

# Can Work Engagement and Job Satisfaction Predict Employee Innovation ? Case of Indian Telecom Employees

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## Abstract

Work engagement is a positive, fulfilling, work - related state of mind that is characterized by vigor, dedication, and absorption. This concept is gaining popularity because of the desirable outcomes it offers to both employers and employees. Job satisfaction describes the extent to which a person is satisfied in his/her present job. Its impact on organizational performance is well known. Employee innovation occurs when creative ideas are originated and implemented in the organization. Innovation is the need of the hour, and despite this, studies about innovation and its antecedents are sparse in the Indian context. The present study attempted to find out the impact of work engagement and job satisfaction on employee innovation. Data were collected from 165 employees working in various telecom organizations in Kerala by using convenient sampling technique. Job satisfaction was assessed using the Minnesota Satisfaction Questionnaire, Utrecht Work Engagement Scale (UWES) was used to measure work engagement, and employee innovation was measured by using the validated Corporate Innovation Survey questionnaire. The results revealed a significant positive relationship between work engagement, job satisfaction, and employee performance. It was also found that work engagement and job satisfaction individually as well as collectively impacted employee innovation. The study established that significant influence on employee innovation was more when work engagement and job satisfaction were combined. The study offered valuable insights to both practitioners and academicians by significantly contributing to the existing body of knowledge.

**Keywords :** employee innovation, work engagement, job satisfaction, organizational excellence

**JEL Classification :** J24, J28, M12, M50, M54

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There is a wide - spread research interest in the area of engagement, which can be evidenced from the exponential growth in the number of studies conducted across the world. This is mainly because of the desirable outcomes engagement offers to both employers and employees (Morgan, 2017). According to Schohat and Vigoda - Gadot (2010), work engagement augments an organization's performance by improving employee loyalty and attempts to redefine individual - organization relationship. Engagement studies in the Indian context are very vital because of boom in the service sector, talent war, dynamic human resource practices, and global aspirations (Gupta, Shaheen, & Reddy, 2017). Job satisfaction is a pleasurable emotional state resulting from the appraisal of one's job (Brief & Weiss, 2002). It is the mental state resulting from one's job and of the total job perspective. The popularity of job satisfaction is because of a number of desirable outcomes it offers. Lack of satisfaction in the job may result in dissatisfaction. Jnaneswar (2016) opined that organizations should ensure the satisfaction of their employees, failing to do so may result in high employee turnover.

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The incremental and discontinuous changes in social, economic, and technological factors ensuing in shorter life cycle of products, services, and business processes make continuous innovation a business compulsion. Innovation predominantly happens in an organization if its workforce exhibits innovative behaviour, which is the need of the hour. The fact that sustained success in an organization results from employee innovation is vouched by many practitioners and academicians. After the emergence of innovation as a critical source of competitive advantage, many organizations are showing keen interest in identifying the factors that foster employee innovation. The present paper aims to investigate the predictive power of work engagement and job satisfaction, both individually and collectively, on employee innovation in the Indian telecom industry. Studies examining the major antecedents of employee innovation are sparse in the Indian context, and as India is one of the fastest growing economies, the present study demystifies the relationship between job satisfaction, work engagement, and employee innovation, which results in establishing valuable research and practical implications.

## Review of Literature

The review of literature explains the three concepts : work engagement, job satisfaction, employee innovation, and the relationship between these variables.

**(1) Work Engagement (WE) :** The first academic article on engagement at work was published by William Kahn in early 1990s in the *Academy of Management* journal. According to him, engagement embodies the attachment of an employee to his/her work role. Kahn (1990) in his study highlighted the physical, emotional, and cognitive attachment of employees to performance. WE is viewed as the antithesis of burnout. Compared to those who experience burnout, engaged employees are energetic, have high self-efficacy, and can see the alignment of their activities with the overarching goals of the organization. Schaufeli and Bakker (2004) defined WE as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption. These three dimensions were highlighted by many researchers in their work and extensively used in various WE studies. Energy, resilience, and readiness to devote effort and persistence in the face of problems are hallmarks of vigour, which denote the peculiar mindset of employees. Dedication encompasses employees' enthusiasm and pride about the job. High level of concentration and engrossment in work by employees implies dedication.

There is a distinction in the definition of engagement by business and academia. For instance, Schaufeli (2013) studied the conceptualization of employee engagement by consultancy firms such as Mercer, Hewitt, and Towers Perrin and found that they merged three existing concepts such as job satisfaction, organizational commitment, and extra role behaviour to define employee engagement. The lacunae of the approach followed by the consultancy firms is that it is not reviewed by subject experts as their method of assessment is patented, thus establishing a lack of transparency. Shuck (2011), after reviewing 213 publications from the HRM, psychology, and management databases identified four approaches to define engagement. The four approaches, namely needs - satisfying approach, burnout antithesis approach, satisfaction - engagement approach, and multidimensional approach highlighted a different aspect of engagement. For instance, the needs - satisfying approach focused on engagement's relation with role performance, burnout antithesis approach on employee well being, satisfaction - engagement approach on resourceful jobs, and the multidimensional approach focused on both job and the organization.

Extant literature provides support for the positive contributions of WE, for example, Salanova, Agut, and Peiro (2005) established relationship with work performance, Sonnentag (2003) with proactive behaviour and learning, and Saks (2006) with organizational citizenship behaviour. According to Aninkan and Oyewole (2014), WE's impact on business is well known and engaged employees provide better services to customers and clients. Engaged employees can enhance customer loyalty and customer engagement, which will ultimately culminate in

an improvement in organizational profitability. The other outcomes of WE are increase in organizational commitment as suggested by Boyd, Bakker, Pignata, Winefield, Gillespie, and Stough (2011), less sickness absence (Schaufeli, Bakker, & Van Rhenen, 2009), more personal initiatives (Hakanen, Perhoniemi, & Toppinen-Tanner, 2008), and improved role performance (Bakker & Bal, 2010).

**(2) Job Satisfaction (JS) :** JS indicates the degree to which employees like their job and it can be explained as the emotional or expressive reaction to the job (Buitendach & De Witte, 2005). It can range from extreme satisfaction to extreme dissatisfaction. According to Spector (1997), JS reflects employee's attitude toward various realities of work. According to him, JS is the representation of employees' satisfaction with their jobs, embodying the nature and management of work. Employees experience both intrinsic and extrinsic satisfaction. In intrinsic satisfaction, employees consider the kind of work and tasks associated with the job. It focuses more on task variety, task identity, skill utilization, and autonomy. Employee's extrinsic satisfaction depends on factors other than the tasks such as pay, co-workers, and working conditions. Sardžoska and Tang (2015), in their study, described about both extrinsic and intrinsic satisfaction. According to them, extrinsic satisfaction is the motivation by the desire to gain a reward and intrinsic satisfaction is the motivation by an internal desire to do a task well.

Extant literature classifies the predictors of JS into two categories, namely job characteristics & work environment and characteristics of individual employees. Job Characteristics model developed by Hackman and Lawler (1971) and Demands - Control model developed by Theorell, Karasek, and Eneroth (1990) established that job factors and work environment as critical to JS. The second view that characteristics of individual employees determine JS was popularized by Halbesleben and Wheeler (2008). Compared to the second view, the first one is more popular as there are more number of studies supporting this view as reported in the literature. The main reason for JS's big popularity is its impact on job performance. This was established by a number of studies, which include the commendable work of Lu, Lu, Gursoy, and Neale (2016) and Rich, Lepine, and Crawford (2010). They established a significant relationship between JS and various organizational outcomes. Giri, Pavan Kumar, and Rajesh (2017) found that JS influenced turnover intention. Similarly Bushra, Usman, and Naveed (2011) suggested that JS produced a number of desirable outcomes such as positive mind set and camaraderie among employees, morale improvement, and enhancement of job performance. Singh, Saufi, Tasnim, and Hussin (2017) in their study also established that JS increased customer satisfaction, and the net effect was increased in profitability through customer goodwill.

**(3) Employee Innovation (EI) :** West and Farr (1990) defined innovation as the purposeful introduction and use of ideas, procedures, and processes within a role, group, or organization for the meaningful advantage of individual, group, organization, or the wider society. There is immense scope for innovation in a wide range of activities in the organization and is not limited to just technology and research & development. EI occurs from the generation and implementation of new ideas, products, and processes facilitated by employee involvement and interaction. Idea generation and implementation are the two integral components of employee innovation. In the idea generation stage, employees make serious attempts to contribute ideas for addressing the problem or opportunity. Idea creation is not sufficient for innovation to happen in an organization, actualization and execution of an idea is necessary for innovation to materialize. Janssen (2003) commented that an organization shall engage in a number of activities across all levels for innovation to materialize. Human resources occupy a pivotal position in the innovation process in an organization which will culminate in organizational effectiveness. The critical success factor of innovation is idea only, and it is people who originate and implement ideas. According to De Jong and Hartog (2007), thoughtful attention shall be paid to where creative ideas are originated and how these are implemented for knowing the innovation process, and literature about this is sparse.

Magadley and Birdi (2012) opined that many research works about innovation assess only idea generation,

leaving out the pivotal idea implementation, thus resulting in vague conclusion about the diverse factors influencing idea generation and idea implementation. Factors influencing idea generation and implementation vary, for example, individual factors strongly influence idea generation, and organizational and group factors influence idea implementation. Organizational and group support factors such as assistance in developing new ideas, time availability, employees supporting each other for development and use of ideas, collaboration and unrelenting support in the implementation are crucial for innovation to happen in organizations. Innovation will flourish in a supportive work environment where ideas are touted and not neglected.

In the days of economic turbulence, only innovation can help an organization in its journey towards excellence. Literature highlights a number of studies linking innovation to organizational performance and efficiency. According to Lööf and Heshmati (2006), innovation is one of the ways in which organizations can achieve efficiency and performance, and many organizations are using it as their strategy for continuous success and growth. This viewpoint was supported by Dobni (2010) as he also established a relationship between innovation orientation and competitive strategy in the organization. In another study by Güngör and Gözülü (2012), the consequences of not innovating by an organization include outperformance by competitors, losing valuable talent, operational inefficiency, and financial loss. Organizations seeking creativity influence its liquid workforce and encourage them to innovate more, which is very essential in today's dynamic business environment (Chakraborty, Santra, & Dhara, 2019).

**(4) Relationship Between WE and EI :** One of the ways to become competitive in today's dynamic environment is to pursue innovation. This is applicable to all organizations, irrespective of the industry to which they belong or serve. Human capital is an important partner in the innovation process because human beings are the main source of ideas and are responsible for implementation of ideas. In addition to this, human resources can hamper change efforts if they are dissatisfied. Evidence about the relationship between WE and EI can be found in the literature as there are a number of studies reported highlighting the correlation between the two variables. For instance, Langelaan, Bakker, Van Doornen, and Schaufeli (2006) in their study found that the triggering event for employee creativity and innovation was the heightened connection between employees and their jobs. They also opined that WE is one of the key antecedents of creativity and innovation. Hakanen, Perhoniemi, and Toppinen - Tanner (2008) opined that WE always had a positive influence on employee initiatives, which in turn improved their innovative behaviour in the organization. Wefald and Downey (2009) in their study suggested that the three dimensions of WE namely, vigour, absorption, and dedication significantly contributed to the development of employee innovation. Similarly, Slåtten and Mehmetoglu (2011) also established a significant relationship between WE and EI when they conducted their study in the hospitality sector. They studied employees who were dealing directly with customers and found that a positive correlation existed between the two variables. Other popular works highlighting the relationship between WE and EI include the studies conducted by Bakker, Hakanen, Demerouti, and Xanthopoulou (2007) and Agarwal (2014). Considering these past studies, the first hypothesis of the study is framed as :

↳ **H1 :** WE has a positive influence on employee innovation.

**(5) Relationship Between JS and EI :** Evidence about correlation between JS and EI can be traced in the literature. Shipton, West, Parkes, Dawson, and Patterson (2006) opined that task variety in the job substantially increased satisfaction, which subsequently resulted in employee creativity and innovation. Tien and Chao (2012) also found a positive relationship between JS and innovation in their study as satisfied employees are willing to render additional energy and effort in their work. According to Davis (2009), there is an interconnection between JS and creativity because of JS's positive impact on knowledge creation and intellectual thinking. In the same vein,

Bushra et al. (2011) and Hosseini, Chileshe, and Zillante (2014) established a relationship between JS and EI and commented that satisfied employees contribute more creative ideas and try to implement them, thus facilitating the organization to remain competitive. Replicating past literature, the second hypothesis of the study is set as :

↳ **H2** : JS has a positive influence on employee innovation.

**(6) Impact of WE and JS on EI** : There is no dearth of studies about the relationship between WE and EI and JS and EI, but there is lack of empirical research that comprehensively and simultaneously investigates the relationship between the three variables. Considering the growing popularity of WE and EI and its desirable outcomes, it is necessary to have some good empirical studies linking these variables with other constructs. JS, even though an age old concept, is still popular in industry and academia. These type of studies are very rare in the Indian context.

The Indian economy is going through a lot of changes with a lot of ambitious plans like 'Make in India' campaign, 'Digital India,' and these sort of studies are required to enhance creativity and innovation in our country. Therefore, the present study attempts to comprehensively analyze WE and JS and their impact on EI. Thus, H3 is :

↳ **H3**: WE and JS together significantly predict employee innovation.

## Methodology

**(1) Sample and Procedure** : One hundred and sixty five (165) employees working in various telecom organizations in Kerala were taken as the sample for the present study. These respondents were selected using convenient sampling technique. The sample included 93 women and 72 men ; 30.3 % of the respondents belonged to the age group of 20 - 30 years, 24.2 % belonged to the age group of 31 - 40 years, and the remaining 45.5% were above 50 years of age. In terms of work experience, 43.6% of the respondents had work experience of 0 - 10 years, 33.3 % had 11 - 20 years of work experience, and 23% had more than 20 years of work experience. With respect to the educational qualification of employees, 57.6% were post graduates and the remaining 42.4% were graduates. The study was conducted during December 2018 - June 2019.

**(2) Measures** : The present study is conducted using three structured questionnaires. The sections of the questionnaire are detailed below.

**(i) Job Satisfaction** : The predictor variable JS is assessed using the Minnesota Satisfaction Questionnaire (MSQ - SF) developed by Weiss, Dawis, England, and Lofquist (1967). The questionnaire, which consisted of 20 statements, measured intrinsic, extrinsic, and general job satisfaction. Typical items in the questionnaire included, "The chance to do different things from time to time," "The way my job provides for steady employment," and so on. The items were rated on a 5 - point Likert scale ranging from 1 (*very satisfied*) to 5 (*very dissatisfied*). This questionnaire is highly popular and extensively used in empirical research.

**(ii) Work Engagement** : Utrecht Work Engagement Scale (UWES) developed by Schaufeli and Bakker (2003) was used to measure WE, the second predictor variable. UWES includes three constituting aspects of work engagement namely vigor, dedication, and absorption. Sample items in the questionnaire included, "At my job, I feel strong and vigorous," "When I work, I forget everything else around me," and so on. The questionnaire included 17 statements with response options ranging from 0 = *never* to 6 = *always*.

**(iii) Employee Innovation** : The dependent variable EI was assessed using the validated Corporate Innovation

Survey questionnaire developed by Magadley and Birdi (2012). For this study, organizational support for innovation and measures of innovation (idea generation and idea implementation) were captured. These two sub-sections comprised of 7-items on a 5-point scale. Sample items in the scale included, "People in our organization co-operate in order to help develop and apply new ideas," "To what extent have you generated idea for new policies, services, or products in the last 3 months," and so on. The scale was anchored by 1 (*not at all*) and 5 (*a great deal*). A higher score in the scale is the representation of more EI.

**(3) Reliability of the Instrument :** Reliability of the instrument was tested by conducting a pilot study among 50 respondents. Cronbach's alpha values of the three questionnaires were found to be greater than 0.7 (WE : 0.760 JS : 0.968 ; EI: 0.911). Thus, reliability of the instrument was found to be good to conduct the study.

## Analysis and Results

The frequency distribution (mean and standard deviation) of three variables are presented in the Table 1. In order to test the hypothesis for the influence of WE on EI, correlation and simple linear regression are conducted. The results are presented in the Table 2 and Table 3.

The analysis reveals a significant correlation between WE and EI at the 0.01 level (0.671), providing support for H1. There is a perfect correlation between the two variables, which underpins that if work engagement is there in the organization, employees exhibit innovative behaviour in the organization. This result is in concordance with a number of earlier studies conducted by scholars. For example, Whittington and Galpin (2010) established a significant positive correlation between WE and EI. Those who experience WE have positive feelings about the organization and are connected with the organization. They experience a sense of belongingness, which is a primary thing for exhibiting an entrepreneurial spirit.

A significant regression equation is found ( $F(1,163) = 133.763, p < 0.001$ ), with  $R^2$  of .451. That is, 45.1% of

**Table 1. Mean and Standard Deviation of the Variables**

	Work Engagement	Job Satisfaction	Employee Innovation
Mean	4.68	3.85	3.77
Standard Deviation	0.6953	0.7816	0.7519

**Table 2. Correlation Between WE and EI**

	Work Engagement	Employee Innovation
Work Engagement	1	0.671(**)
Innovative Behaviour	0.671(**)	1

**Note.** \*\*. Correlation is significant at the 0.01 level.

**Table 3. Linear Regression Analysis Between WE and EI**

Model	Unstandardized Coefficients B	Standard Error	Standardized Coefficients Beta	t-value	Sig	R <sup>2</sup> Value	F-value	Df
Constant	0.374	0.297		1.261	.020	0.451	133.763	1
Work Engagement	0.726	0.063	0.671	11.566	.000			

**Note.** Dependent variable: Employee Innovation

**Table 4. Correlation Between JS and EI**

	Job Satisfaction	Employee Innovation
Job Satisfaction	1	0.625(**)
Innovative Behaviour	0.625(**)	1

**Note.** \*\*, Correlation is significant at the 0.01 level.

**Table 5. Linear Regression Analysis Between JS and EI**

Model	Unstandardized Coefficients B	Standard Error	Standardized Coefficients Beta	t-value	Sig	R <sup>2</sup> Value	F-value	Df
Constant	1.451	0.231		6.274	.000	0.391	104.506	1
Job Satisfaction	0.601	0.059	0.625	10.233	.000			

**Note.** Dependent variable: Employee Innovation

EI can be predicted by WE. The regression analysis reveals a positive regression between WE and EI. WE is found to be statistically significant in predicting EI ( $\beta = 0.671$ ,  $\text{sig} < 0.05$ ).

Moreover, as a result of regression analysis, it is possible to predict the EI by the equation as follows :

$$EI = 0.374 + 0.726 (WE)$$

Thus, for each one unit increase of WE, EI increases by 0.726. These results also provide full support for H1. This is in agreement with some of the earlier studies reported in the literature. Kim and Park (2017) in their study established the predictive power of WE on EI as 49%. In the same vein, Agarwal, Datta, Blake - Beard, and Bhargava (2012) found significant variance in EI due to WE. Thus, the necessity of having an engaged workforce to produce innovation in the organization is again heightened.

For testing H2, correlation and simple linear regression are used. The results are shown in Table 4 and Table 5. A significant positive correlation is found between JS and EI (0.625) at the 0.01 level. This is in perfect resonance with some of the earlier studies conducted by Chen, Zhao, Liu, and Wu (2012) ; Yaghoubipoor, Tee, and Ahmed (2013) ; and Nikpour (2018). The present result accepts H2. Satisfied employees are more likely to engage in idea generation and implementation along with providing support for innovative activities by others.

Simple linear regression reveals a significant regression equation ( $F(1,163) = 104.506$ ,  $p < 0.001$ ), with  $R^2$  of .391. This shows that 39.1 % variance in EI is because of JS. JS is found to be statistically significant in predicting EI ( $\beta = 0.625$ ,  $\text{sig} < 0.05$ ).

It is possible to predict the EI by the equation as follows:

$$EI = 1.451 + 0.601 (JS)$$

Thus, for each one unit increase of JS, EI increases by 0.601. These results also provide support for H2. The results of this study are in line with some of the earlier studies reported in the literature. Allouzi (2018) established the predictive power of JS on EI as 55.7%. Other scholars who supported the impact of WE on EI include Bysted (2013), who also observed impact of JS on EI.

### **Impact of WE and JS Together on EI**

Multiple linear regression is performed to predict EI based on work engagement and job satisfaction. Preliminary

**Table 6. Multiple Regression Analysis Between WE, JS, and EI**

Model	Unstandardized Coefficients B	Standard Error	Standardized Coefficients Beta	t-value	Sig	R <sup>2</sup> Value	F-Value	Df
Constant	0.368	0.287		1.285	0.020	0.490	77.781	2
Job Satisfaction	0.278	0.079	0.289	3.525	0.001			
Work Engagement	0.498	0.089	0.460	5.613	0.000			

**Note.** Dependent variable: Employee Innovation

analysis was performed to ensure that there was no violation of the assumption of normality, linearity, and multicollinearity. A significant regression equation is found ( $F(2,162) = 77.781, p < 0.001$ ), with  $R^2$  of .490. That is, 49% of EI can be predicted by WE and JS. WE ( $\beta = 0.460, sig < 0.05$ ) and JS ( $\beta = 0.289, sig < 0.05$ ) are found to be statistically significant in predicting EI. The results are presented in the Table 6.

Moreover, as a result of regression analysis, it is possible to predict the EI by the equation as follows:

$$EI = 0.368 + 0.498 (WE) + 0.278 (JS)$$

Thus, for each one unit increase of WE, EI increases by 0.498 and for each one unit increase of JS, EI increases by 0.278. These results also provide support for H3.

In the result, we can also see that when taken together, JS and WE predict 49% of variance in EI, which is higher than the variance when the independent variables are taken separately (WE = 45.1% and JS = 39.1%). This also shows that when taken together, JS and WE impact more on EI. This supports the viewpoint that an organization requires not only satisfied employees, but also engaged employees. The extent of innovative behaviour in the organization by employees will be determined by JS and WE.

## Managerial Implications

The present study establishes WE and JS as important predictors of EI. They individually as well as collectively predict employee innovation/innovative behaviour in the organization. This has pivotal implications for organizations. Satisfied and engaged employees can bring in organizational effectiveness by significantly contributing towards innovation. This is an important piece of knowledge for HR and other line managers who directly deal with a number of subordinates. They can formulate progressive people friendly practices for keeping their diverse workforce not only satisfied, but also engaged. Managers at all levels must think of how to generate and retain the vigor, passion, and dedication of employees. This calls for job redesign, conducive work environment, up-skilling, performance management system, and attractive reward structure in the organizations (Jnaneswar, 2019). Apart from these practices, the role of feedback is also important. Chug and Vibhuti (2017) found that feedback from superiors increases WE. Managers must abandon the age old traditional HR practices and try to bring in prudent practices as HR practices followed in the organization can increase WE (Regy & Malini, 2019).

Nowadays, organizations are operating in an environment characterized by uncertainty and hyper competition, therefore, they require employees who are innovative as fulfilling formal job requirements alone is not sufficient to outperform competitors. The pivotal role of innovation in the sustained success of an organization is well recognized, and the popularity of the concept will be soaring in the coming years, which may continue to garner attention from both industry and academics. The present study makes a meaningful contribution towards the different bodies of knowledge : WE, JS, and EI. As studies about innovation are still in a nascent stage in a country like India, the present study offers a framework for managers to foster creativity and innovation in their



organizations. The positive contribution from an engaged and innovative workforce towards the organization was well established in the study conducted by Janssen (2000). In the same vein, the clear implication is that organizations must adopt a good HR architecture to ensure contented and engaged workforce, which will result in innovative behaviour and ultimately organizational growth and effectiveness.

## Conclusion

Research studies about the relationship between employee innovation, job satisfaction, and work engagement in the Indian context are in an embryonic stage. The present study establishes the predictive power of WE and JS individually and collectively on EI. The study findings enrich existing literature and provide valuable framework for practicing managers to foster EI which ultimately culminates in organizational excellence.

## Limitations of the Study and the Way Forward

Despite significant theoretical and practical contributions, the study is not without limitations. The cross-sectional design of the study limits the determination of causality between the variables. Longitudinal research design better explains the causality, but due to paucity of time and resources, the present study adopts a cross sectional design. Another limitation of the study is with respect to sample size, as the study could collect data from only 165 employees of various telecom organizations in Kerala. For proper generalization of predictive power of variables, a larger sample selected using probability sampling technique could have been a better choice.

This study also offers avenues for future research. India is an emergent economy witnessing a number of changes in its business environment and WE and EI are sparsely researched. Considering the growing importance of these variables and paucity of empirical studies, the present study can be extended to other sunrise sectors like retail and information technology. Future studies can concentrate on various antecedents of WE like psychological meaningfulness and psychological availability and how WE mediates their relationship with EI.

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