

Zhou, Wenqian; Velamuri, Vivek K.

## Article

# Key contextual success factors for employee innovative behavior: A study in a foreign manufacturing subsidiary in China

Cogent Business & Management

## Provided in Cooperation with:

Taylor & Francis Group

*Suggested Citation:* Zhou, Wenqian; Velamuri, Vivek K. (2018) : Key contextual success factors for employee innovative behavior: A study in a foreign manufacturing subsidiary in China, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, Vol. 5, <https://doi.org/10.1080/23311975.2018.1471770>

This Version is available at:

<https://hdl.handle.net/10419/206074>

## Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

## Terms of use:

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<https://creativecommons.org/licenses/by/4.0/>



Received: 20 November 2017  
Accepted: 28 April 2018  
First Published: 10 May 2018

\*Corresponding author: Wenqian Zhou, HHL Leipzig Graduate School of Management, Jahnallee 59, 04109 Leipzig, Germany  
E-mail: [wenqian.zhou@hhl.de](mailto:wenqian.zhou@hhl.de)

Reviewing editor: Gordon Liu, The Open University, UK

Additional information is available at the end of the article

## MANAGEMENT | RESEARCH ARTICLE

# Key contextual success factors for employee innovative behavior: A study in a foreign manufacturing subsidiary in China

Wenqian Zhou<sup>1\*</sup> and Vivek K. Velamuri<sup>1</sup>

**Abstract:** Employee innovative behavior has been recognized as a key enabler for competitiveness in China. As more and more foreign multinational companies (MNCs) are setting up innovation activities in China, fostering employee innovative behavior is playing an increasingly central role in their development strategies. However, while there is an abundance of literature on contextual success factors to foster employee innovative behavior set in Western contexts, there has been little attention on the impact of culture-specifics in China. Also, there has been limited effort to determine the relative importance of the factors and define which ones are key. We address these gaps by conducting a Delphi study set in a foreign manufacturing subsidiary in China. Among a list of 24 success factors identified in extant literature, our results reveal *reward and pay*, *cross-functional cooperation* and *company innovation strategy* as the three most important factors to foster employee innovative behavior in China. We discuss these factors as to why they play a vital role for Chinese employees and finally we provide practical suggestions for implementing them. These include the set up of transparent guidelines for rewards, enhancing cross-functional cooperation and setting aligned goals among different functions.

**Subjects:** Innovation Management; Asian Business; Organizational Change; Manufacturing Industries

**Keywords:** employee innovative behavior; key success factors; foreign subsidiaries; China

## ABOUT THE AUTHORS

Vivek K. Velamuri is the Rolf Schrömgens Professor in Entrepreneurship and Technology Transfer at the HHL Leipzig Graduate School of Management, Germany. He holds a doctoral degree from Friedrich-Alexander University of Erlangen-Nuremberg, Germany. His current research focuses on business models, open innovation, and servitisation strategies. Since 2013, he is the program chair for the special interest group (SIG) innovation at the European Academy of Management (EURAM).

Wenqian Zhou is a PhD candidate at HHL Leipzig Graduate School of Management, Germany. She holds a degree as Dipl.-Ing. oec from the Technical University in Hamburg-Harburg, Germany. She has several years of working experience in various industries and has worked in China for several years. Her research focuses on innovation in China and organizational change.

## PUBLIC INTEREST STATEMENT

Employee innovative behavior is a key enabler for competitiveness in China. As more and more foreign multinational companies are setting up innovation activities in China, fostering employee innovative behavior is becoming increasingly important. In order to find the three most important factors to foster employee innovative behavior in China, we conduct a study in a foreign manufacturing subsidiary in China. Our results reveal *reward and pay*, *cross-functional cooperation* and *company innovation strategy* as the three most important factors. We discuss these factors as to why they play a vital role for Chinese employees and finally we provide practical suggestions for implementing them. These include the set up of transparent guidelines for rewards, enhancing cross-functional cooperation and setting aligned goals among different functions.

## 1. Introduction

Fostering employee innovative behavior in China is playing an increasingly central role in the development strategies of multinational companies (MNCs) and their subsidiaries (Leung, Chen, Zhou, & Lim, 2014; Yip & McKern, 2014). This is a result of the increasing importance of China as an innovation destination for MNCs. This trend has been fostered by the establishment of China as a lead market for a variety of industries and by the realization of many MNCs that they need to make use of the local employees' expertise to compete locally (Birkinshaw & Hood, 2001; Bruche, 2009).

Past research has sought to identify factors that might contribute to employee innovative behavior. However, the focus has been mostly on Western countries (e.g. Abstein & Spieth, 2014; Axtell et al., 2000; Parzefall, Seeck, & Leppänen, 2008; S. G. Scott & Bruce, 1994). Earlier research suggests that individuals from non-Western cultures may respond differently to organizational conditions and innovation strategies than those from Western nations due to cultural dissimilarities (Anderson, de Dreu, & Nijstad, 2004; Shane, Venkataraman, & MacMillan, 1995). In China, the work culture shows significant differences with regards to power distance, uncertainty avoidance, individualism and masculinity compared with Western countries like Germany and the United States (Fernandez, Carlson, Stepina, & Nicholson, 1997). It is characterized by authoritarian management styles, low propensity to take risks, and a preference for equality in organizations (Fernandez et al., 1997). At the same time, contemporary social forces impede the individual (Leung, 2012). These social forces include a high focus on materialistic success and a keen sense of competitiveness, both characteristics of less affluent societies.

Given those cultural differences, it seems not surprising to find that foreign companies struggle in China when it comes to the management of local employees and the activation of their innovative behavior. In fact, the management of local employees has been reported to be one of the greatest challenges (Ahlstrom, Bruton, & Chan, 2001; Williamson & Zeng, 2004; Wu, 2008). It remains unclear how innovation strategies developed in the West can enhance employee innovative behavior in China, given the differences in context and culture (Shane et al., 1995; Zhou & Su, 2010).

It is against this background that this study is exploring facilitators of employee innovative behavior in China. Specifically, this study aims to answer following two research questions:

- (1) What are key contextual success factors to foster employee innovative behavior in China?
- (2) How can we explain the importance of the key success factors and how can those be implemented in practice?

An exploratory case study research set in a foreign manufacturing subsidiary of an MNC in China is conducted. The study contributes to literature as it integrates research streams for employee innovative behavior from extant Western and Asian context and distills the important ones for the Chinese context via empirically grounded data. Furthermore, the results help organizations to adjust their limited resources to key success factors to foster employee innovative behavior.

The paper is structured as follows: Section 2 describes the concept of employee innovative behavior and reviews existing research on contextual success factors set in Western and Asian contexts. Section 3 describes the research method and the sample case, followed by results and discussions in the fourth section. In Section 5, a summary, limitations, and contribution to research and practitioners are presented.

## 2. Previous works

Following the definition of West and Farr (1989), employee innovative behavior describes the intentional creation, introduction and application of new ideas, processes, products or services within a work role, group, or organization (Abstein & Spieth, 2014; Yuan & Woodman, 2010). It is

closely related to creativity but differs in that it explicitly includes the implementation of ideas in addition to idea generation (Parzefall et al., 2008). Furthermore, employee innovative behavior intends to provide some benefit and is expected to generate innovative output in the form of, for example novel products, processes or services (De Jong & Den Hartog, 2010).

Employee innovative work behavior can range from incremental improvements to developing radically novel ideas (Axtell et al., 2000). While the latter are rather rare, the former smaller-scale suggestions and improvements are much more widespread and concern employees from all areas. As such, innovative work behavior is crucial in many contemporary management principles, such as continuous improvement, kaizen or suggestion programs (De Jong & Den Hartog, 2007; Dörner, 2012). A prerequisite for employees to show employee innovative behavior is the individual capability and willingness to innovative. For that, knowledge and skills, but also characteristics like openness and creativeness are necessary (Del Giudice & Maggioni, 2014; Lawson & Samson, 2001; Parzefall et al., 2008).

A variety of contextual success factors have been studied as important facilitators for employee innovative behavior in literature. Drawing from existing reviews, these contextual factors can be clustered into leadership, job, group and network, and organizational level factors (Axtell et al., 2000; Parzefall et al., 2008). The factors can all be influenced by the organization. Factors like environment, structural context or governmental policies have been excluded. An overview of studies from Western and Asian contexts about contextual success factors for employee innovative behavior is summarized in Tables 1–4, and selected studies are discussed in sections *Leadership*, *Job*, *Group and Network* and *Organization*.

## 2.1. Leadership

Scholars have devoted considerable attention to study leadership style, leader-subordinate relationship and supervisory behavior as a driving force for employee innovative behavior. Though no clear picture has emerged what leadership style is most effective in which situation, some key distinctions can be made

**Table 1. Overview of contextual success factors for employee innovative behavior related to leadership**

Cluster	Success factor	Description	Authors
Leadership	Autocratic leadership style	Leaders take decisions, give clear directions and monitor task accomplishment.	Jayasingam (2009), Leung (2012), Leung et al. (2014)
	Participative leadership style	Leaders consult and collaborate with employees in decision making.	Axtell et al. (2000), Jayasingam (2009)
	Transformational leadership style	Leaders motivate and challenge employees to identify problems proactively and question the status quo.	Aryee, Walumbwa, Zhou, and Hartnell (2012), Li, Zhao, and Begley (2014), Shin and Zhou (2003)
	Relationship between leader and employee	Leaders and employees have a relationship characterized by mutual trust, respect, and liking.	S. G. Scott and Bruce (1994), Yuan and Woodman (2010)
	Leadership support	Leaders provide practical support to the employee to solve problems and to introduce new ideas.	Axtell et al. (2000), De Jong and Den Hartog (2007)
	Leader as role model	The leader is an example of innovative behavior.	De Jong and Den Hartog (2007), Pan et al. (2015)
	Praise	The leader provides regular praise and encouragement to the employee.	Huhtala and Parzefall (2007)
	Criticism	The leader regularly shows areas for development and improvement to the employee.	Conțiu et al. (2012), Zhou and Su (2010)

between transformational, participative and autocratic leadership style. Shin and Zhou (2003), in a study of transformational leadership and creativity, show that leaders who exhibit traits, such as inspirational motivation and idealized influence positively affect employee creativity. This is particularly the case for employees valuing tradition and conformity; traits also found in Chinese culture (Fan, 2000). They suggest that employees respecting conservation of tradition are more willing to accept their leaders' influence and exhibit greater creativity in response to this influence than workers from Western societies. De Jong and Den Hartog (2007) suggest participative leadership to enhance employee innovative behavior. Here, employees and leaders collaborate in decision making. Employees who participate in decision making may feel more ownership toward the outcome, and thus are more likely to propose new and improved ways of fulfilling them (Axtell et al., 2000). While autocratic leadership style characterized by low autonomy for the single employee tends to be typically viewed as a factor that stifles creativity in low power-distance cultures, innovative employee behavior in China is found to be highest in organizations with autocratic leadership and innovative climate (Leung et al., 2014). This may be because Chinese employees expect instructions from their leaders and interpret "control" as mentoring attempts. Yuan and Woodman (2010), who study the effect of leader-subordinate relationship, find that employees who have good relationships with supervisors are more confident to express innovative behavior. This could be related to leadership support for innovation: The leader acts in a friendly way to innovative employees and provides actual help if problems arise instead of penalizing the employee (De Jong & Den Hartog, 2007). Pan, Wu, Zhou, and Lou (2015) study the impact of leader's behavior on creativity. They find that leader's creativity positively impacts the employee's creativity; hence verifying the positive benefits of role modeling (De Jong & Den Hartog, 2007). Another interesting, but controversial leadership behavior is the usage of praise and criticism. While it is well known that praise positively affects employee innovative behavior (De Jong & Den Hartog, 2007); Zhou and Su (2010) suggest that negative feedback which focuses on showing employee's weaknesses might be more effective in the Asian culture because this is the predominant educational style.

## 2.2. Job

Past studies have highlighted how job characteristic and task play a major role in influencing employee innovative work behavior. For example, Ong, Wan, and Chng (2003) propose that challenging tasks and wider job responsibilities are positively related to innovation. While execut-

**Table 2. Overview of contextual success factors for employee innovative behavior related to job**

Cluster	Success factor	Description	Authors
Job	Task	The job definition is broad and demanding. Employees are required to work their minds instead of doing routine work.	Ong et al. (2003), Parzefall et al. (2008)
	Job requirement	The job requests and expects employee innovative behavior.	Goepel et al. (2012), Yuan and Woodman (2010)
	Job autonomy	The job provides freedom for the employee to determine how the work is carried out and to engage in "trial and error".	Parzefall et al. (2008), Ramamoorthy et al. (2005)
	Reward and pay	The job provides incentives, such as behavior-based rewards and pay for performance.	Ashok et al. (1993), Conțiu et al. (2012), Leung (2012), Ong et al. (2003), Ramamoorthy et al. (2005)
	Training	The job provides opportunities for learning and development processes targeted at behavioral, task, knowledge, and skill improvement.	Abdullah et al. (2014)
	Resources and time	Adequate material resources and enough time are provided to explore new ideas.	Huhtala and Parzefall (2007), Parzefall et al. (2008)

ing more complex tasks, employees are more likely to work their minds and consider alternatives when looking for solutions (Parzefall et al., 2008). At the same time, having a wider job definition, employees gain a greater perspective which in turn might stimulate individual innovative behavior. Though innovative behavior has often been recognized as a voluntary behavior that is not prescribed in formal job descriptions (Abstein & Spieth, 2014), Yuan and Woodman (2010) propose innovativeness as an explicit job requirement to be positively related to employee innovative behavior. The formal demand and expectation to be innovative will lead to the employee feeling more appropriate to engage in innovative behavior and more confident that managers and co-worker will accept new ideas. This might be especially true in Asian culture with high power distance in which employees are more used to being told what to do (Ramamoorthy, Flood, Slattery, & Sardesai, 2005). Ramamoorthy et al. (2005) find that pay influences innovative work behavior of the employees. They suggest rewarding innovative work behavior as it encourages employees to try out new ideas. If applied appropriately (Rosenblatt, 2011), it fulfills the expectation of the employees for appropriate compensation of performance. In risky innovation projects, this might mean to reward for “intelligent effort” instead of “success” (Ashok, Gupta, & Singhal, 1993). Leung (2012) suggests that the usage of pay and rewards may be particularly effective in China because the strive for materialistic well-being is high. Factors, such as job autonomy, a critical success factor in affluent Western countries, might be of less importance (Axtell et al., 2000).

### 2.3. Group and network

Existing research indicates that group relations and composition are important in facilitating employee innovative behavior. Good interpersonal relations and a high level of trust in the group will lead to employees’ feeling safer to voice their ideas openly (Axtell et al., 2000). Also, a trustful group composition with close social ties encourages knowledge sharing. This results in learning and innovation within the group (Cabrera & Cabrera, 2005). Zhou and Su (2010) propose that in China, the group may have a stronger influence on an employees’ creativity in China than in the West due to the higher level of collectivism in China. This leads to a stronger creative individual role identity when the expectation and identity of the peer group toward innovation are high. In a study about managerial *guanxi*—personal managerial connections in China—Shu, Gao, Jiang, and Page (2010) find that *guanxi* has a positive indirect link on innovation. A broad *guanxi* network helps to increase knowledge exchange and knowledge creation, and thus organizational innovation. Further, Parzefall et al. (2008) and Bogers, Foss, and Lyngsie (2018) emphasize the importance of team compositions with complementing skills and knowledge, education and work history to enhance employee innovative behavior. The combination of different viewpoints might lead to a higher likelihood to produce innovative solutions.

**Table 3. Overview of contextual success factors for employee innovative behavior related to group and network**

Cluster	Success factor	Description	Authors
Group and Network	Relationship with co-worker	Employees are well integrated into the functions they belong to and have trust in the team.	Axtell et al. (2000), Ong et al. (2003)
	Co-worker as role model	The co-workers are an example of innovative behavior.	Ong et al. (2003), Zhou and Su (2010)
	Guanxi	Employees have a broad <i>guanxi</i> network within the organization.	Shu et al. (2010)
	Group composition	Groups are diverse in skills, knowledge, and personality.	Bogers et al. (2018), Parzefall et al. (2008)

#### 2.4. Organization

A corporate strategy and a corporate structure for innovation have been commonly reported as important factors facilitating employee innovative behavior. The strategic emphasis on innovation and a vision for focusing on long-term risky projects have been proposed as factors that enhance employee innovative behavior (Parzefall et al., 2008). Strategic focus on innovation might lead to organizations systematically building innovation capabilities (Lawson & Samson, 2001). This might be through setting up internal and external networks for knowledge sharing and building knowledge management systems (Bresciani & Ferraris, 2016; Cabrera & Cabrera, 2005; Yahya & Goh, 2002). A failure of organizational direction for innovation might lead to problems in facilitation and cooperation among functions to support innovation. This has been named as one of the major barriers for innovations (Goepel, Hölzle, & zu Knyphausen-Aufseß, 2012). Corporate structure for innovation has been described as usually loose during initiation phase, but evolving into more formality as ideas become better defined (Parzefall et al., 2008). Here, a certain stability and clarity of responsibilities might help the organization to facilitate the dispersion and implementation of ideas and allows contribution by individuals (Ong et al., 2003).

In abovementioned review, the majority of studies use a rather narrow or single-level approach, focusing on isolated factors relevant for employee innovative behavior. This has led to an abundance of literature. However, scholars criticize the limited effort in current studies to determine the most relevant success factors (Parzefall et al., 2008). Also, it is not clear, how the factors identified in previous research predominantly conducted in Western contexts can be used to foster employee innovative behavior in a different cultural setting like China. This study aims to overcome these gaps of prior studies, and will hence explore key contextual success factors relevant for employee innovative behavior in China.

**Table 4. Overview of contextual success factors for employee innovative behavior related to organization**

Cluster	Success factor	Description	Authors
Organization	Company innovation strategy	The organization emphasizes the need for innovation.	Parzefall et al. (2008)
	Cross-functional cooperation	Within the organization, functional areas and management cooperate to facilitate new idea generation and implementation.	Goepel et al. (2012), Ong et al. (2003)
	Organizational structure	A corporate structure for innovation including defined responsibilities and processes exists.	Parzefall et al. (2008)
	Climate for innovation	The organization encourages innovation and provides an atmosphere of support for new ideas.	Leung et al. (2014), Übüs, Alas, and Elenurm (2013)
	Communication structure	The organization has an integrated communication infrastructure among different departments that allows high connectedness and idea sharing.	Ong et al. (2003)
	Human resource management	The organization has a human resource system in place which values the individual and their work engagement and fosters work-life balance.	Abstein and Spieth (2014)

### 3. Research method

Previous empirical work on success factors for employee innovative behavior has mostly used causal correlations (e.g. Abdullah, Lee Ping, Wahab, & Shamsuddin, 2014; Ramamoorthy et al., 2005; Yuan & Woodman, 2010). Those studies have usually focused on a narrow set of factors that have been identified in previous exploratory research as being relevant for employee innovative behavior.

As this study aims at both identifying the relevant contextual success factors for employee innovative behavior and their relative importance within research question 1, a Delphi method was chosen (Skulmoski, Hartman, & Krahn, 2007). The Delphi survey is an iterative process over typically three to four rounds to collect and distill the anonymous judgments of experts. It is well suited as a research instrument when there is incomplete knowledge about a problem and as a means for handling opinions rather than objective facts (Schmidt, 1997). It is a flexible research technique and has been applied in a wide variety of management disciplines including innovation and international business (e.g. Keil, Lee, & Deng, 2013; Sun & Wing, 2005). For answering research question 2, qualitative participant input is sought within the Delphi questionnaire in written form.

#### 3.1. Research setting and participants

The survey was conducted in a subsidiary of a large Western manufacturing firm located in Jiangsu province, the region with the fastest economic growth rate in China. The subsidiary specializes in hydraulic applications and has been operating in China for over 20 years. Innovation is anchored in its global and local strategy. It is primarily a manufacturing subsidiary but with a high level of engineering activities as it designs the majority of its products according to customer needs.

The firm has approximately 900 employees of which more than 98% are Chinese. The management team consists of 24 members with 7 Europeans. The selection of participants followed an approach suggested by Sun and Wing (2005) in which middle and senior managers directly concerned with employee innovative behavior are surveyed regarding their perception of the most important contextual success factors. They are considered to “know best” (Sun & Wing, 2005, p. 297). A criteria-based approach for choosing the participants was followed. All participants chosen considered employee innovative behavior as being medium or highly relevant for their teams (see Table 5).

**Table 5. Participants profile and information on innovation**

Participants profile		
Job level	Head of Department	12
	Group Leader	10
	Team Leader	4
	Project Leader	1
Nationality	Chinese	21
	Foreigner	6
Average years of leadership experience		7 years
Information on innovation		
Average relevance of employee innovative behavior*		2
Type of innovation	Process innovation	73%
	Product innovation	25%
	Other	2%
Degree of innovation	Incremental innovation	88%
	New to the firm	12%
	New to the world	0%

Note: \*Likert Scale 1 = very high relevance, 5 = no relevance.

The participants represent the value chain as a whole. Hence they come from various functional areas including product management, sales project management, engineering, purchasing, logistic, manufacturing, quality and human resources. This ensures a broad view on the problem. Also, foreign and Chinese participants were included to account for different viewpoints.

A total of 27 participants agreed to take part in the survey after a guarantee of anonymity, a sample size consistent with other Delphi studies (Skulmoski et al., 2007). Participants' profiles were collected to make sure that the panelists had sufficient leadership experience. Also, participants were asked to provide information on the type of innovation in their area and judge the relevance of innovation. An overview is provided in Table 5.

Employee innovative behavior has been rated as having a high relevance on a 5-point Likert Scale. Innovation type in the surveyed manufacturing subsidiary consisted of mostly process innovation. Examples given by the participants included the establishment of a new-product-introduction process, the introduction of an IT tool to reduce engineering design mistakes and the optimization in routing processes in manufacturing to increase efficiency. The degree of innovation is judged as mostly being incremental.

### 3.2. Data collection and analysis

The data collection and analysis for the Delphi study was based on an approach adopted from Sun and Wing (2005) and G. M. Scott (1999). Specifically, we followed a three round process after conducting a pilot phase. In the pilot phase, a draft questionnaire with a list of 24 contextual success factors for employee innovative behavior and a description identified in the literature (see Table 1–4) was checked for understanding and distinctiveness by one academic and three professionals.

In the first round of the Delphi survey, the participants were familiarized with the study in face to face discussions. They were asked to narrow down the list of 24 success factors shown in Table 1–4 to the 10 most important ones. In line with majority criteria, only those factors selected by over 50% of the participants were retained for next round in order to achieve a more manageable size for ranking in round 2 and 3 (Schmidt, 1997; von der Gracht, 2012). A total of 24 usable responses was collected which equals an 89% response rate. The initial list was thus reduced to 10 factors via this process (see Table 6).

In the second round, the participants were given the 10 remaining factors from round 1 and were asked to rank the factors according to importance (Tie ranks were not allowed). Furthermore, the participants had to provide reasoning for their choice of the Top 3 ranked items as to why they considered these factors to be particularly important in the Chinese context and ways to achieve it. The response rate was 93% for this round.

In the 3rd round, feedback and mean rank from round 2 was shared with the participants that participated in round 2. The participants were asked to re-consider their ranking from round 2 and provide reasoning if they agreed or disagreed with the results from round 2. Twenty-one valid responses were received which equals an 84% response rate. The ranking was assessed after each round using mean value and consensus level for the Top 3 factors. A consensus was reached when a majority of 51% agreed to one topic (Loughlin & Moore, 1979).

The language in the questionnaire used was Chinese and English. The survey was first created in English, then translated to Chinese and back-translated into English by two fluent speakers to ensure consistency. The study was conducted within a timeframe of June till August 2015.

## 4. Results of Delphi study

In this section, we present the results of the study organized in two subsections. First, we present the ranking results from the Delphi study that address research question 1 with regards to key success factors and their relative importance. A key success factor is here considered to be in the Top 3 ranking

**Table 6. Results from Delphi round 1: success factors for employee innovative behavior that were considered important by >50% of the participants**

Success factor	Description	% of participants that considered this factors to be important
Transformational Leadership Style	Leaders motivate and challenge employees to identify problems proactively and question the status quo.	54%
Relationship between leader and employee	Leaders and employees have a relationship characterized by mutual trust, respect, and liking.	54%
Leadership support	Leaders provide practical support to the employee to solve problems and to introduce new ideas.	58%
Praise	The leader provides regular praise and encouragement to the employee.	71%
Reward and pay	The job provides incentives, such as behavior-based rewards and pay for performance.	81%
Training	The job provides opportunities for learning and development processes targeted at behavioral, task, knowledge, and skill improvement.	75%
Resources and time	Adequate material resources and enough time are provided to explore new ideas.	58%
Group composition	Groups are diverse in skills, knowledge, and personality.	75%
Company innovation strategy	The organization emphasizes the need for innovation.	58%
Cross-functional cooperation	Within the organization, functional areas and management cooperate to facilitate new idea generation and implementation.	54%

of the overall list. Second, we discuss the key success factors why they are important for the Chinese employee and give suggestions for ways of implementation hereby addressing research question 2.

#### **4.1. Key success factors for employee innovative behavior**

Table 7 presents the results from the ranking round 2 and 3 with mean ranks and consensus levels for the Top 3 items. In round 2, following the definition of Loughlin and Moore (1979) in which 51% of the participants are required in order to reach consensus, no agreement for the Top 3 success factors was reached. In round 3, controlled feedback in the form of mean rank from round 2, as well as the reasoning of the participants for their Top choices was provided to the participants and a re-ranking took place. The mean ranking for the overall population did not change but was confirmed in round 3 with an agreement level above 51% for the Top 3 success factors.

Because the overall ranking has been confirmed among two rounds, an agreement for the Top 3 success factors was achieved by >51% of the participants and outliers clearly stated reasons as to why they do not agree with the group in round 3, the results were considered sufficient to go on with the analysis and it was decided to refrain from surveying another round.

#### **4.2. Importance of key success factors and ways of implementation**

Three factors namely reward and pay, cross-functional cooperation and company innovation strategy have been ranked in the Top 3 in two consecutive ranking rounds and were rated among the Top 3 factors by >51% of the population in round 3, thus indicating a high importance for employee innovative behavior in China. They are hence considered key success factors. We will next discuss why the factors are essential for the Chinese context based on the feedback of the survey participants and ways for implementation in practice. A summary is given in Table 8. Text and words in quotation marks indicate quotes of surveyed participants to illustrate major themes that arose.

Table 7. Results from Delphi round 2 and 3: ranking of key success factors for employee innovative behavior						
Success factor	Round 2			Round 3		
	Mean score of participant ranking*	Overall Rank	Agreement Level: % of participants that ranked this factor in the Top 3	Mean score of participant ranking*	Overall Rank	Agreement Level: % of participants that ranked this factor in the Top 3
Reward and Pay	4.64	1	44%	2.71	1	76%
Cross-functional cooperation	4.68	2	44%	3.14	2	71%
Company innovation strategy	4.80	3	44%	3.67	3	52%
Transformational Leadership style	5.36	4	36%	4.67	4	38%
Leadership support	5.40	5	24%	4.90	5	33%
Training	5.64	6	24%	6.19	6	14%
Relationship between leader and employee	5.76	7	24%	6.67	7	5%
Group composition	5.96	8	32%	6.95	8	5%
Resources and time	6.28	9	12%	7.52	9	0%
Praise	6.48	10	16%	8.57	10	5%

Note: \*Ranking Scale of participants: 1 = most important; 10 = least important.

**Table 8. Key success factors for employee innovative behavior: reason for importance and suggestion for ways of implementation**

<b>Key success factor</b>	<b>Reason for importance</b>	<b>Suggestion for ways of implementation</b>	<b>Supporting quotes</b>
Reward and Pay	<ul style="list-style-type: none"> <li>Standard and cost of living are increasing in China</li> <li>Idealistic bounding to the company is less in China</li> <li>Extra effort is required for the employee to generate and implement innovative ideas</li> </ul>	<ul style="list-style-type: none"> <li>Set up clear and transparent guideline for rewards</li> <li>Link rewards and pay to clear targets and performance and communicate openly and regularly</li> <li>Plan sufficient budget for rewards</li> </ul>	<p>"It is very important that employees are recognized for innovating. The reward shall encourage the employee both financially and morally". (Group Manager; Logistic)</p> <p>"The strive for materialistic success comes from social pressure". (Group Manager; Procurement)</p> <p>"Plan enough budget for rewards". (Department Head, Logistic)</p>
Cross-functional cooperation	<ul style="list-style-type: none"> <li>Individual has limited capabilities to solve complex problems</li> <li>Mutual learning and collaboration among functions are necessary to achieve optimum for the company.</li> </ul>	<ul style="list-style-type: none"> <li>Establish process-thinking to optimize value chain instead of focusing on functional optimization</li> <li>Set up clear organizational responsibilities and authorities for cross-functional decision-making</li> <li>Encourage employees to cooperate cross-functionally and learn from others</li> </ul>	<p>"To innovate, it is important to collect different opinions for mutual benefit". (Group Manager, Procurement)</p> <p>"It is important that employees understand the work content of related departments". (Group Manager, Procurement)</p>
Company innovation strategy	<ul style="list-style-type: none"> <li>A defined innovation roadmap of the company is needed to align different functional departments to work on common goals</li> <li>All hierarchies need to set the focus on innovation</li> <li>Chinese employees are encouraged to express their ideas more openly</li> </ul>	<ul style="list-style-type: none"> <li>Set and align goals among departments</li> <li>Formulate, communicate and penetrate company innovation strategy among all hierarchies in the whole organization</li> <li>Demonstrate visible actions in line with strategy</li> <li>Show leadership focus for innovation</li> </ul>	<p>"Innovative behavior is mostly concerned with change. If the company wants to change, the organization needs to encourage this climate for change". (Manager; Sales Project Management)</p> <p>"Company strategy is the prerequisite for innovation. With the strategic direction and a culture for innovation, the employee will be motivated to actually do it". (Department Head, Human Resources)</p>

#### 4.2.1. *Reward and pay*

Participants reported that in a developing country like China, with a poor economic past and raising costs of living, incentives related to pay were the highest motivation to encourage employee innovative behavior.

Participants explained that some shop floor workers struggled to satisfy their basic needs for existence. Praise and encouragement were not enough to compensate extra work for innovation but clear financial rewards were needed. One manager notes:

Innovative people have rare skills, therefore reasonable pay is important to attract them.  
(Department Head, Procurement)

“Pay for performance” (Department Head, Sales Project Management) is incorporated in today’s Chinese mindset. This is especially relevant because idealistic bounding to the company or task is less dominant in China. Thus clear and transparent reward guidelines should be set up accordingly in the organization. Participants suggested to link rewards and pay to targets and communicate achievement openly and regularly to the employee. One manager explained:

A reasonable incentive structure is the biggest motivation for the employee. However, if there is no transparency how incentives are distributed, then this will turn into a big demotivation. (Manager, Sales Project Management)

Participants noted that suggestion boxes for shop floor and office workers to raise improvement ideas were good ways to encourage idea generation. This should be, however, coupled with a rewarding system. It was emphasized that the rewards should be significant in order to be attractive. Hence, enough money should be budgeted to award employees for outstanding ideas. Possibly, rewards could also be in relation to the benefit the implemented idea brings to the company.

#### 4.2.2. *Cross-functional cooperation*

Cross-functional cooperation among organizational departments and hierarchies was ranked as the second highest success factor for employee innovative behavior. One participant notes:

The general thinking in China is rather hierarchically and functionally oriented. An organization which emphasizes on cooperation will lead to a wider creation of ideas. (Department Head, Procurement)

Cooperation among functions gets even more important in big organizations as the individual has limited capability only. One manager explains:

Problems are getting increasingly complex and cannot be solved by a single department anymore. (Group Manager, Quality)

Also, it was reported that in China today, many times a cooperative mindset was missing because the current environment advocates “individual heroism” (Department Head, Sales Project Management). All the more, cross-functional cooperation in the organization needs to be encouraged because the individual has limited capabilities only to generate and implement innovative ideas.

Several participants mentioned that barriers between departments needed to be overcome in order to establish cross-functional process-thinking in which the focus is less on the functional benefit of the department but rather on the optimum for the entire value chain. Employees needed to be encouraged to cooperate with other departments, possibly through recurrent management advice, but also through common cross-functional team activities that open up new communication channels. One manager notes:

A single function cannot do its own thing, but needs to always think for the whole organization. (Group Manager, Logistic)

Therefore, a clear organizational set-up is needed in which responsibilities and authorities are transparent, and cross-functional decisions can be made easily for the benefit of the company. Also, fast hierarchical management decisions are required in case of disagreements between departments.

#### 4.2.3. *Company innovation strategy*

The company's innovation strategy was ranked as the third key success factor for employee innovative behavior. Participants described the company's innovation strategy as "the path the organization pursues with regards to innovation" (Department Head, Procurement). If the roadmap is transparent and clear, then the chance is higher that the whole organization is more aligned to support innovation. The importance of the strategic direction was emphasized by several managers who compare it to the "constitution of a country" (Department Head, Service) or the "director of an orchestra" (Department Head, Sales Project Management). One manager explained it the following way:

It's important that the strategy of the company emphasizes on innovation. Then the management team will focus on it and eventually every employee. This is related to the Top-to-Down culture in China. (Manager, Sales Project Management)

Participants noted that Chinese employees were not commonly expressing themselves and their ideas. Thus if the company wants to encourage employee innovative behavior, the company needs to eliminate those concerns of the Chinese employee to express themselves with innovative ideas. It needs to be made clear to every employee, that there is a "need" for innovation and employees' ideas, and that this is "crucial for the long-term survival of the company" (Group Manager, Manufacturing).

For a company innovation strategy to come alive in the organization, strategic goal setting and goal alignment are needed in order to encourage cooperation across functions and hierarchies. A good communication structure will support penetration of the strategy. Frequent information on implemented innovation ideas and promotion of new ideas is needed on the management level in order to trigger the mindset down to the employees. One manager explained:

The strategy needs to be clear to every employee. Adequate communication and high penetration of the strategy is the basis for its execution. (Manager, Sales Project Management)

Several participants noted that for a strategy to be credible, real actions and decisions of the management team supporting the strategy were important. Chinese employees needed to visibly see actions to trust in and follow the direction of the company innovation strategy. One manager notes:

A slogan is good, but actions are better, especially in China. (Department Head, Engineering)

Furthermore, several participants mentioned that leadership focus for innovation was highly relevant. The leader needs to show clear appreciation if an employee suggests a new idea. This is essential to encourage and motivate new idea generation and implementation.

## 5. Discussion, limitation and contribution

### 5.1. *Discussion*

With the growing significance of China as an innovation destination for MNCs, engaging local employees in innovative behavior is becoming increasingly important. In light of this development, our study investigated key contextual success factors to foster employee innovative behavior in China in a foreign manufacturing subsidiary. We find that reward and pay, cross-functional

cooperation and company innovation strategy are the three key contextual success factors to foster employee innovative behavior in our studied subsidiary. We explain the importance of each factor in the context of China and provide suggestions for implementation in practice.

This extends previous studies on employee innovative behavior in four main ways:

First, we find that some factors proposed in literature to encourage employee innovative behavior specifically in China or the Asian context like autocratic leadership style (Leung et al., 2014), critical feedback (Zhou & Su, 2010) and *guanxi* network (Shu et al., 2010) are not ranked among the 10 important ones. This corresponds to insights from Leung (2012) who proposes that changing social forces in China impede traditional cultural values. While in the past, autocratic leadership style and critical feedback might have been prevailing in education and upbringing, today's family structures mostly consist of a single child who receives excessive attention and whose inappropriate behavior is oftentimes tolerated. This new generation is much more individualistic and independent than older generations. This leads to possibly less receptivity for autocratic leadership styles and criticism as ways for encouragement and motivation at work. Furthermore, this generation is much more exposed to Western influences through media and especially if working in a foreign company like in our research setting. While *guanxi* is a traditional Chinese concept to form business connections, it might be valued less in multinational organizations. Here Chinese workers are exposed to Western management practices that are more based on formality and legality.

Second, our results confirm that reward and pay are a big motivational incentive as suggested by authors like Conțiu, Gabor, and Oltean (2012) and Leung (2012). In a less affluent country like China, where some employees struggle with basic needs for existence, factors like job autonomy or task become secondary. Because striving for material success is high in China, reward and pay rank as the most important key success factor for employee innovative behavior.

Third, cross-functional cooperation is highly relevant for employee innovative behavior in China. Though this topic has been tackled in previous research (Goepel et al., 2012; Ong et al., 2003), it has received rather implicit attention in literature as a success factor for employee innovative behavior. Contrary to findings of Ong et al. (2003), who did not find cooperation and support from other functions to affect individual innovation, our results reveal that this factor is highly relevant for employee innovative behavior in China. While cross-functional process-thinking might have been established and promoted in more mature countries, the barrier of "individual heroism" is prevailing in China. This leads to optimization of personal gains instead of the overall organization. Though past cultural studies have highlighted collectivism over individualism in China (Fernandez et al., 1997); individualistic behavior is more prevailing among today's employees (Leung, 2012). While the problem has been identified by the participants, this factor will need high management attention to encourage collaboration among the functions and a change of mindset.

Fourth, the third key success factor is company innovation strategy. This confirms findings in literature from Parzefall et al. (2008). Interestingly, the strategic path of a company is compared to a "state constitution", which shows both the respect for and reach of a sound strategy. Emphasis is put on a clear formulation and wide communication of the company innovation strategy among all employees. This high respect for a sound company innovation strategy might be related to the Chinese society being used to single parties setting the course of politics and economy via e.g. Five Year Plans (Veldhoen, Mansson, McKern, Yip, & DeJonge, 2012). These strategic plans are, once defined, followed and executed rigorously. Hence clear and credible strategies on a subsidiary level that encompass the individual employee might have similar effects.

## 5.2. Limitations and further studies

There are some limitations to the study which point at future research direction. First, data collection was based on a single case study within a subsidiary of an MNC in China. This allowed us to have panelists from different areas of expertise along the complete value chain. They were able to provide an accurate

view of the success factors for a manufacturing subsidiary as a whole. However, it implies a limited generalizability as we only have the view of one single subsidiary. Consequently, further research about employee innovative behavior in China should incorporate a larger sample of subsidiaries.

Second, our study focuses on contextual factors to enhance employee innovative behavior. We neglect individual factors like capability and willingness of the employee to innovate. This opens the discussion if individual factors need to be discussed as a prerequisite for employee innovative behavior. In this regard, it would be interesting to understand what fosters individual capability and willingness to innovative (Ashok et al., 1993; Yahya & Goh, 2002). Possibly, contextual success factors are only indirectly influencing employee innovative behavior as such, but are affecting individual factors firstly. Hence, a model is called for that depicts these interdependencies.

Second, in the review of past studies, we cluster enablers for employee innovative behavior into four categories drawn from past research. Although the categories allowed us to generate an extensive view on various studies for ranking, it comes with limitations. It mixes different theory lenses. Although for this study, the intention was not to focus on a single dimension of factors, we suggest that further studies can now take a more focused discussion on e.g. reward and pay and the link to motivational theory. Certainly discussions can also be expanded with regards to completeness of the factors and direct or indirect effect on employee innovative behavior.

Third, the study has been conducted in a manufacturing subsidiary in which incremental process innovations are the predominant form. Though incremental innovations are considered the most common outcome of employee innovative behavior (Dörner, 2012), an interesting path for further research would be to focus on product innovations with a higher degree of innovativeness.

### 5.3. Contribution

This study, regardless of its limitations, makes some significant contributions to research and practice. For researchers, first, our study integrates research streams and success factor for employee innovative behavior from extant Western and Asian context and distills the important ones for the Chinese context via empirically grounded data. This helps to add to the understanding of specialties for employee innovative behavior in China. Second, our study employs a systematic method to rank factors for employee innovative behavior. Hence, it identifies key contextual success factors and its relative importance. This helps to close a gap in past research which has identified many success factors but neglected to account for their relative importance. Third, our study reveals success factors for innovation that might be of particular significance in the Chinese context, such as reward and pay, and cross-functional cooperation. This may lay the foundation for future research in this area.

For practitioners, the distribution of innovation and improvement activities of MNCs to China is a phenomenon that is expected to increase. Past research has highlighted both the importance and the challenge of managing the individual employee in this course. Taking the results of our case study, practitioners can evaluate if they have adequate contextual factors in place to encourage employee innovative behavior within their organization. The ranked results and ways for implementations help organizations to adjust their focus of activities to the key success factors. The findings suggest MNCs to direct their limited capacities to set up an effective reward and pay system in the local subsidiary in China, encourage cross-functional cooperation among the value chain for the good of the overall company, and formulate and penetrate a directional company innovation strategy involving the individual employee.

#### Funding

The authors received no direct funding for this research.

#### Author details

Wenqian Zhou<sup>1</sup>  
E-mail: [wenqian.zhou@hhl.de](mailto:wenqian.zhou@hhl.de) and  
Vivek K. Velamuri<sup>1</sup>  
E-mail: [vivek.velamuri@hhl.de](mailto:vivek.velamuri@hhl.de)

<sup>1</sup> Faculty Entrepreneurship and Technology Transfer, HHL Leipzig Graduate School of Management, Leipzig, 04109, Germany.

#### Citation information

Cite this article as: Key contextual success factors for employee innovative behavior: A study in a foreign manufacturing subsidiary in China, Wenqian Zhou and Vivek K. Velamuri, *Cogent Business & Management* (2018), 00: 1471770.

## References

- Abdullah, N. H., Lee Ping, L., Wahab, E., & Shamsuddin, A. (2014, September). *Perception on training and employee innovativeness: An evidence from small firms*. Paper presented at the ICMIT 2014 International Conference on Management of Innovation and Technology, Singapore. doi:10.1109/ICMIT.2014.6942404
- Abstein, A., & Spieth, P. (2014). Exploring HRM meta-features that foster employees' innovative work behaviour in times of increasing work-life conflict. *Creativity and Innovation Management*, 1–15. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/caim.12053/full>
- Ahlstrom, D., Bruton, G., & Chan, E. S. (2001). HRM of foreign firms in China: The challenge of managing host country personnel. *Business Horizons*, 44(3), 59–68. doi:10.1016/S0007-6813(01)80036-7
- Anderson, N., de Dreu, C. K. W., & Nijstad, B. A. (2004). The routinization of innovation research: A constructively critical review of the state-of-the-science. *Journal of Organizational Behavior*, 25(June 2003), 147–173. doi:10.1002/job.236
- Aryee, S., Walumbwa, F. O., Zhou, Q., & Hartnell, C. A. (2012). Transformational leadership, innovative behavior, and task performance: Test of mediation and moderation processes. *Human Performance*, 25, 1–25. doi:10.1080/08959285.2011.631648
- Ashok, K., Gupta, A., & Singhal, A. (1993, January). Managing human resources for innovation and creativity. *Research Technology Management*, 36, 41. doi:10.1016/j.cell.2010.03.006
- Axtell, C. M., Holman, D. J., Unsworth, K. L., Wall, T. D., Waterson, P. E., & Harrington, E. (2000). Shopfloor innovation: Facilitating the suggestion and implementation of ideas. *Journal of Occupational and Organizational Psychology*, 73, 265–285. doi:10.1348/096317900167029
- Birkinshaw, J., & Hood, N. (2001). Unleash innovation in foreign subsidiaries. *Harvard Business Review*, 79(3), 131–138. Retrieved from <http://europepmc.org/abstract/med/11246920>
- Bogers, M., Foss, N. J., & Lyngsie, J. (2018). The “human side” of open innovation: The role of employee diversity in firm-level openness. *Research Policy*, 47(1), 218–231. doi:10.1016/j.respol.2017.10.012
- Bresciani, S., & Ferraris, A. (2016). Innovation-receiving subsidiaries and dual embeddedness: Impact on business performance. *Baltic Journal of Management*, 11(1), 108–130. doi:10.1108/MBE-09-2016-0047
- Bruche, G. (2009). The emergence of China and India as new competitors in MNCs' innovation networks. *Competition & Change*, 13(3), 267–288. doi:10.1179/102452909X451378
- Cabrera, E. F., & Cabrera, A. (2005). Fostering knowledge sharing through people management practices. *The International Journal of Human Resource Management*, 16(5), 720–735. doi:10.1080/09585190500083020
- Conțiu, L. C., Gabor, M. R., & Oltean, F. D. (2012). Employee's motivation from a cultural perspective – A key element of the hospitality industry competitiveness. *Procedia Economics and Finance*, 3(12), 981–986. doi:10.1016/S2212-5671(12)00261-4
- De Jong, J. P. J., & Den Hartog, D. N. (2007). How leaders influence employees' innovative behaviour. *European Journal of Innovation Management*, 10(1), 41–64. doi:10.1108/14601060710720546
- De Jong, J. P. J., & Den Hartog, D. N. (2010). Measuring innovative work behaviour. *Creativity and Innovation Management*, 19(1), 23–36. doi:10.1111/j.1467-8691.2010.00547.x
- Del Giudice, M., & Maggioni, V. (2014). Managerial practices and operative directions of knowledge management within inter-firm networks: A global view. *Journal of Knowledge Management*, 18(5), 841–846. doi:10.1108/JKM-06-2014-0264
- Dörner, N. (2012). *Innovative work behavior: The roles of employee expectations and effects on job performance* (Unpublished doctoral dissertation). University of St. Gallen, St. Gallen.
- Fan, Y. (2000). A classification of Chinese culture. *Cross Cultural Management*, 7(2), 3–10. doi:10.1108/13527600010797057
- Fernandez, D. R., Carlson, D. S., Stepina, L. P., & Nicholson, J. D. (1997). Hofstede's country classification 25 years later. *The Journal of Social Psychology*, 137(1), 43–54. doi:10.1080/00224549709595412
- Goepel, M., Hölzle, K., & zu Knyphausen-Aufseß, D. (2012). Individuals' innovation response behaviour: A framework of antecedents and opportunities for future research. *Creativity and Innovation Management*, 21(4), 412–426. doi:10.1111/caim.12000
- Huhtala, H., & Parzefall, M.-R. (2007). A review of employee well-being and innovativeness: An opportunity for a mutual benefit. *Creativity and Innovation Management*, 16(3), 299–306. doi:10.1111/j.1467-8691.2007.00442.x
- Jayasingam, S. (2009). Leadership style and perception of effectiveness: Enlightening Malaysian managers. *Asian Social Science*, 5(2), 54–65. doi:10.5539/ass.v5n2p54
- Keil, M., Lee, H. K., & Deng, T. (2013). Understanding the most critical skills for managing IT projects: A Delphi study of IT project managers. *Information and Management*, 50(7), 398–414. doi:10.1016/j.im.2013.05.005
- Lawson, B., & Samson, D. (2001). Developing innovation capability in organisations: A dynamic capabilities approach. *International Journal of Innovation Management*, 5(3), 377–400. doi:10.1142/S1363919601000427
- Leung, K. (2012). Theorizing about Chinese organizational behavior: The role of cultural and social forces. In H. Xu & M. H. B. Bond (Eds.), *Handbook of Chinese organizational behavior – Integrating theory, research and practice* (p. 560). Cheltenham: Edward Elgar Publishing.
- Leung, K., Chen, Z., Zhou, F., & Lim, K. (2014). The role of relational orientation as measured by face and renqing in innovative behavior in China: An indigenous analysis. *Asia Pacific Journal of Management*, 31(1), 105–126. doi:10.1007/s10490-011-9277-1
- Li, C., Zhao, H., & Begley, T. M. (2014). Transformational leadership dimensions and employee creativity in China: A cross-level analysis. *Journal of Business Research*, 68(6), 1149–1156. doi:10.1016/j.jbusres.2014.11.009
- Loughlin, K. G., & Moore, L. F. (1979). Using Delphi to achieve congruent objectives and activities in a pediatrics department. *Journal of Medical Education*, 54(2), 101–106. doi:10.1097/00001888-197902000-00006
- Ong, C.-H., Wan, D., & Chng, S.-H. (2003). Factors affecting individual innovation: An examination within a Japanese subsidiary in Singapore. *Technovation*, 23(7), 617–631. doi:10.1016/S0166-4972(02)00019-6
- Pan, J., Wu, Q., Zhou, W., & Lou, Y. (2015). When is the leader's creativity related to the followers' creativity? A cross-level examination in China. *Innovation: Management, Policy and Practice*, 17(3), 364–382. doi:10.1080/14479338.2015.1061897
- Parzefall, M., Secek, H., & Leppänen, A. (2008). Employee innovativeness in organizations: A review of the

- antecedents. *Finnish Journal of Business Economics*, 2(8), 165–182.
- Ramamoorthy, N., Flood, P. C., Slattery, T., & Sardesai, R. (2005). Determinants of innovative work behaviour: Development and test of an integrated model. *Creativity and Innovation Management*, 14(2), 142–150. doi:10.1111/j.1467-8691.2005.00334.x
- Rosenblatt, M. (2011). The use of innovation awards in the public sector: Individual and organizational perspectives. *Innovation: Management, Policy and Practice*, 13(2), 211–223. doi:10.5172/impp.2011.13.2.207
- Schmidt, R. (1997). Managing Delphi surveys using non-parametric statistical techniques. *Decision Sciences*, 28(3), 763–774. doi:10.1111/j.1540-5915.1997.tb01330.x
- Scott, G. M. (1999). Top priority management concerns about new product development. *Academy of Management Perspectives*, 13(3), 77–84. doi:10.5465/AME.1999.2210316
- Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal*, 37(3), 580–607. doi:10.2307/256701
- Shane, S., Venkataraman, S., & MacMillan, I. (1995). Cultural differences in innovation championing strategies. *Journal of Management*, 21(5), 931–952. doi:10.1177/014920639502100507
- Shin, S. J. A. E., & Zhou, J. (2003). Transformational leadership, conservation, and creativity: Evidence from Korea. *Academy of Management Journal*, 46(6), 703–714. doi:10.5465/30040662
- Shu, C., Gao, S., Jiang, X., & Page, A. L. (2010, August). *Managerial Guanxi ties, knowledge creation, and firm innovation: Evidence from China*. Paper presented at the Academy of Management. Montréal, Canada. doi:10.5465/AMBPP.2010.54493609
- Skulmoski, G. J., Hartman, F. T., & Krahn, J. (2007). The Delphi method for graduate research. *Journal of Information Technology Education*, 6(1), 1–21. doi:10.28945/199
- Sun, H., & Wing, W. C. (2005). Critical success factors for new product development in the Hong Kong toy industry. *Technovation*, 25(3), 293–303. doi:10.1016/S0166-4972(03)00097-X
- Übuis, Ü., Alas, R., & Elenurm, T. (2013). Impact of innovation climate on individual and organisational level factors in Asia and Europe. *Journal of Business Economics and Management*, 14(1), 1–21. doi:10.3846/16111699.2011.642081
- Veldhoen, S., Mansson, A., McKern, B., Yip, G., & DeJonge, M. (2012). Innovation – China's next advantage? 2012 China innovation survey. Retrieved August 25, 2013, from [http://www.strategyand.pwc.com/media/uploads/Strategyand\\_2012-China-Innovation-Survey.pdf](http://www.strategyand.pwc.com/media/uploads/Strategyand_2012-China-Innovation-Survey.pdf)
- von der Gracht, H. A. (2012). Consensus measurement in Delphi studies. Review and implications for future quality assurance. *Technological Forecasting and Social Change*, 79(8), 1525–1536. doi:10.1016/j.techfore.2012.04.013
- West, M. A., & Farr, J. L. (1989). Innovation at work: Psychological perspectives. *Social Behaviour*, 4(1), 15–30.
- Williamson, P., & Zeng, M. (2004). Strategies for competing in a changed China. *Sloan Management Review*, 45(4), 1–10.
- Wu, J. (2008). An analysis of business challenges faced by foreign multinationals operating the Chinese market. *International Journal of Business and Management*, 3(12), 169–174. doi:10.5539/ijbm.v3n12p169
- Yahya, S., & Goh, W. (2002). Managing human resources toward achieving knowledge management. *Journal of Knowledge Management*, 6(5), 457–468. doi:10.1108/13673270210450414
- Yip, G., & McKern, B. (2014). Innovation in emerging markets – The case of China. *International Journal of Emerging Markets*, 9(1), 2–10. doi:10.1108/IJoEM-11-2013-0182
- Yuan, F., & Woodman, R. (2010). Innovative behavior in the workplace: The role of performance and image outcome expectations. *Academy of Management Journal*, 53(2), 323–342. doi:10.5465/AMJ.2010.49388995
- Zhou, J., & Su, Y. (2010). A missing piece of the puzzle: The organizational context in cultural patterns of creativity. *Management and Organization Review*, 6(3), 391–413. doi:10.1111/j.1740-8784.2010.00192.x



© 2018 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.

You are free to:

Share — copy and redistribute the material in any medium or format.

Adapt — remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made.

You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

No additional restrictions

You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.



***Cogent Business & Management* (ISSN: 2331-1975) is published by Cogent OA, part of Taylor & Francis Group.**

**Publishing with Cogent OA ensures:**

- Immediate, universal access to your article on publication
- High visibility and discoverability via the Cogent OA website as well as Taylor & Francis Online
- Download and citation statistics for your article
- Rapid online publication
- Input from, and dialog with, expert editors and editorial boards
- Retention of full copyright of your article
- Guaranteed legacy preservation of your article
- Discounts and waivers for authors in developing regions

**Submit your manuscript to a Cogent OA journal at [www.CogentOA.com](http://www.CogentOA.com)**

