

Article

Does an Innovative Climate Help to Sustain Competitiveness? The Moderating Effect of Government Support and Market Competition

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Abstract: Innovation has become a key source of competitive advantage that supports companies in achieving sustainable development. Organizational innovations usually start from employees' innovative ideas, irrespective of the company's size. If there were no specific rules to restrain employees from generating novel ideas, innovation could happen anywhere in an organization. The quest for innovation calls for a broad range of management strategies that are far beyond the research and development (R&D) investment. How can managers integrate intra-organizational management and external factors to incentivize people for innovations? Drawing on the interactional theory of organizational innovation, this study adopted a systematic perspective and tested the effect of the innovative climate on sales and manufacturing department innovation while examining the moderating effects of government support and market competition. Our findings from a survey of 482 companies showed that: (1) an innovative climate has a positive effect on both sales and manufacturing department innovation, (2) government support strengthens the positive effect of an innovative climate on department innovations, and (3) market competition enhances the positive moderating effect of government support on the relationship between an innovative climate and department innovation, such that the innovative climate exerts a stronger influence on department employee-driven innovation when government support and market competition are both high. Our study provides companies with an effective and low-cost approach to enhance competitiveness. We discuss the theoretical contributions and practical implementations of this study.

Keywords: innovative climate; department innovation; government support; market competition

1. Introduction

Innovation has become a key source of competitive advantage that supports companies in achieving sustainable development [1–3]. Organizational innovations usually start from employees' innovative ideas, irrespective of the company's size. Employee-driven innovation refers to the generation and implementation of new ideas, products, or processes that originate from a single employee or from two more employees' joint efforts [4]. Nevertheless, not all companies could afford the expenditures of a research and development (R&D) sector or a professional research team, especially for those small and medium enterprises (SMEs). Fortunately, innovations that create value for companies may not always be from formal R&D activities [5]. Further, the various types of innovation (e.g., product, process, and managerial innovation) exert different effects on financial and operational performance [6].

Innovation is the outcome of deliberate management instead of a random event [7]. Innovation management has successfully attracted the attention of scholars in the fields of both economics and organizational management [8,9]. The quest for innovation calls for a broad range of management strategies that are far beyond the R&D investment [5]. Previous studies in economics have proposed some alternative choices to promote organizational innovation, such as the new knowledge adoption, the advanced technology acquisitions, R&D cooperation, or skilled labor employment [7,10,11]. Using a perspective in organizational management, either the purchase of machinery or introducing knowledge might start from employees' innovative ideas. If there were no specific rules to restrain employees from generating novel ideas, employee-driven innovation could happen anywhere in an organization [12]. Either a creative sales plan or some improvement in the manufacturing process could help a small company make a profit. More and more ordinary employees are getting involved in innovative processes [13]. How can we energize employees and accelerate their innovation in the workplace? Is there some effective and low-cost approach for companies to enhance competitiveness? An innovative climate, stemming from the conglomeration of various work environment factors, could initiate employees' creativity and innovation as well as further fuel organizational development [14]. Creating a work climate that supports innovation might be critical for nurturing an organization's current and future competitive advantages [15] (p. 477).

The climate refers to employees' subjective perceptions about their organizational context [16,17]. This term and work environment are sometimes used interchangeably [18,19]. An innovative climate refers to the shared perceptions among employees about how much these contextual factors support organizational innovation [20]. It might involve management practices, innovation-related policies, and some social rules that support the generation, promotion, and realization of new ideas. Because of the differences in the history and factor endowment among companies, technological and organizational change could be localized, and therefore specific to a given firm or sector [21]. Further, an innovative climate, specific to a firm, might help to achieve competitiveness effectively via stimulating employees' innovativeness. Evidence shows that an innovative climate/environment is positively related to product or technology innovation [19,22]. In addition, more and more studies have started to investigate the effect of an innovative climate on general innovation, such as sales or management innovation. Many studies have revealed the positive relation between an innovative climate and individuals' behavior (e.g., Scott and Bruce, 1994; Hu and Fan, 2010; Shanker, Bhanugopan, Heijden, & Farrell, 2017 [23–25]). Surprisingly, we know less about the extent to which a corporate climate could contribute to non-R&D innovation at the firm level.

The interactional theory of organizational innovation suggests researchers should focus on the moderating effect of external factors to obtain a full understanding of innovations [26]. Government support might be the first consideration, as governments have launched an increasing number of programs and policies to enhance economic innovation and sustainability [27–29]. Due to the benefits of knowledge spillover, many governments would like to invest a number of resources to support firm innovation. A large amount of evidence shows that government support could strengthen organizational performance or innovation via subsidies, tax credits, loans, policies, etc. [30,31]. We could identify two streams in exploring the effect of government support on firm innovation. One stream focuses on the effect of a specific policy or program on firm innovation, such as research subsidies, tax reduction, or grants [28,32,33]. The other stream examines the effect of government connections on innovation (e.g., political ties [34]). However, fewer studies attempt to clarify the synthetic effect of government support with firm strategic management on the firms' innovation. In addition, few studies focus on innovative performance beyond product and R&D departments. In fact, government support not only provides economic or technical assistance, but also re-shapes employees' perceptions about innovation. We propose that government support could leverage the effect of organizational climates on innovations by mitigating the perceived and real risks. In this study, we explored the moderating effects of perceived government support.

Moreover, we intended to probe the intervention of the market situation. Business competition is a severe challenge faced by the companies. Any innovative improvement in the manufacturing process might save energy, reduce cost and achieve efficiency that enables the company to survive amid fierce competition [35]. More specifically, companies are motivated to utilize internal and external support to implement innovative programs in response to market competitions. Market competition might amplify the moderating effect of government support as innovation motives increase. It is interesting to investigate the extra moderation effect of the market situation.

To sum up, we sought to examine the effect of an innovative climate on both sales and manufacturing department innovation based on the interactional theory of organizational innovation. First, we explored the influence of an innovative climate on sales and manufacturing department innovation. Second, we tested the moderating effect of government support on these relationships. Third, we integrated market competition into our theoretical framework and probed the three-way interactional effect on department innovations.

2. Theory and Hypotheses

Climate is related to but distinct from organizational culture [14,36]. Organizational culture refers to shared values and norms among employees [37]. In addition, an organizational climate could be treated as a surface manifestation of the culture [38,39]. Previous research has defined organizational climate in two different ways. Some researchers emphasize that climate is an objective property of an organization (e.g., Ekvall, 1996 [40]). Others treat climate as a subjective perception about the organizational environment (e.g., Schneider, 1975 [17]). Consistent with the majority of climate researchers [14], this research adopted the subjective view and treated organizational climate as a perception in nature.

Based on the subjective perspective, we identified two main genres in exploring the dimensions of an innovative climate. One characterizes the features of an organizational climate that might stimulate creativity and innovation, such as freedom, challenge, trust, debates, and so on (e.g., Creative Climate Questionnaire, CCQ, [40]; and Isaksen et al.'s Situational Outlook Questionnaire, SOQ [41]). The other one categorizes the instrumental conditions that benefit or hinder innovations (e.g., Amabile and her colleagues' KEYs [18]). The former genre pays more attention to real life in organizations and to how people usually behave in the workplace. For example, it concerns how much people discuss and consider opposing opinions in an organization [42]. The latter focuses on the environmental antecedents of creativity and innovation in organizations. Relevant studies tend to find all related environmental factors and sort them out, such as work support, sufficient resources, or supervisory engagement. In this study, we adopted the second view and defined innovative climate as the perception about the combination of contextual factors related to creativity or innovation [20,43].

Grounded in Chinese management practices, Ma theorized that an innovative climate consisted of value cultivation, interpersonal support, and management practices [43]. Value cultivation refers to the consensus on the significance of innovation in the workplace. For example, in Chinese companies, managers usually communicate the value of innovation and encourage employees to meet clients' demands in creative ways. They are willing to guide public opinions via speeches, events, or activities. Interpersonal support is viewed as vertical and horizontal empowerment among employees through communication and coordination. In addition, management practice includes a set of innovation-related rules that cover rewarding, training, modeling, and providing resources. Adopting Ma's three-dimensional model [43], we analyzed the effect of an innovative climate on non-R&D department innovation in Chinese companies.

Employee-driven innovation encompasses two processes: idea generation and idea implementation [44]. These two processes involve different activities that make the innovation process very complex. First, the idea generation process advocates "out of box" thinking, which might go beyond conventional approaches. In addition, it might bring criticism and discontent in the workplace. Second, newly generated ideas should be useful. In other words, these ideas should meet

clients' requirements and help to solve problems. Third, innovation always accompanies potential risks for unpredictable consequences and innovators should be not afraid to take risks. Fourth, both creativity and innovation demand communication and cooperation among employees, as the division of tasks becomes more and more elaborate. Successful innovations might depend on a group of people who have good ideas and who have the initiative to put these ideas into practice. While investigating the effect of an innovative climate on employee-driven innovation, we need to adopt a collective view and treat the organizational climate as a shared perception among employees, instead of as some personal psychological climate.

Organizational innovation relies on employees' creative thinking and innovative initiatives. An innovative climate could nurture department innovation by empowering employees and providing sufficient resources. More specifically, when organizations always communicate the value of innovation in solving problems, employees are more willing to pay attention to generate new and useful ideas in their daily work. Salespersons or teams might need innovative methods to keep their market shares. In the manufacturing sector, employees might find the implementation of new ideas to be valid for quality improvement or cost control. If most employees achieve an agreement on the significance of innovation, they will have less social pressure when going beyond the routines. Therefore, value cultivation could benefit employee-driven innovation. Likewise, interpersonal support is positively related to innovation. When leaders encourage employees to engage in innovative processes, they are likely to think and share their new thoughts. Meanwhile, co-workers' support could help creative parties implement their new ideas. Whether in the sales or manufacturing department, any innovative improvement might involve a group of people instead of a specific person. Vertical and horizontal support not only encourages creative employees to practice their new ideas, but also keeps them away from potential criticism.

Finally, innovation-related practices will reinforce employees' beliefs in innovative improvement. If they receive professional training in their organizations, they might develop more work-related knowledge and innovative skills. When they need to carry out experiments, they will believe they can obtain sufficient resources from the department. If they are successful, they will win rewards from their companies. Therefore, they will dedicate themselves to innovative thinking and try to make progresses via innovative methods or procedures. In light of this, we theorized that an innovative climate will be positively related to sales and manufacturing department innovation.

Hypothesis 1 (H1). *An innovative climate has positive effects on (a) sales department innovation and (b) manufacturing department innovation.*

According to the interactional theory of organizational innovation [26], organizational characteristics interact with environmental factors in influencing organizational innovation. Due to the knowledge spillovers of innovation, local governments usually encourage and support companies in pursuing innovation and entrepreneurship. As a significant contextual factor, government support should not be ignored during an investigation into the effect of companies' innovation strategies. Government support reflects the extent to which the local government provides general support to firms, such as implementing beneficial policies or programs in the region [45,46]. We proposed that perceived government support will strengthen the positive effect of an innovative climate on organizational innovation for three reasons. First, government support makes organizational practices legitimate to all employees. In this situation, people are more likely to embrace organizational innovative policies and be dedicated to innovative processes without a doubt. Second, with the endorsement of the government, employees might think the government will help their companies to overcome difficulties and potential risks. Innovative attempts usually come with risks and losses. This is the main reason why some employees are afraid of innovations. When employees believe the government will provide the necessary resources to support organizational innovations or to help to control losses due to failures, they might overlook risks and have more confidence in achieving success. Third, employees might be

willing to dedicate more to sales or manufacturing innovation when they find that their companies' demands are congruent with government appeals. Government support might give extra meaning to organizational innovations. To sum up, we theorized that government support will moderate the effects of an innovative climate on sales and manufacturing department innovation.

Hypothesis 2 (H2). *Government support moderates the effects of an innovative climate on (a) sales department innovation and (b) manufacturing department innovation, such that the relationship between an innovative climate and department innovation is stronger in a more supportive context.*

In addition, we proposed that market competition would enhance the positive moderating effect of government support on the relationship between an innovative climate and organizational innovation (see Figure 1). Facing a challenging market, employees are more likely to cherish government support. Market competition causes people to realize they need new approaches to keep up with the market or improve manufacturing procedures. It will amplify the moderating effect of government support in leveraging innovation. At the same time, people might find government support meaningless if there is no competition. Without pressure from the market, employees might focus on their daily work and neglect government support as well. Thus, we proposed a three-way interaction among an innovative climate, government support, and market competition in department innovation.

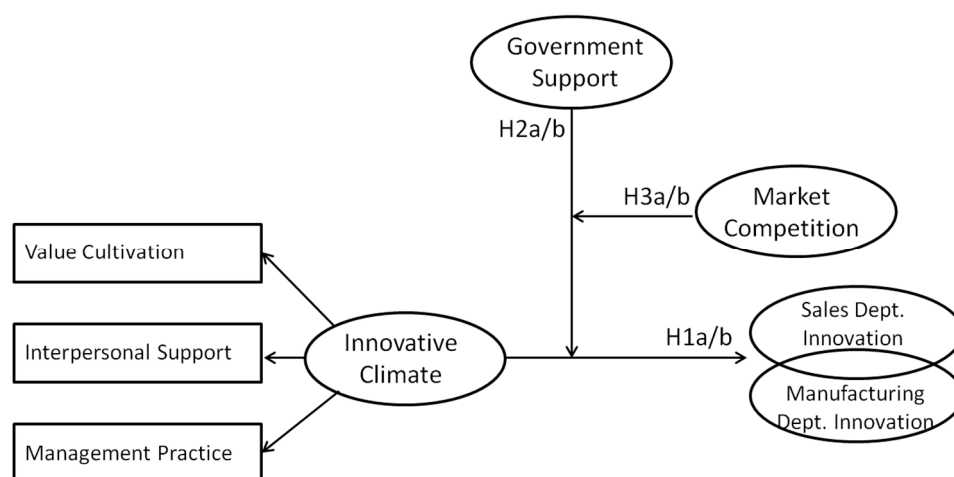


Figure 1. A theoretical model.

Hypothesis 3 (H3). *Market competition will enhance the positive moderating effect of government support on the relationship between an innovative climate and (a) sales department innovation and (b) manufacturing department innovation.*

3. Method

The present study was carried out in Zhejiang province, located in the southeastern part of China. We selected 1000 firms randomly from a list provided by the local administrative department. As part of the local technology management project, we conducted our survey with the permission of these firms. To avoid common method bias, we invited top management team members to rate department innovation, government support, and market competition, while also asking employees to evaluate the innovative climate. We operationalized the innovative climate by aggregating employees' perceptions at the firm level. The final sample included questionnaires from 482 companies, yielding a valid response rate of 48.2%.

Innovative climate. We used the 24-item scale developed by Ma to measure innovative climate [43] (Cronbach's alpha = 0.98). Ma developed 36 items to measure innovative climate in her original dissertation, and we adopted a convenient version by selecting 24 items with higher factor loadings in this study. The sample items included the following: "Our company develops employees' marketing consciousness by advocating innovative initiatives to meet market demand", "In our company, colleagues are willing to share their expertise with others", and "In our company, innovation evaluation is fair".

Government support. We adjusted Li and Atuahene-Gima's scale to measure government support with five items [45] (Cronbach's alpha = 0.89). The sample items included the following: "The local government implements policies and programs that have been beneficial to our company," and "Our company could have financial support (e.g., tax deductions and financial subsidies) from the local government."

Market competition. We modified the intensity of the market competition scale and measured market competition with six items [47] (Cronbach's alpha = 0.70). The sample items included the following: "There are very similar competitor product offerings," and "The competition is becoming extremely aggressive."

Department innovation. We adapted Janssen's scale to measure sales and manufacturing department innovation with a referent-shift approach [48] (Cronbach's alpha = 0.97, 0.98). Janssen developed nine items to measure innovative job performance based on the stages of innovation (idea generation, idea promotion, and idea realization). The sample items included the following: "creating new ideas for improvements," "mobilizing support for innovative ideas," and "transforming innovative ideas into useful applications."

Control variables. We controlled for a number of firm characteristics. Companies with more assets might have more resources for supporting department innovation. Thus, we controlled the total assets in the present study. In addition, organizational innovation usually stems from an employee's creativity. Thus, we controlled for the employee size of each company. Moreover, we also adopted a dummy variable to control the presence of an R&D department (1 = Yes, 0 = No). Finally, we coded firm status as 0 = listed and 1 = not listed. To normalize the employee size and assets, we used the base 10 logarithm of these two variables.

4. Results

Table 1 summarizes the means, standard deviations, and correlation coefficients among all interest variables. As we expected, innovative climate is positively correlated with sales department innovation ($r = 0.43, p < 0.01$) and manufacturing department innovation ($r = 0.32, p < 0.01$).

Table 1. Means, standard deviations, correlations, and internal consistency reliabilities.

	Mean	Std	1	2	3	4	5	6	7	8	9
1. Size	2.27	0.53									
2. Asset	3.94	0.73	0.79 **								
3. Listed	0.91	0.28	−0.32 **	−0.32 **							
4. R&D Department	0.92	0.26	0.16 **	0.20 **	−0.03						
5. Innovative Climate	4.81	0.71	0.04	0.06	−0.01	−0.02	(0.98)				
6. Government Support	5.12	0.67	0.08	0.06	0.00	0.04	0.27 **	(0.89)			
7. Market Competition	4.49	0.65	0.13 **	0.13 **	0.04	−0.01	0.05	0.28 **	(0.70)		
8. Innovation-Sales	4.85	0.72	−0.01	−0.01	0.11 *	−0.05	0.43 **	0.41 **	0.22 **	(0.97)	
9. Innovation-Manufacture	4.63	0.91	0.08 *	0.08	0.05	−0.00	0.32 **	0.39 **	0.25 **	0.67 **	(0.98)

Note. N = 482. Values in parentheses are reliability coefficients. ** $p < 0.01$ (2-tailed). * $p < 0.05$ (2-tailed).

Tables 2 and 3 present the results of the regression analyses for sales and manufacturing department innovation separately. Specifically, at model 1 through 4 in each table, we entered the control variables, innovative climate, government support, and an interactional term (innovative climate \times government support), market competition and all other higher order terms, respectively.

Table 2. Results of regression analyses for sales department innovation.

Sales Department	Main Effect			Moderating Effect			
	Model 2.1	Model 2.2		Model 2.3	Model 2.4		
Intercept	4.34 **	2.04 **		4.56 **	4.60 **		
Size	0.02	0.04		−0.01	−0.01		
Asset	0.04	−0.01		−0.01	−0.02		
Listed	0.35 *	0.34 **		0.32 **	0.30 **		
R&D Department	−0.18	−0.14		−0.14	−0.11		
Innovative Climate		0.50 **		0.37 **	0.32 **		
Government Support				0.42 **	0.40 **		
Market Competition					0.12 *		
IC * GS				0.25 **	0.23 **		
IC * MC					0.04		
GS * MC					0.01		
IC * GS * MC					0.15 **		
R2	0.02	0.20 **		0.32 **	0.34 **		
ΔR2		0.18 **		0.02 **	0.01 **		
Conditional effect of X on Y at values of the moderator(s):							
Government Support	Effect	SE	t	p	LLCI	ULCI	
	−0.67	0.20	0.07	2.97	0.00	0.07	0.34
	0.00	0.37	0.05	7.97	0.00	0.28	0.46
	0.67	0.54	0.06	9.39	0.00	0.42	0.65
Conditional effect of X * M interaction at values of W:							
Market Competition	Effect	SE	t	p	LLCI	ULCI	
	−0.65	0.13	0.08	1.70	0.09	−0.02	0.28
	0.00	0.23	0.07	3.24	0.00	0.09	0.37
	0.65	0.33	0.08	4.04	0.00	0.17	0.48

Note. N = 482. IC = innovative climate; GS = government support; MC = market competition. ** $p < 0.01$ (2-tailed).

* $p < 0.05$ (2-tailed).

To test Hypotheses 1a and 1b, we regressed sales department innovation (Model 2.2) and manufacturing department innovation (Model 3.2) separately on innovative climate. After controlling for employee size, firm asset, firm status and the presence of an R&D department, we found that an innovative climate has a positive effect on sales ($b = 0.50$, $p < 0.01$) and manufacturing department innovation ($b = 0.41$, $p < 0.01$). As we hypothesized, an innovative climate exerts a significant influence on both departments' innovation (comparing Model 2.2 to Model 2.1, delta R^2 explained by innovative climate = 0.18, $p < 0.01$; comparing Model 3.2 to Model 3.1, delta R^2 explained by innovative climate = 0.11, $p < 0.01$). Hypotheses 1a and 1b were supported.

Hypothesis 2 predicted that government support would strengthen the positive effect of an innovative climate on departments' innovation. To test Hypotheses 2a and 2b, we regressed sales and manufacturing department innovation separately on innovative climate, government support and the interaction of innovative climate and government support (Model 2.3 and Model 3.3). As shown in Tables 2 and 3, government support significantly moderates the relationship between an innovative climate and department innovations (for a sales department, $b = 0.25$, $p < 0.01$; for a manufacturing department $b = 0.18$, $p < 0.05$). To further test the moderating effect, we adopted a bootstrapping approach with the aid of the PROCESS macro provided by Preacher and Hayes [49]. Tables 2 and 3 summarizes the estimated effects of the innovative climate on department innovation at high and low levels of government support. To display the form of the moderating effect, we used the cut values of one standard deviation above and below the mean for government support to obtain four separate points. Following the procedure suggested by Aiken and West [50], we plotted the relation between an organizational climate and department innovation at high and low levels of government support.

Figures 2 and 3 illustrate that the relationships between an innovative climate and departments' innovation are stronger in a more supportive context, which is consistent with Hypothesis 2. Thus, Hypothesis 2 was supported.

Table 3. Results of regression analyses for manufacturing department innovation.

Manufacturing Department	Main Effect		Moderating Effect	
	Model 3.1	Model 3.2	Model 3.3	Model 3.4
Intercept	3.88 **	1.99 **	4.08 **	4.19 **
Size	0.06	0.08	0.03	−0.01
Asset	0.11	0.06	0.08	0.06
Listed	0.29	0.28	0.25	0.20
R&D Department	−0.08	−0.03	−0.05	−0.03
Innovative Climate		0.41 **	0.28 **	0.19 **
Government Support			0.47 **	0.44 **
Market Competition				0.19 **
IC * GS			0.18 *	0.07
IC * MC				0.21 **
GS * MC				0.10
IC * GS * MC				0.18 *
R2	0.01	0.12 **	0.22 **	0.27 **
ΔR2		0.11 **	0.01 *	0.01 **

Conditional effect of X on Y at values of the moderator(s):						
Government Support	Effect	SE	t	p	LLCI	ULCI
−0.67	0.16	0.08	1.92	0.06	−0.00	0.31
0.00	0.28	0.06	5.01	0.00	0.17	0.38
0.67	0.40	0.07	5.84	0.00	0.26	0.53

Conditional effect of X * M interaction at values of W:						
Market Competition	Effect	SE	t	p	LLCI	ULCI
−0.65	−0.04	0.09	−0.46	0.64	−0.22	0.14
0.00	0.07	0.08	0.90	0.37	−0.09	0.24
0.65	0.19	0.09	2.03	0.04	0.01	0.38

Note. N = 482. IC = innovative climate; GS = government support; MC = market competition. ** $p < 0.01$ (2-tailed). * $p < 0.05$ (2-tailed).

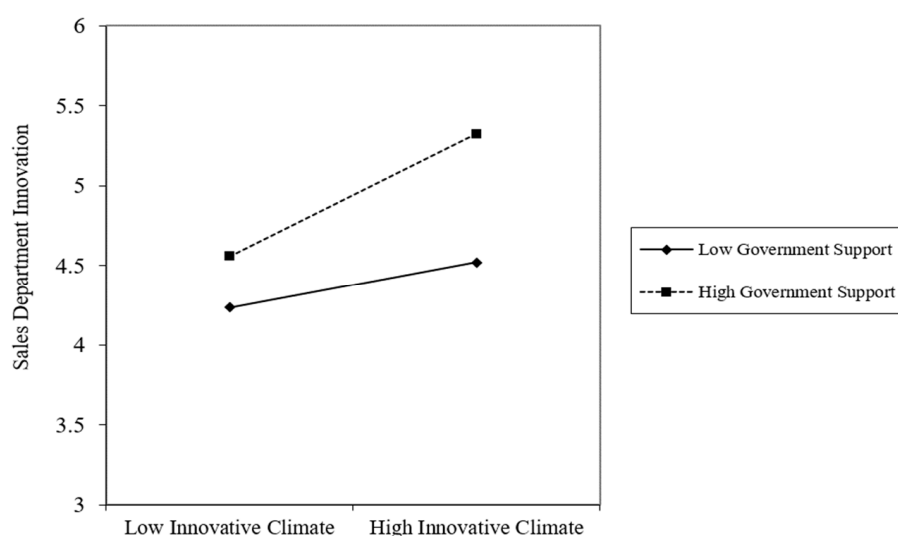


Figure 2. Moderating effects of government support on the relationship between innovative climate and sales department innovation.

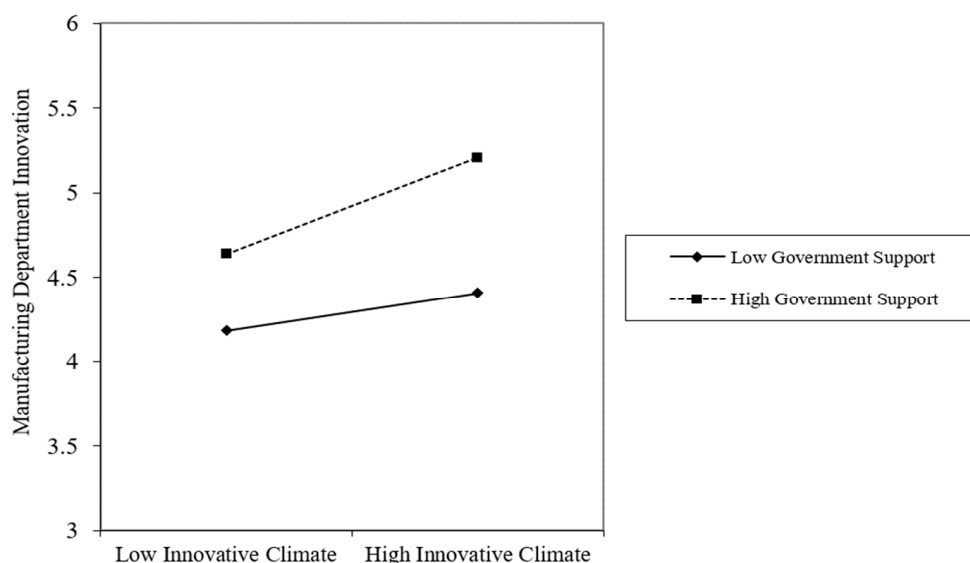


Figure 3. Moderating effects of government support on the relationship between innovative climate and manufacturing department innovation.

We further tested the three-way interaction among an innovative climate, government support, and market competition in department innovations, and we reported the regression results in Table 2 (Model 2.4) and Table 3 (Model 3.4). The results showed that market competition further moderates the moderated effect of government support on the relationship between an innovative climate and department innovation (for a sales department, $b = 0.15$, $p < 0.01$; for a manufacturing department $b = 0.18$, $p < 0.05$). We further adopted the PROCESS macro (developed by Preacher and Hayes [49]) to estimate the moderating effect of government support at high and low levels of market competition. When market competition is weak, government support has no significant moderating effect on the relationship between an innovative climate and department innovation (the confidence intervals for both sales and manufacturing innovation include zero, as shown in Tables 2 and 3). When market competition is high, government support has a significant moderating effect on the relationship between an innovative climate and department innovation (the confidence intervals for both sales and manufacturing innovation exclude zero, as shown in Tables 2 and 3; for sales department innovation, conditional effect = 0.33, 95% CI [0.17, 0.48]; for manufacturing department innovation, conditional effect = 0.19, 95% CI [0.01, 0.38]). We also adopted Aiken and West's procedure and plotted Figures 4 and 5 [50]. These graphic representations of the three-way interactions show that strong market competition could amplify the moderating effect of government support. More specifically, an innovative climate has a stronger effect on department innovation when government support and market competition are both high. Thus, Hypothesis 3 was supported.

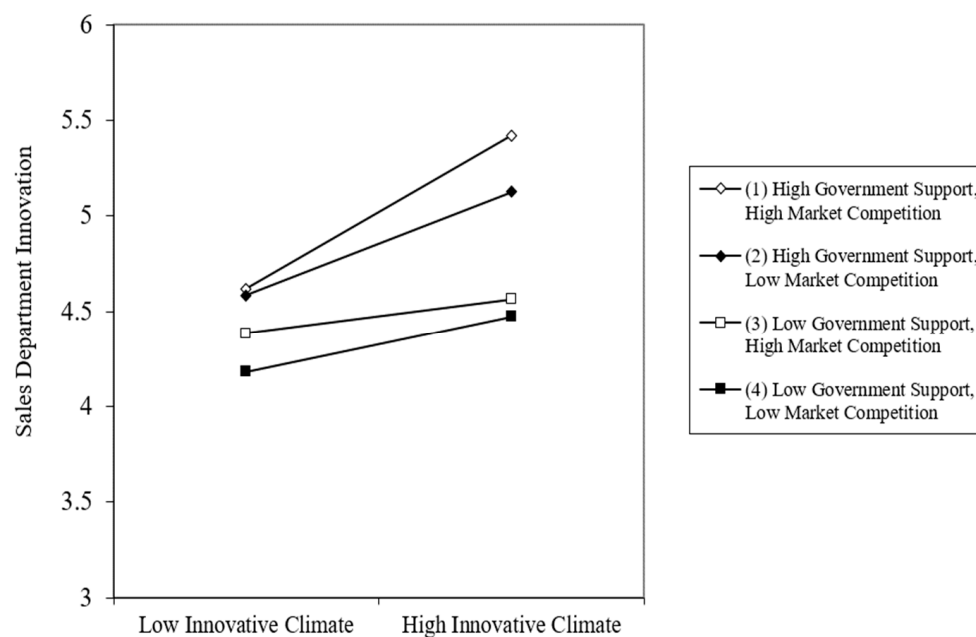


Figure 4. Three-way interaction with sales department innovation as dependent variable.

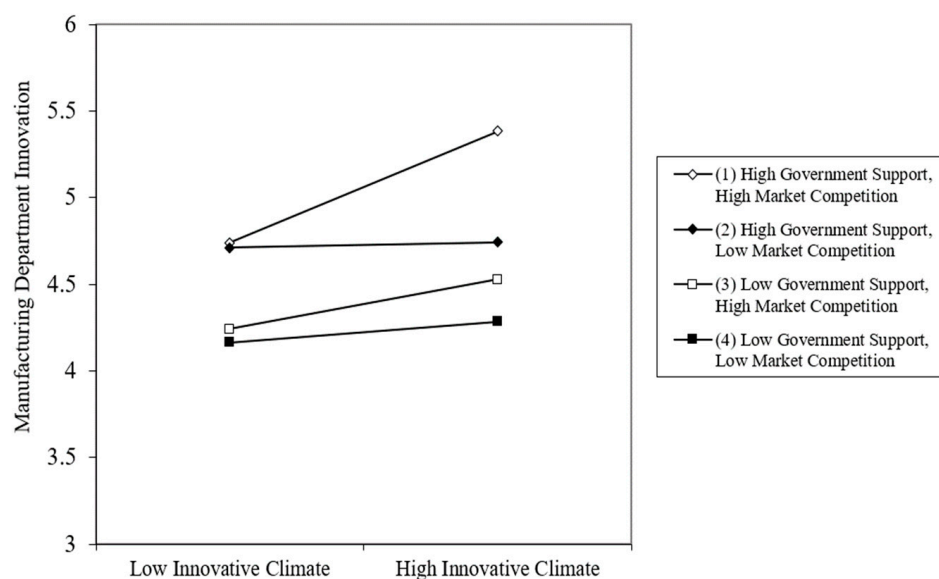


Figure 5. Three-way interaction with manufacturing department innovation as dependent variable.

5. Discussion

Drawing on the interactional theory of organizational innovation, this study tested the effect of an innovative climate on sales and manufacturing department innovation while examining the moderating effects of government support and market competition. First, we found that an innovative climate has a positive effect on both sales and manufacturing department innovation. An innovative climate is characterized by value cultivation, interpersonal support, and management practices. Innovation is not always restricted to products or technology systems. For SMEs, either an innovative sales plan or an improvement in the manufacturing process could bring competitive advantages. The consistent findings across departments demonstrated the value of an innovative climate in turbocharging innovation. Thus, this study makes a contribution to the employee-driven innovation realm by examining the effect of an innovative climate on non-R&D department innovative performance in China.

Second, government support strengthens the positive effect of an innovative climate on department innovations. Although many empirical studies have examined the effect of various types of government support on firm innovation [51], few have focused on the synthesized effect with organizational practices on employee-driven innovations. Our findings suggest that local government could not only benefit business by providing instrumental support, but also enhance employees' confidence in their companies. Such a belief might strengthen the influence of an innovative climate on department innovative performance. Our findings further extend the interactionist framework of innovation by including government support in it.

Third, we identified the three-way interaction among an innovative climate, government support, and market competition in department innovation, such that market competition further enhances the positive moderating effect of government support on the relationship between an innovative climate and department innovation. Government support might become more important to help companies handle fierce competition. In addition, we had some unexpected findings. The results showed that government support fails to strengthen the influence of an innovative climate on innovation when there is no market competition (see Figures 4 and 5). In other words, employees might not care about government support if they face no competition in the market. These findings undoubtedly enlarge our understanding of how external interventions resonate in moderating the effect of an innovative climate on department innovation.

Our results also have several practical implications in advocating employee-driven innovations, especially for SMEs. Because of the moderate and low cost of building an innovative climate or cultivating an awareness of competition, even small businesses can afford it. Our study provides companies with an effective and low-cost approach to initiating innovations in the workplace. To be more specific, this study provides guidelines for companies to develop innovative climates. We used Ma's framework and decomposed an innovative climate into three activities: value cultivation, interpersonal support, and management practices [43]. Following Kuenzi and Schminke's suggestions [14] (p. 703), we measured the relevant practices, policies, and procedures that constitute an innovative climate directly. There is no doubt this triadic model demonstrates an explicit plan to create an innovative climate. To implant innovative value, we encourage executives to emphasize the significance of market-orientated innovation by setting appropriate visions, missions, and performance goals. In addition, our results suggest that people should support one another in their daily work. On the one hand, managers could empower their subordinates and embrace their differences. On the other hand, managers could enhance communication and cooperation among employees to advocate innovations. What's more, executives could offer innovators resource support, training opportunities, fair evaluations, and specific rewards by launching a series of policies to energize employee-driven innovations.

In addition, this study provides a new perspective for understanding the role of government support in prompting companies' innovation. While browsing the websites of some Chinese companies, we could usually find news on a governor's visit or government concerns on the first page. Does this matter for employers or employees? Our study found that perceived government support could amplify the positive effect of an innovative climate on department innovation by enhancing people's confidence in innovation. What's more, the value of government support goes far beyond the expectations of companies that face intense competition. In other words, market competition makes government support more significant in leveraging the effect of an innovative climate on department innovations. If executives take advantage of these external factors, they might design promotion strategies within the company to advocate innovations.

The last problem executives should be concerned with is a lack of competition. As we discussed above, the 95% confidence intervals of the moderating effect for both sales and manufacturing innovation include zero at the low level of market competition, as shown in Tables 2 and 3. Scrutinizing Figures 3 and 4, we found it hard to identify the slope differences between line 2 (high government support, low market competition) and line 4 (low government support, low market competition). Specifically, government support fails to strengthen the positive effect of an innovative climate on

department innovation without competition. An alternative explanation might be the loss of motivation for innovation. If employees know there are few challenges or threats in a market, they might think it is unnecessary to take risks by attempting innovation. Thus, executives should be aware that moderate market competition could help to maintain employees' will to fight.

This study is not without limitations. First, the research design is cross-sectional. To avoid the common method bias, we asked employees to evaluate an innovative climate and invite executives to rate departments' innovative performance. Although we obtained permission to conduct the survey in hundreds of enterprises, executives were too busy to do one more survey a few months later. In addition, we should not ignore the endogeneity problem caused by the cross-sectional design. The results might be seen as correlations instead of casual links. A longitudinal design is a better choice for examining such causal relationships in the future. Moreover, this study operationalized all interest variables via subjective ratings instead of objective indicators. After several discussions with managers from our sample companies, we found it hard to identify the general objective indicators reflecting sales department innovation or manufacturing department innovation. If focusing on one industry, future studies might discover some appropriately objective criteria for measuring these two departments' innovation. It is also worth noting that more and more companies are willing to disclose information through websites or news. We wildly guess that future studies might find some objective indicators for government support or market competition via content analysis. The last concern is in the context of unpacking the mediating process. Drawing on the employee-driven innovation perspective, we call for more studies to explore the mediating effect to strengthen the causal argument. In the future, a longitudinal study with objective indicators might be helpful for drawing a firmer conclusion about the relationship between an innovative climate and innovative performance at the firm level.

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