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EMPIRICAL STUDY ON THE ANTECEDENTS PREDICTING ORGANIZATIONAL INNOVATION OF THE SMALL AND MEDIUM ENTERPRISES IN BANGLADESH

Estudo empírico sobre antecedentes que antecipam a inovação organizacional das pequenas e médias empresas em bangladesh

Luo Fan[1], Md. Aftab Uddin[1,2] , Anupam Kumar Das[2,3]
1 School of Management, Wuhan University of Technology, P.R. China
2 Faculty of Business Administration, University of Chittagong, Bangladesh
3 School of Management, Shanghai University, P.R. China
E-mail: sailluof@126.com, mdaftabuddin@cu.ac.bd, dasanupam@cu.ac.bd

Abstract: In the era of global competition, innovation has become a central object to obtain a sustainable future by an organization outrunning their counterparts. Based on the questionnaires survey on Ready-made Garment (RMGs) and small and medium enterprises (SMEs) in Bangladesh, this empirical study aims at finding the impact of transformational leadership (TL), knowledge management (KM), citizenship behavior or positive deviance (PD), and intrinsic motivation (IM) on organizational innovation (OI). Stratified random sampling has been used for collecting the responses of the SMEs in Bangladesh. Data analysis shows that TL, KM, IM, and PD can predict OI significantly. Limitations, implication and further research directions have also been discussed in this article.
Key words: Transformational leadership; Knowledge management; Positive deviance; Intrinsic motivation; Organizational innovation

Resumo. Na era da competição global, a inovação tornou-se um objetivo central para obter um futuro sustentável por uma organização superar seus contrapartes. Este estudo empírico, com base na pesquisa de questionários sobre vestuário pré-fabricado (RMGs) em pequenas e médias empresas (PMEs) no Bangladesh, tem como objetivo encontrar o impacto da liderança transformacional (TL), gestão do conhecimento (KM), comportamento de cidadania ou desvio positivo (PD) e motivação intrínseca (IM) na inovação organizacional (OI). A amostragem aleatória estratificada tem sido utilizada para recolher as respostas das PME em Bangladesh. A análise de dados mostra que TL, KM, IM e PD podem prever de forma significativa a OI. Limitações, implicações e outras orientações de pesquisa também foram discutidas neste artigo.
Palavras-chave: Liderança transformacional; Gestão do conhecimento; Desvio positivo; Motivação intrínseca; Inovação organizacional.

INTRODUCTION

In the era of global competition, innovation has become a central object to have a sustainable future for an organization outrunning their counterparts. The past century has seen the rapid advances in innovation. OI has been defined as the successful implementation of noble and useful creative ideas within an organization (Radzi, Hui, Jenatabadi et al., 2013). Amabile (1988) advocated that creative ideas can be 'anything from ideas for new products, processes, or services within the organization's line of business to ideas for new procedures or policies within organization itself.' Recently, researchers have paid interests in this field because of its critical role in the competitive business world for having sustainable performance. Empirical studies mirrored that the antecedents predicting OI are TL, KM, citizenship or PD, organizational climate, and IM which are virtually mentioned in several studies. Besides, organization needs employees' dedication, cooperation, and a little extra effort for achieving competitive edge. This little extra effort by the voluntary works of employees is really a matter for the organizations to improve it further (Yilmaz and Tasdan, 2009). Employees' creative and innovative behavior is the key resource for sustainability. If an individual gets bored, it is irrelevant to expect any creative contribution from him. Amabile (1988) posits that individual's propensity to work and degree of enthusiasm for the activity is the primary condition of IM. Research showed that IM is one of the precursors to the employees' creativity which leads the firm into the OI. It is imperative for an organization to pile tangible and tacit resources to accomplish OI. A company's excellence is linked with the utilization of its knowledge resources, i.e. the knowledge of the organization and its employees (Chait, 1999; Ericsson and Avdic, 2003). Hence, dynamic organization requires handful leadership to turn all those antecedents for arousing individual intrinsic motivation for leading to OI.

THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

The theory of reasoned action (TRA) suggests that immediate antecedent of any behavior is the intention to perform that behavior approved by his social pressure. In the words of Ajzen and Madden (1986, p.454), "the stronger a person's intention, the more the person is expected to try, and hence the greater the likelihood that the behavior will actually be performed." Ajzen (1991) theorized in 'the theory of planned behavior (TPB)' that individual's behavioral intention leading to behavior is contingent upon individual's perceived control of his/her behavior, attitude, and subjective norms. It exhibits, in addition to the previous theory; that those employees who are certain of their positive outcome by their controlled behavior tend to behave positively. Self-determination theory (SDT) opined on the degree to which an individual decision is self-motivated and determined without external interference. Ryan and Deci (2000) noticed that three needs-competence, relatedness, and autonomy-that

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*Corresponding author is reachable at mdaftabuddin@cu.ac.bd

affect the inherent growth tendencies towards the subjects. Social exchange theory (SET), proposed by Blau (1964), and the norms of reciprocity (NR) posited by Gouldner (1960) forwards these same tenets a step further from a different perspective that employees feel obliged to reciprocate more if their employer value their contributions and efforts they give in. First three theories revealed that individuals have inherent needs to create and grow and, moreover, that behavior has been regulated by their intention, behavior control, and social approval or disapproval. Social approval or disapproval and perceived behavioral control by them have been affected by the organizational retreat and recognition. SET and NR theories go further that when organization treats employees well, it makes them morally, personally, and socially responsible to bounce it back to organization's wellbeing. In views with the perceived organizational supports (POSs), creative individuals and innovative teams tend to get demoralized when employees see the absent of POSs and equity among themselves.

Previous theoretical explanation strengthens the understanding that employees have inherent tendency to grow, relate, compete (SDT theory) with their firm control of their behaviors in a social interaction (TRA and TPB theories). SET and NR theories show how employees react to the organizational response to them. IN model, and CMC narrated that how an organization can better accomplish their sustainable competitive advantage. Empirical studies state that TL significantly predict IN (Chang, 2016; Tajasom, Hung, Nikbin et al., 2015) and KM (Birasnav, 2014; Han, Seo, Yoon et al., 2016) because TL, like POS theory, foster supportive climate for individual initiative, on the other hand, it helps employees create, transfer, and utilize of knowledge among stakeholders. The supportive climate prepared by TL also instigates the employees to helping each other. This cooperation from TL supportive attitude drives employees' intrinsic motivation and citizenship behavior to the innovative organization (Humphrey, 2012; Jaiswal and Dhar, 2015, Teigland and Wasko, 2009).

H_1: Transformational leadership significantly predicts organizational innovation;

Besides, KM is found correlated with the upgrading of organizational creativity and sustainable innovation. Shieh (2011) mentioned that KM created new knowledge and shared it to other employees. Other literatures also found that KM significantly predicts OI (Darroch, 2005). Therefore, the prevailing studies elucidate that organization needs TL and fair climate to mould KM, the employees' IM and PD for fostering organizational innovation. The following hypotheses have been proposed for further studies:

H_2: Knowledge management significantly effects organizational innovation;

H_3: Citizenship behavior significantly predicts organizational innovation;

H_4: Intrinsic motivation significantly predicts organizational innovation;

RESEARCH METHODS
1. Data characteristics

Self-administered questionnaires were sent to RMGs and the other SMEs using stratified random sampling in the greater commercial City-Chittagong of Bangladesh. Analyses of demographic characteristics showed that of the 204 responses, 73.5 per cent represents men and the rest 26.5 per cent represents women. Their age's group consists of 6.4, 51.0, 35.8, and 6.8 per cent belonging to above 18, e 25, 35, and 45 years respectively. Educational profile shows that 15.7 per cent, 57.8 per cent, and 26.5 per cent have completed their bachelor, master, and others, i.e. doctorate or diploma certificate. The analysis of the respondents' job position reports that 37.3 per cent, 51.0 per cent, and 11.7 have been serving lower, mid and top levels respectively. 3

2 Survey instruments

A total of 300 questionnaires were delivered through off line and online survey, but 230 responses were received. In screening tests, 26 responses were dropped out to address the issue of common method bias, missing data, outliers, and data normality. Survey instruments of transformational leadership (Podsakoff, MacKenzie, and Bommer, 1996), intrinsic motivation (Tierney, Farmer, and Graen, 1999), citizenship behavior (Ritz, Giauque, Varone et al., 2014), knowledge management (Gold, Malhotra, and Segars, 2001) and organizational innovation (Miller and Friesen, 1983) were used in this analysis. SmartPLS 2, and IBM SPSS 20 software packages were used for producing the results.

ANALYSIS AND FINDINGS

In order to estimate the validity of the model and instruments, several statistical test has been tried. Indicators' validity can be measured by performing bootstrapping test through Smart PLS 2. All indicators scored above the cut off value of 0.70 and found significant at $p < 0.000$ that demonstrate the sufficient level of validity (Urback and Ahlemann, 2010). Besides, internal consistency, like Cronbachs Alpha, of all instruments score above 0.77 (see table 1) which is also above the threshold limit. For convergent validity testing, average variance extracted (AVE) has been recommended. It's been found that that AVE of each construct in this study exceeds 0.69 whereas the minimum rule of the thumb is advised to be at least 0.50. Table 1 also shows the correlation matrix for discriminant validity which reveals that the square root of AVE of each construct is higher than the construct's highest correlation with any other construct in this study (Hair Jr, Hult, Christian et al., 2014).

Convergent validity of the items							Discriminant validity among the instruments					
Latent Variables	Mean Value	Standard Deviation	AVE	Composite Reliability	R^2	Cronbachs Alpha	Latent Variables	1	2	3	4	5
1. IM	1.91	0.64	0.690	0.918	0.447	0.888	1. IM	**0.831**				
2. KM	2.11	0.72	0.725	0.913	0.638	0.873	2. KM	0.667	**0.851**			
3. OI	1.93	0.66	0.681	0.865	0.727	0.765	3. OI	0.781	0.703	**0.825**		
4. PD	1.95	0.71	0.697	0.920	0.690	0.891	4. PD	0.807	0.694	0.806	**0.835**	
5. TL	2.05	0.73	0.714	0.926	0	0.900	5. TL	0.669	0.799	0.702	0.686	**0.845**

Before going to find the effects of subject variables, researchers control the demographic variables (Table 2) to find the magnitude of their effects on OI. It's been noticed in model 1 (table 2) that demographic variables altogether explain OI by 6.40 per cent, however, age ($\beta = -0.175; p < 0.016$) and gender ($\beta = 0.189, p < 0.088$) of demographic factors are only found significant. Model 2 shows that TL has a significant ($\beta = 0.635; p < 0.000$) effect on OI with a R^2 value of 0.444. Observation of model 3, model 4, and model 5 reveal that KM ($\beta = 0.348; p < 0.000$), IM ($\beta = 0.543; p < 0.000$), PD ($\beta = 0.338; p < 0.000$) have a very significant effect of OI with R^2 value of 0.05, 0.141, and 0.04 respectively.

Table 2 Hierarchical Regression Analysis on OI

Variables	Model 1			Model 2			Model 3			Model 4			Model 5		
	β	Std error	Sig.	β	Std error	Sig.	β	Std error	Sig.	β	Std error	Sig.	β	Std error	Sig.
Constant	2.036	.266	.000	.631	2.868	.005	.557	.210	.009	.285	.176	.106	.276	.165	.095
Age	-.175	.072	.016	-.113	-2.151	.033	-.100	.050	.048	-.129	.041	.002	-.113	.039	.004
Education	.016	.074	.829	.074	1.375	.171	.060	.051	.247	.076	.042	.074	.073	.040	.068
Job Position	.029	.078	.710	.083	1.466	.144	.033	.055	.553	.053	.046	.250	.041	.043	.337
Gender	.189	.110	.088	-.020	-.242	.809	-.017	.078	.832	-.031	.064	.630	-.054	.060	.369
TL				.635	13.353	.000	.353	.075	.000	.182	.065	.005	.136	.061	.027
KM							.348	.074	.000	.162	.064	.012	.103	.061	.094
IM										.543	.057	.000	.326	.067	.000
PD													.338	.063	.000
R^2	0.064			0.507			0.557			0.698			0.737		
Adjusted R^2	0.045			0.495			0.544			0.688			0.726		
ΔR^2				0.444			.050			0.141			0.04		
F	3.376			40.769			41.315			64.830			68.260		
Sig.	0.010			0.000			0.000			0.000			0.000		

DISCUSSION

This empirical study goes for finding the predictor variables of organizational innovation. In this connection, four antecedents have been picked up from previous literatures which are found theoretically and empirically connected to OI. The prime objective of this study is to figure out the relative importance of each predictor variable to OI. Hierarchical regression analysis shows that all hypotheses are significantly influencing subject variables at p<0.000. Of the predictor variables, TL is the most dominating antecedent explaining OI. Empirical research and theories of leadership, POSs, TPB, and TRA supported these findings that TL drives organizational innovation by engaging the followers' attention for the fullfilment of the organizational vision (Ajzen, 1991; Ajzen and Madden, 1986; Tajasom et al., 2015; Teigland and Wasko, 2009; Tierney et al., 1999). KM is found to effect OI significantly. Theoretically, RBVs signifies the impact of knowledge along with other resources to enhance the capability of the organization (Warnerfelt, 1984). Knowledge creation, transfer, and storing of it help the users to generate new ideas. KM has a significant effect on OI which is found consistent with other empirical findings (Birasnav, 2014; Radzi et al., 2013). Hypothesis 3 assumes the effect of IM on OI. Result shows that it has significant effect on OI which is found consistent with previous theoretical and empirical studies (Ajzen, 1991; Ajzen and Madden, 1986; Amabile, 1988; Coelho,

Augusto, and Lages, 2011; Dewett, 2007; Eisenberger and Shanock, 2003; Ryan and Deci, 2000; Wernerfelt, 1984). Last hypothesis intends to find the effect of PD (citizenship behavior) on OI. It's been noticed that it is also a significant predictor of OI. SET, NR, POSs, TRA, TPB and SDT explain that employees have control on what they behave to their surroundings (TRA, TPB, and SDT) and sometimes they are controlled by the way their surroundings (SET, NR, and POSs) treat them (Ajzen, 1991; Ajzen and Madden, 1986; Blau, 1964; Gouldner, 1960; Ryan and Deci, 2000). This study is also found consistant with empirical findngs (Raja and Johns, 2010; Zhang and Begley, 2011).

CONCLUSIONS

This study, Firstly, aims at finding the potential impact of TL, KM, IM, and PD (citizenship behavior) on OI of the SMEs in Bangladesh. It's been proved that all of them have a significantly influence on OI. Secondly, it is purported to measure the extent of each predictor variable on OI and result shows that TL has larger influence than other variables on OI. Therefore, it is highly recommended that enterprises require to emphasize more on the effective leadership to mould the employees' attitude to OI. It also holds true that KM, IM, and PD are contributing a lot to the OI. It contains several implications both for professionals and academics. The least they might do is to ensure enough resource commitment from the top level management. Two of the few limitations of this study are the scope and size of the research and sample respectively, i.e. 204 samples from RMGs and the other RMGs, and time span used in this research. Further research might be suggested with relatively large size accompaning multiple cross-sectional data. In addition, moderating and mediating effects of other variables might have been used in this study to trace out any latent variable existences.

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