International Journal of Physical and Social Science
Vol. 10 Issue 5, May 2020
ISSN: 2249-5894 Impact Factor: 6.644
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

HRM practices and employees' innovative work behavior-IWB An application of the AMO theory

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Abstract

Aiming at examining the ideas of the AMO theory, the roles of autonomy, reward, training & development impact on IWB (Innovative Work Behavior) in a Vietnamese university. the results from SEM (structural equation modeling) support the hypotheses. A test based upon a sample of 413 university lectures in the southern of Vietnam reveals that reward has positive impacts on both Innovative Work Behavior and training & development. Besides, autonomy and training & development also underlie Innovative Work Behavior.

Keywords:
AMO;
IWB;
HRM practices;
Innovative Work;
Vietnam.

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1. Introduction

Today, Organizations must transform to adapt to economic changes and gain competitive advantages, so the organizations need to innovate continuously and motivate employees to contribute to the process of innovation. Therefore, Individuals in organizations hold the required know-how and skills for managing critical tasks and must, so that, there are enabled to carry out continual innovation. Lack of creativity on all levels can seriously undermine an organization's competitiveness [4]. High levels of innovation are needed to make sure that organizations remain flexible and successful in tough markets.

In the existing literature, evaluating and rewarding creativity is perceived as the most important extrinsic factor for enriching creativity in organizations [2]. Existing research and empirical evidence emphasize the need to build intrinsic motivation for innovation while ensuring the organizational environment does not create a bottleneck. As a result, the staff in organizations perceive their own capacity as having innovative potential [3].

Research has shown that innovation is beneficial for the performance of organizations, in spite of the burgeoning research interest in innovation at the level of the firm, there is a shortage of knowledge about how innovation can be fostered at the individual level. According to (Agarwal, 2014, p. 43) [5], "*one option for organizations to become more innovative is to encourage their employees to be innovative*".

The AMO model posits that the interaction of ability, motivation, and opportunity are determinants of job performance [3]. Applying the AMO model into the study, This paper is set out to address this gap in understanding by providing evidence on the relationship between HRM practices and innovative work behavior (IWB) at the employee level.

This study attempts to answer the above research questions by examining some principal factors affecting IWB through university lecturers at Master, doctoral degrees in the south of Vietnam. Employing the ability–motivation–opportunity model [3] to a specific task, i.e., innovative work behavior, the study focuses on three determinants of IWB. They are ability-enhancing HRM practices: training and development; motivation-enhancing HRM practices: reward; and opportunity-enhancing HRM practices: autonomy. We test the hypotheses using a survey data set collected from university lecturers using structural equation

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modeling (SEM). The remainder of the paper presents the theoretical background and hypotheses, research methods, data analysis and results, and, conclusions and future research.

2. Research Method

Literature and hypotheses

2.1 Conceptual model

The AMO model states that the interaction of ability, motivation, and opportunity are determinants of job performance [3]. Employing the AMO model into IWB, this study proposes a theoretical model depicted in Fig.1. In this model, Having conceptualized HRM practices based on the AMO framework, To be structured the results on the relationship between HRM practices and IWB as ability-enhancing HRM practices, motivation-enhancing HRM practices and opportunity-enhancing HRM practices [6]. According to (Bos-nehles et al., 2017)[7] here are seven HRM practices that could be categorized as best in terms of encouraging IWB. Such as one ability-enhancing HRM practice: training and development; two motivation-enhancing HRM practices: like reward and job security; and four opportunity-enhancing HRM practices: such as autonomy, task composition, job demands and time pressure, and feedback.

The knowledge and skills that lectures acquire from training process (in short, training & development); Lecturers' motivation for IWB, among these elements (reward and job security), the reward is contextually very necessary which may be affected by external factors, while job security is less important than the one mentioned above; Similarly, the opportunity of lecturers to perform their work (autonomy, task composition, job demands and time pressure, and feedback), in general, the degree of independence and freedom that employees experience in how they carry out their tasks and roles are most important, for they are highly qualified and their self-determination at work is essential. Besides, a number of studies show that empowered people tend to be more creative and have a better awareness of how work is done [8],[9],[10].

Because of these reasons, reward and Autonomy are selected as a proxy to represent a lecturer's motivation and opportunity in this study (in short, reward and autonomy)

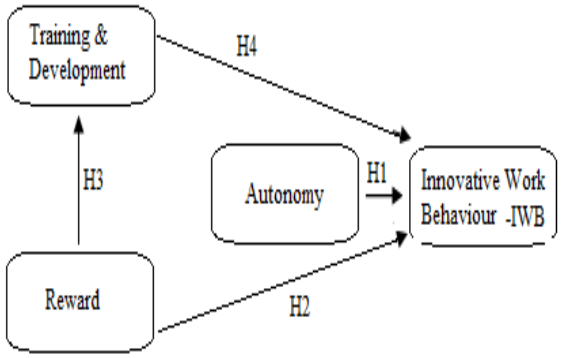


Fig 1: Conceptual model

2.2 Innovative Work Behavior

In organizations, creativity has been simply described as the process of "coming up with fresh ideas for changing products, services, and processes to better achieve the organization's goals" [11], meanwhile, IWB is defined as the intentional behaviors of individuals to produce and implement novel and useful ideas explicitly intended to benefit the individual, group or organization. The definition suggests that IWB is broader and more than creativity (*creativity is: a source of innovation*) although creativity is a necessary part of IWB, especially in the beginning, to generate original and useful ideas (Scott and Bruce, 1994).

How to conceptualize and measure IWB has been the focus of several studies. For instance, (Dorenbosch et al.,2005) split IWB into two main stages: the first invention and then the implementation of ideas [12] divided it into three stages: the generation of novel and useful ideas, the search for sponsorship and, finally, the implementation of created ideas.

Nonetheless, the generation of ideas is a large concept and (De Jong and Den Hartog, 2010)[13] argue that it is also significant to consider what gives rise to idea generation. They, therefore, suggested a fourth IWB stage: the recognition of opportunities or problems.

2.3 Autonomy for IWB

Although authors label this HRM practice in different ways in the various papers, they all describe "autonomy" or "self-determination"in a very similar way. Self-determination reflects autonomy in the initiation and continuation of work behavior and processes. Most of the studies describe autonomy as the degree of independence and freedom in making decisions about work methods, pace, and discretionary

efforts that employees experience in how they carry out their tasks and roles [15], [17],; [16]. Based on ideas from the self-determination theory, intrinsic motivation has been seen as an explanation for the linkage between autonomy and IWB [18], [19]. (Ohly et al., 2006)[18], for example, argue that empowered employees are more intrinsically motivated and this, in turn, triggers proactive behaviors such as IWB. Thus, as posited by the AMO model.

Hypothesis 1. Autonomy has a positive impact on IWB

2.4 Reward for IWB

Rewards are what the organization offers to employees with outstanding performance that contribute to the overall goals of the organization. Findings about the relationship between rewards and IWB are ambiguous. Most studies are found significant negative relationships between reward and IWB dimensions (e.g. Dorenbosch et al., 2005; Sanders et al., 2010), but some also detected a significant positive relationship between financial and non-financial rewards and IWB. however, (Janssen, 2000) [20] further argued that perceptions of effort-reward fairness were necessary for this mutual relationship to emerge and employees tend to reciprocate with IWB when they feel fairly rewarded for their efforts [20]. Based on ideas from the theory of equity, This relationship is reasonable and it can be said that AMO is very suitable for the author to choose for this article. Hence

Hypothesis 2. Reward has a positive impact on IWB

2.5 Reward for Training and development

In modern society, it is natural for a person to be trained and retrained to meet the demands of the job. However, re-training courses will be more effective and stronger if there are factors that promote the trainees' motivation [24] such as financial rewards (eg. Bonuses) and\ or indirect financial rewards (eg. health insurance). This is quite straightforward it is easy to see that individuals will gain more benefits after training. For these reasons, it seems that the reward is related to the training. Therefore, the author proposes the following hypothesis:

Hypothesis 3. Reward has a positive impact on Training and development.

2.6 Training and development for IWB

(Bos-nehles et al., 2017) [7] said that "training and development" is a composite of various activities that aim to develop competence and knowledge within organizations. In the study of (Ong et al., 2003; Knol and van Linge, 2009) [21], [22], for instance, examined knowledge resources and knowledge management and their relationship with IWB, while (De Spiegelaere et al., 2012) [23] interpreted training and development as covering competence and career-enhancing practices. (Sanders et al., 2010)[19] explains the relationship between training and development and IWB as a social exchange phenomenon in which employees realize training and development practices as the organization's personalized commitment to themselves, which the staff need to reciprocate through positive attitudes and behaviors, such as IWB. Thus, as posited by the AMO model.

Hypothesis 4. Training and development has a positive impact on IWB

Methodology

2.7 Research context

Vietnam provides a suitable case for the study of IWB. In the phase of transitional economy, the Vietnamese economy has been moving from a centrally planned economy to a market-oriented economy. In the past two decades, Vietnam's continuing economic transformation has sharply increased the demand for qualified staff by Vietnamese firms because they have to compete with other local and international firms in the market [25], 2012). Vietnamese universities have also responded to this requirement by enhancing the quality of their education programs. Therefore, the university needs to have a policy to promote innovation in the teaching staff to ensure the quality of training.

2.8 Research process

Two phases comprised the research: a pilot study and a main survey:

(1) The pilot study included a qualitative study and a quantitative survey. The pilot qualitative study was undertaken using in-depth interviews with 8 lecturers (saturated point of 8) at Long An University of Economics and Industry. The purpose of this study was to modify the measures of the constructs in the model.

(2) The quantitative pilot study was conducted by using face-to-face interviews with 125 lectures at Interviewees were university lectures at Ho Chi Minh City University of Food Industry (FIU), Long An University of Economics and Industry (LAU), and Tien Giang University (TGU) to refine the scales. Cronbach's alpha reliability and exploratory factor analysis (EFA) were used to preliminarily assess the scales.

(3) The main survey was also undertaken by using face-to-face interviews. A convenience sample of 413 lectures at the University of Finance- Marketing (UFM), Ho Chi Minh City Open University (HOU), Ho Chi Minh City University of Food Industry (FIU), Long An University of Economics and Industry (LAU), and Tien Giang University (TGU) was interviewed in this survey. The purpose of this main survey was to

validate the measures and to test the structural model. First, confirmatory factor analysis (CFA) was utilized to assess the measures. Then, structural equation modeling (SEM) was employed to test the theoretical model and hypotheses.

2.9 Measurement

Constructs examined included Autonomy, Reward, Training & development, and IWB. Autonomy, Reward, and Training & developmentwere first-order constructs and IWB were second-order constructs. Autonomy was measured by three items, borrowed from (Spreitzer, 1995)[10] and one item made in the qualitative study. Reward was measured by four items borrowed from (Nguyen et al, 2014). Training & development was measured by 5 items also from (Nguyen et al, 2014). Finally, IWB was comprised of two components: *willing to try*and*creative original*. *Willing to try* was measured by five items borrowed from (Hurt et al., 1977)[26]. *creative original*was measured by five items that also borrowed from (Hurt et al., 1977)[26]. All items were measured by a 5-point Likert scale, anchored by 1: strongly disagree, and 5: strongly agree. All the measures were initially prepared in English and then translated into Vietnamese by a fluent translator. This procedure was undertaken because English is not well-understood by all lecturers. Back-translation ensured the equivalence of meaning.

2.10 Measure refinement

As previously mentioned, the measures were refined via Cronbach's alpha reliability and Exploratory Factor Analysis (EFA), using the data set collected from 125 university lecturer in the pilot study.

The results showed that all scales were used in the study satisfied the requirement for Cronbach's alpha reliability. Specifically, Cronbach's alphas of the scales measuring Autonomy, Reward, Training & development, willing to try and creative original were 0.85, 0.81, 0.79, 88 and 0.82, respectively and item-total correlations were favorable (>0.3). Note that, there was one item measuring training & development*(I have a clear orientation to develop my career),*one item measuring Willing to try*(I am suspicious of new inventions and new ways of thinking),* and one item measuring creative original *(I consider myself to be creative and original in my thinking and behavior)* were deleted due to theirs low item-total correlation (<0.3). EFA (principal components with varimax rotation) attracted three factors with 67.297% percent variance extracted: Autonomy (eigenvalue=4.734), Reward (eigenvalue=2.045), and Training & development (eigenvalue=1.296). EFA extracted two factors from 8 items measuring IWB with 67.507% percent of variance extracted. The first factor (eigenvalue= 3.370) included items measuring*willing to try* and The second factor (eigenvalue= 2.031) covered items measuring *creative original*.

The results of the preliminary assessment indicated that all the used scales in this study satisfied the requirements for reliability and validity. Accordingly, these measures were used in the main survey.

2.11 Sample characteristic

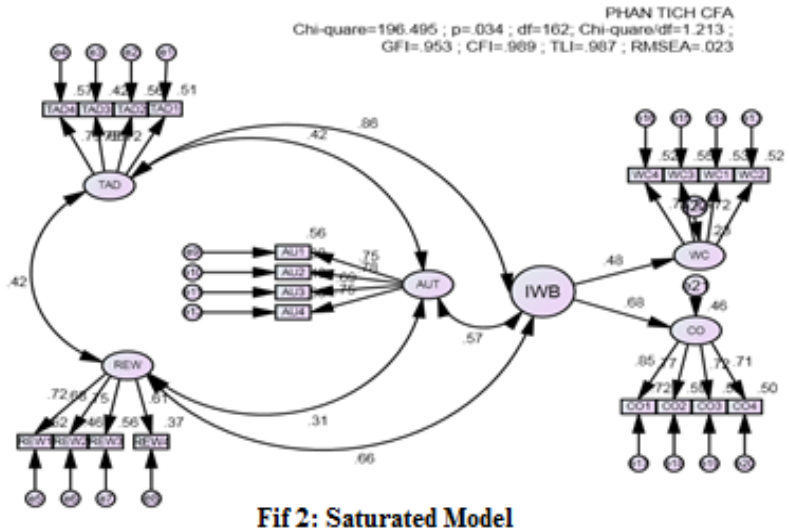
The sample of 413 university lecturers included 225 (54.5%) male lectures and 188 (44.5%) female lectures. In terms of academic title or degree, there were 341 (82.6%) masters, 68 (16.5%) doctors, and 4 (0.9%) professors and professors. Classified by training institution, there were 82 (19.9%) interviewees at UFM, 60 (14.5%) interviewees at (HOU), 94 (22.8%) interviewees at (FIU), 88 (21.3%)lectures at (LAU), 89 (21.5%) interviewees at (TGU)

3. Results and Analysis

3.1 Measurement validation

In this step, CFA was used to validate the measures and, then, SEM followed to test the theoretical model and hypotheses. As presented previously, the model comprised four constructs: autonomy, reward, training & development, and IWB. The scales measure that these constructs were refined via Cronbach's alpha reliability and EFA, using the data set collected from 125 university lectures in the pilot study. These scales were then validated by CFA using the data set collected from 413 university lectures in the main survey.

The saturated model (final measurement model) received an acceptable fit to the data: $\chi 2$ [162] = 196.495 (p = 0.034), GFI = 0.953, CFI = 0.989, TFI= 0.987, and RMSEA = 0.023 (depicted in Fig.2). The factor loadings of all items measuring all the constructs in the model were high (≥0.607) and significant (p<0.001). These findings indicate that the scales measuring these constructs were unidimensional and the within-method convergent validity was achieved. The correlations between constructs, together with their standard errors (see Appendix 1) indicate that they were significantly different from unity. thus, supporting the construct discriminant validity. Table 1 presents the CFA factor loadings of items, composite reliability, and average variance extracted (AVE) of the scales.



Fif 2: Saturated Model

Table 1: Standardized CFA loading

ITEM	CFA loading	p
TRAINING & DEVELOPMENT: ρ_c= 0.809 ; AVE= 0.515		
1 My organization always has a new employee training program.		
2 I regularly attend additional professional training courses in the organization.	0.761 0.751	*** ***
3 The organization always facilitates employees to improve their knowledge and skills.	0.647	***
4 The organization provides equal promotion for all employees.	0.752	***
REWADR: ρ_c= 0.782 ; AVE= 0.490		
1 Besides salaries, I legally receive bonuses and allowances.		
2 The organization provides employees with extra benefits such as lunch charge, transportation fare and telephone fee, and housing support.	0.720 0.775	*** ***
3 The organization has scholarship and bonuses for employees on special occasions.	0.747	***
4 The family receive a lot of attention from the organization (weddings, funerals, supports and holidays)	0.607	***
AUTONOMY: ρ_c= 0.829 ; AVE= 0.550		
In the work		
1 I have significant autonomy in determining howI do my job.	0.750	***
2 I have decide on my own how to go about doing my work.	0.777	***
3 I have considerable opportunity for for independence and freedom in how I do my job.	0.690	***
4 At work, I'm not under pressure to do what others want.	0.747	***
WILLING TO TRY: ρ_c= 0.817; AVE= 0.528		
In the work		
1 I am reluctant about adopting new ways doing things until I see them working for people around me.	0.719	***
2 I rarely trust new ideas until I can see whether the vast majority of people around me accept them.	0.727	***
3 I am generally caution about accepting new ideas.	0.741	***
4 I must see other people using new innovations before I will consider them.	0.741	***
CERATIVE ORIGINAL: ρ_c= 0.846 ; AVE= 0.581		
In the work		
1 I see out new out new ways to do things.	0.846	***
2 I enjoy trying out new ideas.	0.765	***
3 I am receptive to new ideas.	0.725	***
4 I frequently improvise methods for solving o problem when an answer is not apparent.	0.707	***

3.2 Structural results

Basing on the accepted saturated model, SEM was used to test the theoretical model and four hypotheses.

Table 2: Structural path

Hypothesis	Structural path	Unstandardized Estimate	Standardized Estimate	S.E.	C.R.	P
H3	TAD <--- REW	0.458	0.447	0.068	6.758	***
H4	IWB <--- TAD	0.456	0.648	0.063	7.240	***
H2	IWB <--- REW	0.235	0.326	0.063	3.744	***
H1	IWB <--- AUT	0.177	0.243	0.053	3.349	***

The SEM results indicated that all four proposed hypotheses were supported (Table 2). To be consistent with hypothesis H1, a positive relationship between autonomy and IWB was found ($p<0.001$). Hypothesis H2 proposed a positive linkage between reward and IWB. The estimated structural path between these two constructs was also significant ($p< 0.001$), supporting this hypothesis. Hypothesis H3 proposed a positive relationship between reward and training & development. The results revealed that this hypothesis also received support from the data ($p< 0.001$). A positive relationship between training & development and IWB was proposed in hypothesis H4. The estimated structural path between these two constructs was significant ($p< 0.001$).

The results also indicated that training & development was a key factor in predicting IWB (γtotal = 0.648, Table 3). All three factors, autonomy, reward, training & development explained 78% of the variance of IWB.

Table 3: Direct, indirect and total effect on IWB

Construct	Effect	TAD	AUT	REW
TAD	Direc	-	-	0.447
	Indirect	-	-	-
	Total	-	-	0.447
IWB	Direc	0.648	0.243	0.326
	Indirect	-	-	0.290
	Total	0.648	0.243	0.616

4. Conclusion

The Vietnamese economy, like other transition economies, has just been transformed from a centrally planned economy to a market-oriented economy, making a high demand for many qualified staff. In order to do this, it is necessary to have innovative lecturers who can train effectively their students. The AMO theory enables them to shape how to accomplish this goal. The results of this study will help participating partners (education manager, lectures, students) to recognize key factors that enhance the IWB in the organizations. Also, on the basis of findings of this research, we conclude that there are positive and significant relationships among the impact of autonomy, reward, training & development, and IWB. This research is limited to a few of the factors suggested by Bos-nehles et al., 2017 [7]. In the future, these studies may be replicated in different contexts with new factors (job security; and task composition, job demands and time pressure, and feedback).

Appendix 1

			r	Se('r)	CR	P
REW	<-->	AUT	0.314	0.045365185	6.9216074	1.59512E-11
REW	<-->	IWB	0.662	0.035812679	18.485074	8.12441E-57
AUT	<-->	IWB	0.574	0.03912642	14.670394	6.37962E-40
REW	<-->	TAD	0.422	0.043318824	9.7417233	1.98796E-20
TAD	<-->	AUT	0.419	0.04338526	9.6576578	3.91688E-20
TAD	<-->	IWB	0.861	0.024302085	35.429059	1.0972E-130

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