

A Study on the Relationship between Quality Ethics and Enterprise Performances in China - Based on the SEM Model

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***Abstract*—“Quality first” and “quality power” were written in the report of CPC nation congress for the first time. “Quality” was mentioned 19 times in the report of the nineteen CPC national congress. The relationship between quality ethics and enterprise performances is of great theoretical and practical significance in improving the quality of our country and the level of enterprise performances. In this thesis, the quality of management and quality culture as mediator variables together with other 22 observation variables were explored by using the SEM model. The result demonstrated that quality ethics could affect the performances of enterprises directly or indirectly. The higher the ethical level was, the better the performance would be. Finally the proposal that social enterprises should work hard to construct quality ethics was put forward.**

***Keywords*-Quality Ethics; Enterprise Performances; SEM Model**

I. PROPOSING HYPOTHESES

With China's economy entering a period of new normal, it is essential for Chinese enterprises to improve the quality and promote the spirit of craftsman. "Quality first" and "quality power" were written in the report of CPC nation

congress for the first time. "Quality" was mentioned 19 times in the report of the nineteen CPC national congress. The relationship between quality ethics and enterprise performances is of great theoretical and practical significance in improving the quality of our country and the level of enterprise performances.

Quality ethics are guidelines and norms that should be followed in quality management activities, including the government quality ethics, corporate quality ethics, and personal quality ethics. "Love" is the essence of quality ethics including the fear of human life and the love for product quality. Business performance refers to the results of business activities and the effectiveness of stakeholders (Stakeholder). [1] The evaluation of enterprise performance has been developed into a multivariate evaluation system. Ethical behavior on the performance of enterprises having a positive impact has become the consensus of the academic community. Zhang Changyuan proposed that the ethical responsibility of enterprises was reflected in the quality of ethics. [2] Hong Yan (2012) thought that there is a consistent relationship between business ethics and performances. [3] The viewpoint that quality management has entered the quality of ethical management stage was

made by Yu Ji'an (2015). [4] Li Zhao (2008) conducted an empirical study on the impact of quality management practices on enterprise performances. The result showed that quality management practices indirectly affect enterprise performance through quality performance and innovation performances [5] Gong Dan (2014) pointed out that the excellent quality culture will greatly promote the development of enterprises. [6]

Based on the theoretical research and empirical results of domestic and foreign experts and according to the field interviews with quality personnel, it is believed that quality ethics is positively related to firm performances. A complete SEM model includes two parts: the Measurement Model and the Structure Model. The former refers to the actual measurement variables and the relationship between potential traits, and the latter describes the relationship between potential variables.

(1) The equation expression for the measurement model is: $x = \Lambda x\xi + \delta y = \Lambda y\eta + \varepsilon$

(2) The equation expression for the structural model is: $\eta = B\eta + \Gamma\xi + \zeta$

Therefore, regard the culture of quality and quality management as intermediary variables, the conceptual model was shown in Figure 1.

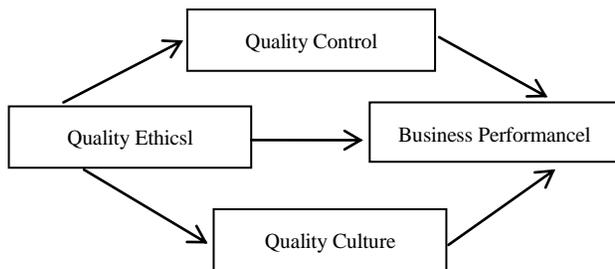


Figure 1. Conceptual model of the impact of quality ethics on firm performances

The following hypotheses were made:

- H1: Quality ethics has a positive impact on corporate performances improvement.
- H2: Quality ethics have a significant positive impact on quality management.
- H3: Quality management has a significant positive impact on business performances improvement.

- H4: Quality ethics have a significant positive impact on quality culture.
- H5: Quality culture has a positive impact on corporate performances improvement.
- H6: Quality ethics has a significant positive impact on the improvement of firm performances through intermediary variable quality management.
- H7: Quality ethics through the intermediary variable quality culture has a significant positive impact on the improvement of corporate performances.

II. EMPIRICAL STUDY

A. Samples and Observed Variables

256 questionnaires were distributed, of which 50 were distributed and 29 valid questionnaires were retrieved. 30 questionnaires were sent by e-mail, 13 valid questionnaires were retrieved. 176 were distributed through questionnaires, and 164 valid questionnaires were collected. A total of 206 questionnaires were collected, all of them were valid questionnaires, and the effective questionnaire was 80.47%.

The study uses 1-5 points to measure variables. In order to ensure the validity and reliability of the measurement tools, existing literature at home and abroad have been used in the scale, and adjusted slightly according to the actual situation. The result is shown in table 1.

B. Reliability and Validity Test

The Cronbach's Alpha was 0.973 in the overall reliability analysis of the sample data, and the Cronbach's Alpha data of each study variable was higher than 0.88, which indicated that the sample data had higher reliability. Judging by KMO and Bartlett test, the data of this study sample KMO is 0.962 which larger than 0.9. The significant probability of Bartlett's test was 0.000 < 0.001, which indicated that the sample data was highly effective and was suitable for factor analysis. After rotation of each variable, the factor load of each variable is between 0.6 and 0.95, which can explain the research variables well, and the cumulative explanation variance variation is 74.583%.

TABLE I. MEASUREMENT INDICATORS AND THEIR REPRESENTATIVE SYMBOLS

First grade indexes	Second index	Code symbol
Quality ethics	Quality ethics awareness	A1
	Quality ethics communication	A2
	Quality ethics cultivation	A3
	QualityethicsManagementmechanism	A4
Quality management	Quality leadership	B1
	Quality strategy	B2
	Resources	B3
	Focus on customers	B4
	Process control	B5
	The quality of information	B6
Quality culture	Enterprise environment	C1
	The quality system	C2
	The quality of behavior	C3
	Quality values	C4
Enterprise performances	Quality cost	D1
	Annual sales	D2
	Annual return on assets	D3
	Product quality level and service level	D4
	Market share	D5
	Enterprise competitiveness	D6
	Customer satisfaction	D7
	Corporate image	D8

TABLE II. MODEL HYPOTHESIS TEST RESULTS

Theoretical hypothesis	The inspection results
H1: quality ethics has a positive influence on the improvement of enterprise performance	Significant examination ****
H2: quality ethics has a significant positive impact on quality management	Significant examination ***
H3: quality management has a significant positive impact on performance improvement	
H4: quality ethics has a significant positive impact on quality culture	Significant examination ***
H5: quality culture has positive influence on the improvement of enterprise performance	Significant examination ***
H6: quality ethics has a significant positive effect on the improvement of enterprise performance through the quality management of intermediary variables	
H7: quality ethics has a significant positive effect on the improvement of corporate performance through the quality culture of intermediary variables	Significant examination ***

Notc: *** means $P < 0.001$, ****, means $P < 0.005$.

C. SEM Model Verification

The SEM model of incubation network performances was analyzed using AMOS application software. The observation variables of the potential variables were mentioned as before. To make the model fit the ideal standard, there are 22 observed variables which corrected the model constantly. The final model is shown in figure 2 and the specific hypothesis test results are shown in table 2.

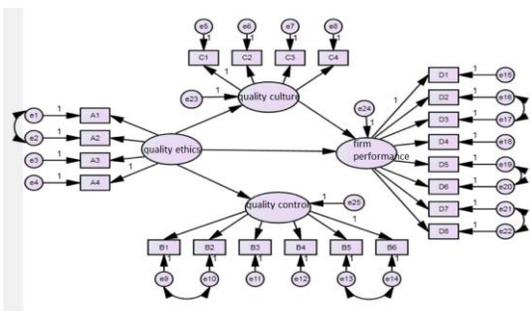


Figure 2. Final structure equation model

III. CONCLUSIONS AND SUGGESTIONS

The higher the ethical level of enterprise quality is, the better the enterprise performances will be. Quality ethics affects the performances of enterprises via two methods. One is directly influencing the enterprise performances, and the other is the influence of enterprise performances through the quality culture of the intermediary variable; and the latter effect is greater than the former. The construction of enterprise quality ethics helps to improve the quality and cultural level of enterprises. The higher the quality ethic level is, the better the internal quality management will be. Enterprise quality management needs ethical support to implement integration and unification of management and ethics.

The construction of quality ethics is a long-term process. In general, it is necessary to make joint efforts with enterprises to change the current social quality ethics. At the social level, the construction of quality ethics by government

should be based on the law as the compulsory tool and the mechanism as the guiding means, with social ethics and ethical construction as its support. At the enterprise level, enterprises should establish a proper concept of management, strive for perfection, and learn lessons from both domestic and foreign enterprises to improve the ethical level of their staff.

ACKNOWLEDGMENT

This article supported by the national natural science foundation project (70873094) and the key research base planning project (14JZ027) of the philosophy and social sciences of universities in Shaanxi province.

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