

# **Adaptation Analysis of Denison Corporation Culture Model in State-owned Corporations—an Example of Corporation Culture Evaluation in a State-owned Electric Power Enterprise**

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**Abstract:** On the basis of the related references, Denison cultural measurement scale was applied to a state-owned electric power enterprise to evaluate culture construction, and principal component factor analysis was used to get the 7 factors and compare this with other revised models from other scholars. Finally, Denison corporation culture model is proved to be adaptable to state-owned corporations and this model pays more attention to enterprise stability and internal management.

## **Introduction**

Since 18<sup>th</sup> CPC National Congress and Third Plenary Session of the 18<sup>th</sup> CPC Central Committee has opened, a new generation of leadership collective of the CPC made a strategic movement to cultivate and develop the core values of socialism, deepen the reform of state-owned enterprises and build culture-power state. At macro level, facing the constantly changing international environment, China's economic structure must adjust to the increasingly fierce international competition under the new situation. In this situation, the state-owned enterprises as the main driver of China's economy how to improve the efficiency of enterprises, enhance its vitality and vigor, adapt and keep on exploring the modern enterprise management system under the new situation, strengthen international competitive advantage plays an important role in China's economic and social development. At micro level, with technology update rate accelerating and increased competition, in order to gain a sustainable competitive advantage, types of enterprise core competencies are constantly changing, developing from the original cost competition to cultural competition<sup>[1]</sup>. Cultural elements in the core competitiveness of enterprises play an increasingly important role. Enterprise culture is the soul of enterprise, which has a profound impact on the enterprise's core competitiveness, survival and development of enterprises in the long run. It is the enterprise's values when enterprise is engaged in production and business activities and is the internalized conviction of the heart in the employee, is an external symbol and internal driving force and direction of enterprise development. Therefore, research on the State-owned enterprise corporate culture not only in theory, but also in practice. So, how to properly evaluate the State-owned enterprise corporate culture properly is very critical. This paper aims to study the different corporate culture measurement model and select Denison culture traits model to evaluate a State-owned electric power enterprise culture as an example. Denison model is used to study the applicability in State-owned enterprises, and factor analysis is used to identify the 7 dimension. On

the comparison of other models from other scholars, this State-owned enterprise corporate culture measurement model can be used to inspect the present situation of State-owned enterprise corporate culture and has the characteristics of focusing on enterprise stability and internal development.

**Literature review**

**Review of the scale of Sino-foreign enterprise culture.**In the 1980 of the 20th century, the economic continuing rise of Japan posed a huge threat on the United States companies owned advanced technology and management experience. United States enterprises sent a delegation to Japan to investigate and found that the secret of success in Japan business lied in the unique ‘cultural management’, since then, the corporate culture has become a hot topic in the field of management science. More than 30 years, academics conducted in-depth study of enterprise culture. Several typical evaluation methods of corporate culture at home and abroad are sorted in table 1<sup>[2-7]</sup>.  
Tab.1 Chinese and foreign typical corporation culture measurement model and commentary

**Denison scale of enterprise culture and its application review.** Denison culture survey scale was widely used, highly recognized all over the world. Compared with other scale described above, the Denison measuring scale comes out from being revised for more than 10 years in 1000 companies and 40,000 employees in practice, and through many amendments the scale has strong applicability. And this scale is not carried out in suitability test in the State-owned enterprises, and not been knew whether the scale of cultural construction for State-owned enterprises also have indicators. So this paper uses this scale and selects a State-owned enterprise to carry out corporate culture evaluation in order to draw relevant conclusions.

OCQ (Organizational Culture Questionnaire) scale that is a culture model to describe effectiveness of organizations built by Denison and other Professor from Switzerland Lausanne School. The model reflects the link between four cultural traits and organizational effectiveness. Four cultural characteristics are the adaptability, Mission, consistency and involvement, which are differentiated between four regions by two dimensions (interior-oriented and exterior-oriented, flexibility-stability), each feature is divided into 3 dimensions, a total of 12 aspects to inspect corporate culture. Denison values the application of OCQ scale in actual use in the business or organization, so he also sets up a professional website to show his research and practical application of results. ([www.denisonculture.com](http://www.denisonculture.com))

**Data collection**

This data is collected in a State-owned electric power company. The Chinese OCQ questionnaire is attained on Denison culture website ([www.denisonculture.com](http://www.denisonculture.com)). The scale includes 60 questions describing the current state of enterprise culture, every 15 questions measuring a cultural trait, every 5 items measuring one dimension. Likert five rating method is adopted marking 60 items separately. (Respondents according to the degree of coincidence of actual situation in line with the problem description. ‘1’ stands for ‘very inconsistent’ and ‘5’ stands for ‘very consistent’. )

**Total sample factor analysis condition test.** Factor analysis can simplify data by decreasing dimensions, find relationship of many variables and extract a few important variables to represent complex data structures with inner meaning. It is an analysis method to simplify complex data. Original variable often have a lot of correlation, and factor analysis condition is checking whether there is a significant correlation between the original data.

Tab.1 KMO and Bartlett test	
KMO 检验值	.770

Bartlett 检验值	近似卡方	4150.603
	df	1326
	Sig.	.000

Generally accepted that KMO's value closer to 1 is better, which means partial correlation coefficients between all variables is much smaller than simple correlation coefficients, in which case factor analysis is suitable to be performed. Results shows KMO value is 0.77 suitable for factor analysis. Bartlett sphere test is significant ( $P=0.000$ ,  $\chi^2=4150.603$ ) rejected the null hypothesis that correlation matrix is the identity matrix. Test results show this data is suitable for factor analysis.

**Factor analysis.** Paper selects factors of which feature value is greater than or equal to 1 by using exploratory factor analysis and main components method. Then matrix is rotated by using maximum variance method. According to the number of factors set in advance all items can be distinguished, and making sure that the load of items owned by each factor is bigger than that in other factors .If one item has higher in two or more than two factors, then this item should be deleted. Also the item has factor load less than 0.50 should be deleted. If an item constitutes a factor alone, then it should be removed in the study.

**Assignment analysis.** To analyze the results further, according to the factor load of factors each factor is assigned. Descriptive statistics of the factor assignment are shown in table 2.

Tab.2 Factor assignment descriptive statistics

Factor name	Quantity	Min.	Max.	Mean	Std.
F1Coordination	178	1.91	5.00	3.3322	.6860
F2Employee awareness	178	1.97	4.80	3.6064	.6594
F3Adaptability	178	1.75	5.00	3.5136	.7261
F4Aim	178	1.98	5.00	3.8009	.6246
F5Values	178	2.68	5.00	3.6565	.5636
F6Vision	178	2.00	5.00	3.6012	.6139
F7Team spirit	178	2.00	5.00	3.9126	.8236

First of all, it can be seen that from table 6, all factor scores are above 3 points, which that employees have acceptable and positive attitude about enterprise culture. The culture construction of enterprises obtains the certain effectiveness. Among them, the highest score owned by F7-team spirit, which means the company pays great attention to encourage employees to cooperate with each other to achieve collective goals. F4-Aim has second high score, which means aims coordinated with missions and strategies set out by company are deeply rooted in the heart of employees.

Overall, goals, vision, and values these factor have high scores which illustrates the company has a strong sense of mission. This is related to the property of the State-owned enterprises, because State-owned enterprises bear the responsibility of the development of the national economy, and must have a firm goal and a strong sense of mission. Team awareness and employee awareness have good scores, stating that the State-owned enterprises have fully realized that in today's market environment only relying fully cooperation between employees and improving their ability can make better development.

## Conclusion

This paper uses Denison cultural measurement to analyze the company culture in one of the state-owned electric companies in China and establishes a cultural measurement model. The result

indicates that the model cause a positive effect on the construction of company's culture. What's more, it can foster the sustained development of the corporations in long-term.

## **References**

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