

Regulatory Effect of Government Quality Award on the Relationship between Quality Management Activities and Enterprise Quality Innovation Performance and Analysis of Employees' Psychological Demand in Quality Management Activities

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Abstract:

The Since 2000, Chinese governments at all levels have successively carried out the evaluation of government quality awards and achieved certain results. However, how to prove the impact of various quality management activities adopted by government enterprises on enterprise performance, especially quality innovation performance, and how to explore the action mechanism of Government Quality Award activities on quality innovation performance, as well as the psychological demand of employees in quality management activities, will be the main problems of this study. This paper examines the regulatory effect of quality management activities and enterprise quality innovation through the institutional factor of government quality award. This study takes the enterprises from Zhejiang province that have won the county, city, district or provincial government quality award as the research object, including more than 80 enterprises in Hangzhou, Wenzhou, Taizhou and Lishui. This study uses statistical analysis, takes more than 80 enterprises as effective samples, and utilizes SPSS13 statistical software further verifies the theoretical conception of this study quantitatively. This study studies the changes of quality management activities, innovation performance and employees' psychological demand, and tests the relationship between various factors in various quality management activities and enterprise quality innovation performance and employees' psychological demand. In this study, the Government Quality Award activities at all levels have a significant effect on the innovation performance of enterprises and play a boosting role. This shows that various quality management activities adopted by the government are of great significance to the improvement of enterprise performance as long as they are implemented in place and provided with accurate services; According to the research conclusion, combined with the shortcomings of the existing research, this paper puts forward the future research direction and the

corresponding management enlightenment, which has certain theoretical and practical significance; Under the social and cultural background of our country, the psychological demand of employees is introduced as a regulating variable to study the relationship between various quality management activities and innovation performance.

Keywords: *Quality Award; Quality management activities; Innovation performance; Employee psychological demand*

I. INTRODUCTION

At present, the evaluation criteria of government quality awards at all levels mainly adopt the excellent performance evaluation criteria. Yeung (2006) believes that quality management activities represent a whole set of management philosophy rather than a clearly defined technology or the sum of a series of technologies[1]. According to Mellat (2015) and Blanco (2015), the introduction and implementation of quality management practices by enterprises are subjected to "legitimate constraints". They believe that when the government takes quality management activities as an important measure of macro management and an international practice, due to the asymmetry of power, enterprises can only succumb to government policies, choose to actively adopt and implement quality management activities, so as to continue to obtain the scarce resources provided by the government[2]. Jiang Peng (2010), a domestic scholar, pointed out that when an enterprise realizes that its competitors have achieved results through the implementation of quality management activities, it will choose to emulate these successful competitors[3]. Feng Xiaobing (2016) believes that enterprises are in need of customers, suppliers, dealers and other stakeholders to conduct quality management activities. When these stakeholders realize that quality management activities are effective, enterprises will also choose to carry out quality management activities in order to obtain the relevant resources provided by them, So striving for the quality award issued by the government is an authoritative quality management award, which can be highly recognized by all relevant parties [4]. The quality award is issued by the government and has high legitimacy. Because the quality award has high legitimacy, if the enterprise obtains the quality award, it will be easier to get the support and recognition of customers, suppliers, dealers, government departments and other stakeholders, and it will also be easier to obtain the resources they provide to support the enterprise to carry out quality management activities, These create important conditions for enterprises to improve enterprise performance. Nowadays, the government quality award has been widely recognized by consumers, suppliers, dealers and other stakeholders, and has become a symbol of legitimacy. Then, is the matter any difference between the government quality award-winning enterprises and non winning enterprises in the impact of quality management activities on enterprise innovation performance? Built on the above theoretical basis, this study will further analyze and test [5].

For the evaluation standard of Government Quality Award - excellent performance model, scholars' research mainly focuses on structural relationship. In terms of structural relationship, Lee et al. (2003), sun (2011), Lee et al. (2013), Meyer and collier (2001), Winn and Cameron (1998) studied MBNQA model [6], supporting the basic role of leadership triangle, result triangle and measurement and analysis [7].

Wang renpeng, Jin Guoqiang (2002), Liu Bin (2008), Yue Gang (2008), Liu Yang (2009), Zhang Peng (2012) and Xiong Wei (2013) also conducted a lot of research on the structural relationship of excellent performance model in China, which supports the structure of excellent performance model [8]. Although most of these studies verify the structure of relevant models, they are only founded on the analysis of section data. In terms of organizational implementation effect, Hendricks, Singhal (1996) and Adam (1999) respectively studied the impact of award news release on the fluctuation of enterprise stock price, and analyzed whether the quality award can bring extraordinary performance to the enterprise [9]. Li Zhao et al. (2010) pointed out that MBNQA effectively helped enterprises to continuously improve product and service quality, improve operation and management level, guide enterprises to pursue an excellent operation and management mode, and produced huge economic and social benefits [10]. Therefore, the implementation of exceptional performance model will bring changes in management and performance, but how this change plays a role is still lack of systematic research. In terms of Quality Award activities, Li Zhao et al. (2010) pointed out that quality award evaluation can guide enterprises to establish quality awareness and actively learn advanced management experience[11].

II. MATERIALS AND METHODS

2.1 Research assumptions

2.1.1 Influence of leadership support on quality innovation in quality management activities

Wilson (2000) research shows that the success of any quality management activity largely depends on the support of senior leaders. Leaders can create an enterprise business atmosphere of completing mission, active participation and active innovation [12]. Prajago (2005) believes that senior leaders have the ability to mobilize internal and external resources of the enterprise, organize and coordinate all employees to actively promote quality management activities and help the enterprise achieve excellent performance[13]. This has an important impact on enterprises to carry out quality innovation activities and strive for quality innovation. Therefore, this study puts forward the following assumptions:

Hypothesis 1A: the greater the leadership support, the faster the improvement of quality innovation.

According to the "triangular role of leadership", this paper also puts forward the following assumptions:

Hypothesis 1b: leadership support has a positive impact on the improvement of strategic management ability.

Hypothesis 1C: leadership support has a positive impact on customer concern.

2.1.2 The influence of strategic management ability and quality innovation in quality management activities

Rahman (2005) believes that strategic management capability refers to the ability to formulate and manage all work, including enterprise vision, company level comprehensive strategy, business level strategy and departmental level functional strategy. Efficient strategic management ability can improve product quality and quality innovation performance[14]. Therefore, enterprises need to regularly evaluate

quality strategic management and make corresponding tactical adjustments to improve their environmental adaptability. Feng et al. Show that strategic management capability makes a significant positive impact on quality innovation. Therefore, this study puts forward the following assumptions:

Hypothesis 2A: the stronger the strategic management ability is, the faster the quality innovation is improved.

Hypothesis 2B: the stronger the strategic management ability, the greater the impact on customer attention.

2.1.3 Influence of customer concern on quality innovation in quality management activities

Phan (2011) believes that enterprises must pay more attention to customers, such as dynamically understanding customers' needs and expectations, and timely providing high-quality products and services to meet customers' needs, so as to improve customers' perception of product and service quality, customer satisfaction and loyalty, which has a direct impact on the improvement of enterprise quality innovation. Fuentes (2006) believes that enterprises should search for innovative ideas from the dynamic development of the market, timely obtain the potential needs of customers, and provide targeted product improvement for enterprises, which can reduce the probability of problems in the process of new product development to a certain extent, and has a significant impact on the improvement of enterprise innovation performance [15]. Therefore, this study puts forward the following assumptions:

Hypothesis 3A: the higher the degree of customer concern, the faster the improvement of quality innovation.

The regulatory role of government quality awards will be discussed below.

When the government quality award is generally recognized among stakeholders and becomes a symbol of legitimacy, the enterprises that win the government quality award have higher legitimacy, easier to effectively resist external threats and improve their reliability in the eyes of stakeholders, so as to obtain more resources needed for enterprise development, so as to improve and improve the quality innovation level of enterprises. Therefore, the following assumptions are put forward: the government quality award plays a positive regulatory role in the relationship between quality management activities and quality innovation. For enterprises that have won the government quality award, the impact of quality management activities on quality innovation is greater than that of non winning enterprises. Specifically, we explain why the government quality award will strengthen the relationship between quality management activities and quality innovation from the following three aspects.

2.1.4 The government quality award regulates the relationship between leadership support and quality innovation

Blanco (2015) believes that enterprise leaders who have won the government quality award are considered to have higher legitimacy, which is embodied in the formulation of enterprise vision, values and code of conduct that fully reflect the interest demands of all employees, customers, suppliers, dealers, government departments and other stakeholders. Cull (2010) believes that enterprise leaders highly recognized by relevant parties can bring more external cooperation opportunities and internal development opportunities for enterprises to carry out quality management activities, which lay a good foundation for the improvement and improvement of quality innovation [16]. Therefore, the following assumptions are

put forward:

Hypothesis 4: the government quality award has a positive regulatory effect on the relationship between leadership support and quality innovation. For enterprises that have won the government quality award, the impact of leadership support on quality innovation is more important than that of non winning enterprises.

2.1.5 Government quality award regulates the relationship between strategic management ability and quality innovation

The formulation of strategic planning by enterprises that have won the government quality award is considered to be able to quickly and accurately identify market opportunities and threats according to environmental changes, reconsider and use resources, and constantly adjust the resource portfolio. Steele (1995) believes that the highly recognized quality strategic management can ensure the consistency and effectiveness of the objectives of quality management activities, which provide a strong institutional support for the improvement and improvement of quality innovation.[17] Therefore, the following assumptions are put forward:

Hypothesis 5: the government quality award has a positive regulatory effect on the relationship between strategic management and quality innovation. The impact of strategic management on quality innovation of enterprises that have won the government quality award is more important than that of enterprises that have not won the award.

2.1.6 Government quality award regulates the relationship between customer concern and quality innovation

The customer focus orientation of enterprises that have won the government quality award is considered not only to maintain good communication and cooperation with customers, but also to enable customers to actively participate in enterprise product design and improvement, and establish smooth channels for interconnection and cooperation through sharing, evaluation, criticism and suggestions, so as to improve customer satisfaction and loyalty. Cham (2015) believes that enterprises highly recognized by customers can more effectively promote products and services, obtain fiscal benefits faster and establish competitive advantages. Therefore, the following assumptions are put forward:

Hypothesis 6 is the government quality award has a positive regulatory effect on the relationship between customer concern and quality innovation. For enterprises that have won the government quality award, the impact of consumer attention on quality innovation is greater than that of enterprises that have not won the award.

To sum up, based on the previous research results on the structure of exceptional performance model, this paper puts forward the following conceptual model as figure 1 below.

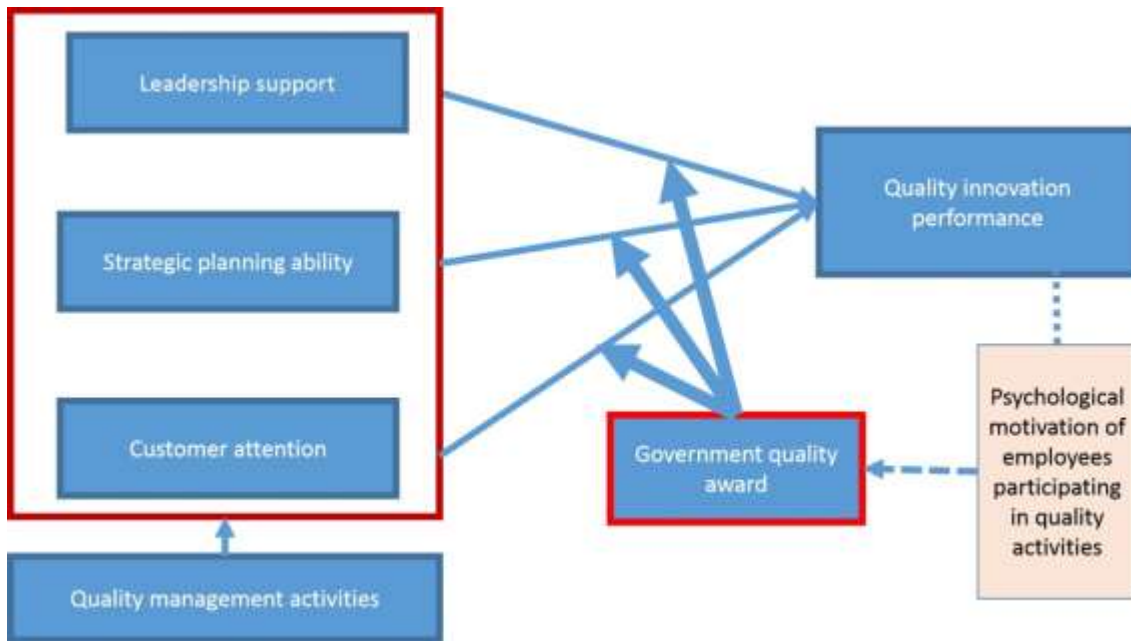


Fig 1: Conceptual model.

2.2 research methods

2.2.1 Sample and data collection

This paper selects the enterprises participating in the evaluation of provincial, municipal, county and district government quality awards in Zhejiang Province as the survey object. These enterprises have a deep understanding of the excellent performance model, which can reflect the changes in management and performance after the implementation of the excellent performance model. The questionnaire was sent out by mail, and a total of 80 enterprises gave feedback on the effective questionnaire. This paper collected data in three ways: (1) the members of the research group sent questionnaires to the above enterprises in the form of e-mail. When sending e-mail, an invitation letter was attached to explain the purpose of our research. relevant persons of the enterprise are invited to fill in the questionnaire. (2) entrust the Bureau of quality and technical supervision of governments at all levels in Zhejiang Province to issue the questionnaire on behalf of them. (3) field investigation was conducted on Zhongguang electric appliance company (Lishui), galea electric appliance company (Wenzhou) and other enterprises, and questionnaires were distributed[18].

2.2.2 Questionnaire design and variable measurement

The questionnaire used in this study comprises two parts. The first part is the measurement of many variables. According to lake and Muthen (2004), seven level Likert scales are adopted for all items, from "1" to "7" to complete compliance[19]. At the same time, considering that after the implementation of the new quality management strategy, enterprises often need to operate for a period of time to fully reflect the applicability of the original strategy, and the impact on enterprises may sometimes lag.

In order to prove the pre-test reliability of the questionnaire, a questionnaire was initially formed after personal in-depth interviews with quality directors of 10 large and medium-sized enterprises, and then a

pre-survey was conducted on 100 enterprises. 85 questionnaires were recovered, and the questionnaires with missing values were removed. A total of 80 valid questionnaires were obtained, and the effective recovery rate was 80.00%. Next, the reliability and exploratory factor analysis of the two scales are performed by using the collected small sample data. Among them, the reliability coefficients of leadership support, strategic management and customer concern in the quality management practice scale reached 0.978, 0.878 and 0.968, indicating that the quality management activity questionnaire have high reliability. Spss22.0 software for exploratory factor analysis, extract factors based on eigenvalues greater than 1, and rotate the factors by the maximum variance method. Mo value is 0.878. The significance level of Bartlett's sphericity test is 0, indicating that it is suitable for factor analysis. A total of 3 factors are extracted, and the interpretation of cumulative total variance is 80.766%. The results show that the three factors are stable.

2.2.3 Analytical method

The structural equation model method, which is widely used in the field of social science, is selected for analysis. Because the data of the improvement of the achievement degree of the measurement variables do not obey the multivariate normal distribution, and the sample size is only 80, the partial least squares method without strict requirements on the sample data distribution and sample size is selected for analysis by using smartly 3 software.

The data analysis methods used in this study mainly include: first, spss22.0 reliability and exploratory factor analysis of small sample data obtained from pure survey; Second, amos22.0 The maximum likelihood estimation method in 0 software performs confirmatory factor analysis on the data obtained from the formal survey to test the combined reliability and validity of the data. If the requirements are met, the structural equation model analysis is further established to test the goodness of fit of the model and analyze the influence relationship between various variables; Third. Use amos22.0 software is used to test the regulation effect. The group comparison method is adopted. The enterprises that have won the government quality award are one group and the enterprises that have not won the government quality confer are another group. The exact methods are as follows: first, limit the regression coefficients of the structural equations of the two groups to be equal to obtain one χ^2 values and corresponding degrees of freedom. Then remove this limitation, re estimate the model, and get another one χ^2 values and corresponding degrees of freedom. Ahead χ^2 minus the following χ^2 get a new one χ^2 . The obtained degree of freedom is the difference between the degrees of freedom of the two models. If both χ^2 if the different test result is statistically significant, the adjustment effect is significant.

III. RESULT ANALYSIS

3.1 Reliability and validity analysis

Cronbach's for 4 potential variables α The values are greater than 0.9, the composite reliability is greater than 0.9, and the average variance extraction (AVE)[20] is greater than 0.6. Except for the results, the redundancy of other potential variables is more than 0.5, indicating that the survey has high reliability and validity. The specific consequences are listed in table 1.

Table I. Reliability and validity analysis

Project	Mean variance extraction	Composite reliability	R2	α	Common factor variance	Redundancy
Leadership support	0.780	0.936	0.667	0.901	0.645	0.601
Strategic planning ability	0.656	0.906	0.781	0.911	0.671	0.598
Customer attention	0.708	0.922	0.812	0.912	0.678	0.611
Quality innovation performance	0.618	0.907	0.798	0.923	0.622	0.608

The details are as follows:

(1) Reliability test

Cronbach's α The reliability of all structural variables in the questionnaire is analyzed by coefficient, and the results are shown in Table 5. As can be seen from table 5, Cronbach's of all dimensions of the variable α The co-efficient has basically reached 0.7, so all variables show good internal consistency in the adopted sample data, the scale structure is stable and has high reliability.

(2) Validity test

First, content validity test. The two scales of quality management activities and quality innovation in this study are from relatively mature research scales at home and abroad. They are obtained through a strict bilingual translation process before citation, and their content validity is guaranteed through the following three links: first, the scale design is based on a large number of literature and research results; Second, each item in the scale has been repeatedly deliberated and revised; Third, the reliability was obtained by strict reliability and exploratory factor analysis. Secondly, construct validity test. This study uses Amos 22.0 statistical analysis software to test the structural validity of each variable by confirmatory factor analysis.

(3) Confirmatory factor analysis of quality management activities

Confirmatory factor analysis (CFA) is utilized to check whether the quality management practice conforms to the three factor model. The process of confirmatory factor analysis is presented in table 6. From the table, it can be seen that the first-order three factor models (there is a correlation between factors)

$\chi^2 = 878.678$, $df = 198$, $\chi^2 / df = 1.278$, $RMSEA = 0.056$, $NFI = 0.906$, $TLI = 0.901$, $CFI = 0.907$) has better fitting effect than other nested models, and has a good matching index, which shows that the first-order the three factor model of leadership support, strategic planning and customer concern for quality management practice has good structural validity. The date of process of confirmatory factor analysis of quality management practice is in the table 2.

Table II Process of confirmatory factor analysis of quality management practice

Confirmatory factor model of quality management activities	X ²	df	X ² /df	RMSEA	NFI	TLI	CFI
0.Null model	6887.781	230	19.478	0.278	0.000	0.000	0.000
1. First order factor analysis	4786.527	205	16.238	0.267	0.134	0.149	0.104
2. First order three factor model (correlation between factors)	988.125	205	2.456	0.078	0.918	0.907	0.911
3. First order three factor model (correlation between factors)	878.678	198	1.278	0.056	0.906	0.901	0.907
Recommended value	The smaller the better	The bigger the better	<0.5	<0.08	>0.9	>0.9	>0.9

According to Wang (2005) et al., the discriminant validity of the three variables was tested by mean extraction variation (AVE). By calculating, the ave value of each dimension is between 0.80~0.90, both greater than 0.5, indicating good discriminant validity. At the same time, the combined reliability (CR) of each variable is calculated to judge the internal quality of the variable. The results show that the combined reliability coefficients of all three variables are greater than 0.0570, which are higher than the ave value of each variable. The detailed results are shown in table 3.

Table III Confirmatory factor analysis process of quality management practice

Three factor model (leadership support, strategic management ability, customer concern); Model fitting evaluation index ($\chi^2 = 878.678$, $df = 198$, $\chi^2 / df = 1.278$, $RMSEA = 0.056$, $NFI = 0.906$, $TLI = 0.901$, $CFI = 0.907$)								
Latent variable	Test item	Non standard load	standard deviation	Standard load	AVE	Ave recommended value	CR	CR recommended value
Leadership support	LL 1	1		0.909				
	LL 2	1.032	0.024	0.912	0.868	0.5	0.968	
	LL 3	1.022	0.014	0.901				
	LL 4	1.078	0.035	0.912				
	LL 5	1.006	0.038	0.978				
Strategic management capability	ZG 1	1		0.912				
	ZG 2	0.978	0.018	0.908	0.851		0.916	
	ZG 3	0.926	0.028	0.912				
	ZG 4	0.8916	0.033	0.914				
	ZG 5	0.929	0.018	0.913				
Customer concern	GG 1	1		0.911				
	GG 2	0.911	0.034	0.913	0.821		0.958	

	GG 3	0.901	0.031	0.913				
	GG 4	0.913	0.033	0.908				
	GG 5	0.903	0.034	0.901		0.5		0.7

Considering that the enterprise performance is only measured by quality innovation performance, the confirmatory factor analysis process table of quality innovation performance is omitted. After verification, it is concluded that the first-order one factor analysis model of quality innovation performance is better than other nested models, and has a good matching index. This shows that the construction of quality innovation performance has good structural validity.

3.2 Basic statistical analysis

By comparing the achievement degree of each measurement variable, it is found that after the enterprise implements the excellent performance model. The achievement degree of each activity shows different increases. In the three process categories, the average achievement degree of award-winning enterprises is significantly higher than that of non award-winning enterprises (as showed in Table 8). Enterprises reflects that the establishment of key performance indicator system (KPI) promotes all employees to pay more attention to performance, and the improvement and innovation activities participated by all employees are easy to achieve results.

Compared with the performance level of Enterprises above Designated Size, the profit of the surveyed enterprises is about 8 times that of Enterprises above Designated Size, the sales revenue is about 6 times, the tax payment is about 9 times, and the return on net assets is significantly higher than that of Enterprises above designated size. It shows that the quality award has selected excellent enterprises.

4.3 Test on the regulatory effect of Government Quality Award

In order to test the regulatory effect of government quality award, this study divides the samples into two groups: one group is the enterprises that have won the Government Quality Award (40 samples), and the other group is the enterprises that have not won the award (40 samples). When the path coefficients between variables are not limited, non standardized path coefficients of the enterprise structural equation model that has won the government quality award and that has not won the award are shown in table 4 and table 5 respectively.

TableIV Estimation results of group structural equation for winning Government Quality Award

Route	Estimate	S.E.	C.R.	P
Quality innovation performance ← leadership support	0.378	0.031	10.769	* **
Quality innovation performance ← strategic management capability	0.272	0.028	9.486	* **
Quality innovation performance ← customer concern	0.256	0.027	8.325	* **

Table V Estimation results of non winning group structural equation

Route	Estimate	S.E.	C.R.	P
Quality innovation performance ← leadership support	0.166	0.062	8.762	0.007
Quality innovation performance ← strategic management capability	0.102	0.058	3.621	0.527
Quality innovation performance ← customer concern	0.106	0.057	1.236	0.878

Comparing Table 4 and table 5, it can be seen that the non standardized path coefficients of group leadership support, strategic planning and customer attention on enterprise innovation performance of those who won the government quality award are higher than those of non winning enterprises, but whether there is a regulatory role needs to be further analyzed. Since the regulatory variable government quality award is a category variable and the variables involved in the regulatory effect analysis of the structural equation model are latent variables, the regulatory effect test method adopts grouping structural equation analysis. The specific test process takes the path regulatory effect analysis between the government quality award on leadership support and enterprise quality innovation performance as an example. Firstly, two groups are set in Amos, one is the enterprise that has won the government quality award, the other is the enterprise that has not won the award, and the corresponding data are loaded; Secondly, two models are set, one is the default model and the other is the limited model. In the limited model, the path coefficient between leadership support and enterprise quality innovation performance is equal between the two groups; Finally, run Amos to get the results of the two models χ^2 significance test of difference value. The results are shown in Table 6.

Table VI Test results of the regulatory effect of government quality award on the relationship between leadership support and enterprise quality innovation performance

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI Rho-2
Restricted model	1	5.578	0.013	0	0	0	0

It can be seen from table 6 that the chi square difference between the limited model and the default model is 5.783, and the significance p value is 0.01 015, less than 0 05, indicating that there is a significant difference between the two models in rejecting the nihility hypothesis. Therefore, the government quality award has a regulatory effect on the path between leadership support and enterprise performance. The same inspection process is utilized to test test the adjustment effect of the other two paths. The summary results are presented in table 7.

Table VII Test results of regulatory effect of Government Quality Award

Number	Route	Awards	Nonstandard regression coefficient	Model card variance test		
				Δ df	Δ X2	P
1	Quality innovation performance ← leadership support	Yes	0.478***	1	5.783	0.015
2		No	0.245**			
3	Quality innovation performance ← strategic management capability	Yes	0.378***	1	12.578	0
4		No	0.018			
5	Quality innovation performance ← customer concern	Yes	0.368***	1	3.788	0.036
6		No	0.052			

It can display in table 7 that the path coefficients of group leadership support, strategic planning and customer attention on enterprise quality innovation performance of those who won the government quality award are higher than those of non winning enterprises. From the significance test results of chi square change, it can be seen that the change of chi square value of the three paths is significant, and the change of chi square value of the structural path of → enterprise quality innovation performance is significant at the level of 10%. In conclusion, the research hypothesis H (4, 5, 6,) is confirmed. It is possible to conclude that the positive correlation between enterprise leadership support, strategic planning, customer concern and enterprise quality innovation performance is strong, and the positive correlation between enterprise leadership support, strategic planning, customer concern and enterprise quality innovation performance is weak.

3.4 Model validation

Model fitting was performed on 80 sample data, and the significance of the path coefficient of the structural model was tested by bootstrap algorithm (n = 5000). The test results presented in table 8 were obtained. A total of 10 hypotheses were verified: H1a (P < 0.001), H1B (P < 0.1), H1C (P < 0.01), H2A (P < 0.001), h3a (P < 0.01), H3B (P < 0.01), h6a (P < 0.001) H6b (P < 0.05), h6c (P < 0.001), H6D (P < 0.05), and the path coefficients are positive, showing a positive impact. The remaining 9 assumptions failed to pass the verification, namely h1d, h1e, H2B, H2C, H2D, H3C, h4a, H4B and H5. The summary results of path analysis are presented in table 8.

Table VIII Path analysis

Hypothesis	Original value	Sample mean	Standard deviation	T	P
H1a	0.578***	0.515	0.101	1.678	0.001
H1b	0.687**	0.676	0.231	2.601	0.004
H1c	0.466***	0.448	0.135	0.603	0.000
H2a	0.357**	0.313	0.008	0.124	0.003
H2b	0.368***	0.327	0.013	7.678	0.000
H3a	0.786***	0.701	0.208	5.671	0.000



Fig 2: Model fitting results

The relationship of establishment of H1a, H1B and H2B is shown in the figure 2. The establishment of H1a, H1B and H2B shows that the support of leaders has a significant positive impact on strategic management and customer attention, and the improvement of strategic management ability also has a significant positive impact on the improvement of customer attention, which further supports the structure of the leadership triangle, where the awareness and ability of senior leaders play a key role. The establishment of H1C shows that the support of leaders has a significant positive impact on the attention of customers, which also shows how senior leaders can adhere to "customer-oriented" and always pay attention to the needs of customers, so the excellent performance model can be truly implemented and the enterprise's performance can be successful. The establishment of H2A shows that accurate strategic positioning and systematic strategic implementation are conducive to the efficient realization of quality innovation performance; The establishment of h3a also shows how enterprises can effectively identify target customers, analyze their needs and establish good customer relations, so the performance of quality innovation can be reflected. The establishment of H2B also shows that the guiding role of strategy is first highlighted by external customers and markets. When the company's strategic direction is adjusted, the target customer group and marketing mode need to be adjusted quickly; When the company's development strategy changes, the sales policy needs to change, which proves that good strategic management ability is conducive to the improvement of customer attention. The establishment of h3a shows that paying attention to clients can indeed improve the quality innovation performance of enterprises. Practice has also proved that only quality innovation carried out around the needs of customers can truly meet the needs of consumers, improve the value of customers and enhance the value of enterprises at the same time.

III. CONCLUSION

Based on the theory of New Institutionalism Theory, this study constructs a research model on the regulatory effect of government quality award on the relationship between quality management activities and enterprise quality innovation performance. Based on the survey data of 80 enterprises implementing the excellent performance model in Zhejiang Province (including those that have applied for the government quality award but have not won the award), this paper empirically tests the model and its research hypothesis. The main conclusions are as follows:

This study analyzes the changes before and after the implementation of the excellent performance model through the investigation of some enterprises that have won the provincial governor or mayor quality award. The triangular structure of leadership, strategy and customer and market is established, which shows that the structure of process category of excellent performance model has been basically confirmed. Moreover, leadership support, strategic management ability and customer attention can also have a significant positive impact on the improvement of quality innovation performance. Various factors of quality management activities such as leadership support, strategic planning and customer attention have a significant positive impact on enterprise quality innovation performance. The results of this study support the relevant research that leadership support, strategic management ability and customer concern have a significant positive impact on enterprise performance.

REFERENCES

- [1] Lee S M, Rho B H, Lee S G. Impact of Malcolm Baldrige National Quality Award Criteria on organizational quality performance. *International Journal of Production Research*, 2003, 41(9): 2003-2020.
- [2] Sun H. A systems research on quality management under the MBNQA framework. *Total Quality Management*, 2011, 22 (11): 1195-1211.
- [3] Lee S M, Leeb D H, Olson D L. Health-care quality management using the MBHCP excellence model. *Total Quality Management*, 2013, 24 (2): 119-137.
- [4] Meyer S M, Collier A. An empirical test of the causal relationship in the Baldrige Health Care Pilot Criteria. *Journal of Operations Management*, 2001, 19 (4): 403-425.
- [5] Winn B A, Cameron K S. Organizational quality: An examination of the Malcolm Baldrige quality framework. *Research in Higher Education*, 1998, 39 (5): 491-512.
- [6] Wang renpeng, Jin Guoqiang Path analysis in the study of quality management structure model. *Industrial Engineering and management*, 2002, 7 (4): 41-45
- [7] Liu Bin Investigation and Analysis on the implementation of excellent performance model in Chinese manufacturing enterprises. Nanjing: Nanjing University of technology, 2008
- [8] Yue gang Research on category correlation analysis of excellent performance model. Tianjin: Tianjin University, 2008
- [9] Liu Yang Investigation and Analysis on the management status of Chinese service enterprises based on excellent performance model. Nanjing: Nanjing University of technology, 2009
- [10] Zhang Peng Research on the impact mechanism of quality management on organizational performance based on excellent performance model. Hangzhou: Zhejiang University, 2012
- [11] Xiong Wei, Wang juanli Research on the implementation effect of government quality award and its influence mechanism on enterprise performance. *Macro quality research*, 2013, 1 (2): 107-119
- [12] Adam G, McQueen C, Seawright K. Revisiting the stock price impact of quality awards. *Omega*, 1999, 27 (6): 595-604.
- [13] Li Zhao, Tian Wu, Tang Wanjin Analysis on the development trend of American quality award and Its Enlightenment. *Research on science and technology management*, 2010 (2): 214-216
- [14] Yeung A.C.L., Cheng T.C.E., Kee-Hung L. An Operational and Institutional Perspective on Total Quality Management. *Production and Operations Management*, 2006, 15(1): 156-170.
- [15] Mellat—Parast M. An Institutional Theory of Quality Outcomes in Strategic Supply Chain Partnership. *International Journal of Quality & Reliability Management*, 2015, 32(4): 346-360.
- [16] Blanco-González A., Cruz-Suárez A., Díez-Martín F. The EFQM Model as an Instrument to Legitimise Organisations//Peris-Ortiz M., Ivarez-García J, Rueda-Armengot C. *Achieving Competitive Advantage Through Quality Management*. Switzerland: Springer International Publishing, 2015
- [17] Jiang Peng, Su Qin, Dang Jixiang, et al. Empirical Study on different types of quality management practices and enterprise performance impact mechanism. *China soft science*, 2009, 1 (7): 134-143
- [18] Jiang Peng, Su Qin, song Yongtao, et al. Empirical Study on quality management practice and enterprise performance model under different scenarios. *Management review*, 2010, 22(11): 111-119

- [19] Feng Xiaobin, Chen Liqiong. Research on the relationship between quality management practice, organizational learning and enterprise performance -- An Empirical Analysis Based on Zhejiang manufacturing enterprises. *Management review*, 2016, 28 (1): 31-41
- [20] Wilson D.D., Collier D.A. An Empirical Investigation of the Malcolm Baldrige National Quality Award Causal Model. *Decision Sciences*, 2000, 31(2): 361-383