in mediating PP and IWB. This study is subject to several limitations. Firstly, this study only focuses on one public sector department, namely JKDM. Thus, there might be limited information gained for the overall results. It is suggested to further examine IWB in other public sector agencies and departments. Secondly, this study only uses three independent variables, which are SE, IM, and PP. Hence, it is suggested for future research to apply other independent variables to determine the potential contributing factor that will enhance IWB. The third limitation of this study is that WE as a mediating variable was exploited. Therefore, future research may consider using other mediating variables, such as trust and empowerment.

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1. INTRODUCTION

Malaysia is actively pursuing The National Transformation 2050, with the objective of attaining developed nation status and establishing an advanced knowledge-based economy. One of the primary aims of this initiative is to enhance economic growth. Aynur (2019) asserts that technical improvements and innovation have a crucial role in stimulating economic growth. Furthermore, aside from technology and innovation, both capital and the labour force have a substantial role in driving economic growth (Aynur, 2019). Employees have a vital role in driving innovation inside organisations, and their Innovative Work Behaviour (IWB) is a major contributing factor to the ongoing process of innovation (Iqbal et al., 2020). Public sector organisations must prioritise enhancing their innovation in response to the multitude of difficulties they face.

The Malaysian public sector encounters several challenges, such as substantial public grievances regarding inadequate service quality, particularly in counter services and front-line personnel, corruption, and a deficiency in integrity (Mustapa, 2017; Wan Abdullah et al., 2018 as cited in Hashim, 2021). These issues have a detrimental effect on both organizational and employee performance. The Malaysia Public Service Bureau (PCB) experienced a significant surge of 90.86% in complaints between 2020 and 2022, indicating the subpar performance of public service employees in Malaysia. In light of the increasing number of complaints, there is a strong call for the public sector to enhance its efficiency, and employees are being encouraged to embrace innovative behaviour in the workplace (Agarwal, 2014). The organizational structures of the public sector are inflexible, bureaucratic, and hierarchical, which poses difficulties in promoting innovation and encouraging employees to be innovative (Bos-Nehles, Bondarouk & Nijenhuis, 2017). In the present circumstances, innovation and creativity play a particularly vital role in the Malaysian public sector. In recent years, there has been a growing recognition of the significance of innovation in the public sector. This is driven by the desire to enhance the effectiveness of public services, address workplace challenges efficiently (De Vries et al., 2016), gain a competitive advantage (Hughes et al., 2018) and lower costs (Mulgan & Albury, 2003).

The Royal Malaysian Customs Department (Jabatan Kastam Diraja Malaysia, JKDM) is one of the agencies involved in counter services and frontline staff, making it vulnerable to issues of corruption and integrity. Although there has been an increase in research on public sector innovation in recent years (Hameduddin et al., 2020; Lapuente and Suzuki, 2020; Lewis et al., 2018), studies specifically focusing on JKDM are lacking. Data from the Enforcement Agency Integrity Commission (EAIC) shows that JKDM received 17,000 complaints in 2023, making it one of the top agencies for complaints about poor performance in delivering their services. Additionally, there is a scarcity of research on IWB at the individual-level (Bos-Nehles et al., 2017; Suseno et al., 2020). Some researchers have suggested that IWB research should be conducted at the individual level due to the limited empirical studies on innovative work behaviour in public organizations (Miao et al. 2017; Hakimian et al., 2016). The absence of IWB practices can hinder an organization's ability to implement strategies and achieve targets (Alheet et al., 2020). Therefore, promoting IWB among Malaysian public servants is crucial for advancing the government's strategic goals for national development.

This study highlights several gaps in the field of IWB among Malaysian public servants. Firstly, although research on public sector innovation is on the rise (Hartley, Sorensen, & Torfing, 2013; Osborne & Brown, 2011), previous studies on public sector innovation somewhat neglect examining IWB (Bankins, Denness, Kriz, & Molloy, 2017; De Vries et al., 2016). Secondly, while many researchers have studied IWB, Bos-Nehles, Bondaruk, and Nijenhuis (2017) point out that there is still a lack of understanding of IWB in the public sector, particularly in terms of how it can be initiated and supported. Thirdly, there is a scarcity of research on work engagement (WE) as a mediating variable for IWB, necessitating further exploration as suggested by Ibus et al. (2020).

This study contributes to the existing literature in many folds. Firstly, this study provides Malaysian public servants with useful insights for underpinning the Self-Determination Theory (SDT) by explaining individual factors (self-efficacy, intrinsic motivation and proactive personality) that influence IWB. Secondly, this study enhances the body of knowledge regarding the mediating role of work engagement between self-efficacy (SE), intrinsic motivation (IM), proactive personality (PP) and IWB especially for the population of JKDM. From a managerial perspective, this study will provide useful insights to JKDM to apply specific tactics to enhance and encourage IWB by considering the factors that are included in this study.

Hence, this study attempts to investigate the relationship of individual factors, namely SE, IM, PP and WE as mediating variable towards IWB among employees in JKDM to fill the gap with the current situation demands.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Innovative work behaviour (IWB)

Innovative Work Behaviour (IWB) refers to intentional and purposeful acts taken by individuals to introduce novel and advantageous ideas, processes, products, or procedures within their work function, group, or organisation (De Jong & Hartog, 2007). Scott & Bruce (1994) define IWB as a range of activities that involve recognising, producing, changing, adapting, and executing ideas. Organisations address internal obstacles by devising remedies (Widodo & Mawarto, 2020) and employing unconventional approaches (Ma Prieto & Pérez-Santana, 2014). Employees are encouraged to engage in IWB in order to cultivate creativity in light of the evolving corporate landscape (Hong et al., 2016). A study by Lukes and Stephen (2017) demonstrated that implementing IWB positively impacts both the organisation and its employees, leading to improved working conditions, increased job satisfaction, and enhanced well-being. IWB is considered a dynamic and essential component of innovation. In the current professional landscape, adopting IWB is crucial for the advancement and growth of organisations, whether in the private or public sectors (Abdullatif et al., 2017).

2.2 Work engagement (WE)

The relationship between work engagement (WE) and IWB among Malaysian public servants is a crucial area of study, highlighting the fact that individuals who are highly engaged are more inclined to display IWB. According to Anggritanyo et al. (2022), WE refers to the state of being excited and engaged in tasks, and is characterised by vigour, dedication, and absorption. It creates an environment where employees feel

motivated and devoted to their work. Being in this positive mental state makes it much easier for them to come up with new ideas and put them into action, which supports IWB (Schaufeli et al., 2002). Engaged employees in the Malaysian public sector are more inclined to overcome ordinary tasks and provide innovative solutions to organisational difficulties. The reason for this is that people who are engaged tend to have elevated levels of energy, increased WE, and a more pronounced alignment with the organization's objectives. These factors collectively promote innovative thinking and behaviour (Bakker & Demerouti, 2008). Sharma and Nambudiri's (2020) research validates the favourable correlation between WE and both personal initiative and the pursuit of new ideas. Moreover, research focused on the Malaysian public sector indicates that having leaders who provide support, chances for professional growth, and a work climate that encourages collaboration can improve both WE and IWB (Ramli & Azizan, 2018; Munir & Beh, 2019). A study conducted by Afsar et al. (2020) found that employees who exhibit high levels of WE, specifically in terms of energy and dedication, are more likely to demonstrate IWB. When public servants feel encouraged and respected, their engagement levels increase, which in turn leads to enhanced creativity and a higher propensity to innovate, rather than sticking to their comfort zones and executing mundane jobs. Although there is a significant link between WE and innovation, as demonstrated by Agarwal et al. (2012), other research emphasises the mediating function of employee job engagement in the connection between antecedents and outcomes inside organisations as highlighted by Orgambidez et al. (2020). Therefore, the researcher derived the hypothesis as below:

H1: There is a significant relationship between WE and IWB

2.3 Self-efficacy (SE)

Ji and Yoon (2021) defined self-efficacy (SE) as a psychological mechanism that influences individuals' job performance. It acts as a predictive element that improves an individual's ability to handle significant situations while carrying out tasks. Bandura (1986) posited that those possessing a robust sense of SEs are more likely to attain elevated levels of achievement and demonstrate unwavering determination and persistence in the face of adversity. Santoso and Heng (2019) provide evidence that individuals with high SE are more inclined to exert effort and work autonomously in order to get favourable outcomes in the workplace. This is attributed to their motivational orientation, which fosters IWB. Nevertheless, Ramli and Azizan (2018) discovered that the correlation between SE and IWB differs in relevance and intensity depending on the specific organisational setting in the public sector. Furthermore, there are discrepancies in the research findings concerning the correlation between SE and IWB among employees in the public sector of Malaysia. Munir and Beh (2019) note that some studies show a positive correlation, while others show that mediating factors are needed to have an effect on this association.

Employees' SE is essential for enhancing their ability to handle unforeseen circumstances with ease. Alterations in SE have a strong correlation with modifications in well-being markers, such as engagement (Bresó et al., 2011). Individuals who possess a strong sense of SE are driven to accomplish their objectives and have a strong belief in their capacity to fulfil job demands. As a result, they exhibit elevated levels of WE (Luthans and Youssef, 2007). These differences highlight the

necessity for more study to elucidate and consider mediating characteristics, such as WE. As a result, the researcher developed the hypotheses listed below:

H2: There is a significant relationship between SE and WE.

H3: WE mediate the relationship between SE and IWB.

2.4 Intrinsic motivation (IM)

Intrinsic motivation (IM) as defined by Bin Saeed et al. (2019), is the internal drive or pleasure that an individual experiences when engaging in a task, independent of any external factors. Studies indicate that individuals that are intrinsically motivated are more inclined to actively seek out new ideas and actively participate in creative problem-solving. This is because they find the process of innovation fundamentally pleasurable and satisfying (Ryan & Deci, 2000). According to Pawar (2009), when employees believe that their work is in line with their expectations, they are more likely to support each other, strive for better quality in their employment, and become more involved. Engaged personnel demonstrate a strong enthusiasm for their work, display elevated levels of energy, and are fully absorbed in their tasks (Bakker, 2011; Xanthopoulou et al., 2007). In addition, people that are intrinsically motivated demonstrate superior problem-solving skills and exhibit a greater emphasis on creativity. In the Malaysian public sector, IM plays a particularly important role because of the distinct difficulties and limitations commonly linked to public service. Employees who are intrinsically motivated demonstrate greater levels of initiative and persistence when faced with bureaucratic impediments, resulting in more inventive outputs. Xu et al. (2022) discovered that the combination of IM and a supportive creative culture had a strong positive impact on IWB. This correlation implies that creating a work environment that promotes employee autonomy and competence might enhance their IM and, as a result, their IWB. While IM plays a significant role in employee performance, it may not be sufficient to effectively impact innovative behaviour (Karadeniz et al., 2021). Consequently, certain research has included mediators or moderators to enhance the connection between IM and IWB (Buijs, 2022; Bawuro et al., 2019). Therefore, the researcher derived the hypotheses as below.

H4: There is a significant relationship between IM and WE.

H5: WE mediate the relationship between IM and IWB.

2.5 Proactive personality (PP)

Many scholars believe that achieving an innovative government is possible through employee innovative behaviour (Demircioglu & Audretsch, 2019), which can be realised when public servants continuously innovate and create new procedures to address tasks and resolve workplace problems. Recent studies have explored which individuals are more likely to exhibit IWB at work based on the BigFive model of personality (Williamson, Lounsbury & Han, 2013; Madrid et al., 2014). However, it has been suggested that the Big Five model is not specifically tailored for workplace studies, and additional personality constructs, such as proactive personality (PP) should be considered when examining personality traits that influence IWB (Li et al., 2017). PP refers to the ability to assess the current environment and understand how to change it for personal benefit (Alshamsi & Ahmad, 2019). The rigid, bureaucratic, and hierarchical characteristics of public sector organisational structures make

implementing innovation challenging, ultimately hindering the increase in employee IWB (Bos-Nehles, Bondarouk & Nijenhuis, 2017). Individuals with a strong PP are likely to engage in generating, disseminating, and implementing ideas as they constantly seek ways to improve their current circumstances (Crant, 2000; M. Li, Wang, Gao, & You, 2017). Although the link between PP and IWB has been established (Chen et al., 2013; Kim et al., 2010; Li et al., 2017; Taştan, 2013), few researchers have examined the intervening mechanisms underlying this relationship. WE may serve as a source of IWB and is likely to be strengthened by high levels of WE. Bergeron, Schroeder, and Martinez (2014) found that faculty members at U.S. research universities with a strong proactive personality engaged more frequently in both task and organisational citizenship behaviours and worked more hours per week than those with a less proactive personality. Therefore, the researcher derived the hypotheses as below:

- H6: There is a significant relationship between PP and WE.*
H7: WE mediate the relationship between PP and IWB.

2.6 Self-determination theory (SDT)

Self-determination theory (SDT) is an all-encompassing theory that explores the relationship between human personality, motivation, and the influence of the social environment on individuals. The idea emphasises the inner drive that pushes people to do things for their own pleasure, to be involved, and to be curious, rather than because of outside pressures (Zhang and Bartol, 2010). SDT differentiates between IM and distinct forms of extrinsic drive. It elucidates how these motives impact responses in diverse areas, including social and cognitive development, personality, and various domains. The theory focuses on the core psychological demands of autonomy, competence, and relatedness, which are crucial for self-determined motivation. SDT's six mini theories provide an explanation of human behaviour in different areas of life, such as work, relationships, education, religion, health, sports, and stereotyping and prejudice. Individuals who derive satisfaction and enjoyment from their occupations are more inclined to generate novel suggestions for alterations or enhancements, thereby augmenting overall performance (Cai et al., 2018). Therefore, this study is based on SDT because of its efficacy in elucidating human nature and motivation.

2.7 Research framework

Figure 1 illustrates the research framework used in this study.

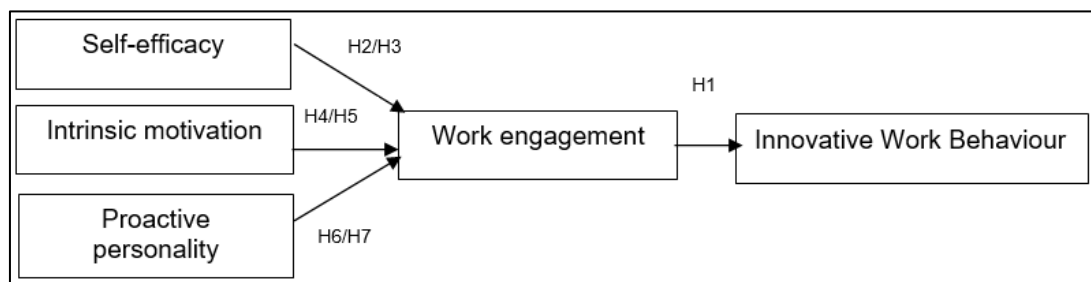


Figure 1: Research framework

3. RESEARCH METHODOLOGY

This study applied quantitative research, and the data was collected via an online survey from 111 public servants at Jabatan Kastam Diraja Malaysia (JKDM). A stratified random sampling technique was used to segregate the population based on the department and followed by simple random sampling. Participants were asked to rate the degree to which they agreed with each of the statements using a 6-point Likert scale. In total, 46 items were used to measure five variables. Data were analysed using structured partial least squares modelling (PLS-SEM), and Smart PLS version 4 statistical software was used for the data analysis. This study adopted measurement questions from previous research and adapted them based on the suitability of this study. Six-point Likert scales ranging from strongly disagree to strongly agree were used to measure the variables in this study. Chomeya (2010) stated that to emphasise discrimination and reliability, the researcher should use the 6-point Likert scale to help the respondents choose the answer, as there is no neutral point. IWB was measured from Janssen (2000), WE from Hidayah Ibrahim et al. (2019), SE was measured by using the scale by Nilasari et al. (2022) whereas IM was measured by Tierney et al. (1999), and PP was measured from Bateman and Crant (1993).

4. FINDINGS AND DISCUSSIONS

4.1 Respondent’s background

There were 111 total respondents involved in this study. Table 1 shows that 55.86% of the respondents are male, and the other 44.14% are female. In detail, most of the respondents are between 31 and 40 years old (57.66%); another 25.22% are between 21 and 30 years old, 10.81% are between 41-50 years old and the remaining 6.31% are between 51 and 60 years old. Furthermore, majority of the respondents have served between 0 to 10 years (57.66%), another 32.43% have served between 11 to 20 years and the remaining 9.91% were between 21-30 years. The professional and management groups (Grade 41 and above) had the highest number of respondents in this study, which was 55.86%, followed by the support group (Grade 40 and below) with 44.14%.

Table 1: Respondent’s background and profile

Variables	Descriptions	Frequencies	Percentages
Gender	Male	62	55.86%
	Female	49	44.14%
	Total	111	100%
Age	21 - 30 years old	28	25.22%
	31 - 40 years old	64	57.66%
	41 - 50 years old	12	10.81%
	51 - 60 years old	7	6.31%
	Total	111	100%
Employment Grade	Professional and management groups (Grade 41 and above)	62	55.86%
	Support group (Grade 40 and below)	49	44.14%
	Total	111	100%
Service period	0 - 10 years	64	57.66%
	11 - 20 years	36	32.43%
	21 - 30 years	11	9.91%
	Total	111	100%

4.2 Measurement model

4.2.1 Reliability and validity

In this study, all constructs were above 0.70, which met the rule of thumb for composite reliability, and all constructs in Cronbach's alpha also met the rule of thumb of being larger than 0.60. In addition, the value of AVE is larger than 0.50, indicating that they have met the acceptable standard of convergent validity.

Table 2: Measurement model analysis

Variables	Items	Outer loading	Average variance extracted (AVE)	Cronbach's alpha	Composite reliability
IM	IM1	0.849	0.749	0.916	0.937
	IM2	0.875			
	IM3	0.891			
	IM4	0.851			
	IM5	0.863			
IWB	IWB1	0.847	0.759	0.960	0.966
	IWB2	0.872			
	IWB3	0.825			
	IWB4	0.861			
	IWB5	0.900			
	IWB6	0.877			
	IWB7	0.907			
	IWB8	0.888			
	IWB9	0.862			
PP	PP1	0.552	0.506	0.939	0.945
	PP2	0.719			
	PP3	0.662			
	PP4	0.734			
	PP5	0.638			
	PP6	0.739			
	PP7	0.787			
	PP8	0.746			
	PP9	0.836			
	PP10	0.752			
	PP11	0.753			
	PP12	0.806			
	PP13	0.688			
SE	PP14	0.554	0.750	0.933	0.947
	PP15	0.725			
	PP16	0.742			
	PP17	0.580			
	SE1	0.867			
SE	SE2	0.867	0.750	0.933	0.947
	SE3	0.895			
	SE4	0.883			

Variables	Items	Outer loading	Average variance extracted (AVE)	Cronbach's alpha	Composite reliability
	SE5	0.844			
	SE6	0.839			
	WE1	0.804			
	WE2	0.769			
	WE3	0.880			
	WE4	0.826			
WE	WE5	0.846	0.722	0.951	0.959
	WE6	0.811			
	WE7	0.914			
	WE8	0.894			
	WE9	0.890			

4.2.2 Discriminant validity

Discriminant validity for this study was tested by applying the Heterotrait-Monotrait Ratio Correlations (HTMT) criterion suggested by Hair et al. (2022). The result shown in Table 3 indicate that all values were below than 0.90, which confirmed that the discriminant validity in this study has been established. Having such results confidently confirms that the model for this study has adequate reliability and validity.

Table 3: HTMT criterion analysis

	IM	IWB	PP	SE	WE
IM					
IWB	0.868				
PP	0.473	0.562			
SE	0.870	0.894	0.507		
WE	0.823	0.898	0.520	0.859	

4.3 Structural model

Table 4: Structural model analysis and hypothesis testing

	VIF	Path	p value	Decision
WE > IWB	1.000	0.870	0.000	H1 supported
SE > WE	3.011	0.501	0.000	H2 supported
SE -> WE -> IWB		0.435	0.000	H3 supported
IM > WE	2.878	0.312	0.001	H4 supported
IM -> WE -> IWB		0.271	0.001	H5 supported
PP > WE	1.342	0.132	0.153	H6 rejected
PP -> WE -> IWB		0.115	0.144	H7 rejected

The results in Table 4 present the hypothesis testing in the structural model for this study. Firstly, all the Variance Inflation Factor (VIF) values for the inner model are below 5, which means that collinearity has no substantial effect on the structural model for this study (Hair et al., 2022).

WE was found to have a significant relationship with IWB ($\beta = 0.000$, $p < 0.05$). Therefore, H1 is accepted. This finding suggests that the WE promotes innovation and creativity among public servants in JKDM. Engaged employees, characterised by high energy and enthusiasm, are more likely to pursue new ideas and creative solutions, going beyond their routine responsibilities to innovate. This is particularly relevant in the public sector, where innovative solutions can significantly improve service delivery and efficiency. This result is in line with the studies conducted by Yaqoob and Kitchlew (2022) and Nazir and Ul Islam (2020).

SE was found to have a significant relationship with WE ($\beta = 0.000$, $p < 0.05$). Therefore, H2 is accepted. This finding implies that SE encourages WE among public servants in JKDM. This result is in line with the studies conducted by Karatepe, Ozturk and Kim (2019) and Tian et al. (2019). Similarly, WE is empirically supported in the mediation relationship between SE and IWB ($\beta = 0.000$, $p < 0.05$). Therefore, H3 is accepted. This finding implies WE acts as a mediating variable between SE and IWB. This result is in line with the studies conducted by Uppathampracha and Guoxin Liu (2022). SE, which is the belief in one's ability to successfully perform tasks, plays a crucial role in fostering IWB. However, its direct impact on innovation is significantly enhanced through the mediating role of WE. In the context of Malaysian public servants, a supportive organisational environment that promotes SE and WE is critical for innovation, as engaged employees feel more supported and are more likely to collaborate and share knowledge, leading to higher levels of innovation (Hakanen et al., 2008).

IM was found to have a significant relationship with WE ($\beta = 0.001$, $p > 0.05$). Therefore, H4 is supported. This finding implies that IM encourages WE among public servants in JKDM. This result is in line with the studies conducted by Chua et al. (2021). Similarly, WE is empirically supported in the mediation relationship between IM and IWB ($\beta = 0.001$, $p < 0.05$). Therefore, H5 is accepted. Intrinsically motivated employees derive satisfaction from the work itself, leading to greater engagement, as they are more likely to be absorbed in their tasks and to persist even in the face of challenges because they find their work fulfilling and meaningful (Ryan & Deci, 2017). When Malaysian public servants feel that their work aligns with their personal values and interests, driven by IM, their dedication and willingness to invest time and effort into their work increase, enhancing overall engagement (Gagné & Deci, 2005).

PP was found to have an insignificant relationship with WE ($\beta = 0.153$, $p < 0.05$). Therefore, H6 is rejected. This finding implies that the PP does not encourage WE among public servants in JKDM. This result is in contrast with the study conducted by Mubarak et al. (2021). Similarly, WE is empirically not supported in the mediation relationship between PP and IWB ($\beta = 0.144$, $p < 0.05$). Therefore, H7 is rejected. This implies that the PP will not have an impact on WE, and WE do not play the mediator roles in the relationship between PP and IWB among public sector employees. Bos-Nehles et al. (2017) note that public sector organisations operate within a political context that lacks the competitive pressures and performance demands found in private firms (Bysted & Jespersen, 2014). This absence of competition diminishes a key stimulus for fostering innovation and IWB within these organizations. Consequently, the less competitive environment in the public sector may discourage employees from using their PP traits to drive innovation. Additionally, the centralised nature of public sector organisations makes

implementing innovations challenging due to bureaucratic structures and rigid formalisation, which standardise rules, procedures, and communication (Fitriana & Satrya, 2023). Due to this, the PP of people who work in the public sector is often limited by these formal and bureaucratic processes, making it harder for them to make decisions on their own or question decisions and rules set by higher management.

Table 5: R² and Q²

	R²	Q²
IWB	0.757	0.753
WE	0.719	0.691

Hair et al. (2022) say that the coefficient of determination (R²) value, which shows how well the model can predict what will happen in a given sample, is the most common way to judge the structural model's explanatory power.. The R² values for this study were 0.757 (IWB) and 0.719 (work engagement), which indicates that the model's explanatory power for IWB is large, while for work engagement, it is substantial (Cohen, 1988).

This study employed the technique of predictive relevance of Q² analysis and PLS predict which was suggested by Hair et al. (2022), to test the structural model. The Q² value for this study was 0.753 (IWB) and 0.691 (work engagement), which is greater than zero. Henceforth, the predictive relevance of this model was established. The results of the PLS predict procedure in Table 6 show that all indicators in the PLS-SEM analysis have lower RMSE (or MAE) values compared to the naive LM benchmark, which indicates that PLS-SEM has lower MAE values compared to the naive LM benchmark. Therefore, it can be concluded that this model has high predictive power.

Table 6: PLS predict procedure

	PLS-	PLS-	LM_RMSE	LM_MAE	
IWB	IWB1	0.640	0.539	0.690	0.543
	IWB2	0.519	0.439	0.586	0.472
	IWB3	0.593	0.506	0.732	0.554
	IWB4	0.554	0.494	0.657	0.526
	IWB5	0.623	0.547	0.714	0.583
	IWB6	0.632	0.549	0.709	0.592
	IWB7	0.605	0.517	0.675	0.543
	IWB8	0.548	0.478	0.662	0.528
	IWB9	0.557	0.498	0.639	0.523
WE	WE1	0.580	0.513	0.644	0.523
	WE2	0.618	0.509	0.733	0.605
	WE3	0.562	0.434	0.616	0.489
	WE4	0.676	0.552	0.759	0.619
	WE5	0.699	0.573	0.765	0.595
	WE6	0.585	0.506	0.713	0.575
	WE7	0.565	0.473	0.669	0.508
	WE8	0.653	0.539	0.719	0.576
	WE9	0.663	0.553	0.677	0.542

5. CONCLUSIONS AND RECOMMENDATIONS

The results of this study indicate that proactive personality does not have a significant impact on WE, while SE and IM are the main predictors of WE. Moreover, this study discovered that work engagement serves as a mediator between two independent variables (SE and IM) and IWB, although WE do not mediate the relationship between PP and IWB. Therefore, it is suggested for the public administration to develop a program to enhance the level of self-efficacy, boosting the intrinsic motivation and strengthening the work engagement among their employees, in order to foster the innovative work within the public sector. Additionally, it is recommended to incorporate this criterion into the personality assessment conducted throughout the recruitment process. Therefore, the organisation will benefit in the future from hiring people who have a strong sense of self-efficacy, intrinsic motivation, and work engagement because they will exhibit a high degree of innovative work behaviour. . This research contributes to the national agenda, "National Transformation 2050," by enhancing the innovative work behaviour of public sector employees with the goal of achieving developed nation status and establishing a knowledge-based economy. This study is subject to several limitations. The first limitation of this study is that it only focuses on one public sector department, namely JKDM. Thus, there might be limited information gained for the overall results that represented the whole public sector administration in Malaysia. Therefore, it is suggested to further examine the innovative work behaviour in other public sector agencies and departments. The second limitation of this study is that it only uses three independent variables, which are self-efficacy, intrinsic motivation, and proactive personality. Hence, it is suggested for future research to apply other independent variables to determine the potential contributing factor that will enhance innovative work behavior. The third limitation of this study is that work engagement as a mediating variable was exploited. Therefore, future research may consider using other mediating variables, such as trust and empowerment.

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