



# Employee Service Innovative Behavior in the Public Sector: The Role of Proactive Personality and Work Engagement

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**Abstract.** This study aims to examine the critical role of proactive personality on the employee service innovative behavior and the indirect effect of mediation of work engagement. 323 complete responses from full-time frontline employees in Indonesia's public service organization were used and analyzed with Structural Equation Modeling (SEM). The results show that proactive personality positively influences employee service innovative behavior, both directly and indirectly, through work engagement. Furthermore, this research is expected to contribute to policymakers in human resources to identify proactive personality in talent recruitment and selection and pay attention to increasing work engagement as a significant mediator to stimulate innovative behavior in employee services, especially in the public sector.

**Keywords:** Employee service innovative behavior · Proactive personality · Work engagement

## 1 Introduction

There are challenges in managing business processes effectively and efficiently to achieve the organization's vision, mission, and goals. Innovation has been used as a solution for organizations to overcome these challenges by creating a competitive advantage and improving performance [1]. While characteristics of organizational structures in the public sector are rigid, bureaucratic, and hierarchical, making innovation challenging to implement and ultimately challenging to increase employee innovative behavior [2]. Public sector requires efficient services due to increasing technological and budget constraints. Currently, our society is more critical [3].

To build a sustainable organization, organizations need to reinforce employee innovative work behavior by producing or modifying HR-related policies (e.g., the reward for innovative employees, creative culture) [4]. Then, with innovative behavior, business management will be more effective and efficient through innovation, so that customer needs and desires can be met and maintain organizational sustainability [2, 4].

For service organizations, frontline employees have an essential role in service innovation implementation [5]. In the era of the experience economy, where products and services are sold based on their influence on society's life, customer participation is needed

to establish employee service innovative behavior in the service company [6]. Meanwhile, frontline employees act as initiators to activate customer participation because they increase the perception of customer value [5].

Employee service innovative behavior (ESIB) that generates new and valuable service ideas to improve service quality, requires employees' willingness to share creative ideas that increase customer satisfaction [7, 8]. Individuals need to have a proactive personality (PP) as a valid and significant factor for ESIB. Companies that want to improve innovative behavior can apply an appropriate selection method to recruit employees who have this personality [5]. Individuals who have a PP are known as risk-takers and are more likely to grow up because they are active in learning and energetic at work, actively seek opportunities, show initiative, and involve themselves in innovation activities [9, 10].

According to previous studies, PP in employees who have work engagement (WE) has a more significant effect on increasing service innovation behavior [8–11]. Then leaders need to involve employees in decision-making to provide empowerment and autonomy from bureaucratic constraints, thereby stimulating the creative and innovative behavior of employees [8, 12, 13].

Decentralized organizations can better develop the required service innovations because of minimal bureaucracy, open and intense communication, and, more importantly, customer expectations can be realized, available, and responded to on schedule [14]. While employees in the public sector are centralized; thereby, it is challenging to implement the resulting innovations; there is environmental pressure, strict institutions, and firm formalization where rules, procedures, instructions, and communication are standardized [2].

Based on the various problems above, this study aims to examine the research model of several studies on the innovative behavior of public services, especially in the insurance industry. In addition, this study modifies the variables of PP influencing directly or indirectly (mediation of WE) to ESIB, as in previous studies [5, 9].

### **1.1 Proactive Personality and Employee Service Innovative Behavior**

Personal characteristics of employees have an essential role in employee performance and then affect organizational performance. It is supported by several studies where PP plays a role in a successful career [15, 16]. They tend to choose, create, and influence the work environment, which ultimately affects career advancement and job satisfaction [17]; they also engage in the innovation process because these individuals are constantly looking for better ways and means to improve their current state [15, 18].

PP as a relatively stable personality and can influence environmental changes [19]. PP scale was developed to see how these individuals are taking action to control the environment. This type of self-initiated change-oriented proactivity, such as making changes to corporate practices or taking the action to resolve problems in the workplace, is called proactivity [20].

Innovative behavior as individual behavior directed at creating, informing, and implementing new and valuable things at various levels of an organization [21]. Furthermore, posited that the state process of individual innovation begins with problem identification

and then results in a new or adopted idea or solution, thus considering this innovative activity as an effective way to overcome heavy workloads [22]. From the explanation above, creative behavior is a deliberate effort and provides new beneficial results, including better organizational functions and socio-psychological benefits for workers or individual groups [23].

Innovative work behavior carried out by frontline employees is categorized as ESIB, where employees generate ideas to solve recent problems and use them during service [24]. The service quality of service companies partly depends on the level of interaction between customers and employees, where customer participation has a significant role in ESIB [6], so employee character traits and proactive personality are essential traits to bring innovation to the organization [20].

Several studies conducted in service organizations have proven that proactive personality is positively related to ESIB [5, 10, 11]. In the banking industry, PP is a reliable indicator of service innovation and the desire to successfully enhance innovative behavior by recruiting proactive employees with appropriate selection methods [5]. As a result, the following hypothesis has been proposed H1: Proactive personality has a positive effect on employee service innovative behavior.

## 1.2 The Mediating Role of Work Engagement

As competition between service provider organizations intensifies, organizations become more focused on the type and quality of service provided to their customers. WE is needed, contributes to customer performance and satisfaction [25], Personal engagement as the use of self as a member of the organization to play a role in the work physically, cognitively, and emotionally [26]. Then engagement is a structure of motivation defined as a positive, satisfying, and work-related thought that has the character of vigor, dedication, and absorption [27].

Employees with this engagement have to work hard, not because of a solid inner drive as in workaholics, but because work is fun, so these employees are easier to appreciate, recognize, and succeed [25]. Frequently, WE is considered something opposite to burnout conditions, namely fatigue conditions due to stress continuously [28]. However, employees with WE always feel energetic when carrying out their work activities and can also fulfill various job demands. Energy in WE can turn into fatigue which eventually turns into burnout, which organizations must immediately realize [29].

Meanwhile, PP is positively correlated with individual performance satisfaction, mediating self-efficacy and WE because individuals with a PP always have more incredible determination of [18]. Employees with a positive personality are interested in shaping structural work, job, and resource management into higher-level, dedicated, and more creative tasks for creating WE [30]. PP also was discovered to be positively significant to WE [9, 10]. In line with those studies, the following is the hypothesis H2: Proactive personality seems to have a positive impact on work engagement.

Quantitative study of research findings backs up the major impact of WE on ESIB [8, 12, 13]. Employees involved in decision-making and are given autonomy are more likely to develop and mutually engage in purposive innovation and supportive developments of creative behavior in work [8]. Therefore, the following is the hypothesis:

H3: Work engagement seems to have a positive impact on employee service innovative behavior.

The effect of PP on the innovative behavior of primary and middle teachers in western China was partly mediated by WE [10]. Similarly, WE has a positive facilitating role between PP and innovative work behavior [9]. Therefore H4: Proactive personality has a positive influence on employee service innovative behavior mediated by work engagement.

## 2 Research Methods

For this research, a quantitative approach was used as the foundation for the technique; it will measure the data and generalize the results from the sample to the population of interest [31]. Google forms were used to collect data surveys from frontline employees in a public service organization in Indonesia and were selected purposely.

The survey was divided into two sections. In the first section, participants were asked to provide demographic information, such as their gender and educational attainment. The second part consists of 25 questions about the construct variables and uses a five-point Likert scale ranging from 1 (“strongly disagree”) to 5 (“strongly agree”). The 25-item questionnaire was adapted from previous research. ESIB was operationalized using six items adapted from [13]. PP was measured using a 10-item scale [16]. A shortened version of the questionnaire [19]. Then, WE used a shortened version of Utrecht Work Engagement Scale (UWES) questionnaire with nine items [28]. This study used LISREL-SEM software packages for simulation and modeling procedures to identify key and dominant factors.

A total of 323 people filled out this survey. The data cleaning method was carried out because when data is collected through anonymous Internet surveys, particularly under conditions of mandatory participation, the quality of the data can be a concern [32]. 70% were female, 58% were between the ages of 21 and 30, and 80.2% graduated from university (bachelor or above). Overall percent of people had worked between one and five years (48.3%).

## 3 Results and Discussion

### 3.1 Reliability and Validity Tests

Confirmatory Factor Analysis (CFA) of the three constructs (PP, WE, and ESIB) was conducted to test the reliability and validity of the constructs. Convergent validity is estimated by testing the value of the loading factor above 0.5 [33]. All measurement items were loaded significantly, except WEA3 was removed because of low factor loadings (0.45). For the convergent reliability by examining the value of variance extracted (AVE)  $\geq 0.5$  and composite reliability (CR)  $\geq 0.70$ , respectively. Although AVE by PP was below 0.50, all the standard factor loadings of those constructs were above 0.50 and CR 0.88 [34]. Table 1 shows satisfactory results of the validity and reliability of the measurement model.

**Table 1.** Convergent Validity and Reliability Constructs

Variable Items	SLF	Error	CR	AVE
Personality			0.88	0.43
I. am constantly on the lookout for new ways to improve my life (PP1)	0.53	0.72		
Where I have been, I have been a powerful force for constructive change (PP2)	0.57	0.68		
Nothing is more exciting than seeing my ideas turn into reality (PP3)	0.55	0.70		
If I see something I do not like, I fix it (PP4)	0.50	0.75		
No matter what the odds if I believe in something I will make it happen (PP5)	0.68	0.54		
I love being a champion for my ideas, even against others' opposition (PP6)	0.73	0.47		
I. excel at identifying opportunities (PP7)	0.78	0.4		
I am always looking for better ways to do things (PP8)	0.71	0.49		
If I believe in an idea, no obstacle will prevent me from making it happen (PP9)	0.69	0.53		
I can spot a good opportunity long before others can (PP10)	0.76	0.42		
Work Engagement			0.94	0.68
At my work, I feel bursting with energy (WEV1)	0.83	0.32		
At my job, I feel strong and vigorous (WEV2)	0.77	0.41		
When I get up in the morning, I want to go to work (WEV3)	0.77	0.41		
I am enthusiastic about my job (WED1)	0.84	0.29		
My job inspires me (WED2)	0.90	0.20		
I am proud of the work that I do (WED3)	0.78	0.4		
I feel happy when I am working intensely (WEA1)	0.85	0.28		
I am immersed in my work (WEA2)	0.86	0.26		
<del>I get carried away when I am working (WEA3)</del>	<del>0.45</del>	<del>0.80</del>		
Employee Service Innovative Behavior			0.89	0.57
At work, I seek new service techniques and methods (ESIB1)	0.66	0.56		
At work, I sometimes produce innovative and creative notions (ESIB2)	0.75	0.44		
At work, I sometimes propose my creative ideas and try to convince others (ESIB3)	0.82	0.33		

*(continued)*

**Table 1.** (continued)

Variable Items	SLF	Error	CR	AVE
At work, I try to secure the funding and resource needed to implement innovations (ESIB4)	0.66	0.57		
At work, I provide a suitable plan and workable process for developing innovative ideas (ESIB5)	0.80	0.36		
Overall, I consider myself a creative member of my team (ESIB6)	0.81	0.35		

Notes: SLF = Standardize Loading F actor ( $\geq 0.5$ ); CR = Construct Reliability ( $\geq 0.7$ ); AVE = Average Variance Extracted ( $\geq 0.5$ )

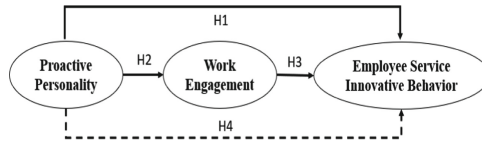
**Table 2.** Mean, Standard Deviation, and Correlation

Construct	Mean	SD	WE	ESIB	PP
WE	4.415	0.677	1.00		
ESIB	4.048	0.771	0.54	1.00	
PP	4.256	0.743	0.52	0.75	1.00

The Goodness of Fit Index (GOFI) to assess the proposed model was examined and had a good fit result. The overall fit of the measurement model was satisfactory. Use three to four fit indices, at least one incremental index, and one absolute index, in addition to the X2 value ( $X^2 = 666.56$ ;  $p\text{-value} = 0.00$ ) and the associated degrees of freedom ( $df = 241$ ), to provide adequate evidence of model fit [33]. The absolute fit indices are RMSEA of 0.074 ( $< 0.08$ ), SRMR of 0.066 ( $< 0.08$ ); and chi-square ( $X^2/df$ ) ratio of 2.76 (between 1 and 3). The incremental indices are NFI of 0.96 ( $> 0.90$ ), CFI of 0.98 ( $> 0.90$ ), NNFI of 0.97 ( $> 0.90$ ), and IFI of 0.98 ( $> 0.90$ ). Based on the results, convergent validity, construct reliability, and the overall fit of the proposed model has been fulfilled. It can be concluded that the full model is adequate for the data.

### 3.2 Descriptive and Correlations Results

The means, standard deviations, and inter-correlations between constructs are presented in Table 2 and all constructs were correlated positively. Among all variables, the highest mean value is 4.415 ( $SD = 0.677$ ) for WE. This value indicates that employees already have positive thoughts about work-related, characterized by vigor, dedication, and absorption. The lowest mean value is 4.048 ( $SD = 0.615$ ) for ESIB. Employees are still good for having behavior that creates new techniques and finding a way to solve problems and have implemented them when interacting with customers. PP indicates the most substantial Pearson’s correlation coefficient magnitude on the ESIB with  $r = 0.75$ .



**Fig. 1.** Conceptual Model.

**Table 3.** The Results of Hypothesis Testing

	Path	t-value	$\beta$	Result
H1	PP $\rightarrow$ ESIB	9.07	0.65	Supported
H2	PP $\rightarrow$ WE	8.72	0.52	Supported
H3	WE $\rightarrow$ ESIB	3.76	0.21	Supported
H4	PP $\rightarrow$ WE $\rightarrow$ ESIB	3.63	0.11	Supported, partially mediated

### 3.3 Hypothesis Testing

Based on the research model shown in Fig. 1, the four hypotheses were tested in Lisrel 8.8 using Maximum Likelihood Estimation (MLE), which provides valid and stable results for simple models with sample sizes as small as 50 [33]. The statistical results are summarized in Table 3. Based on the research model in Fig. 1. The results show that PP has a positive and significant effect on ESIB ( $t = 9.07$ ;  $b = 0.65$ ;  $p = 0.00$ ). Therefore, H1 is accepted. The result also demonstrates that PP has a significant and positive effect on WE ( $t = 8.72$ ;  $b = 0.52$ ,  $p = 0.00$ ), supporting H2.

The third hypothesis examines the effect of WE on ESIB and is supported by positive significance ( $t = 3.76$ ;  $b = 0.21$ ;  $p = 0.00$ ). Then for H4, WE partially mediate the relationship between PP and ESIB ( $t = 3.63$ ,  $b = 0.11$ ,  $p = 0.00$ ). These indicate that PP has a direct positive effect on ESIB and indirectly improves ESIB through WE (partially mediated). Therefore, H3 and H4 are accepted.

### 3.4 Discussion

The primary purpose of this study is to examine the important role of PP in predicting front-line employees' innovative behavior and evaluating the mediating effect of WE.

PP is found to be positively significant to front-line employees service innovative behavior. It can indicate that a personality that tends to create and influence environmental changes will generate the ideas to solve the customer's problem [5, 10, 11]. If employees can excel in identifying the opportunities, they will propose some creative ideas and convince others to accept the ideas. Employees should have self-starting and change oriented to improve personal or organizational effectiveness, then taking action to control the environment [19, 20].

PP is also discovered to be positively significant to WE [9, 10, 18]. It can be summed up that employee trying to find better ways and means to improve their current state will have a positive, satisfying, and work-related thought. Organizations that provide

opportunities for employees to change the work environment better will make employees more inspired by their job. PP has been considered one of the strongest predictors of WE because individuals are engaged in their work environment [18, 19].

Furthermore, WE is found to influence ESIB significantly and positively. This result is as expected because when employees become intensely engaged in their work by showing a sense of enthusiasm, inspiration, and pride, such as dedication to their work, this will excite and increase the service innovative behavior of front-line employees. This finding is similar to previous studies in public service organizations [8, 13].

This study also affirms the mediating role of WE in the relationship between PP and ESIB and the mediating effect is partial (Direct effect 0.68 > Indirect effect 0.11). The effect of PP on ESIB through WE can be direct or indirect. The indirect effect can be explained that employees who took initiatives and actions to bring positive changes to their environment tend to develop higher levels of engagement in the form of absorption, dedication, and vigor. Then it will ultimately lead them to create more ideas for better service solutions for the customers [9, 19]. Consequently, WE is a very important variable between PP and ESIB.

## 4 Conclusion

This study points out that a PP has an important role in increasing WE and ESIB. In addition, WE also plays an essential role in improving ESIB in frontline employees. This study has limitations, namely only confirming previous research models showing valuable and conclusive results, which were then tested in other countries with different cultural backgrounds. Furthermore, future research can consider other new constructs that can shape ESIB.

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