SILESIAN UNIVERSITY OF TECHNOLOGY PUBLISHING HOUSE

SCIENTIFIC PAPERS OF SILESIAN UNIVERSITY OF TECHNOLOGY ORGANIZATION AND MANAGEMENT SERIES NO. 194

2024

A MEDIATING ROLE OF WORK ENGAGEMENT IN PSYCHOLOGICAL CONTRACT AND INNOVATIVE WORK BEHAVIOUR: A STUDY OF INFORMATION TECHNOLOGY SECTOR OF PAKISTAN

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Purpose: The goal of this research was to learn how psychological contracts influence workers' innovative work behavior in Pakistan's information technology industry.

Design/methodology/approach: Employees from several software companies in Rawalpindi, Islamabad, participated in the study. Standardized scales were used to obtain data from 234 workers via questionnaires.

Findings: The study's findings showed a favorable correlation between innovative work behavior and the presence of psychological contracts (both transactional and relational).

Originality/value: There remained uncertainty and little study was done on the mediation function of work engagement in the relationship between Psychological Contract and Innovative Work Behavior despite decades of research on the subject. Thus, work engagement was employed as a mediator in this research, and the findings demonstrated that work engagement mediates the relationship between innovative work behavior and the psychological contract in a positive and meaningful way.

Keywords: psychological contract, innovative work behaviour, work engagement, IT sector. **Category of the paper:** Research paper.

1. Introduction

Psychological contract can be portrayed as individuals' feelings about the relative duties among themselves and their alliance (Alcover et al., 2017a). Psychological contracts are divided into two types in the literature: that is transactional contract and relationship contract (Soares, Mosquera, 2019). Transactional contracts allude to simply a short-term and constrained

contribution and restricted participation of the employees. Relational contract refers to longterm commitments that include a focus on socioemotional components including relatedness, devotion, support, job stability, and trust in addition to reference to monetary and reciprocal exchanges (Bal, Kooij, 2011; Liu et al., 2020).

The researchers have discovered that diverse sorts of psychological contracts differ in their impact on innovation and creativity. Even more particularly, transactional contracts have been found negative association with innovative work behaviour (Vander Elst et al., 2016). However, relational contracts are substantially and favorably linked to innovative work behavior in the workplace (Afridi et al., 2020). In spite of that, the mechanism linking the two contract types and innovative work behavior remains undecided. The current study seeks to contribute to the existing evidence of a theoretically relevant and meaningful mediator of this relationship. The mediating relations between the psychological contract and innovative work behavior at work have been largely ignored in previous research (Li, Chen, 2018).

On the premise of theory of organizational innovation (Zheng et al., 2017), it hypothesizes that individuals 'innovative behaviour is not autonomous, yet another element of consistent procedure of connection between the individual and circumstances experienced. We join these hypothetical perspectives in a mediation model to concentrate the directing effect of psychological atmosphere on the interceding impact of work engagement between psychological contracts and innovative work behavior. As a result, we can better understand the conditions in which psychological contracts encourage creative behavior in the workplace. As a result, we can better understand the conditions in which psychological contracts encourage innovative work behavior in the workplace. This study unquestionably contributes to our theoretical understanding of psychological contracts in two main ways: by mediating the motivating intervening system of work engagement between the two.

Despite the large amount of study that has been done on innovative work behavior, there is still a severe lack of literature in this area, leaving many concerns unsolved. There is little evidence in the literature linking the types of psychological contract to innovative work behavior. To be more precise, although there is a negative association between transactional contracts and innovative work behavior, there is a positive association between relational contracts with innovative work behavior. However, it is not apparent how the transactional contract and relational contract, and innovative work behavior are connected to one another throughout the process (Chang et al., 2013).

To fill this research gap by using the three psychological condition theory (Kahn, 1990) of work engagement; engagement is a motivational concept that assumes a part of mediator among the relationship of the transactional contract and innovative work behaviour and relational contract and its positive outcomes. This research summarizes various factors that contribute to innovative work behavior in the organizations today. Moreover, this study provides theoretical basis for further studies on this construct. An important goal of this study is to provide new

evidence supporting the existence of key individuals at the group's center who are assumed to play a pivotal role in the organization's success.

2. Preliminary studies

2.1. Psychological Contract and Innovative Work Behaviour

Both types of psychological contracts have been extensively studied by a wide range of analysts (Bal, Kooij, 2011). However, the two types of psychological contracts are the opposite ends of a continuous legally binding path taken by representatives on behalf of their respective organizations (Hughes, Palmer, 2007). The effects of different legal codes on innovative work behavior shift as one moves along the continuum. Scholars have argued that relational contracts are useful for fostering innovative work behavior. This is because innovation is a comprehensive strategy, and that true creativity emerges only via sustained, focused effort by trained professionals (Stojcic et al., 2018). Some researchers (Thompson, Heron, 2006) have discovered the mediating relations and found that this tool considers attitude or behavior mediators. For instance, (Thompson, Heron, 2006) discovered that the connection between execution pay (a component of transactional contract) and innovative work behavior was mediated, in large part, by emotional obligation.

Thompson and Heron (2006) found that the relationship between execution pay and innovative work behavior was mediated by information sharing practices among delegates in an organization's innovative work (R&D) office, and that the relationship between professional development (a component of the social contract) and innovative work behavior was also mediated by information sharing practices. In light of the viewpoints of a few subgroups identifying with value-based or social contracts, these findings supported a proposed development of psychological contracts theory. Consequently, they do not take a simple stance on the centrality of motivational system between the two types of psychological contracts and innovative work behavior.

Innovative work behavior is defined as deliberate creation, presentation, and use of new ideas inside a work place, gathering or association, to profit part execution, the gathering, or the association (Edmondson, 2018). Researchers have shown that the impact of different types of psychological contracts on innovative work behavior varies. In particular, it has been shown that value-based contracts have a negative association with innovative actions (Liinamaa et al., 2016). In contrast, relational contracts are often associated with innovative actions (Sumo et al., 2016). However, the relationship between the two types of contracts and innovative work behavior is unclear. The available research does not provide sufficient confirmation of the

hypothesized important intermediary individuals in this interaction, leaving room for more research.

Examiners have found that social contracts are helpful in affecting innovative work behavior. This follows the logic that innovation is an all-encompassing process, and that original behavior emerges when individuals focus their efforts over extended periods (Cloutier, Langley, 2020). The certainty of psychological contracts is supported by prior research showing a correlation between the types of psychological contract and innovative work behavior and negative for value-based contracts (Ahmed et al., 2019).

- **Hypothesis 1:** Transactional contract has a significant relationship with Innovative work behaviour.
- **Hypothesis 2:** Relational contract has significant relationship with Innovative work behaviour.

2.2. The Mediating Role of Work Engagement

Work engagement is described by Vigor, commitment, and absorption (Schaufeli et al., 2017). The word "vigor" suggests a high level of vitality, mental flexibility, the motivation to put out effort at work, and the fortitude to persevere despite setbacks. "Dedication" displays the intensity, focus, drive, and probing nature of an individual. "Absorption" involves a feeling of complete obsession and appeased incorporation in one's work to the point of inconvenience of secluding from work (Schaufeli et al., 2017).

According to Kahn (1990), workers' personalities and perspectives on their workplaces create psychological circumstances that have a direct impact on their productivity. Three psychological conditions are vital psychological meaningfulness, safety, and availability. A sense of psychological meaningfulness suggests that personal endeavors are financially rewarding. The key influences on heft originate from the impression of hierarchy and work factors related to projects, components, and work linkages. Value coincides between persons and their relationships as the cornerstone to meaningfulness, according to some analysts (Rich et al., 2010). The most important factor in determining one's level of happiness is one's estimation of the availability of supportive relationships and networks. Psychological availability concerns the individual's feeling that they have the passionate, mental, and physical assets important to contribute to role exhibitions. Speculations of enthusiastic and physical energies and professional stability impact the view of accessibility.

As a consequence, people can't go for break or reveal their true selves since they fear adverse results (Rich et al., 2010). These assumptions of reduced mental security, which in this way decrease the availability and attention of individuals totally in the workplace. Moreover, the mental absence of individuals suggests that employees are just revealing a fraction of their true selves at the office, which may lead to decreased productivity (Kahn, 1990). Finally, the confined commitment of social events in esteem-based contracts shields a man from driving

physical, scholarly, and excited energies into work parts. This addresses singular withdrawal with workplace (Rich et al., 2010).

Taking after these hypothetical arguments, we anticipate that transactional contracts adversely identify with work engagement. The steady and trusting connections they have with their association enable them to go for break, demonstrate their genuine selves, and attempt and maybe fall flat without dreading the negative outcomes (Rich et al., 2010). The socio enthusiastic components of social contracts give passionate assets to meet the requests of work engagement (Bakker et al., 2005; Demerouti et al., 2001; Kahn, 1990) Moreover, relational contracts create work security (Morrison, Robinson, 1997; Rousseau, 1990) that effects on mental accessibility as it compares to how secure individuals feel about their function (Kahn, 1990). People need a sentiment security to put resources into their work roles (Kahn, 1990). In entirety, social contracts encourage mental significance, security, and accessibility that create showcases of high work engagement.

In this research we propel work engagement as a mediator for the accompanying three reasons. In the first place, innovative work behavior is largely a motivational problem (Pieterse et al., 2010). Work engagement is a motivational build that leads to a positive, satisfying, full of feeling motivational, and business-related perspective that is portrayed by force, devotion, and assimilation (Salanova et al., 2005; Schaufeli, Bakker, 2004). Our attention on the motivational instrument varies from the attitudinal or behavioural systems analysed in past reviews (Thompson, Heron, 2006). Second, when representatives are locked in, they are proactive, demonstrate activity, team up adequately with others (Bakker, Schaufeli, 2008) and put vitality in their work place (Rich et al., 2010). These practices are especially applicable to inventive exercises (Rich et al., 2010; Shalley et al., 2010).

Thirdly, an absence of hypothetical examination on representatives' work engagement despite expanding corporate intrigue (Bakker, Schaufeli, 2008). We contribute to a common theoretical understanding of these issues and provide ideas for improving organizational practices by focusing on the role that preparation plays in employees' dedication to the job. Overall, we argue that work engagement is indicative of a potentially crucial mediator that might broaden our understanding of the links between psychological contract types and innovative work behavior, ruling out the need for additional mediating tools.

Research into innovative work behavior are in early stages, and restricted attention is provided to antecedents. Of surviving reviews, administration, singular critical thinking style, and work-assemble relations (Volery, Tarabashkina, 2021) distributive and procedural reasonableness (Volery, Tarabashkina, 2021) administrator steadiness (Volery, Tarabashkina, 2021) and self-authority, wage, and occupation residency abilities (Carmeli, Weisberg, 2006) are analysed to decide whether they have suggestions for innovation. Be that as it may, restricted endeavours have been made to look at work engagement as a predecessor of ingenuity (Timms et al., 2015).

Associations frequently acquaint advancements with given benefits (Jha, 2016), however embracing developments obliges representatives to contribute generous exertion. Since imaginative practices include making of something new, they oblige representatives to think and end up plainly consumed in their work (retention). Advancement is additionally change-arranged (Nauman, Qamar, 2018). Different representatives in the workplace may oppose changes in view of the frailties and vulnerabilities they bring (Gwyther et al., 2018).

Work engagement, a tenacious positive full of feeling intellectual state described by energy, commitment, and retention (Chakraborty, Ganguly, 2019), adds to the advancement of inventive work conduct. Bakker et al. (2007) discovered positive connections amongst innovation and the three measurements of work engagement: (1) vigor (2) dedication and (3) absorption. The first figure shows the hypothesized theoretical framework.

Hypothesis 3: Work Engagement significantly mediates the relationship between Transactional contract and innovative work behaviour.

Hypothesis 4: Work engagement significantly mediates the relationship between Relational contract and Innovative work behaviour.

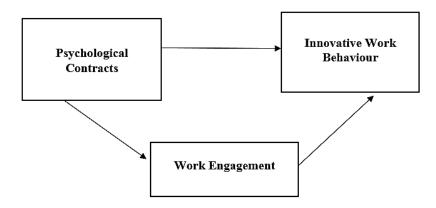


Figure 1. Hypothesized theoretical framework

3. Reserch methodology

3.1. Sample and data collection

Due to the one-time data collection strategy, the current research may be classified as a cross-sectional analysis. From January 1st, 2023, to January 25th, 2023, we collected data for a total of about 25 days. Instead than limiting themselves to either public or only private software developers, researchers gathered information from all types of software developers. Even in the midst of the country's current economic crisis, Pakistan's IT industry is seen as a success story (Pakistan Software Export Board [PSEB]). By the end of 2020, there will be more than 7000 software development firms in Pakistan (National Information Technology

Board [NITB], 2020). There are more than 6,000 software development firms in Rawalpindi and Islamabad combined, according to a study by the Punjab Information Technology Board (Punjab Information Technology Board [PITB], 2023). In the two cities of Islamabad and Rawalpindi, there are over a thousand software development firms. Therefore, the current study's population included all workers from these IT software companies. Due to the generalizability of social exchange theory, this industry was selected as a population of research.

The sample of present review was for the most part comprised of workers of IT programming houses in Islamabad and Rawalpindi. For this, reasons workers of various programming houses were drawn nearer through the individual contacts. The add up to quantities of representative reached and asked for to finish the surveys were 350. Out of these, 255 complete questionnaires were gathered on a commonly concurred time. Out of 255 questionnaires 21 were avoided because of missing information. The remaining 234 questionnaires were utilized as a part of study yielding a reaction rate of 66%. A total of 62.8% of respondents were female. The mean age was 33.45 years, with an average organizational tenure of 7.44 years. The sample was predominantly composed of Islamabad software houses (69.7%); 30.3% were in Rawalpindi.

3.2. Instrumentations

3.2.1. Psychological Contract

Psychological Contract measured by using 18 item scale developed by Millward and Hopkins (1998). Total 18 items are divided in two parts in which 9-item scale of Relational contract and 9-item scale of Transactional contract. Items were assessed on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). A sample item is "my loyalty to the organization is contract specific". The Cronbach's alpha value was '0.740 for transactional contract and 0.825 for the relational contract.

3.2.2. Work Engagement

Work engagement scale was measured with a 9-item scale created by Schaufeli & Bakker, 2003. Things were evaluated on a 5-point scale extending from 1 (strongly disagree) to 5 (strongly agree). A sample item is "Time flies when I am working". The Cronbach's alpha reliability value of work engagement was 0.868.

3.2.3 Innovative Work Behavior

De Jong and Den Hartog (2010) 6 items scale was utilized to quantify the reaction of innovative work behaviour of representatives. Sample items include "In your job, how often do you make suggestions to improve current products or services?" It is measured on a 5-point Likert scale, where 1 show Never, 2 Seldom, 3 Sometimes, 4 Often and 5 shows Almost always. The Cronbach's alpha value was 0.734.

4. Results and analysis

Traditionally regression analysis in social analysis was mostly carried out by using Barron and Kenny method. Barron and Kenny (1986) method are based on following assumption. 1) Relationship among independent factor and Dependent factor essentially be significant. 2) Relationship among Independent factor and Mediator variable essentially be significant. 3) Relationship among Mediator variables and Dependent factor essentially be significant. After the satisfaction of these three basic assumptions, you can run mediation analysis. In 4th step by controlling mediator if it reduces the effect of independent factor on Dependent factor then its mean Partial mediation exist. At the point when the current significant affiliation between IV and DV get insignificant then its mean full mediation exists.

Table 1.

Model		Un-Standardized Coefficients		Significance Level		
		В	Std.Error	t-ratio	Sig.	
1	(Constant)	0.984	0.228	4.307	0.000	
1	PC_MEAN	0.783	0.062	12.046	0.000	
Demonstrate Variables, W/D, MEAN, $D^2 = 0.5(7, E = 144.755, n = 0.000)$						

Relationship between psychological contract and Innovative work behaviour

Dependent Variable: IWB_MEAN: $R^2 = 0.567$, F = 144.755, p = 0.000.

To test hypotheses, several regression analyses were performed, first, the relationship between the two independent variables that is transactional contract and relational contract and their effect on innovative work behaviour was measured. The results obtained from Table 1 shows the beta values of independent variables (TC & RC) 0.783^{**} at p < 0.05 with the value of R² is 0.567. This means that there is a direct relation and significant association among these two independent factors (TC & RC) and dependent variable innovative work behaviour. This allows the first two hypotheses to be accepted that are transactional contract has negative and significant relationship with innovative work behaviour and second hypothesis is the relational contract has positive and significant relationship with innovative work behaviour. To examine for mediation procedure suggested by Baron and Kenny (1986) was followed. According to Baron and Kenny (1986), four criteria need to be met to support full mediation. Initially, the independent factors (i.e., Transactional contract and Relational contract) needs to be significantly related to a mediator (i.e., work engagement). Second, Transactional contract and Relational contract needs to be significantly related to innovative work behaviour. Third, Work engagement needs to be significantly related to innovative work behaviour. And finally at the fourth step, the relationship between independent variables and dependent variables must disappear when mediator is introduced into the regression equation predicting dependent variable. If the coefficient between independent variables and dependent variables after introducing mediator into the regression equation remains significant, but is reduced, there is evidence for partial mediation.

Table 2 represents the results of mediation following the steps suggested by baron and Kenny (1986). At first step, the effect of control variables and mediating variable on dependent factor was tested. At second step the effect of independent variables on dependent was checked and so on.

Mediation Analysis: step-1

The following Table 2 demonstrate relationship between transactional and relational contract and innovative work behaviour.

Table 2.

Relationship between Tran	nsactional & Relational	Contract and Innova	tive Work Behaviour
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Model	Un-Standardiz	ized Coefficients Signif		ficance Level	
Model	В	Std.Error	t-ratio	Sig.	
(Constant)	1.708	0.212	8.051	0.000	
Transactional Contract	-0.617	0.050	-12.274	0.000	
(Constant)	2.126	.373	5.702	0.000	
Relational Contract	0.450	.088	5.113	0.000	

Dependant Variable: Innovative Work Behavior: $R^2 = 0.11$, F = 25.897, p = 0.000.

This table is interpreted as follow. β was having a value of -0.617, means if we better the transactional contract will indicate 61% change in innovative work behaviour which was dependent variable in that case. Significance level in this relationship was 0.000 which was less than 0.05 and significant. Therefore, we accept H1 (Transactional contract has a negative and significant association with Innovative work behaviour). Such discoveries were in alliance to the finding of Brown and Trevino (2006) who noticed significant relation of transactional contract with innovative work behaviour. R² has its value 0.11 that shows 11% variation was clarified by relational contract in employee innovative work behaviour. Value of B was 0.450 which justifies that if we increase and make better relational contract with 1%, will make innovative work behaviour was 0.000 which was less than 0.05 which shows that this relationship was significant. Therefore, we accepted hypothesis no. 2 (Relational contract has a positive and significant relationship with Innovative work behaviour). Such findings of the research work are like the results of Piccolo et al. (2010) who examined innovative work behaviour is positively influenced by relational contract.

Mediation Analysis step-2

The following Table 3 demonstrate relationship between transactional and relational contract and work engagement.

1					
Model	Un-Standardized Coefficients		Significance Level		
Widdel	В	Std.Error	t-ratio	Sig.	
(Constant)	0.869	0.122	7.125	0.000	
Transactional Contract	-0.795	0.029	-27.413	0.000	
(Constant)	1.338	0.234	5.710	0.000	
Relational Contract	0.704	0.055	12.682	0.000	
D_{1} (W 111 W 1E C_{2} D_{2}^{2} 0.247 E 160.020 0.000					

Table 3.

Dependent Variable: Work Engagement: $R^2 = 0.347$, F = 160.822, p = 0.000.

The value of regression coefficient was 0.795 which explains that if we increase and make better transactional contract with per unit, it will bring 79% change in work engagement. P was having a value $0.000 \le 0.05$, so here we can say we met the second condition of Barron and Kenny (1986). R² was 0.347 which explains that 34% variation was explained by relational contract in work engagement. B having a value of 0.704 that justifies that 1% change in relational contract makes work engagement to change with 70%. So here we can say we met the second condition of Barron and Kenny (1986).

Mediation Analysis: Step-3

IWB. Innovative work behaviour and work engagement's relationship was explained in Table 4.

Table 4.

Model	Un-Standardized Coefficients		Significance Level	
MOGEL	В	Std.Error	t-ratio	Sig.
(Constant)	1.734	0.413	4.1959	0.000
Work Engagement	0.542	0.098	5.536	0.000

Relationship between Work engagement and IWB

Dependent Variable: Innovative Work Engagement: $R^2 = 0.13$, F = 30.650, p = 0.000.

F carries its value as 30.514 with $p = 0.000 \le 0.05$ which indicates that data was fitting overall model. The value of R² was 0.13 shows that 13% fluctuation was clarify by work engagement in innovative work behaviour. B carries a value of 0.542 which indicates if we change work engagement with 1% it will show 54% changes in innovative work behaviour. P value was significant at $\alpha = 0.05$ which means that the association among work engagement and innovative work behaviour was significant. So, here we prove and met the third condition of mediation regression through Barron and Kenny (1986), so we can proceed next analysis.

Mediation Analysis: Step- 4

Table 5 shows the result for regression analysis among transactional contract and innovative work behaviour with the addition of mediating variable work engagement.

Model	Un-Standardiz	ed Coefficients	Significance Level	
INTOGEL	В	Std.Error	t-ratio	Sig.
(Constant)	1.338	0.234	5.710	0.000
Work Engagement	0.704	0.055	12.80	0.000
(Constant)	1.337	0.2321	5.788	0.000
Work Engagement	0.427	0.120	3.558	0.000
Transactional Contract	-0.278	0.107	-2.598	0.000

Table 5.

Independent - Dependent Relationship with Inclusion of Mediating Variable

Dependent Variable: Innovative Work Behavior: $R^2 = 0.31$, F = 160.822, p = 0.000.

Regression coefficient for transactional contract in the mediation analysis has reduced from 0.617 to 0.278 which explains that the association among transactional contract and innovative work behaviour was partially mediated by work engagement, which was significant at each step. Similarly, both X and M was still significant after controlling M which shows partial mediation. Hence these findings supported hypothesis no. 3 and accepted the mediating effect of work engagement. These discoveries were in resonance with finding of (Manxhari, 2015) that transactional contract develop task related skills, self-efficacy and have high competence in his/her position which is an important for employee to be motivated and adopt innovative work behaviour.

Table 6.

Model	Un-Standardiz	ed Coefficients Significance L		ce Level
Intonet	В	Std.Error	t-ratio	Sig.
(Constant)	1.734	0.413	4.195	0.000
Work Engagement	0.542	0.098	5.891	0.000
(Constant)	1.734	0.414	4.186	0.000
Work Engagement	0.452	0.215	2.101	0.037
Relation Contract	0.091	0.192	0.0473	0.637

Independent - Dependent Relationship with the Inclusion of Mediator

Dependent Variable: Innovative Work Behavior: $R^2 = 0.13$, p = 0.000.

Relationship among independent factor and dependent factor innovative work behaviour in the existence of work engagement as a mediating factor was explained in the Table 6. The value of B for relational contract dropped from 0.450 to 0.091 and was close to 0 which clarified that the relationship of relational contract and innovative work behaviour is fully mediated by work engagement. Similarly, both X and M was no more significant after controlling M which indicates full mediation. Hence these findings supported hypothesis no 4 and accepted the mediating effect of work engagement.

5. Recommendations

5.1. Theoretical Implications

The present study has made two distant contributions in the growing body of literature. The first, contribution of this research is that study provides the empirical support for association among employee's engagement and innovative work behaviour. Previous research has examined the effect of different psychological contract dimensions and types like psychological breach of contract. The present study expands the literature by psychological contract and innovative work behaviour and provides supportive evidence for study conducted by (Ma et al., 2013).

The second, commitment of study is by building up work engagement as mediator between psychological contract and innovative work behaviour, the study offer useful insight in understanding of operating mechanism through which psychological contract influence innovative work behaviour. The study has empirically bridged a gap between psychological contract and innovative work behaviour research. These results extend the previous findings of (Kasekende et al., 2015; Chafra, 2016) who found mediating role of work engagement between psychological contract and innovative work behaviour.

A vast majority of early researcher has examined the effect of psychological contraction outcome based on a social learning and social exchange theory (Ma et al., 2013). The distant contribution of the study is that it shed a spotlight on motivational aspect of work engagement and provides empirical evidence for study conducted by (Kasekende et al., 2015; Chafra, 2016) in which they highlight the motivational aspect of work engagement.

5.2. Practical Implications

This study consists of three practical implications. To begin with, relational, as opposed to value-based contracts incite people's innovative behaviour. Different systems develop this legally binding sort. Psychological contracts at first casing structure amid the enlistment methodology (Pawar, 2016). Therefore, techniques as reasonable employment sneak peaks make social shrinks by making a sentiment fit amongst individual and associations. Practical employment sneak peaks clear up what is expected from the general population at the occupation and demonstrate what can be predicted by the firm (Goldstine-Cole, 2017). By suitably outlining practical occupation reviews, firms can affect the advancement of relational contracts. Long term incentives, for example investment opportunities (Flammer, Bansal, 2017) or total level prizes (Galster et al., 2019), can in like manner urge agents to make social contracts with their organizations. Introduction projects and preparing blend delegates into creating solid individual acknowledgment and regard similarity with the firm (Stadtler, Van Wassenhove, 2016). What's more, firms can show double vocation steps as a wellspring of holding group of workers and giving a long-haul professional movement for gifted specialists

and designers who don't search for authoritative obligations (Chakraborty, 2020). Second, work engagement impacts representatives' innovative behaviour. Exhaustively, agents' work engagement creates through the experience of employment self-sufficiency (Alcover et al., 2017b) and proficient improvement opportunities (Xanthopoulou et al., 2007). More especially, executives may develop work engagement in their specialists by rousing them to partake in business related basic leadership, empowering their finding out about new headways, treating them similarly, utilizing open correspondence and demonstrating honest to goodness stresses. (May et al., 2004).

6. Limitations and future directions

The present research has few limitations, such as a small sample size, a cross-sectional nature of data, and a lack of awareness about the research. Future studies should be conducted with larger sample size, longitudinal nature of data, and data from both employees and their immediate supervisor. Additionally, future studies should be conducted in other sectors, such as educational sector, to capture the impact of situational factors. Moreover, the limitation of the study was data were collected from one source only from IT sector employees which may result in problem caused by common method bias (Jordan, Troth, 2020).

Future research can also look at the components of various mediators in order to develop the limit states of the psychological contract idea. For instance, the researchers argued that a strong separation may result in bosses establishing rules around what employees should and shouldn't do (Goffee, Jones, 2015). Cultural respect shapes psychological contracts, therefore the current study also offers future researchers a perspective on how cultural values affect people's behaviors, including independence/cooperation, control assertiveness, and longterm/here and now orientation (Hofstede, 1994). According to Forsyth (2020), collectivist social qualities enable people to create more relational contracts whereas nonconformist social qualities encourage them to create more value-based contracts (Forsyth, 2020).

Future research can combine behavioral components (such as learning/information sharing behavior) with motivational frameworks (such as work engagement) to develop a more complete understanding of the tools necessary to understand the relationship between psychological contract and creative work behavior (Thompson, Heron, 2008). In earlier research on psychological contracts, the single level examination was frequently the focus (A-M Coyle-Shapiro et al., 2019). Other studies could look into shared psychological contracts at the group level (Alcover et al., 2017b). Future research can therefore examine the relationship between individual psychological contracts and inventive behavior or determine whether group level mental contracts have an impact on an individual's creative behavior. Future research or study may also look into the relationship between group level psychological contracts and group advancement.

7. Conclusion

A much work has been done on psychological contract, however a relatively less research has been done on behavioral psychological contract along with important mediator work engagement. In this study for the first time important motivational mediating variable work engagement has been studied, which helped in behavioral outcomes of psychological contract. On psychological contract we get various reviews are accessible, the fascinating thing is that the outcomes are not steady and on many events the bearing of relationship is additionally not the same. Varieties do exist in the extent of these connections, and furthermore in the sign, between the psychological contract and innovative work behaviour results of representatives who encounter it. Hence the role of mediator is the key importance in this study which can provide a reasonable justification. The current study proves that a psychological contract and unmet expectations are the cause of brain drain and low productivity in IT industry. These critical demeanors and practices are fundamentally connected to a Innovative Work Behaviour. At the point when representatives feel that they didn't get what they expected, the reward is not as per their desires, or the arrival is not in value with their sources of info they feel deceived. Hence they can show different attitudes and behaviors, as a result many workers leave the organization showing disloyalty and some of them even leave the country and go abroad for better prospects.

Acknowledgements

We would like to express our deepest gratitude to the late Professor Joanna Bartnicka, whose unwavering dedication, invaluable guidance, and profound expertise significantly influenced the development and completion of this research. Professor Joanna Bartnicka played a pivotal role in shaping our understanding of Management and Quality Sciences and provided invaluable insights that enriched the depth and quality of this work. Despite the immense loss we feel with Professor Joanna Bartnicka's passing, their impact on this research project and our academic journey is immeasurable. We are indebted to their mentorship, intellectual generosity, and enduring commitment to the pursuit of knowledge. This article is dedicated to the memory of Professor Joanna Bartnicka, whose legacy continues to inspire and shape the scientific community. The influence of their teachings and mentorship will resonate in the work of generations to come. May Professor Joanna Bartnicka's contributions be remembered with the highest regard, and may this acknowledgment stand as a small tribute to the profound impact they had on both our academic and personal growth.

Silesian University of Technology (Faculty of Organization and Management), supported this work as a part of Statutory Research 13/030/BK_24/0083 (BK-266/ROZ3/2024).

References

- Afridi, S.A., Afsar, B., Shahjehan, A., Rehman, Z.U., Haider, M., Ullah, M. (2020). Retracted: Perceived corporate social responsibility and innovative work behavior: The role of employee volunteerism and authenticity. *Corporate Social Responsibility and Environmental Management, Vol. 27, No. 4*, pp.1865-1877.
- Ahmad, I., Donia, M.B., Khan, A., Waris, M. (2019). Do as I say and do as I do? The mediating role of psychological contract fulfillment in the relationship between ethical leadership and employee extra-role performance. *Personnel review, Vol. 48, No. 1*, pp. 98-117.
- 3. Alcover, C.M., Rico, R., Turnley, W.H., Bolino, M.C. (2017). Multi-dependence in the formation and development of the distributed psychological contract. *European Journal of Work and Organizational Psychology, Vol. 26, No. 1*, pp. 16-29.
- 4. Alcover, C.M., Rico, R., Turnley, W.H., Bolino, M.C. (2017). Understanding the changing nature of psychological contracts in 21st century organizations: A multiple-foci exchange relationships approach and proposed framework. *Organizational Psychology Review, Vol. 7, No. 1*, pp. 4-35.
- 5. Bakker, A.B. (2011). An evidence-based model of work engagement. *Current directions in psychological science*, *Vol. 20, No. 4*, pp. 265-269.
- 6. Bakker, A.B., Hakanen, J.J., Demerouti, E., Xanthopoulou, D. (2007). Job resources boost work engagement, particularly when job demands are high. *Journal of educational psychology, Vol. 99, No. 2*, pp. 274.
- Bal, P.M., Kooij, D. (2011). The relations between work centrality, psychological contracts, and job attitudes: The influence of age. *European Journal of Work and Organizational Psychology*, Vol. 20, No. 4, pp. 497-523.
- Carmeli, A., Weisberg, J. (2006). Exploring turnover intentions among three professional groups of employees. *Human Resource Development International*, Vol. 9, No. 2, pp. 191-206, doi:10.1080/13678860600616305.
- 9. Chakraborty, B.R. (2020). Human Resource Practices Of IDLC Finance Ltd.
- Chakraborty, T., Ganguly, M. (2019). Crafting engaged employees through positive work environment: Perspectives of employee engagement. In: *Management techniques for employee engagement in contemporary organizations* (pp. 180-198). IGI Global.
- 11. Chang, H.T., Hsu, H.M., Liou, J.W., Tsai, C.T. (2013). Psychological contracts and innovative behavior: a moderated path analysis of work engagement and job resources. *Journal of Applied Social Psychology, Vol. 43, No. 10*, pp. 2120-2135.
- 12. Cloutier, C., Langley, A. (2020). What makes a process theoretical contribution? *Organization Theory, Vol. 1, No. 1.*

- 13. Coyle-Shapiro, J.A.M., Pereira Costa, S., Doden, W., Chang, C. (2019). Psychological contracts: Past, present, and future. *Annual Review of Organizational Psychology and Organizational Behavior*, *Vol.* 6, pp.145-169.
- 14. De Jong, J., Den Hartog, D. (2010). Measuring innovative work behaviour. *Creativity and innovation management, Vol. 19, No. 1*, pp. 23-36.
- 15. Edmondson, A.C. (2018). *The fearless organization: Creating psychological safety in the workplace for learning, innovation, and growth.* New York: John Wiley & Sons.
- 16. Erkutlu, H., Chafra, J. (2016). Benevolent leadership and psychological well-being: The moderating effects of psychological safety and psychological contract breach. *Leadership & organization development journal, Vol. 37, No. 3*, pp. 369-386.
- 17. Flammer, C., Bansal, P. (2017). Does a long-term orientation create value? Evidence from a regression discontinuity. *Strategic Management Journal*, *Vol. 38, No. 9*, 1827-1847.
- 18. Forsyth, D. (2020). *Making moral judgments: Psychological perspectives on morality, ethics, and decision-making.* New York: Taylor & Francis, p. 210.
- Galster, G.C., Santiago, A.M., Smith, R.J., Leroux, J. (2019). Benefit–cost analysis of an innovative program for self-sufficiency and homeownership. *Evaluation review*, Vol. 43, No. 1, pp. 3-40.
- 20. Goffee, R., Jones, G. (2015). *Why should anyone be led by You? With a new preface by the Authors: What it takes to be an authentic leader*. United States: Harvard Business Review Press.
- Goldstine-Cole, K. (2017). An Everyone Culture: Becoming a Deliberately Developmental Organization. *Harvard Educational Review*, Vol. 87, No. 1, doi: 10.17763/1943-5045-87.1.150.
- 22. Gwyther, H., Shaw, R., Dauden, E.A.J., D'Avanzo, B., Kurpas, D., Bujnowska-Fedak, M., Holland, C. (2018). Understanding frailty: a qualitative study of European healthcare policy-makers' approaches to frailty screening and management. *BMJ open, Vol. 8, No. 1*.
- 23. Hofstede, G. (1994). Management scientists are human. *Management science*, Vol. 40, No. 1, pp. 4-13.
- 24. Hughes, L.W., Palmer, D.K. (2007). An investigation of the effects of psychological contract and organization-based self-esteem on organizational commitment in a sample of permanent and contingent workers. *Journal of Leadership & Organizational Studies*, *Vol. 14, No. 2*, pp. 143-156.
- 25. Jha, V. (2016). Training and development program and its benefits to employee and organization: A conceptual study. *International Journal of Scientific Research in Science and Technology*, Vol. 2, No. 5, pp. 80-86.
- 26. Jordan, P.J., Troth, A.C. (2020). Common method bias in applied settings: The dilemma of researching in organizations. *Australian Journal of Management, Vol. 45, No. 1*, pp. 3-14.
- 27. Kahn, W.A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of management journal, Vol. 33, No. 4*, pp. 692-724.

- 28. Kasekende, F., Munene, J.C., Ntayi, J.M., Ahiauzu, A. (2015). The interaction effect of social exchanges on the relationship between organizational climate and psychological contract. *Leadership & Organization Development Journal, Vol. 36, No.* 7, pp. 833-848.
- 29. Kenny, D.A. Baron, R.M. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology, Vol. 51, No. 1*, pp. 1173-1182.
- 30. Li, S., Chen, Y. (2018). The relationship between psychological contract breach and employees' counterproductive work behaviors: the mediating effect of organizational cynicism and work alienation. *Frontiers in psychology*, *Vol. 9*.
- Liinamaa, J., Viljanen, M., Hurmerinta, A., Ivanova-Gongne, M., Luotola, H., Gustafsson, M. (2016). Performance-based and functional contracting in value-based solution selling. *Industrial Marketing Management*, Vol. 59, pp. 37-49.
- 32. Liu, Y., Liu, Z.Y., Ren, W.W., Forrest, J.Y.L. (2020). A coordination mechanism through relational contract in a two-echelon supply chain. *Journal of Retailing and Consumer Services, Vol. 56.*
- 33. Manxhari, S.M. (2015). The Influence of Motivation on Job Performance Case Study: Managers of Small and Medium Enterprises (SMEs), Kosovo. *ILIRIA International Review*, *Vol. 5, No. 2*, pp. 41-52.
- 34. May, D.R., Gilson, R.L., Harter, L.M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of occupational and organizational psychology*, *Vol. 77, No. 1*, pp. 11-37.
- 35. Millward, L.J., Hopkins, L.J. (1998). Psychological contracts, organizational and job commitment. *Journal of Applied Social Psychology, Vol. 28, No. 16*, pp. 1530-1556.
- 36. Nauman, R., Qamar, A. (2018). The impact of ethical leadership on employee productivity. *Journal of Management and Human Resource (JMHR), Vol. 1*, pp. 66-84.
- 37. Pawar, A. (2016). Employee value proposition: a collaborative methodology for strengthening employer brand strategy. *Journal of Resources Development and Management*, Vol. 16, No. 1, pp. 56-62.
- Piccolo, R.F., Greenbaum, R., Hartog, D.N.D., Folger, R. (2010). The relationship between ethical leadership and core job characteristics. *Journal of organizational behavior*, *Vol. 31*, *No. 2*, pp. 259-278.
- 39. Rich, B.L., Lepine, J.A., Crawford, E.R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of management journal*, *Vol. 53, No. 3*, pp. 617-635.
- 40. Schaufeli, W.B., Bakker, A.B. (2003). *UWES-utrecht work engagement scale: Test manual*. Department of Psychology, Utrecht University.
- 41. Schaufeli, W.B., Shimazu, A., Hakanen, J., Salanova, M., De Witte, H. (2017). An ultrashort measure for work engagement. *European Journal of Psychological Assessment*, *Vol. 35, No. 4.*

- 42. Soares, M.E., Mosquera, P. (2019). Fostering work engagement: The role of the psychological contract. *Journal of Business Research*, *Vol. 101*, pp. 469-476.
- 43. Stadtler, L., Van Wassenhove, L.N. (2016). Coopetition as a paradox: Integrative approaches in a multi-company, cross-sector partnership. *Organization Studies, Vol. 37, No. 5*, pp. 655-685.
- 44. Stojcic, N., Hashi, I., Orlic, E. (2018). Creativity, innovation effectiveness and productive efficiency in the UK. *European Journal of Innovation Management*, *Vol. 21, No. 4*, pp. 564-580.
- 45. Sumo, R., van der Valk, W., van Weele, A., Duysters, G. (2016). How incomplete contracts foster innovation in inter-organizational relationships. *European Management Review*, *Vol. 13, No. 3*, pp.179-192.
- 46. Thompson, M., Heron, P. (2006). The difference a manager can make: organizational justice and knowledge worker commitment. *The International Journal of Human Resource Management, Vol. 6, No. 3*, 383-404.
- 47. Timms, C., Brough, P., O'Driscoll, M., Kalliath, T., Siu, O. L., Sit, C., Lo, D. (2015). Positive pathways to engaging workers: Work–family enrichment as a predictor of work engagement. *Asia Pacific Journal of Human Resources*, *Vol. 53, No. 4*, 490-510.
- 48. Vander Elst, T., De Cuyper, N., Baillien, E., Niesen, W., De Witte, H. (2016). Perceived control and psychological contract breach as explanations of the relationships between job insecurity, job strain and coping reactions: Towards a theoretical integration. *Stress and Health, Vol. 32, No. 2*, pp.100-116.
- 49. Volery, T., Tarabashkina, L. (2021). The impact of organisational support, employee creativity and work centrality on innovative work behaviour. *Journal of Business Research*, *Vol. 129*, pp. 295-303.
- 50. Zheng, J., Wu, G., Xie, H. (2017). Impacts of leadership on project-based organizational innovation performance: The mediator of knowledge sharing and moderator of social capital. *Sustainability*, *Vol. 9*, *No. 10*, pp. 1893.
- 51. Zhou, Y., Huang, M., SL Tsang, A., Zhou, N. (2013). Recovery strategy for group service failures: The interaction effects between recovery modes and recovery dimensions. *European Journal of Marketing*, Vol. 47, No. 8, pp. 1133-1156.