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Proactive personality, organizational context, employee creativity and innovative capability

Evidence from MNCs and domestic corporations

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Abstract

Purpose – The purpose of this study is to develop and empirically examine antecedents of innovative capability in different organization categories of multinational corporations (MNCs) and domestic firms by applying the integrative theory, linking both personal and contextual factors in explaining employee creativity.

Design/methodology/approach – A conceptual framework has been developed based on previous research investigating the relationship between proactive personality, organizational context (hierarchy, communication, atmosphere and risk-taking orientation), employee creativity and, ultimately, corporate innovative capability. More remarkably, by applying multiple group analysis, this research emphasizes on the identification of distinct organizational and contextual characteristics in MNCs and native corporations that respectively affect organizations' capacity to innovate via employee creativity.

Findings – The analysis revealed that four dimensions, communication, atmosphere, risk-taking orientation and employees' proactive personality, have significant impacts on employee creativity and ultimately organizational innovative capability, whereas the proposed negative effect of hierarchy on employee creativity did not exist. This research also highlights the identification of respective organizational characteristics in MNCs and native corporations that affect their capacity to innovate via employee creativity. Given that proactive personality is a critical antecedent of innovative capability regardless of organization types, communication and atmosphere are statistically confirmed to be more influential antecedents in the MNC context, whereas for domestic corporations, risk-taking orientation is dominant.

Originality/value – This research is original and of great value for several reasons. First, it provides suggestion on a single personality trait, proactive personality, that correlates remarkably with creativity. Second, it examines the association between various organizational aspects and employee creativity to appraise and advance the results of previous classic studies done in the field. Last, it incorporates both personal and organizational factors in the evaluation of creativity and innovative capability not only in the context of multinational but also in domestic corporations.

Keywords Organizational culture, Innovation, International business, Organizational innovation, Creativity, Employees

Paper type Research paper



Introduction

In 2012, the Intellectual Property Organization Global (WIPO) announced the ranking index of nearly 200 creative countries and territories worldwide (INSEAD, 2012), of which the creativity indicative statistics of Vietnam ranks 76 among all countries surveyed. Research is based on 84 creativity indicators in various aspects such as institutional; human resources and research capacity; infrastructure; the sophistication of markets and businesses; product knowledge and technology; and innovative products.

A study of the World Economy Forum (WEF) in 2012 and 2013 analyzing the extent to which companies have the capacity to innovate, Vietnam ranks 86 out of 148 countries surveyed with the average score of 3.4 out of 7, which is lower than sample mean of 3.6. Besides, in terms of company spending on R&D, the catalyst of innovation, Vietnam is at 59th position with the score of 3.2 out of 7, 0.1 point lower than the mean of 3.3 (World Economic Forum, 2014). In 2014, Asian Development Bank's report provided a standard evaluation of creative performance called creativity index in a number of Asian countries: Vietnam is at position 16, lower than some other regional counterparts. The question raised here is whether the low creativity reported by Asian Development Bank (2014) is the main cause for the low level of corporate innovative capability addressed by WIPO and WEF.

Besides, a great number of empirical studies have been supporting the relationship between employee proactivity and creativity (Amabile *et al.*, 1996; Kim *et al.*, 2005), but Vietnamese people tend to be reactive (Hung, 2013; Pickus, 2010), which might explain its low performance in terms of creativity. In addition to personal attributes such as proactive personality, contextual factors in the organization are considered to significantly affect employee creativity too, and multinational corporations (MNCs) are claimed to be powerful advocates of innovation. They possess about three quarters of commercial technological knowledge (Dunning, 1992), which remarkably influence the innovation orientation in knowledge economies. They also account for a tremendous proportion of patents owned in the world (Dunning and Lundan, 2008). More recent published researches have strongly bolstered the argument that MNCs are very efficient in facilitating the innovation processes, and the numbers of MNCs are mushrooming rapidly as a result of multiple international agreements and treaties that many countries have entered. Nevertheless, the reality of multinational organizations in Vietnam has never been evaluated or compared with native corporations to see whether it has lived up to people's expectation.

Most analysis on creativity and internal and external determinants are executed in developed economies such as the USA, Japan and Europe to draw out lessons for developing countries. Noticeable exceptional studies are in China (Martinsons and Martinsons, 1996), Taiwan (Farmer *et al.*, 2003) and Mexico (Gomez and Ranft, 2003). In the attempt to broaden this management theory and practice so that it has global implications, the study tests the integrative theory, linking both personal factor and organizational context to employee creativity and, ultimately, corporate innovative capability in a new cultural setting – Vietnam – and, more significantly, compare the impacts in two distinct contexts of MNCs and non-MNCs.

Hypothesis development

Research originality

According to numerous studies in the past decades, two streams of creativity research are prevalent: the first one is at individual levels such as personality traits. Many

researchers have paid great attention toward the collection of personal characteristics and attributes that are related to innovative accomplishments (Barron and Harrington, 1981; Davis, 1989; Martindale, 1989). Personal characteristics that encompass biographical elements and reasoning approaches and intelligence have been closely looked at in these researches (Amabile, 1997; Barron and Harrington, 1981; Davis, 1989; Hocevar and Bachelor, 1989; Woodman and Schoenfeldt, 1989). These findings have portrayed the positive relation between the various personal characteristics such as wide range of interests, inclination toward complex problems, instinctive ability, acceptance of indistinctiveness, assurance of self and the creative tendency in multiple aspects (Barron and Harrington, 1981; Gough, 1979; Martindale, 1989).

Gradually, realizing the effects of organizational factors on employee creativity, the attention has been shifted to research on those external attributes (Amabile and Conti, 1999), clarifying elements in organization that can hinder or foster creativity (Miron *et al.*, 2004). Nevertheless, little experimental research has scientifically examined which organizational features actually contribute to the creativity of employees at work (Amabile, 1988; Shalley, 1991; Staw, 1990). Later on, a few researches started to combine those two perspectives into a hybrid one (Shalley *et al.*, 2004). The width, depth and amount of research on this topic has grown, but there is still a huge gap between the number of researches carried out for this topic and other conventional ones (Mayer, 1999).

Therefore, the originality and value of this research is obvious. First, this study concentrates on individual characteristic that correlates remarkably with creativity, which is proactive personality, to provide a suggestion on a single personality trait of people that are suitable to perform creative jobs. Second, it also examines the association between various organizational aspects and employee creativity to appraise the results of previous studies done by Amabile and Grysiewicz (1989), Ford (2004), etc. in the context of multinational and domestic corporations.

Employee creativity

Woodman *et al.* (1993) described employee creativity as the creation of valuable, helpful new products, services, ideas, procedures or processes by individuals working together in a complicated social system. It has become a change agent, a building block for organizational innovation and a source of competitive advantage to adapt, survive and strive in a constantly changing environment for any businesses nowadays (Amabile, 1988).

Proactive personality and employee creativity

Bateman and Crant (1993) described proactive personality as an individual's disposition to engage in an active role, such as taking initiatives in changing and influencing their environment. According to Crant (2000), proactive people are those who have the ability to find out opportunities, capture changes, proceed initiatives and preserve until meaningful changes happen. This type of personality is closely linked with individual achievement and organizational contingency such as innovation (Seibert *et al.*, 2001) and entrepreneurship (Becherer and Maurer, 1999). There is also an association between people with proactive trait and felt responsibility for productive change and attempt to ameliorate situation, implement new procedures and correct problems (Fuller *et al.*, 2006). Proactive staff actively finds opportunity to recognize new ways to complete their

job by updating their knowledge and competency and identifying new work processes (Choi and Thomson, 2005). Similarly, there is also a positive correlation between proactive people and individual innovative behaviors such as coming up with new ideas and taking initiative on one's job (Seibert *et al.*, 2001).

In pursuant with Crant and Bateman's (2004) appeal for further researches indicating the mechanism and fundamental process that connect proactive personality to work outcomes, the current research evaluates the extent to which proactivity forecasts employee creativity given that creativity is a field of proactive behavior in which employees can identify the issue and opportunity and generate novel ideas and approaches (Amabile, 1997; Shalley *et al.*, 2000).

Organizational context and employee creativity

Although the creativity level is inherent to individual characteristic, whether this human input can be supported and facilitated to transfer into output as innovative products and services or not is largely contingent on the external, organizational context, that is, whether the environment will promote and foster creativity (Lubart, 1999). Organizational context can be defined as individual, team and organizational factors (Shalley and Gibson, 2004). Amabile *et al.*, 1996 argued that the impact of social environment on creativity can be predominant through its influence on task motivation and also on domain-relevant skills or creativity-relevant processes. Mumford *et al.* (2002) regarded creative work as "contextualized" because they describe creativity as an outcome which depends on the capability, pressure, resources and sociotechnical system in their working environment. The working environment is considered as "organizational context", which has been divided into four groups of variables focusing on employee's perception of organizational environment:

- (1) control and hierarchy in an organization;
- (2) support, interaction, communication and consultation in an organization;
- (3) risk-taking orientation of the organization; and
- (4) atmosphere of the organization.

According to Amabile and Gryskiewicz, 1987; Shalley and Gibson, 2004, controlling practices and vital supervision prevent creativity. The same study also pointed out the clear link between support of higher level management and creativity. Zhou (2003) said that when supervisors can give informational and useful feedbacks for their employees to learn and improve their performances, they can approach the higher level of creativity. It is undeniable that there exists a relationship between employee's ratings of supervisory encouragement and employee's creativity (Amabile and Gryskiewicz, 1989). Amabile *et al.* (1996) stated that encouragement, open communication and informational feedback can contribute toward improving creativity.

Shalley and Gibson (2004) highlighted that creative behaviors rely on the individual's predisposition toward risk, which is closely related with proactive personality as an individual factor and with the working organization culture of employees as an organizational context factor. As reported by Amabile (1988) and Woodman *et al.* (1993), risk-taking context can stimulate employees to trigger their creative performance.

It is less likely for individuals under pressure to engage in creative, cognitive processing (Amabile *et al.*, 1996). Some corporate activities in the organizational context

such as managing conversation in the workplace and building trust and caring atmosphere can enhance the creativity (Von Krogh *et al.*, 2000). Wheatley (1999) describes a positive environment as an energetic organization with healthy relationships in which everybody can listen and understand each other, people can feedback honestly, brainstorm and work well with people from diverse backgrounds, honestly share trust-worthy information and have an honor over collaborative efforts. It is certainly that this kind of working environment can result in a positive energy where productivity, personal satisfaction and creativity are constructed.

Employee creativity and organizational innovative capability

Creative employees are a valuable asset, constituting the predominant foundation for new ideas and new knowledge for organizations to innovate (Snell and Dean, 1992). The ability to innovate of any organization is significantly influenced by the extent of creativity its employees possess (Amabile, 1988). In some researches, firm innovative capability is conceptualized from two sub-definitions. One of them is the rate of innovation adoption by the organizations, which is viewed as a behavioral variable. The other one is the organization's willingness to change. Creativity is a distinct construct from innovation as it regards to coming up with a brilliant novel idea, whereas innovative capability is more about execution and implementation (Amabile *et al.*, 1996). Employees' unique ideas often need to be combined together for dramatic breakthrough to happen. Thus, if we have a community of creative employees in one organization, chances are high that innovation would be brought about (Tushman and Anderson, 1986). In other words, the possibility is high that the more employee creativity the organization owns, the higher its organizational innovative capabilities can be.

For above reasons, six hypotheses have been defined as follows:

- H1. Organizational contexts that reflect higher levels of supportive communication are related to higher levels of employee creativity.
- H2. Organizational contexts that reflect higher levels of risk-taking are related to higher levels of employee creativity.
- H3. Proactive personality is related to higher levels of employee creativity.
- H4. Organizational contexts that reflect an open, fun, trusting, caring environment are related to higher levels of employee creativity.
- H5. Organizational contexts that reflect controlling, hierarchical environments are related to lower levels of employee creativity.
- H6. Employee creativity is related to higher levels of organizational innovative capability (Figure 1).

Research design

Data collection method

Data are collected by hand-distributed surveys among Vietnamese employees working in various multinational and domestic organizations belonging to different sectors such as fast moving consumer goods (FMCG), finance, manufacturing, production, education and others. The managers of those popular corporations in Vietnam were visited and asked to distribute self-completion questionnaires to all the departments within the company such that a representation of employees from each department will be

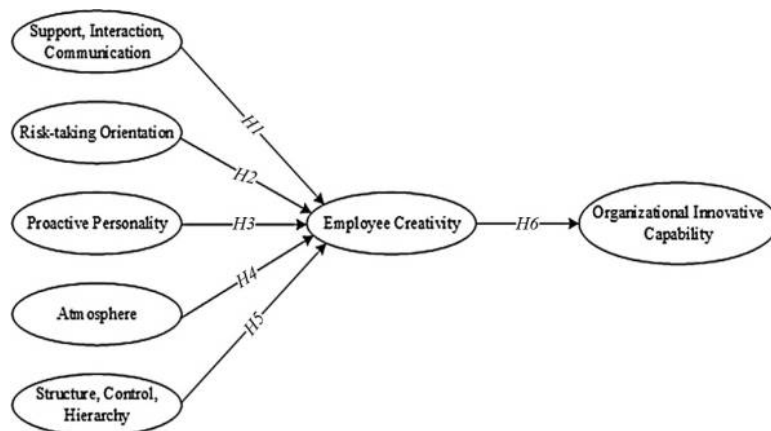


Figure 1.
Research conceptual framework

acquired. Among all companies surveyed, some are in the list of 50 best performing companies in Vietnam (Nhipcaudautu, 2014) and some others are in the list of 50 best working places in Vietnam (Nielson, 2014).

Sample size

In terms of bias reduction and just getting the model to run structural equation model (SEM), several authors found out that with “a sample size of 100 will usually be sufficient for convergence”, and a sample size of 150 “will usually be sufficient for a convergent and proper solution” (Anderson and Gerbing, 1984). In other researches, SEM models could perform well even with small samples from 50 to 100. Bentler and Chou (1987) suggested that the ratio of sample size to the number of free parameters should be 5:1. Although there is little consensus on the recommended sample size for SEM Sivo *et al.* (2006), Garver and Mentzer (1999), and Hoelter (1983) proposed a “critical sample size” of 200 (Kline, 2005, 2011), which means that any number above 200 is understood to provide sufficient statistical power for data analysis, for this study, the sample is astoundingly 309, which met the required criteria.

Measurement scales

The measurements for the present research were borrowed and adapted through an intimate review of diverse literatures

- *Organizational context*: The self-completion questionnaire used to evaluate organizational context is built upon Amabile and other researchers' works. This construct comprises multiple variables demonstrating different aspects of an organization, According to previous researches (Nunnally, 1978; Rice, 2006), this variable should be considered as one with four sub-scales rather than a multi-item summated scale.
- *Proactive personality*: Bateman and Crant's scale for measuring proactive personality is modified and streamlined by Seibert *et al.* (1999) to provide a shortened version of the scale of which the liability is similar to that of the complete version. This adjusted measurement is used for various recent studies, and so it is used for this research.

- *Employee creativity*: Creativity is measured using the most popular measurement scale available, which is a 13-item scale of [Zhou and George \(2001\)](#). Recipients are required to self-assess their own creative working behaviors via statements such as “I come up with new and practical ideas to improve performance”
- *Organizational innovative capability*: Innovative capability is based on the studies of [Henderson and Clark \(1990\)](#) and [Tushman and Anderson \(1986\)](#), who proposed that this item is composed of incremental innovative capability and radical innovative capability with details listed in the following section.

Data analysis

For data analysis, reliability, correlation analysis, confirmatory factor analysis (CFA), SEM and multiple group analysis technique are used.

Empirical results

A total of 400 questionnaires were dropped off, and 309 complete ones consisting of 152 (49 per cent) respondents from MNCs and 157 (51 per cent) from non-MNCs (including state-owned and non-state enterprises) were collected after 15 days. Most of the studies on employee creativity were carried out on a limited number of creative individuals doing jobs requiring creativity ([Costa and McCrae, in press](#)), yet, not only employees who work at jobs that require creativity can generate creative ideas but also employees in any occupations and at any levels in the organization ([Madjar et al., 2002](#)). Therefore, employees' responses from different departments were compiled, especially those that highly require creativity, such as marketing (25 per cent), R&D (10 per cent), D&P (19 per cent), IT (10 per cent), operations (14 per cent), sales (18 per cent), etc. The sample size also includes respondents from diverse corporation sizes: less than 100 employees (30 per cent), from 100 to 500 (32 per cent), from 500 to 1,000 (30 per cent) and more than 1,000 (18 per cent); and with various tenures: less than 1 year (11 per cent), 1-5 years (30 per cent), 5-10 years (36 per cent) and more than 10 years (12 per cent). The sample met the required criteria to be a good sample size ([Comfrey and Lee, 1992](#)), and the results of data analysis are shown as below.

Descriptive, reliability statistics and correlations

[Table I](#) below presents correlation statistics of seven key constructs included in this study. All of the correlation coefficients were positive and significant, except for those of structure, control and hierarchy. Moreover, all the Cronbach's alpha values ranged from 0.803 to 0.880, indicating an excellent reliability of the measurement scale ([George and Mallery, 2003](#)).

Confirmatory factor analysis

According to [Hair et al. \(2010\)](#), CFA was conducted to estimate the structure designated factor loading by testing the fit between the proposed hypothetical framework and the data collected. The structural integrity of the research framework is certified by the calculation of which the results of 39 items in the measurement dictate a fairly good data fit with Chi-square value (CMIN)/df = 2.243 < 3, root mean square error of approximation (RMSEA) = 0.064 < 0.08, goodness of fit index (GFI) = 0.851 > 0.8, the normed fit index (NFI) = 0.915 > 0.9, comparative fit index (CFI) = 0.914 > 0.9 ([Table II](#)).

Variable	Mean	SD	1	2	3	4	5	6	7
Organizational innovative capability	3.51	0.69	(0.872)						
Employee creativity	3.55	0.66	0.724**	(0.88)					
Risk-taking orientation	3.54	0.74	0.717**	0.610**	(0.827)				
Atmosphere	3.53	0.72	0.401**	0.591**	0.374**	(0.823)			
Support, interaction and communication	3.53	0.67	0.523**	0.583**	0.506**	0.373**	(0.805)		
Structure, control and hierarchy	3.42	0.81	0.074	-0.041	0.048	-0.044	0.156**	(0.844)	
Proactive personality	3.63	0.67	0.571**	0.749**	0.482**	0.527**	0.459**	-0.079	(0.803)

Notes: ***Significant at 0.001; Cronbach's alphas are in parentheses

Table II.
Goodness-of-fit
measures and model
scores

Fit index	Threshold	Reference	Score
<i>Absolute fit measures</i>			
CMIN/df	≤3 good; ≤5 sometimes permissible <5, good	Carmines and McIver (1981) Marsh and Hocevar (1985)	2.243
RMSEA	≤0.08 good; ≤0.05 very good <0.08 good	Tho and Trang (2008) Byrne (2001)	0.064
GFI	≥0.9 very good; ≥0.8 good	Bentler and Bonett (1980)	0.851
<i>Incremental fit measures</i>			
NFI	≥0.9	Hu and Bentler (1999)	0.915
CFI	≥0.9	Hatcher (1994)	0.914
Note: RMSEA < 0.6: good fit; 0.6-0.8: acceptable fit; 0.8-1: mediocre fit; ≥1: poor fit			

Structural equation modeling SEM analysis

SEM is used to examine the relationship among the constructs in the model and its validity. Based on the model fit statistics and criterion specified, the model is verified to be acceptable fit with CMIN/df = 2.191 < 3 (i.e. good), GFI = 0.852 > 0.8, CFI = 0.918, Tucker Lewis index (TLI) = 0.904, incremental fit index (IFI) = 0.917 > 0.9 (i.e. good) and RMSEA = 0.062, 0.06 < 0.068 < 0.08 (i.e. acceptable fit).

There exists a positive relationship between support, interaction and communication in the organization on employee creativity. *H2* foretelling the connection between risk-taking orientation of the organization and employee creativity is validated. Similarly, there is certainly a link between organizational atmosphere and employee creativity with *p*-value < 0.001. However, *H5* predicting the relationship between structure, control and hierarchy and employee creativity is not supported; thus, we eliminate this factor from the conceptual framework from this step ahead. The result of *H3* confirms the strong positive relationship between proactive personality and employee creativity. As expected in *H6*, employee creativity has a very significant and positive influence on organizational innovative capability (Figure 2 and Table III).

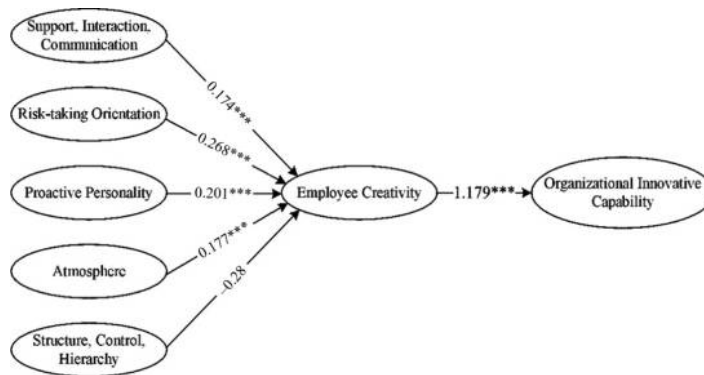


Figure 2.
Result of path
analysis for full
sample

Notes: ***significant at 0.001, **significant at 0.01 and *significant at 0.05

After eliminating factor structure, control and hierarchy from the original model, the measurement values are obviously improved and fit with the criteria mentioned above. Therefore, we conclude that the measurement data are fairly good; and the final SEM with six constructs is subsequently used for multiple group analysis.

Multiple group analysis

As full group statistics might mask the actual impacts specific to organization types, in this section, a multiple-group structural equation modeling is used to evaluate whether the factor loadings and path estimates of the measurement model are different across two groups (MNCs and non-MNCs). In other words, this test is carried out to find out any differences between MNCs and non-MNCs regarding the impacts of individual proactivity and organizational context on employee creativity and influence of employee creativity on corporate innovative capability.

To test for partial measurement invariance (weak factorial invariance) (Meredith, 1993) across groups, the χ^2 from a model with all parameters allowed to be unequal across groups was compared to the χ^2 from a model with only the loadings constrained to be equal across groups. If the χ^2 testing shows no differences between variable and invariable model (p -value > 0.05), the invariable model will be selected (with higher degrees of freedom). Conversely, if the χ^2 difference is significant between the two models (p -value < 0.05), the variable one is selected (higher compatibility) (Tho and Trang, 2008, p. 208).

The comparison between the variable model and invariable model is carried out using the following hypotheses: there is statistical difference between the two models (Table IV).

With p -value = 0.037 < 0.05 , the conclusion is that there is statistical difference between MNCs and non-MNCs groups regarding factors influencing employee creativity and the relationship between employee creativity and organizational innovative capability. In other words, the factor loadings and path estimates are different, which means that the unconstrained multiple group model is accepted (Figures 3 and 4).

At the 0.05 level of significance, all the relationships between constructs are supported, which means that the model is valid and statistically meaningful. However, as the purpose of this part is mainly to differentiate and compare the significance of those relations in two distinct contexts of MNCs and non-MNCs, we apply the 0.01 level of significance. In this case, there is difference between MNCs and non-MNCs regarding the extent of impacts. Specifically, in the case of MNCs group, all the relationships, except for the relationship

Table III.
Goodness-of-fit statistics (structure, control and hierarchy removed)

CMIN/df	GFI	IFI	TLI	CFI	RMSEA
2.357 (< 3)	0.853 (>0.8)	0.922 (>0.9)	0.908 (>0.9)	0.921 (>0.9)	0.66 (<0.8)

Index	χ^2	df
Unconstrained (variable) model	1,315.967	708
Constrained (invariable) model	1,329.337	714
Difference	13.37	6
CHIDIST (13.37,6) = 0.037522444		

Table IV.
Model comparison statistics

Note: CHIDIST = Difference in chi-square, difference in DF

Figure 3.
Unconstraint model
for two groups: result
of path analysis for
MNCs

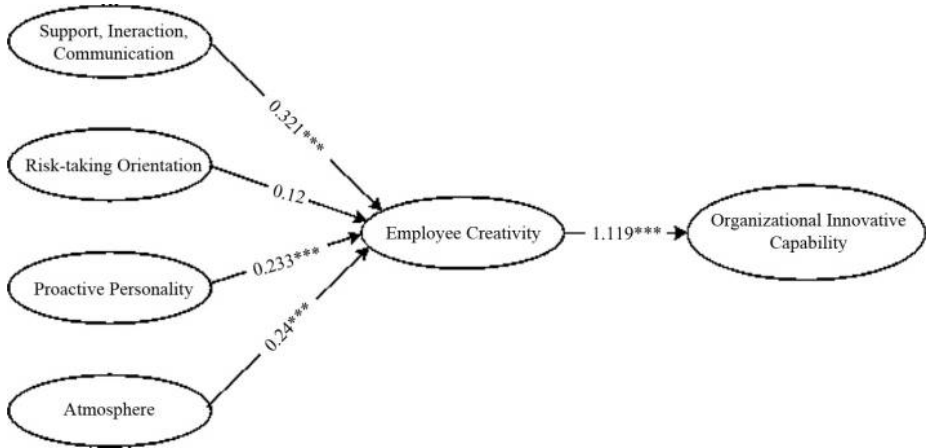
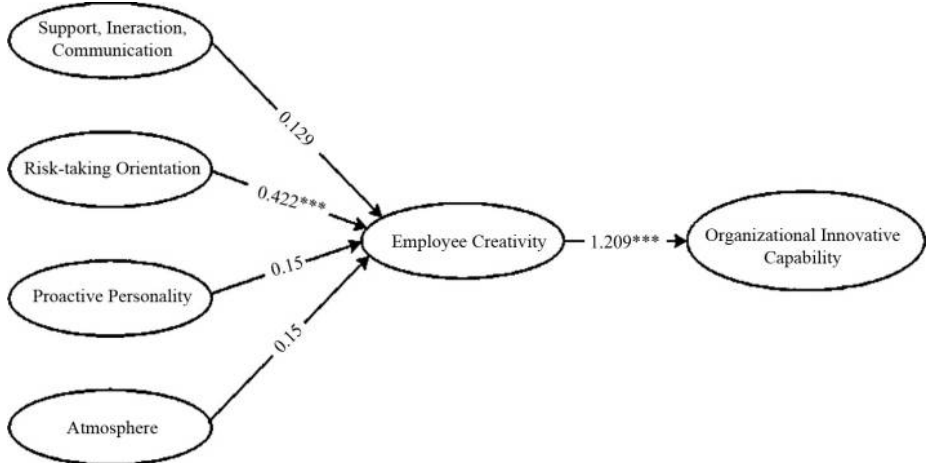


Figure 4.
Unconstraint model
for two groups: result
of path analysis for
non-MNCs



between risk-taking orientation and employee creativity, are proved to be very significant. On the contrary, for non-MNCs group, only two among five hypotheses appear to be statistically confirmed; that is, risk-taking orientation has a great impact on employee creativity, and, subsequently, creativity affects organizational innovative capability, whereas the other three factors and entailed relations, support, interaction and communication, proactive personality and atmosphere, are no longer significant.

Discussion

First and foremost, the result confirms the contextual assumption of employee creativity, which argues that the psychological aspects of the workplace such as atmosphere and social interaction, communication and consultation significantly affect creativity (Oldham and Cummings, 1996; Shalley and Perry, 2001).

Support, interaction, communication, atmosphere and employee creativity

In terms of internal interaction, expertise and experience sharing among members in an organization has been proved to impact individual creativity in various studies: a construct named work group support from Amabile's research in 1996 encompassing openness and commitment was testified to be one of the most dominant factors that help distinguish high and low creative initiatives in the USA. Similarly, a Taiwanese study emphasizing on the importance of responsibility to share information between staff figured out that employees have a stronger sense of creativity when their supervisors and colleagues expect them to be so (Farmer *et al.*, 2003). Both of the researches are in unanimity with the current research's outcomes.

Atmosphere is also an important factor that impacts staff creativity, which is similar to a conclusion drawn from a research of Gunvora and Per Rand (2006), which revealed that people got lower scores on creativity in a more stressful environment than in a relaxing one. This difference is found regardless of sex and intelligence of the attendees. Another research indicates that a humorous and enjoyable working atmosphere significantly increases creativity scores (Ziv, 1989), which supports the result of atmosphere's impacts in our model.

According to multiple group analysis, MNCs are verified to provide a better organizational context that nurtures employee creativity than non-MNCs. The reason why non-MNCs are weaker in this aspect could be attributed to inherent characteristics of their localities. Specifically, Vietnamese organizational culture is characterized by a very high level of power distance (Hofstede, 1991). The compliance and obedience mechanism, especially in the case of state-owned enterprises, is not compatible with either enjoyable working atmosphere or supportive, consultative and interactive communication well built in MNCs, which is an impediment toward creative performance.

Risk-taking orientation and employee creativity

Substantial examinations from diverse fields have advocated a close link between risk-taking and creative behaviors in organizations (March and Shapira, 1987, Covin and Slevin, 1986; Wu *et al.*, 2005; Ling *et al.*, 2008). Among all the factors that nourish employee creativity, risk-taking orientation stands out to be the only one factor that substantially impacts employee creativity in non-MNCs at a very significant level (0.01). This result might sound irrational at first impression, as state owned enterprises are rigid and not risk-takers; but if the sample demographic is taken into consideration, a more generalized picture and the underlying reason for this result are obvious. In fact, about two-third of our non-MNC samples is from non-state enterprises, including private unlimited or limited liability and collective and joint stock company without state capital, and a large proportion of them are small- and medium-sized companies and start-up businesses. According to the National Economics University and other famous literatures, because of a huge number of small and medium enterprises in the market, each has to be constantly changing to adapt to the surroundings and reacting to various external forces, which put critical pressure on managers and founders to have flexibility in managing and operating, to have courage to think and to act and, most importantly, to be inclined toward risk-taking; in other words, they are extreme risk-takers (NEU, 2014). On the contrary, MNCs have to face a great amount of risk from transactional (taxation, macroeconomics policy and cultural differences) to financial risks (debt crisis,

exchange rate, interest rate and inflation), which require them to take a more cautious approach in business operation than small and medium enterprises (Huong, 2014). Hence, the generalized conclusion here is the MNCs' organizational structure better balances the conditions for employee creativity to thrive and bring about better corporate innovative outcomes.

Structure, control, hierarchy and employee creativity

In contrary to the supposition, a controlling, hierarchical work environment does not substantially affect employee creativity in an opposite manner, which coincides with Rice's (2006) study on creativity. Remarkably, in some US publications, workplace autonomy or freedom at work in terms of procedures and hierarchy play a less influential role toward employee creativity than was as the contention (Amabile *et al.*, 1996); likewise, in some Egyptian organizations, the proposed relationship is verified to be a positive one. In Vietnamese context, all business procedures are inherently formalized and bureaucratic no matter what genre the corporation falls into, so, more or less, this feature has become a cultural characteristic in a business operation that has been understood by everyone from front workers to high-level management. Theoretically, this controlled environment hinders creativity, but in reality, people tend to consider it as a disciplined nature of doing business; thus, as supported by the data analysis, the negative relationship is very insignificant and negligible.

Proactive personality and employee creativity

Proactive personality has been associated with diverse personal and organizational outcomes, and this investigation provides statistical proof that individual proactivity is highly linked employee creativity, suggesting that the more proactive an employee is, the more probability he or she will be creative. This result validates and consolidates past argument that employees' personal characters can affect their creativity (Oldham and Cummings, 1996). It is considerable that a great number of literatures on proactive personality have been based on US samples, and few of the type have been done in non-Western cultures, which is why the problem of reactive personality has been existent for a long while in Vietnam but has had no scientific studies or experimentations for it. Hence, another contribution of this dissertation is to shed light on proactivity issues in Vietnam and their correlation with creativity and ultimately organizational innovative capability. The outcome of this study manifests the possibility that Seibert *et al.*'s (2001) premise regarding proactivity and creativity relationship can be extended to other cultures as it has been done to several significantly different cultures such as the USA, Hong Kong, Egypt and now Vietnam.

Employee creativity and organizational innovative capability

We also find out that individual creativity can be an antecedent for innovation in companies, which is in harmony with Conti *et al.* (1996) and Menon and Kanungo's (2000) exploratory investigation, and the result is significant regardless of the genres of corporations. Creativity is the first step leading to innovation process of any organization (West and Farr, 1990). Substantial number of researches conducted in different contexts yield the same result as the current study, suggesting employee creativity's contribution toward organizational outcomes such as survival, effectiveness and, most importantly, innovative capability (Nonaka, 1991). To put it another way, employee creativity has a direct significant positive correlation with organizational

innovative capability, as employee creativity is the creation of new and applicable ideas, whereas innovative capability is the effectiveness in realization of those ideas to bring about positive and beneficial changes for the organization as a whole. Except for successful innovation that derives outside of the organizations such as technology transfer, much of what is conducive to innovative capability literally originates from employees' ideas; thus, the argument exists that in a constantly changing environment, companies should be receptive, originative and innovative to novel ideas and suggestions from within the organizations to survive and thrive (Johnson *et al.*, 1997; West and Farr, 1990).

Implication

Proactive personality and employee creativity

This study suggests that it is insufficient for organizations to employ creative people and hope for a magical increase in corporate innovation. Likewise, it will not bring about surprisingly innovative business solutions if managers only emphasize on building a creativity nurturing context and ignore crucial individual characteristics such as proactivity. Therefore, for corporations to be effectively innovative, they should consider recruitment process aiming to identify and appeal more proactive employees. More importantly, it is highly advisable for modern corporations to create a creative organization culture so that they would be able to attract creative talented individuals. Some of the suggestions to achieve the fore mentioned objective would be as follows.

Support, interaction, communication, atmosphere and employee creativity

Management should provide a well-structured and caring working environment and motivate employees to share their expertise and knowledge, as well as facilitate this communication. Brainstorming session and supervisor-subordinate consultation should be implemented. Creativity training for employees will provide them with better problem-solving skills, which are conducive to a more novel solution to existing problems. Small teams' formation with surreptitious connection among them is highly recommended, as they are more efficient and communication-oriented. They should be given the current technology and delegated the authority and freedom to create new ideas, experiment and get their success to global applicability. Moreover, suggestions have to be taken seriously and positively by superior managers, which means that ideas must be heard and understood in a welcome manner and no punishment or criticism must be inflicted if the ideas are not approved so that employees are consciously encouraged to come up with more novel ideas.

If we want to get employees to think out of the box, we need to motivate them with some forms of rewards. We can set goals and awards for employees to come up with ways to make work processes more efficient. Furthermore, each business should reserve a risky investment budget for employees to realize their creative ideas (Ha, 2015; Hoai, 2015).

Risk-taking orientation and employee creativity

Most companies currently are built to minimize risk and not maximize freedom and speed. Employees may be unwilling to take risks and to be creative because they do not know whether the organization supports it, which suggests that creativity should be a part of company's mission and vision, and organizations should be risk-oriented, not risk-avoidant. One reason why employees are not thinking out of the box or coming up

with solutions that are vastly different from how things used to be done is that they may be afraid of making mistakes. Risk-taking should be encouraged, and organizations should allow rooms for errors.

Employee creativity and organizational innovative capability

Human capital such as employee creativity appears to be the foundation for innovative capability. As innovation is a collaborative effort from individual creativity as a starting point, communication and information dispersion and expertise sharing can help assimilate knowledge to be the foundation for innovation. This research and a study from World Bank recommend that to enhance innovative changes, Vietnam needs to improve business operating environment by focusing on minimizing administrative budget and emphasizing on investment for technological innovation (Ha, 2014).

Limitations and recommendations for further research

As all other studies, this research has certain limitations that subsequent researches might improve, which include a small sample size and possibility of inflated self-reported survey. However, employee's self-assessment of creativity and an other job performance index might be better than those of supervisors' evaluation because employers might not be well aware of all the creative behaviors from their subordinates (Jassen, 2001). Further researches should include more objective evaluation, besides subjective methods, such as supervisory or peer evaluation, number of patents, publications, practical suggestion and experiments to indicate the creativity and innovation level. Later study might comprise other individual traits such as employee's consciousness or openness to experience, which might yield higher impact on creativity. More importantly, for even better generalization, larger random sample sizes are recommended, and in-depth interviews and other qualitative methods might be applied to understand in-depth about the relationship among all constructs.

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Further reading

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