

A Study on Corporate Culture, Intellectual Capital and Corporate Performance

Huafeng Wang

Shaoxing University
Shaoxing, Zhejiang, China

Abstract — In the era of knowledge economy, intellectual capital becomes a dominant source of value creation and sustainable competitive advantages. We establish an intellectual-capital-oriented framework to analyze the relationships among corporate culture, intellectual capital and corporate performance. High-tech enterprises are selected for the empirical study. We find that human capital, as the core factor of intellectual capital, has positive influence on the other two factors of intellectual capital. Different cultures has different effects on the components of intellectual capital. Both clan culture and flex-market culture have significantly positive influences on human capital, structural capital, as well as relational capital. Hierarchy culture shows positive influence on structural capital. Human capital, structural capital, and relational capital all have significantly positive influences on both financial performance and development performance. Moreover, human capital, as the core of intellectual capital, not only influences corporate performance directly, but also positively on corporate performance through enhanced structural capital and relational capital. Managerial insights are proposed to Chinese high-tech enterprises for the development of intellectual capital.

Keywords - intellectual capital; corporate culture; corporate performance

I. INTRODUCTION

This is an era that the knowledge economy dominates in our daily life. The intellectual capital has gradually taken the place of the traditional factors and become the only most important strategic resource today. The capacity to manage knowledge-based intellect is the critical skill of this era [1]. To make the best use of intellectual capital to create value, it is important to do empirical study on the relationship between intellectual capital and firm performance, especially for the Hi-tech enterprises. The purpose of this study is to understand how intellectual capital affects Hi-tech enterprises' firm performance and how the interactions of the components of intellectual capital affect Hi-tech enterprises' firm performance. Based on the past literature review, this paper states the necessity of studying on the intellectual capital's affect conceptual model, and then to Hi-tech enterprises' firm performance, and develops a collects data of Hi-tech enterprises in China to test the hypotheses.

In this study, questionnaire was used as the main tool of data collecting. We sent out 200 questionnaires to Hi-tech enterprises in Changsha, Shenzhen, Shanghai etc and got back 118. The ratio of callback of valid questionnaire is 59%. In the data processing procedure, this paper mainly used correlation analysis, confirmatory factor analysis and structural equation modeling to verify hypotheses in the model. After quantitative analysis and theoretical exploration.

The factors that are used to evaluate the intellectual capital and Hi-tech enterprises' firm performance all have a good reliability and validity; Human capital directly affects the ability of technology innovation and marketing, and then indirectly influences Hi-tech enterprises' firm performance, structural capital and relational capital all directly affect the

ability of technology innovation, and have no direct effect on the ability of marketing; The interactions of the components of intellectual capital also have effects on Hi-tech enterprises' firm performance.

II. CORPORATE CULTURE AND CORPORATE PERFORMANCE

Economic growth has been the long-range goal of the human society. Firm growth has become the main problem facing enterprises. Firms must grasp the nature of the industry and understand the growth mechanism. How to survive in the hard competition and maintain rapid growth has become the problem concerned by many sectors such as government, banks and firms. (Fig.1)[2]

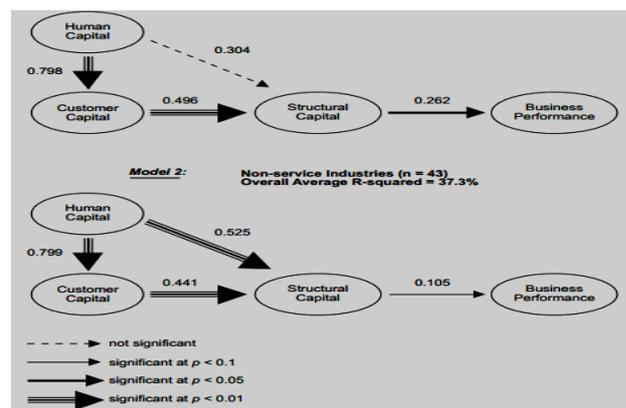


Figure 1. Model

With the accelerated development of economic globalization, the competition between enterprises has become increasingly incentive. The enterprises should establish and maintain their own ore-competitiveness if their

want to gain the marimum profit .As one of the factors of the core-competitiveness; corporate culture is getting more and more attention by reserachers .Many scholars and managers turned their attentions from the resources, technology, marketing to corporate culture managemen. Along with development of our enterprise management, Chinese scholars and theorists have begun to pay more attention to the construction of corporate culture. (Eq.1-2)

$$F_i = \sum_{j=1}^p a_{ij} Z_j \quad (i=1,2\dots k,k < p) \quad (1)$$

$$Score = \sum_{i=1}^k b_i F_i \quad (2)$$

Where $F = A^T R^{-1} X$.

According to the corporate culture studies of Chinese scholars; we found: firstly,many studies of the domestic scholars are based on the foreign cunltural theory they payed less attentions on the background of China.Secondly, the research of domestic scholars mostly use the foreign maturity scales on reseaches of corporate culture form the type of enterises culture,not the corperate elements[3]. In practice ,the consciousness of culture on our corporate is not srong,they are still relatively confused on building efficient culture to promote the performance.This paper is based on the analysis and summarization of reseaches of the domestic and goreign scholars. Through the interview's between mangements, author build the corporate culture questionnaire. Then using SPSS 16.0. author analyed the datas collected by questionnaire. Firstly, author presents the related hypothesis on corporate cunlture and peromance.we think there is a positive corelation between corporate culture and performance.Secondly,using the overall enterprise performance as dependent variable,the ten elements of corporate:values.employee development .interpersonal harmony,system of standardization, custom er-on entati on, organizational learning team-orientation, innvonation, entrepreneurial, corporate social responsibility as independent variables, author analyed the impact of corporate culture an performance through the methods of correlation, stepwise regression analysis .Author found the there is a positive correlation between corporate culture and corporate performance. (Table 1)

TABLE I ENTERPRISES EFFECTS

	Year and sample			
	1995	Sample1	2005	Sample2
Industry effects	19.6%	8.3%	4.0%	18.7%
Firm effects	0.6%	47.2%	45.8%	36.0%
Of which business level effects	0.6%	46.4%	44.2%	31.7%
Corporate effects	N/A	0.8%	1.6%	4.3%
Year effects	N/A	N/A	N/A	2.4%
Industry/year	N/A	7.8%	5.4%	N/A
Effects				
Error	80.4%	36.9%	44.8%	48.4%

III. INTELLECTUAL CAPITAL AND CORPORATE PERFORMANCE

It has long been widely regarded as capital, land, labor and other traditional factors of production to create enterprise value. When entering the 21st century, human society depends on the new economic era intelligence and knowledge investment, people's understanding of the source of value creation has undergone a fundamental change, the importance of intellectual capital as more people begin to understand [4]. The past few decades, the U.S. standard and poor's 500 index companies of the ratio of market value to book value has risen from just more than 100% to 500%, and 80% of the market value of the financial report omission is created by intellectual capital. Experts say, in the modern market economy, intellectual capital has become a new growth point of enterprise value, and even has beyond the trend of the traditional factors of production. For these reasons, people began to study the impact of the constituent elements of intellectual capital on enterprise performance [5]. With the deepening of the study, more and more scholars recognize that intellectual capital to enhance enterprise performance is not a single dimension of the intellectual capital created by the simple sum of the value, but from the coupling between the elements of intellectual capital. In this paper, several key factors to measure the dimensions of intellectual capital to build intellectual capital index, through its empirical analysis of manufacturing and IT industry relations and enterprise performance, and to explore the significance of intellectual capital on enterprise performance as well as traditional industries and emerging industries and enterprises performance improvement in the role of intellectual capital differences. (Eq.3).

$$PV = S_t N(h) - Ke^{-rt} N(h - \sigma\sqrt{\tau}) \quad (3)$$

$$h = \{\ln(S_t / K) + r\tau + \sigma^2\tau / 2\} / \sigma\sqrt{\tau}$$

Where
$$\sigma^2 = Var \left[\sum_{i=1}^t \ln\left(\frac{S_i + \Delta t}{S_i}\right) \right]$$

This auticle do research by combining the empirical research with theoretical analysis. First of all, this paper analyzes the research status of intellectual capital, and then put forward the theoretical assumptions about the relationship between intellectual capital and enterprise performance theory through theoretical analysis. After that, the dimensions of intellectual capital are divided into three aspects: 12 indicators then got the intellectual capital index on factor analysis. Then we select ROE as the dependent variable, namely enterprise performance and other factors may affect enterprise performance as the control variables and to build the model. Finally, after inspecting the linear regression equation by multiple regression analysis, we can clearly find out the relationship between the dependent and independent variables by hypothesis testing. We can also get the result by robustness test. This paper focuses on the analysis of data processed by Excel software and SPSS18.0 statistical analysis software. (Table 2).

TABLE II VARIABLE RELATIONSHIP

	ROE	IC	LEV	SIZE	TAT
ROE	1				
IC	0.178**	1			
LEV	-0.047	0.0238*	1		
SIZE	0.020	0.128**	0.350**	1	
TAT	0.110**	0.361**	-0.038	0.114**	1

This dissertation decomposed correlations in the model into direct, indirect, spurious and unanalyzed effects. Results show that the interrelationships among the three components of intellectual capital have a significantly positive effect on firm performance. To be specific, the correlations between organizational capital and human capital, organization capital and human capital affects financial performance, operational performance and effectiveness performance positively. The correlations between human capital and organization capital, relation capital and organization capital have positive effects on financial performance, operational performance and effectiveness performance. The correlations between human capital and relation capital, organization capital and relation capital also have positive effects on financial performance, operational performance and effectiveness performance.

We build the direct model of the impact from IC on the firm growth, after testing assumptions, we find there is significantly relation between the 5 IC components and firm growth. (Fig.2)

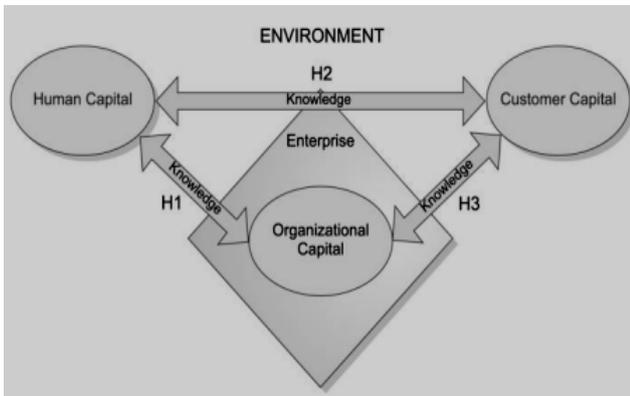


Figure 2. Conceptualization of the Relationships Among the IC Sub-domains

The second step is indirect model, we use core IC(customer capital)as intermediate variable, and find that core IC has the significant the intermediate effect on the relationship between basic IC and firm growth. In the whole model, most relations between basic IC and firm growth are not significant, while the relation between basic IC and core IC, as well as the relation between core IC and firm growth is significantly. It shows us that the core IC is the intermediate variable between the basic IC and firm growth. It tells us the basic IC and core IC do not serve the same role in the model, the basic IC strength the core IC ,then affect the firm growth speed. (Fig.3-4)

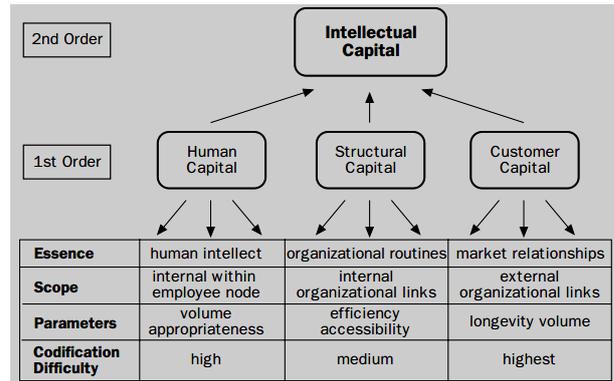


Figure 3. Conceptualization of Intellectual Capital

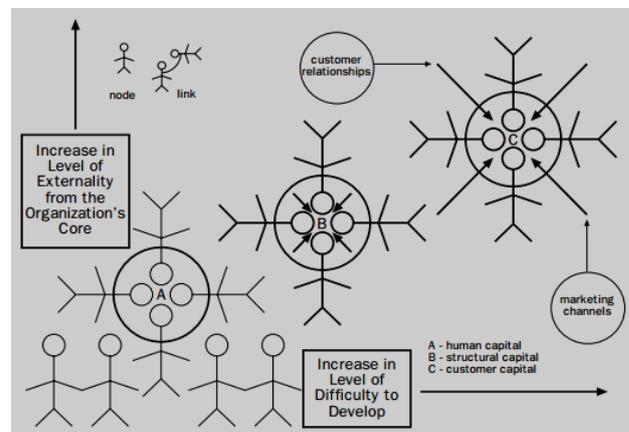


Figure 4. Discriminating Intellectual Capital Sub-domains

IV. CONCLUSION

In this paper, using the nested model approach of structural equation modeling, I compared the Chi square and other fitness indices of four nested models and validated the conceptual model, which described the relation between intellectual capital and the financial performance, operational performance and effectiveness performance, acceptable. Using limited-information factor analysis and second order confirmatory factor analysis, this dissertation tests the dimension of the components of intellectual capital, i.e., human capital, organization capital and relational capital. Results show that there are four dimensions of human capital, that is, employees' attitudes and capability, the overall employees' quality, employee's turnover and training investment. Organization capital involves four dimensions: organization routine and culture, communication and cooperation, knowledge management and innovation investment. Relational capital contains three dimensions: the relation with customers, the relation with suppliers and relations with other stakeholders.

REFERENCES

- [1] Bontis, N., Chua Chong Keow, W., & Richardson, S., "Intellectual capital and business performance in Malaysian industries". *Journal of intellectual capital*, vol.1, No.1, pp: 85-100,2000.
- [2] Cohen, S., & Kaimenakis, N., "Intellectual capital and corporate performance in knowledge-intensive SMEs". *The Learning Organization*, vol.14, No.3, pp: 241-262, 2007.
- [3] Chen, J., Zhu, Z., & Yuan Xie, H., "Measuring intellectual capital: a new model and empirical study". *Journal of Intellectual capital*, vol.5, No.1, pp: 195-212, 2004.
- [4] Youndt, M. A., & Snell, S. A., "Human resource configurations, intellectual capital, and organizational performance". *Journal of Managerial Issues*, pp: 337-360, 2014.
- [5] Tseng, C. Y., & James Goo, Y. J., "Intellectual capital and corporate value in an emerging economy: empirical study of Taiwanese manufacturers". *R&D Management*, vol.35, No.2, pp: 187-201, 2005