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Kalsoom Shahzadi [*]
Sobia Khurram [**]

Self-efficacy and Innovative Work Behavior: The Role of Individual Ambidexterity and Formalization at Work Place in Pakistan

Abstract

This research examined psychological mechanism behind Innovative Work behavior (IWB) of knowledge workers through a moderated mediation model for answering how efficacy beliefs of individuals affect their innovative work behavior, and how organizational context is contingent upon it by influencing ambidextrous behavior of individuals. Data were collected from white collar employees in pharmaceutical sector (N = 308). Empirical results indicate that individual ambidexterity mediates the link between self-efficacy and Innovative Work Behavior, and formalization weakens the relationship between Individual ambidexterity and IWB. This research contributes to the personnel management literature by describing moderated mediation mechanism through which self-efficacy influences Innovative Work behavior, and guides practitioners by emphasizing that employees will be more innovative when they are given less formalized work environment to cope with conflicting activities needed for innovation.

Key words: Innovative Work behavior, Ambidexterity, Self-efficacy, Formalization, Centralization

Introduction

In response to the rapid global changes brought about by major technological shifts (Schwab, 2015; Ven, 1986; Verasai, 2017; Wall, 2018), innovation has always remained a preoccupation of researchers and practitioners (Campo, Díaz, & Yague, 2014; Jaiswal & Dhar, 2017). The extent of continuous innovation in an organization is believed to be linked with innovation by its employees (Janssen, 2000; Scott & Bruce, 1994) therefore IWB of employees is crucial to be studied (Hakimian, Farid, Ismail, & Nair, 2016; Hon & Lui, 2016; Lee & Hyun, 2016).

Organizations often focus on extrinsic factors of motivation to instigate desired behavior among employees but this strategy could be of no use in case of IWB because intrinsic motivation factors (e.g. efficacy beliefs) trigger such behavior among employees (Bandura, 1977; Hammond, Neff, Farr, Schwall, & Zhao, 2011; Ryan & Deci, 2000). Efficacy beliefs of employees help individuals to be

[*] *Kalsoom Shahzadi, Institute of Administrative Sciences, University of the Punjab, Lahore. kalsoom.adil0@gmail.com.*
[**] *Dr. Sobia Khurram, Assistant Professor, Institute of Administrative Sciences, University of the Punjab, Lahore. sobia.ias@pu.edu.pk.*

ambidextrous by managing conflicting goals of their work (Kauppila & Tempelaar, 2016). Keeping in view the importance of conflict management for innovation (Imran, Zaheer, Fatima, & Khan, 2014) individual ambidexterity could provide necessary mediating mechanism between self-efficacy and IWB but to date no attention has been paid towards this potential mediating effect to the best knowledge of researcher and consequently innovative work behavior process is not yet clearly understood in literature (Riaz, Xu, & Hussain, 2018). So, an analysis of intervening mechanism needs special attention.

The first objective of this research was to examine relationship between self-efficacy and innovative work behavior by testing what may happen within the psychological mechanism of the individuals when their efficacy beliefs influence innovative work behavior. In short, this study investigated the mediating role of individual ambidexterity between self-efficacy and IWB.

Organizations could lie on a continuum of organic and mechanistic structure depending upon their need to be flexible or rigid respectively. The mechanistic organizations require high level of formalization/centralization and vice versa (Lunenberg, 2012) In order to achieve conflicting purposes (exploration and exploitation) inherent in individual ambidexterity (Duncan, 1976) it is important to find out the appropriate space on this continuum.

The second objective of this study was to examine how formalization and centralization impact individual ambidexterity needed for demonstrating IWB. Precisely, this study examined the moderating role of formalization and centralization between Individual ambidexterity and IWB.

Theory and Hypothesis

This research has focused on developing three hypotheses. First hypothesis proposes relationship between individual ambidexterity and IWB. Second hypothesis looks for mediating effect of individual ambidexterity between the relationship of self-efficacy and IWB. Third, this study has hypothesized the second stage moderated mediation effect by organizational context (formalization/centralization), i.e. describing how these two structural aspects of organizational context influences IWB of employees by strengthening their ambidexterity. Figure.1 graphically depicts proposed model.

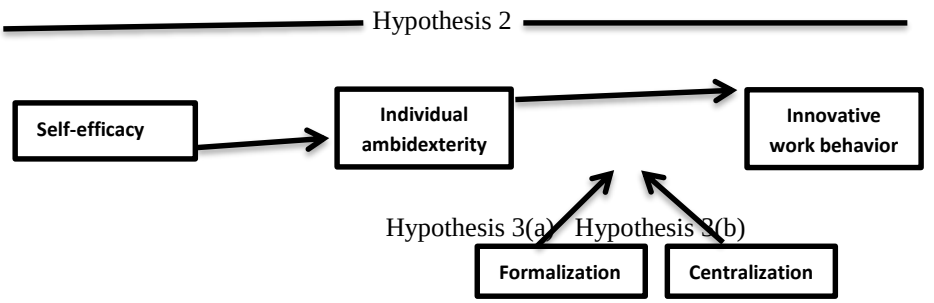

Figure.1

The Mediation Hypothesis

This study has followed classic rule of mediation analysis (Baron & Kenny, 1986) which suggests that implicit in mediation hypothesis are three supplementary assumptions: a) the relationship between self-efficacy and IWB, b) the relationship between self-efficacy and Individual ambidexterity, and c) the relationship between Individual ambidexterity and IWB. The relationships for (a) and (b) conditions can be found in existing literature (Hammond et al., 2011; Kauppila & Tempelaar, 2016), but the relationship between individual ambidexterity and IWB has been paid scarce attention in theory. Therefore this study has focused first on developing a relationship between individual ambidexterity and IWB and then on developing argument about mediating mechanism of individual ambidexterity between self-efficacy and IWB which is unique contribution of this study.

Past researches show that task conflict has significant positive impact on creativity (Janssen, 2000), and paves the way for innovation, by bringing in high quality (West & Anderson, 1996), diverse ideas and information (Jones, 1993; Sieber, 1974). Individual ambidexterity is the individuals' ability to manage the conflicting goals of exploitation and exploration (Bledow, Frese, Anderson, Erez, & Farr, 2009). Exploration and exploitation are two dimensions of competence used in innovation (Danneels, 2002). The innovative performance becomes higher when individuals engage in high levels of exploration and exploitation both, or when both these activities are in optimal balance. Therefore as an important antecedent to innovative performance, achieving an optimal balance between exploration and exploitation is crucial (Rosing & Zacher, 2017). The above arguments lead us to the following hypothesis

Hypothesis1: Individual ambidexterity is positively related with IWB.

The current study particularly emphasized on self-efficacy theory which addresses the linkage between efficacy beliefs of individuals and their coping behavior and assert that strength of self-belief can determine the extent to which individuals involve in challenging tasks, intensify efforts and sustain their span of concentration under uncertain situations (Bandura, 1977, 1986). Review of literature has showed that self-efficacy impacts on innovative behavior of employees (Hammond et al., 2011), because it determines the readiness to cope with change and prepare employees to initiate and intensify actions, and be persistent in a challenging environment. Self-efficacy also influences the ability of individuals to manage conflicting activities e.g. keeping an optimal amount of equilibrium between exploration and exploitation activities (individual ambidexterity) (Kauppila & Tempelaar, 2016). Since conflict is necessary for innovation, therefore successful management of the conflict has the potential to increase innovative behavior (Imran et al., 2014). Empirical evidence has also supported the assumption that when exploration and exploitation both are high or in optimal balance, the innovative performance becomes higher (Rosing, Frese, & Bausch, 2011). Keeping in view these relationships we assume that individual ambidexterity might be mediating the mechanism of innovative behavior, driven by efficacy beliefs of individuals. Researchers could not come across any study in the past which investigated individual ambidexterity as a mediating variable in the process leading to innovative behavior, driven by self-efficacy.

Hypothesis 2: Individual ambidexterity mediates the relationship between self-efficacy and innovative work behavior.

The moderated mediation Hypothesis

Social cognitive theory which belongs to seminal work of Bandura (1977, 1986) embraces the importance of context in shaping human behavior and argues that human cognition is subjected to its experiences, social interactions, and external medium. The contextual ambidexterity approach also suggests that organizational context influences individual capabilities involved in balancing the exploration/exploitation behaviors. A favorable organizational context gives decision making discretion to organizational members which make them able to allocate their time smartly on contradictory behaviors necessary for innovation (Gibson & Birkinshaw, 2004; Mom, Van den Bosch, & Volberda, 2007, 2009). This study aims to explain the structural impact on the ambidextrous behavior of individuals rather focusing on mere task performance. Formalization and centralization are two structural aspects of organizational context included in this study.

Formalization enables employees in getting role clarity (Adler & Borys, 1996), decrease role conflict and ambiguity (Hempel, Zhang, & Han, 2012), and increase commitment with work (Danish, Ramzan, & Ahmad, 2015) but its favorable impact remains as long as it allows flexibility and empowerment (Hempel et al., 2012). Formalization can provide guidelines to employees to cope with environmental dynamics but it might also restrict the employees to adhere with the rules and discourage experimentation necessary to deal with ambiguities (Pertusa & Molina, 2018). Hence it is assumed that:

Hypothesis 3(a): Formalization moderates the relationship between individual ambidexterity and IWB.

A supportive organizational culture is needed to enhance employee ambidexterity. Employees become ambidextrous when they experience an open attitude from their superiors, discretion to make decisions, appreciation to experiment and freedom to bring up new ideas. (Caniels, Neghina, & Schaetsaert, 2017). Power concentrated on the top can communicate a sense of distrust among employees and might direct them towards negative work behavior (Blau, 1968; Gouldner, 1960). High level of centralization in the organization impedes internal knowledge sharing (Pertusa, Zaragoza, & Claver, 2010) obstruct the flow of new ideas in the organization (Zheng, Yang, & Mclean, 2010), hamper innovation (Kalay, 2016) and restrict employees' freedom crucial for individual ambidexterity (Pertusa & Molina, 2018). Hence it is hypothesized:

Hypothesis 3(b): Centralization moderates the relationship between Individual ambidexterity and IWB.

Method

Sample and procedures

The survey was administered among white collar employees of pharmaceutical organizations based in Lahore (Pakistan). To study IWB mechanism, most relevant research site was pharmaceutical industry because this sector has major reliance on the IWB of their knowledge workers. According to an annual report of Pakistan Pharmaceutical Manufacturers Association published (PPMA) in 2017, despite the fact that pharmaceutical organizations in Pakistan are growing at a rate of 12% annually and forming USD 3.2 billion industry, and exporting products of

more than $200 million to 60 countries, pharmaceutical sector has not been studied extensively by the researchers (PPMA, 2017). This study has used Inter-continental Medical Statistics (IMS, 2016) generated ranking list based on the market value of pharmaceutical organizations of Pakistan. Out of top 100 organizations 25 were Lahore based organizations, out of which 10 organizations were selected through random sampling. Only white collar employees were target population because this study attempts to explain the IWB among employees working on knowledge intensive jobs. Blue collar jobs are prone to be replaced with modern technologies in the future but employees on white collar jobs could be scarce due to their unique expertise (Schwab, 2015; Ven, 1986; Verasai, 2017). Hence blue collar workers were excluded from the study. A sample of 317 respondents was derived from a population of 1320 white collar employees using random sampling procedure. After checking for response sets and missing values, nine responses were discarded and researchers proceeded with the rest of 308 usable responses. Of the 308 respondents 76% were males and 24% females. 89% respondents had post-graduation (52%) and graduation (37%) level education, hence generalization of results could be more valid to the knowledge intensive employees consistent with the requirement of this study.

Measures

Survey used for this study was comprised of 44 items belonging to four different sources. IWB was measured by adapting the nine item scale based on Janssen (2000). The original items were all in positive directions, therefore to identify response sets few items were reversed by including frequency of performing particular activity related to IWB (rarely, never etc.) e.g. an original item was stated as 'I Mobilize support for innovative ideas' and after adding frequency it was reversed as 'I never mobilize support for innovative ideas'. Formalization and centralization were each measured by four items used by Mustafa et al. (2019). Self-efficacy was measured by adopting 17 items (Sherer & Maddux, 1982) and 11 items in this scale were reverse worded by the original author. Individual ambidexterity was measured with10 items used by Caniels, Neghina, & Schaetsaert (2017). All items were measured on a five point Likert scale ranging 1-5 where 1= Strongy disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree.

Analytical Approach

The Structural Equation Modeling (SEM) was used to analyze data. SEM analyzes paths using various latent variables (LVs) which cannot be measured directly. SEM is variance based PLS (Partial least Square) approach which has significant advantages in case of complex model (Haenlein & Kaplan, 2004). For running analysis warpPLS (6.0) was used. It analyzed data in two stages. At first stage it made assessment of measurement model and next stage was comprised of structural model assessment.

Results

Evaluation of Measurement model

Measurement model is defined as SEM model that "specifies indicator for each construct and enables the construct validity"(Hair, Ringle, & Sarstedt, 2011). All the constructs under this theoretical model were assessed using loading and cross

factor loadings. Conventionally the loadings for measurement of each item should be higher for it is theoretically measured than to other items. Factor loadings of four items (3, 4, 7, and 9) in IWB scale were below the cutoff value of 0.5 due to the reverse worded questions. All the four items which are excluded were intentionally made reversed to identify the response sets. But the data revealed that reverse wording resulted in worse than good as prior research also suggest that reverse wording cause irritation and confusion among respondents (Sonderen, Sanderman, & Coyne, 2013). Similar was the case with self-efficacy scale. It was a longer scale consisting of 17 items of which 11 items were reversed. In self-efficacy scale items (1, 3, 8, 9, 12, 13, 14, 15, and 17) were having loadings below cut off values, in ambidexterity scale items 8 and 10 were having loadings below 0.5 and in centralization scale only first item loaded below the cut off value. After eliminating these items the rest of the data was analyzed.

Table 1 shows a comprehensive picture of the measurement model. Cronbach alpha values are reported along with respective composite reliability values of the constructs. All the cronbach alpha values meet the standard criteria of 0.7 except IWB and formalization which are also very close to threshold value. In the case of composite reliability all values are within the desirable limit i.e. below 0.95.

Discriminant validity was tested using two approaches; cross loadings and Fornell and Larker's criterion (1981). Discriminant validity can be defined as the degree to which measurement items are not the reflection of other variables in the model and the items are not confused with other variables. In first approach "an indicator's outer loading on the associated construct should be greater than all of its loadings on other constructs (i.e. the cross loadings)"(Hair, Hult, Ringle, & Sarstedt, 2016). Table.2 shows that all indicators have loadings greater with themselves than any of its cross loading with other constructs. Hence using first approach discriminant validity has been established. The second approach requires a comparison of square roots of average variance extracted values of each construct with its correlation with other constructs (Fornell & Larcker, 1981). The diagonal values should be higher than off diagonal values to prove discriminant validity. Table 3 shows the comparison of each constructs' square root of average variance extracted (AVE) with its correlation value with other constructs. The higher diagonal values have proved that discriminant validity exists among the constructs.

f measurement model

Items							Indicator
"I often create new ideas for difficult issues"				IWB1	0.719	0.694	0.813
"I always search out new working methods, techniques, or instruments"	IWB2	0.709					
"I always make important organizational members enthusiastic for innovative ideas"	IWB6	0.732					
"I often introduce innovative ideas in to the work environment in a systematic way".	IWB8	0.729					
"One of my problems is that I cannot get down to work when I should"	SE2	0.602	0.823	0.867			
"When I set important goals for myself, I	SE4	0.703					

rarely achieve them “						
“I give up on things before completing them”				SE5	0.796	
“I avoid facing difficulties”				SE6	0.697	
“If something looks too complicated, I will not even bother to try it”	SE7	0.719				
“When trying to learn something new, I soon give up if I am not initially successful “	SE10	0.544				
“When unexpected problems occur, I don’t handle them well”	SE11	0.585				
“I give up easily”						SE16
“Searching for new possibilities with respect to product/services, processes or markets”	AMB1	0.651	0.781	0.839		
“Evaluating diverse options with respect to product/services, processes or markets”	AMB2	0.668				
“Focusing on strong renewal of product/services or processes”	AMB3	0.681				
“Activities requiring quite some adaptability of you”	AMB4	0.648				
“Activities requiring you to learn new skills or knowledge”	AMB5	0.651				
“Activities of which a lot of experience has been accumulated by you”	AMB6	0.644				
“Activities which serve existing (internal) customers with existing services/products”	AMB7	0.556				
“Activities which you can properly conduct by using your present knowledge”	AMB9	0.521				
“Our work involves a large number of written rules and policies”	FORM1	0.583	0.677	0.805		
“A “rules and procedures” manual exists and is readily available to us”	FORM2	0.708				
“There is a complete written job description for most jobs”	FORM3	0.781				
“The organization keeps a written record of nearly everyone’s job performance”	FORM4	0.771				
“Even small matters have to be referred to someone higher up for a final answer”	CENT2	0.645	0.724	0.846		
“I have to ask my boss before I do almost anything”	CENT3	0.896				
“Any decision I make has to have my boss’s approval”				CENT4	0.857	

onbach alpha, CR= Composite reliability

Table. 2 Cross loadings

	SE	IWB	AMB	FC
SE2	**0.602**	0	-0.07	0.0
SE4	**0.703**	-0.036	-0.004	-0.
SE5	**0.796**	-0.104	0.093	0.0
SE6	**0.697**	0.076	0	-0.

SE7	**0.719**	0.063	0.036	-0.
SE10	**0.544**	-0.006	-0.051	0.0
SE11	**0.585**	-0.007	-0.005	0.0
SE16	**0.694**	0.023	-0.034	0.0
IWB1	0.082	**0.719**	-0.064	-0.
IWB2	-0.035	**0.709**	0.01	-0.
IWB6	-0.022	**0.732**	0.089	0.2
IWB8	-0.025	**0.729**	-0.036	-0.
AMB1	0.004	-0.045	**0.651**	-0.
AMB2	-0.026	0.032	**0.668**	-0.
AMB3	0.008	-0.081	**0.681**	-0.
AMB4	-0.049	0.027	**0.648**	0.0
AMB5	0.026	0.088	**0.651**	0.1
AMB6	0.051	-0.045	**0.644**	0.1
AMB7	-0.082	0.042	**0.556**	0.0
AMB9	0.072	-0.012	**0.521**	0.0
FORM1	0.11	-0.09	0.061	**0.5**
FORM2	-0.021	0.137	0.034	**0.7**
FORM3	-0.067	-0.149	0.031	**0.7**
FORM4	0.003	0.093	-0.109	**0.7**
CENT2	0.074	0.058	0.057	-0.
CENT3	-0.058	-0.096	0.02	0.0
CENT4	0.005	0.056	-0.064	0.0

Note: SE= self effcacy, IWB= Innovative Work behavior, AMB= Individual ambidexterity, FORM

Table.3 Fornell and Larcker's (1981) Criterion

	IWB	SE	AMB	FC
IWB	**0.722**	0.245	0.459	0.2
SE	0.245	**0.672**	0.212	0.1
AMB	0.459	0.212	**0.63**	0.1
FORM	0.237	0.12	0.15	**0.7**
CENT	-0.036	-0.186	0.047	0.0

Note: Square roots of AVE(diagonal), Pearson correlations are off diagonal

Evaluation of Structural Model

Before testing hypothesis it is important to check collinearity among the predictor variables (Hair et al., 2016). Variance Inflation Factor refers to multicollinearity which is high level of correlation among latent variables that are hypothesized to affect dependent variables. A value lower than 5 is recommended because high level of multicollinearity value can cause unrealistic results. The results for full collinearity of variables are presented in Table 4; all the values are less than 5 which indicate that all constructs are not correlated to each other.

Table.4 Values for full collinearity VIFs

Variables	IWB	ISE	AMB	FORM	CENT
VIF	1.377	1.145	1.297	1.096	1.077

Relationship between Individual ambidexterity and IWB

Path coefficient value (β= 0.46, $p<0.01$) suggested a strong positive relationship between Individual ambidexterity and IWB hence hypothesis 1 (Individual ambidexterity➔IWB) is supported in our study. Individual ambidexterity was found to cause 21% variance in IWB ($R^2 = 0.21$).

Mediation analysis

Hypothesis 2 proposed mediation by Individual ambidexterity between Self-efficacy and IWB. This study has analyzed mediation in four steps. A variable acts as a mediator when the following four conditions are fulfilled (Muller, Judd, & Yzerbyt, 2005); 1) the relationship between independent and dependent variable is significant in the absence of mediator, 2) the independent variable should have significant impact on mediator, 3) the mediator should have significant relationship with dependent variable when independent variable is controlled, 4) the indirect effect of mediator should have significant effect on previously established path coefficient value between predictor and outcome variable. Table 5 shows that the mediation model proposed in our study fulfill all these conditions. There is significant relationship between self-efficacy and IWB (β = 0.19), self-efficacy and individual ambidexterity (β = 0.26), individual ambidexterity and IWB (β = 0.41).

The indirect effect of mediator is significant (β = 0.11, $p<0.01$). The introduction of individual ambidexterity (mediator) between self-efficacy and IWB reduces the magnitude of path coefficient significantly (i.e. from 0.30 to 0.19) however the relationship between predictor and outcome remained significant hence partial mediation exists. The significant value of indirect effect leads us to calculate VAF (variance accounted for) value to determine the size of this indirect effect (0.11) in relation to total effect (0.19+0.11= 0.3): VAF= 0.11/0.3= 0.37. VAF values between .20 and .80 depict partial mediation (Hair et al., 2016).

Table 5. Path Coefficients for Mediation model

Hypothesis to be Tested	Beta Values (β)	Significance (P value)	Acceptance/Rejection of Hypothesis
Self-efficacy has positive relationship with innovative work behavior of individuals. (in the absence of mediator)	β = 0.30	P<.001	Hypothesis is supported
Self-efficacy has positive relationship with innovative work behavior of individuals (in the presence of mediator)	β = 0.19	P< .001	Hypothesis is supported
Self-efficacy has positive relationship with individual ambidexterity	β = 0.26	P< .001	Hypothesis is supported
Individual ambidexterity has positive relationship with innovative work behavior.	β = 0.41	P< .001	Hypothesis is supported
Individual ambidexterity mediates the relationship between self-efficacy and innovative work behavior.	β = 0.11	P<.001	Hypothesis is supported

Moderated mediation analysis

A second stage moderated mediation was proposed by adding boundary conditions (formalization and centralization) to the mediation model. Table 6 shows that the beta values of the moderating effects came out significant only for formalization ($\beta = 0.15$, $p<0.01$) but the conditional effect of centralization was non-significant. In the presence of formalization, the mediation effect was slightly reduced from 0.11 to 0.10. The negative sign with beta coefficient suggest that low formalization is desired among individuals to manage conflicting behaviors needed for IWB. Hence stage II moderated mediation by formalization is confirmed.

Table 6.Path Coefficients for moderated mediation

Hypothesis to be Tested	Beta Values (β)	Significance (P value)	Acceptance/Rejection of Hypothesis
Self-efficacy has positive relationship with innovative	β = 0.19	P< .001	Hypothesis is supported

work behavior of individuals.			
Self-efficacy has positive relationship with individual ambidexterity	$\beta = 0.26$	P< .001	Hypothesis is supported
Individual ambidexterity has positive relationship with innovative work behavior.	$\beta = 0.39$	P< .001	Hypothesis is supported
Individual ambidexterity mediates the relationship between self-efficacy and innovative work behavior.	$\beta = 0.101$	P<0.01	Hypothesis is supported
Formalization moderates the relationship between individual ambidexterity and IWB..	$\beta = -0.15$	P<0.01	Hypothesis is supported
Centralization moderates the relationship between individual ambidexterity and IWB.	$\beta = -0.03$	P>0.01	Hypothesis not supported

Note: The path coefficient values for centralization is negative but non-significant.

Discussion

The basic objective of this study was to investigate the IWB process among knowledge intensive employees so that organizations could anticipate the talent scarcity in the world by retaining the highly innovative people or training the valuable staff for upcoming talent crisis. Building on the seminal work of Bandura (1977), this study had assumed that general self-efficacy drives the necessary mechanism that leads to innovative behavior. The results of this study have reinforced the theory of Bandura (1977) and state that relationship between self-efficacy and IWB is significantly positive. In the light of theory, a psychological mechanism involved in IWB was proposed by including self-efficacy and individual ambidexterity as possible contributors. Two boundary conditions (formalization and centralization) were also investigated through stage II moderated mediation model.

This study concludes that self-efficacy (SE) is significantly associated with IWB of knowledge intensive (white collar) employees and individual ambidexterity mediates this mechanism. Employees with high self-efficacy levels have the ability to balance conflicting activities which are necessary to perform IWB. But formalization might hamper their ability to balance conflicting activities necessary to perform IWB.

Theoretical Implications

This study has contributed to the existing literature by responding a recent call for research to explain the IWB process at individual level (Riaz et al., 2018). Prior research has examined the relationship between self-efficacy and IWB (Hammond et al., 2011), and also between self-efficacy and Individual ambidexterity (Rosing et al., 2011) but the relationship between Individual ambidexterity and IWB was paid scarce attention. This gap invoked us to investigate potential mediating effect of individual ambidexterity between the relationship of self-efficacy and IWB which is the unique contribution of this study. Second, although the importance of contextual effects for efficacy beliefs and individual behavior is well recognized in existing literature but the impact of organizational context in terms of formalization and centralization was paid scarce attention. This research has included these structural components as boundary conditions to the mediation model.

The results of our first hypothesis indicate that individual ambidexterity is significantly related with IWB consistent with existing theory which states that since conflict is necessary for innovation, therefore successful management of the conflict has the potential to increase innovative behavior (Imran et al., 2014).

The acceptance of first hypothesis led us to analyze the second hypothesis which has proposed individual ambidexterity as a mediator between self-efficacy and IWB. This mediating relationship had not been investigated before to the best knowledge of the researchers. The results of this study have supported this assumed mediation mechanism between self-efficacy and IWB. In prior research self-efficacy was found to be positively related with ambidextrous behavior of individuals (Kauppila & Tempelaar, 2016). The relationship between individual ambidexterity and IWB is also found significant in our study hence the mediation conditions are fulfilled (Barron & Harrington, 1981). The indirect effect SE➔AMB➔IWB also came out significant but the relationship between self-efficacy and IWB remained significant in the presence of mediator hence partial mediation is supported in our study.

The third hypothesis addressed the potential moderating effects of formalization and centralization on mediation model. Only formalization turned out as significant moderator on second stage moderated mediation model and negative sign of beta coefficient was consistent with the existing theory which states that highly standardized conditions might restrict the use of individual capabilities of the workers with high self-efficacy levels (Mustafa, Glavee-Geo, Gronhaug, & Saber, 2019) forcing them to adhere with the rules and discourage experimentation necessary to deal with ambiguities (Pertusa & Molina, 2018).

Practical implications

Organizations must focus on intrinsic motivation factors that might promote self-efficacy levels of individuals in anticipation of future talent scarcity especially in the context of developing nations like Pakistan. Conflicting activities need to be incorporated in the job description of knowledge employees in order to train them for future talent needs but the contextual impact of formalized environment is also important to be managed as it has a significant impact on the IWB of employees.

Limitations and future research

The effect of organizational context (formalization and centralization) on the relationship between self-efficacy and ambidextrous behavior of individuals is well grounded in literature. The future researchers can focus on these moderating relationships. Secondly moderating effect of boundary conditions (formalization and centralization) on the mediating relationship (Self-efficacy➔Individual ambidexterity➔IWB) could be tested on a different sample belonging to different context and sector. The IWB process investigated in this study could also be tested in the public sector context and a comparison could be made between public and private sector employees. The sample in this study was based only on white collar employees. Future researches might include blue collar workers to make comparison between the levels of IWB among employees working on different types of jobs.

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