P-ISSN: 2709-6254	Journal of Development and Social Sciences	Jan-Mar 2023, Vol.4, No.1
O-ISSN:2709-6262	http://dx.doi.org/10.47205/jdss.2023(4-I)09	[102-112]

Journal of Development and Social Sciences
www.jdss.org.pk

RESEARCH PAPER

Impact of Ambidextrous Leadership on Innovative Work Behavior: Mediating Role of Individual Ambidexterity

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ABSTRACT

This study relies on the COR theory to study the effect of ambidextrous leadership on innovative work behavior. Current study has taken into account the role of ambidextrous leadership in creating employee level ambidexterity (i.e. exploration and exploitation abilities) which in turn improves employees' innovative behavior. Data were collected from 323 faculty members from the twin cities via self-administrated and electronic questionnaires at one point in time and examined hypothesized relationship with mediation through SPSS 25 and the Process Macro Model 4. The results show that ambidextrous leadership increases the employee innovative work behavior through employee individual ambidexterity.

KEYWORDS Innovative Work Behavior, Ambidextrous Leadership, Employee Individual Ambidexterity

Introduction

Striving in today's challenging environment requires organizations to be innovative as it promises the competitive advantage to the organization (Anderson, Potočnik, & Zhou, 2014). Innovation in work includes idea generation, idea promotion and idea realization (Scott & Bruce, 1994), which in turn improves organizational products, processes and work methods (Yuan & Woodman, 2010). Various determinants of innovative work behavior have been studied in terms of roles of leadership including transformational leadership (Grošelj, Černe, Penger & Grah, 2021), ethical (Ullah, Mirza & Jalil, 2021), servant leadership (Iqbal, Latif & Ahmad, 2020). Ambidextrous leadership has been the focus of research recently which facilitates innovation in terms of idea generation and risk taking within organization making it more efficient and improving exiting knowledge and skills in the organization (Gibson & Birkinshaw, 2004; He & Wong, 2004; Zacher & Rosing, 2015). In addition to leadership ambidexterity, there are a handful of studies which focused their attention on the role of organizational context in creating employee ambidexterity (Rosing et al., 2011, Zacher & Rosing, 2017; Asif, 2017; Kim, 2017; Ajayi, Odusanya, & Morton, 2017). Employee ambidexterity has been studied with various determinants including role of empowering culture, knowledge sharing culture (Caniëls, Neghina, & Schaetsaert, 2017) decentralized decision making, team work, reduced formal procedures Ajayi, Odusanya, & Morton, 2017). As individual level ambidexterity is needed (Jansen et al., 2006), also there exists a huge gap which needs to be filled, current study is one of its kinds to investigate ambidexterity theory of leadership for innovation in non-Western culture, Pakistan.

Keeping in view the importance of innovative work behavior in organizations and in order to add to the existing literature in understanding its determinants, current study has taken into account the role of ambidextrous leadership in creating employee level ambidexterity which in turn improves employees' innovative behavior.

Literature Review

Ambidextrous Leadership and Innovative Work Behavior

This study relies on the ambidextrous theory of leadership to study the effect of ambidextrous leadership on innovative work behavior. According to Rosing, Frese & Bausch (2011), leaders' opening behavior fosters employees' exploration behavior and their closing behavior facilitates employees' exploitation behavior which is essential for them to exhibit innovative behavior. On the other hand, leaders need to continuously monitor their leading styles and should flexibly switch most effective leading styles. Exploitation and exploration an essential component of learning organization was first introduced by March (1991). Exploitation is the enhancement of existing competencies, technologies and existing models. Exploration is engaging in experimentation and looking for alternative solutions. Prior research has shown that these two lead towards increased innovation (Benner & Tushman, 2003; Gibson & Birkinshaw, 2004; He & Wong, 2004).

Ambidexterity has gained considerable attention in the last two decades (Tushman & O'Reilly, 1996). It has been studied at the individual and team level (Kauppila & Tempelaar, 2016; Mom, Van Den Bosch & Volberda, 2007). It refers to the usage of both hands efficiently at the same time. According to Markides (2013), ambidexterity is essential for business model innovation. According to Duc, Tho, Nakandala & Lan (2020), a study conducted by in the retail service industry in Vietnam, ambidextrous leaders promote team learning which then leads to team innovation.

Innovative work behavior is work related behavior where employees are involved in idea generation and idea implementation (West, 2002). These behaviors lead towards improving the performance of organization (Janssen, 2005). According to a study conducted in telecom sector by Usman, Ghani, Islam, Gul & Mahmood (2020), ambidextrous leaders act as catalyst towards employees' innovative work behavior where leaders encourage employees to exhibit innovative behaviors to thrive at work by engaging in exploration and exploitation behaviors.

Similarly, ambidextrous leadership enhances employees' innovative performance through their opening behavior to facilitate exploration and closing behavior to encourage exploitative behavior (Rosing, Frese & Bausch 2011). At the same time, leaders switch between the most effective leadership styles so as to foster innovation (Wang, Eva, Newman & Zhou, 2020). Furthermore, leaders encourage followers in idea generation by allowing them to do experimentation, discovery and risk taking through their explorative behavior while with their exploitative behavior, they allow followers to achieve efficiency, refinement and adherence to rules and guidelines for the implementation of ideas (Miron-Spektor, Erez, & Naveh, 2011, Mumford, 2000; Birkinshaw & Gupta 2013). On the other hand, when leaders are low on either their opening or closing behaviors, employees' innovative behavior also degrades. So, leaders need to be trained in ambidextrous leadership to improve employees' innovative performance (Alghamdi, 2018).

This leads to first hypothesis:

H1: Ambidextrous leadership is positively related to innovative work behavior

Ambidextrous Leadership and Employee Ambidexterity

Ambidextrous leaders encourage employees to discover ideas and take risks by their opening behaviors and to refine and implement ideas through their closing behaviors towards employees (Alghamdi, 2018). According to ambidexterity theory of leadership for innovation (Rosing et al., 2011), leaders' opening behavior aids in creating employees' explorative behavior and their closing behavior creates employees' exploitative behavior

(Alghamdi, 2018). So employees would be engaged in exploration and exploitation when leadership styles support such behaviors. Ambidextrous leadership has positive influence at individual level (Tung, 2016), team level (Zacher & Rosing, 2015) and organizational level (Trong Tuan, 2017).

The focus of research has been on organization ambidexterity mostly where the essence of exploration and exploitation is readily studied but the work on individual level ambidexterity is still sparse (Bonesso, et al., 2014; Good & Michel, 2013) though few studies show that individual ambidexterity is the way towards organization ambidexterity (Good & Michel, 2013; Gibson & Birkinshaw, 2004; Mom, van den Bosch, & Volberda, 2007, 2009). Ambidextrous employees are important more in today's dynamic environment (Smith & Tushman, 2005; Good & Michel, 2013). According to Gibson & Birkinshaw (2004), organizational ambidexterity is achieved by the cumulative factors of individual abilities and organizational factors.

In organizational factors, researchers have identified the role of leadership in achieving individual level ambidexterity in organization (Mom et al., 2009; Lin and McDonough (2011). According to a study conducted by Ajayi, Odusanya & Mortan (2017), in SMEs, small organizations need to continuously look for opportunities to improve their internal capabilities and explore new ways to compete in dynamic context of today. For this, employee ambidexterity also plays its part which is facilitated by organizational context.

H2: Ambidextrous leadership is positively related to employee individual ambidexterity.

Mediating Role of Employee Ambidexterity in between the relationship of Ambidextrous Leadership and Innovative Work Behavior

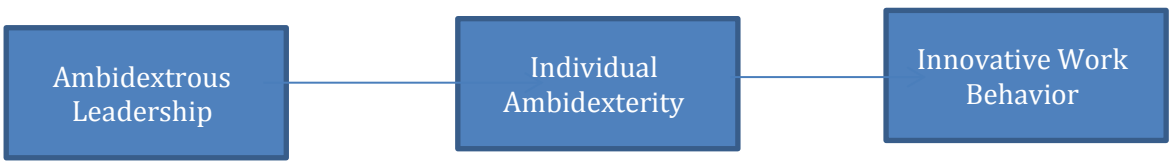
According to a study by Caniëls & Veld, employee ambidexterity is positively associated with innovative work behavior where individuals high on exploration and exploitation exercise more innovative behaviors. They further added, employees who specialize either in explorative or exploitative aspect show innovative wok behavior. Another study by Zacher, Robinson, & Rosin (2016) also shows that innovative performance is high when employees have ambidexterity.

Similarly, the results of a study conducted by Shahzadi & Khurram (2020), showed that the underlying mechanism to improve innovative behavior is through self efficacy where employee ambidexterity acts as a mediator. They further added, innovation is followed by conflict and when it is managed through ambidextrous employees, leads towards innovative work behavior (Shahzadi & Khurram, 2020; Imran et al., 2014)

H3: Employee ambidexterity is positively related to innovative work behavior

H4: Employee ambidexterity mediates the relationship between ambidextrous leadership and innovative work behavior

Research Model



Material and Methods

Sample and Procedure

This study is based on data from 350 employees of higher educational institutions i.e. universities. As teachers are involved in leaning about new knowledge and technologies, also they are interested in knowledge generation and dissemination (Thurlings, Evers & Vermeulen, 2014), it is a promising field to study their innovative work behavior. A questionnaire was developed to collect data from university teachers who are on visiting, contract and regular employment. Convenience sampling approach was used for data collection. The questionnaire was e-mailed to teachers of Air University, National University of Modern Languages, International Islamic University, Women University, Quaid-e Azam University and Bahauddin Zakariya University. The questionnaire was accompanied by cover letter explaining the purpose of study and ensuring the anonymity of respondents. After collecting data, it was scanned and incomplete questionnaires were discarded. So, at the end the completed responses were 323 which were further used for hypotheses testing.

Measures

Existing scales were adopted to measure each construct.

Innovative Work Behavior

Innovative work behavior was measured by nine-item scale having three dimensions: idea generation having three items, idea promotion with three items and idea realization containing three items. This scale is adopted from Janssen (2000), which is based on scale originally developed by Scott and Bruce (1994). Responses on these items were measured on five point likert scale where 1= never and 5= always. The reliability is 0.893.

Ambidextrous Leadership

This construct was measured with 14-items scale given by Rosing et al (2011). It has two dimensions of opening leader behaviors with 7-items and closing leader behaviors with 7-items. The items were answered on a 5-point scale ranging from 1 (not at all) to 5 (always). The reliability is 0.874.

Employee Ambidexterity

This construct was measured by Mom, Van Den Bosch, and Volberda (2007). It's a two dimensional scale of explorative activities with 5-items and exploitative activities with 6-items. All items were rated on five 5-point likert scale ranging from 1=to a very small extent to 5= to a very large extent. The reliability is 0.899.

Results and Discussion

Confirmatory factor analysis (CFA) was conducted in AMOS 23 to test the construct validity of the variables (Hu & Bentler, 1999) ambidextrous leadership, individual ambidexterity and innovative work behavior. The Cronbach alpha value for all variables is greater than its threshold value of 0.70. The off-diagonal components in Table 1 are assessed correlations between all constructs, and their values are significantly less than 0.90, which holds all the condition for discriminant validity (Fornell & Larcker, 1981). Multiple regression analysis was used to analyze the direct and indirect effects through SPSS 25 and Process Macro by Hayes model 4, Table 4 displays the results of multiple regression and the results of mediation analysis.

The mean, standard deviation, skewness, kurtosis and correlation among variables are presented in Table 2 and 3 respectively. The current study used a 5-point Likert scale for responses hence, the mean values ranged between 1 and 5.

Table 1
Model Fit Measures

Measure	Estimate	Threshold	Interpretation

CMIN	1825.871	--	--
DF	857	--	--
CMIN/DF	2.131	Between 1 and 3	Excellent
CFI	0.846	>0.95	Need More DF
SRMR	0.054	<0.08	Excellent
RMSEA	0.059	<0.06	Excellent

The sample size was 323, out of which 158 were males (48.9%) and 165 (51.1%) were females. Among them were 38.1% single and 61.9% married with ages range from 20 to 41 or above. The data showed that 8% were in range of 20-25 years, 27.6% in range of 26-30 years, 30.3% in range of 31-35 years, 21.1% in age range of 36-40 years and 13% were 41 or more years older. The qualification of 4% was Masters, 64.7% was MPhil/MS, 29.7% with PhD degree and 1.5% were holding Post doc. This showed that most institutions were complying to the minimum qualification requirement of HEC (Higher Education Commission). These institutions also have good percentage of PhD holders which might also likely to increase in future. Upon looking at the designation data, it was observed that 61.9% were employed as Lecturers, 25.7% as Assistant Professors, 6.8% as Associate Professors, and only 5.6% as Professors. Among them, 17.6% were visiting faculty members, 22.3% were on contractual basis and 60.1 % were regular faculty members. This showed that most of the universities provide job security to their faculty members. Out of 323 members, 61.9% had job experience of 1-5 years, 22.3% having 6-10 years, and 15.5% with experience of 11 years or above. This showed that most of the faculty members were young to the institutions. Upon analyzing the earning data, it was observed that 9.3% were earning less than Rs/- 40,000 per month, 39.6% with Rs/- 41,000-80,000, 29.1% with Rs/- 81,000-120,000 and 22% were earning Rs/- 121,000 or above. Those with earning less than or equal to Rs/- 40,000 were mostly visiting faculty members, where they are paid based on number of subjects they teach, and credit hours spent. This data also showed that most institutions were paying competitive pay structure to their faculty members.

Mean value of ambidextrous leadership was 3.3629 which showed that respondents believe that moderate to high level of ambidextrous leadership existed in their institutions. Such leadership also created ambidextrous employees which was evident with the mean value of 3.3108. Similarly, most of the faculty members agree that social capital and innovative work behavior was developed as indicated by the mean values of 3.9077 and 3.6949 respectively.

Table 2
Descriptive Statistics

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
AL_M	323	3.3629	.66944	-.208	.136	-.292	.271
IA_M	323	3.3108	.74910	-.432	.136	.268	.271
SC_M	323	3.9077	.71644	-.772	.136	.262	.271
IB_M	323	3.6949	.69088	-.647	.136	.530	.271
Valid N	323						

Table 3
Correlations

		α	AL_M	IA_M	SC_M	IB_M
AL_M	Pearson Correlation	.93	1	.621**	.469**	.557**
	Sig. (2-tailed)			.000	.000	.000
	N		323	323	323	323

IA_M	Pearson Correlation	.85	.621**	1	.429**	.563**
	Sig. (2-tailed)		.000		.000	.000
	N		323	323	323	323
IB_M	Pearson Correlation	.94	.557**	.563**	.596**	1
	Sig. (2-tailed)		.000	.000	.000	
	N		323	323	323	323
**. Correlation is significant at the 0.01 level (2-tailed).						

Table 4
Mediation Analysis

Sr. No	Variable	R	R^2	B	SE	t	p
	Step-1	.62***	.39***				
1	Direct effects of AL_M on IA_M			.70***	.05	14.20	.00
	Step-2	.62***	.39***				
2	Direct effect of AL_M on IB_M			.35***	.06	6.05	.00
3	Direct effects of IA_M on IB_M			.33***	.05	6.32	.00
	Step-3	.56***	.31***				
4	Mediation of IA_M b/w AL_M & IB_M			.58***	.05	12.03	.00

Indirect Effect and Significance using normal distribution

	Effect	SE	Z	P
Sobel	.23	.04	5.76	.00

Bootstrap results for indirect effects

	M	SE	LL95% CI	UL 95% CI
Effect	.23	.06	.13	.35

Ambidextrous leadership directly related to individual ambidexterity, ($\beta = 0.70$, $p < .001$) verified H2. The results in Table 4 supported H1 and H3, as indicated by the regression coefficients and associated significance level ($\beta = .35$, $p < .001$) and ($\beta = .33$, $p < .001$). Moreover, the results for the indirect effects confirm the significant mediating role of employee ambidexterity in the relationship between ambidextrous leadership and innovative work behavior (Indirect effect = .23, 95% CI with LL = .13 and UL = .35). Similarly H4 hypothesis has been accepted.

Conclusion

The purpose of this study was to investigate the impact of ambidextrous leadership on innovative work behavior of employees and explain whether employee ambidexterity influence innovative work behavior. Drawing upon COR theory, the study hypothesized that ambidextrous leaders positively influence employees' exploration and exploitation behavior which in turn improves their innovation at work.

The current study found support for the proposed model with all the hypotheses being accepted. The study contributed to the extant leadership literature in several ways. First, the relationship between ambidextrous leadership and employee innovative behavior is investigated in the developing country context, Pakistan where management research has been neglected for so long (Nauman, Zheng, Basit, 2020). Second, we extended the literature

of ambidextrous leadership and innovative work behavior by providing insight on how these are related through the phenomenon of employee ambidexterity.

Implications

Our study has important practical implications for managers. First, in context of Pakistan, despotic leadership prevail, and employees need to obey their supervisors because there is a high-power distance and employees accept power inequalities (Nauman et al., 2018). In such context, ambidextrous leaders through their exploitative and explorative behavior reflect positive leadership and boost up same behavior in employees which improves their innovativeness at work (Alghamdi, 2018). This in turn has implications towards organization also by increasing its performance (Janssen, 2005). In light of these aspects, managers should show positive leadership rather than negative types of leadership to get the optimum results out of employees.

Another implication for HR managers is that they should encourage ambidextrous leadership behavior by incorporating such behavioral aspects during recruitment and promotion. Meanwhile, discouraging negative leadership behavior by enforcement of code of ethics and holding such people accountable for their behaviors through penalties.

Recommendation

Current study has few limitations. First, self-administered questionnaires were used to collect data which can cause common method bias. Though, it was addressed to some extent by ensuring the anonymity and following the guidelines provided by (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Second, non-probability sampling technique, convenience sampling was used which restricted the generalizability of results. For this, in future, probability sampling techniques may be used. Third, cross-sectional design was used which might bias the results. In future, longitudinal design could be used to validate the results and look for possible causal relationships. Future studies need to validate current model in other sectors and industries. Current study can also be tested by studying the effect of other moderating variables.

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