

Several Analyses of Chinese Manufacturing Entrepreneurs' Enterprise Performance Improvement through Information Sharing

Hu Mengting, Noor Fzlinda Binti Fabeil, Ang Hong Loong

Universiti Malaysia Sabah, Entrepreneurship Department, Faculty of Business, Economics and Accountancy, 88400 Kota Kinabalu, Sabah, Malaysia

To Link this Article: <http://dx.doi.org/10.6007/IJAREMS/v13-i3/22132> DOI:10.6007/IJAREMS/v13-i3/22132

Published Online: 10 September 2024

Abstract

With rapid changes in the external environment, it is increasingly difficult for enterprises to survive alone. Scholars now focus on the impact of inter-organizational relationships and networks on corporate performance. Enterprises must manage networks effectively, making the study of network capability and corporate performance crucial. Hakansson introduced network capability in 1987, and many scholars have since defined and modeled it, exploring its link to corporate performance. However, network capability is still emerging, particularly in China, where research is nascent and lacks diverse perspectives and empirical testing. This study, based on Chinese manufacturing enterprises and literature review, redefines network capability's conceptual model, proposes a framework for improving corporate performance, and empirically tests the relationships among variables.

Keywords: Information Sharing, Manufacturing, Entrepreneurs' Enterprise, Chinese.

Introduction

Enterprise Information Sharing

Enterprise information sharing, also known as information sharing between organizations, refers to two or more organizations participating in long-term exchange relations (Thorelli, 2019). Information sharing becomes a new paradigm for organizational structure and the fundamental framework between organizations (Miles, Snow, 1992). The information sharing model contains three elements: behavior subject, resource and activity (Hakansson, 2017). The formation and development of information sharing is formed through some activity chains, resource knots and action subject belts among enterprises. Kamann, Strijker believes that information sharing is a collection of all interactions between organizations. Any two interactive organizations can be included in the same information sharing.

Gulati, Nohria pointed out that in today's era, the rapid replacement of technology and the continuous development of new markets constitute the main competitive picture of the industry, and the competitive advantage of enterprises depends on the sharing of commercial information, and commercial information sharing provides enterprises with the flexibility

necessary to participate in the market competition. The market responsiveness of the enterprise.

In the real world, enterprises (actors) are not "atomic" in a completely free and competitive market environment, but are connected and influence each other, embedded in social, professional and other Information sharing of the exchange relationship of organizational factors (Xinghua, Ling, 2008) . There are many types of information sharing, if strong If the subject of the adjustment behavior is an enterprise, it can be called enterprise information sharing. If the activities in information sharing are emphasized for the purpose of innovation, it can be called innovation information sharing; if knowledge and technical resources are emphasized, it can be called technology network (Fucui, Peng, 2004) . proposed that value information sharing is the relationship of value generation, distribution, transfer and use formed by the mutual influence of stakeholders (Jiayong ,2008) . Defines enterprise information sharing as an organizational form between enterprises and market, and a "mixed mode" between enterprises and market. It is the third organizational form relative to enterprises and market, which includes virtual enterprises, enterprise groups, enterprise clusters, strategic alliance, etc (Yuan and Yingluo ,2015) .

Form of the enterprise information sharing is either loose or closely depends on the quantity, quality and type of interaction among enterprise members in information sharing. pointed out that the construction and dissolution of relations is a basic feature of modern society. Enterprise construction and The relationship between dissolved organizations is also more and more valued by scholars.

Therefore, we can see that enterprise information sharing has become a common living state of enterprises. No matter what form it exists, such as industrial cluster, strategic alliance, virtual enterprise, industrial module, value chain and other forms, they all reflect the organizational form of enterprises' mutual dependence, mutual restriction and common development. The competition at the enterprise level has gradually evolved into the competition at the information sharing level, and the practice of enterprise information sharing has gradually attracted the attention of the industry and academia. At present, the research on enterprise information sharing presents the characteristics of interdisciplinary and multi-angle approach. In the following, we specifically comb out the relevant theoretical perspectives of enterprise information sharing, To provide theoretical support for the subsequent work in this study.

Study Significance

The significance of this study is mainly reflected in the following aspects:

On the basis of reviewing and summarizing the existing enterprise information sharing and research, guide the research perspective of information sharing ability. Summarize and comb the definition of information sharing ability and related theoretical models, redefine the conceptual model of information sharing ability, specifically include three aspects of connotation, classification and structure, develop and design corresponding measurement scales, and verify the construct validity and internal consistency reliability of the scale through empirical analysis. Hope to provide a new perspective on understanding the ability to share information, as well as It lays a theoretical foundation for domestic subsequent research on this topic.

Comprehensively explore the theoretical framework of enterprise performance improvement path based on information sharing ability. Based on the theory of enterprise performance and external management, enterprise information sharing theory, organizational learning theory and power dependence theory, looking for important ways to affect the improvement of enterprise performance under the information sharing environment — Information sharing ability, inter-organization learning and information sharing power. At the same time, the influence relationship between information sharing ability and inter-organizational learning and information sharing power is also found. Thus, the theory of enterprise performance improvement path based on information sharing ability is constructed. The framework is hoped to enrich the academic research on enterprises' competitive advantages from information sharing.

We designed and developed the inter-organization learning and information sharing power measurement scale. Inter-tissue learning is a relatively new concept, and there is a lack of scientific and universally agreed measurement tools. Based on the existing literature research, this study developed and designed measurement scales for inter-tissue learning. At present, there is little empirical research on the research of information sharing power. This paper designed and developed the information sharing power scale based on the review of relevant literature. The development and design of the above two scales could be useful in the future field. The subsequent research laid a certain theoretical foundation.

Empirical test of the path relationship model of enterprise performance improvement based on information sharing ability. With the background of Chinese manufacturing enterprises, the enterprise performance improvement path relationship with intermediary effect is tested through empirical research model. It is hoped to enrich the empirical research in this field and provide some help for scholars to further explore it.

Theoretical

Although the above theories have been fully studied in their respective fields, there is still a lack of new ideas from the perspective of information sharing and the necessary integration. Enterprise performance exogenous theory and the integration of enterprise information sharing theory, guide the research find enterprise dynamic management of information sharing and enterprise performance of information sharing source, organizational learning theory and the integration of enterprise information sharing to guide the study tease out the concept of learning between organizations, power dependence theory and the integration of enterprise information sharing guide this study tease out the concept of information sharing power. Therefore, this study finds a new convergence point in these four fields, from the perspective of information sharing, Exploring understudied knowledge gaps in various fields.

Literature Review

Economics

The most prominent theory of enterprise information sharing from the perspective of economics is the theory of transaction cost (Coleman,2024) . A proposed "transaction fee" from Coase Since the concept, people found that the way of allocating resources is not an absolute dichotomy — enterprise and market, pointed out that the "expanding middle" between the enterprise and the market, and the middle part between the enterprise and the market has been widely recognized as (Hennart,1993). Williamson proposed the concept of

hybrid organization to represent various institutional arrangements between enterprises and the market, including long-term contracting, reciprocal transactions, regulation and franchising. He believes that the mixed organization between the enterprise and the market is the common form, and that the extreme phenomenon is very rare for . Enterprise information sharing is effectively reducing transactions Cost and increased form of transaction revenue, it is a unique source of value creation and realizatio (Williamson,2002)n. According to , transaction costs depend on three factors: bounded rationality, opportunism, and asset specificity. Based on the different combinations of these three factors, different governance structures were selected, including occasional contracts and regular contracts, the market governance structure is adopted.

Mixed accidental transactions and highly dedicated accidental transactions adopt tripartite governance, that is, they need a form of intermediary system, through the assistance of a third party (such as arbitration) or the use of independent experts to solve the transaction disputes. For the trading behavior of the intermediate product market, it is divided into two situations: if a transaction is frequent, it will produce a specialized management agency.

If it is a highly specialized trait asset, it needs to set up an organization within the enterprise. If the specificity is not very strong, but it has some characteristic assets, There will be a bilateral management to keep the parties independent and to maintain a long-term relationship(Dietrich,1994) . Introduced the concept of transaction income, he believed that the change of the governance structure is more caused by the change of the interests of the governance structure, rather than the purpose of saving transaction costs. When the internal cost of the organization is less than the external total cost, the enterprise will choose to internalize, and at the same time consider the interests. If the interests of the enterprise are less than the benefits of the internal organization cost, the enterprise Will choose a quasi-integrated governance structure.

Tab.2.1
Effectivegovern ance

		Investment characteristics		
		Non-special	mixing	unique
Trading frequency	accidental	Market governance	Tripartite governance (Neoclassical contract)	
	often	(Classical contract)	Both sides governance (Relationship Contract)	Unified governance

Madhok, Tallman also pointed out that the cooperation between enterprises will produce a kind of cooperation value, namely rent. He pointed out that in the process of cooperation, there are three kinds of — enterprise exclusive lease, transaction exclusive lease and cooperation exclusive lease (Madhok, Tallman,1998) .

The enterprise proprietary lease is the rent of the special resources or assets; the transaction proprietary lease; the cooperative proprietary lease is the collection of

transaction proprietary and proprietary resources of all enterprises to create the lease that cannot be generated in the non-cooperative state. When these quasi-rents exceed the transaction cost, the enterprise will obtain the actual value, and the acquisition of this value requires the enterprise management information sharing to reduce the transaction cost. Their theoretical views all jump out of the framework of the transaction cost theory simply emphasizing the cost. When enterprises choose the survival form of information sharing, they should not only consider the cost, Focus more on profits. This kind of profit acquisition requires the organization and management of enterprise information sharing .

Sociology

In sociological research, social information sharing is an important research direction, which is a point of view about social structure, and it is a set of analytical methods and techniques(Mitchell,1969). From the perspective of social relations, the social information sharing sector is defined as a unique set of unique relationships among individuals in a certain group. The theory of social information sharing provides useful analytical tools for the study of two-way relationships among alliance participants, some complex relationships and structures within the alliance, such as the transfer and integration of knowledge, the creation, implementation and evolution of learning information sharing, and the structural development of information sharing (Fei, Limin, 2003) .

Social information sharing is a broader concept than enterprise information sharing, and enterprise information sharing is a form of social information sharing. The influence of relationship, location, and social capital in social information sharing on individual access to resources is also applicable to enterprise information sharing, which is also studied in this paper keynote. At present, there are two important branches of research in information sharing.

One is to study social information sharing by using mathematical statistical methods, White, Boorman, Brieger and Freeman introduced mathematical graph theory and developed a set of quantification At the same time, a series of concepts of information sharing analysis, such as social distance, connectivity, centrality and tightness. Another research path is to observe and understand the society and information sharing from the perspective of individuals, and to care about how individual behavior is influenced by the society and information sharing, among which the famous representatives and theories are: Granovetter representative theory is weak relationship Power and strong relations; Burt and his structural hole theory; Bourdieu and Linnan, etc.

The research of social information sharing provides the theoretical basis and the tool for studying enterprise information sharing (Granovetter,1985) ,pointed out in the article "Economic Behavior and Social Structure: Embedded Problems" that behavior and system are always suppressed and controlled by the running social relations, that is, economic behavior is embedded in social information sharing, and its behavior and effect are affected by the structure and quality of social information sharing embedded in it (Granovetter,1973). clarified the four dimensions of the concept of relationship power: the interaction time, emotional intensity, intimacy and reciprocal exchange between the two sides of the relationship, and divided the embedded relationship into strong relationship and weak relationship. He believes that weak relationships are more conducive to breaking social

boundaries to obtain information and resources. Uzzi (1996), states that close contact and distancing contact can be used as an information transfer Channel, overlapping information sharing can promote information sharing, and promote enterprises to better absorb the results of innovation Burt, (1992), proposed the concept of "structural holes". He pointed out that there are two kinds of social information sharing structures in both organizations and individuals: one is that any subject in social information sharing is directly connected with other subjects, and the other is that some subjects in social information sharing are directly connected with other individuals. From the perspective of social information sharing as a whole, the phenomenon of not directly connected between individuals is like the hole between individuals, called "structural hole". Individuals who occupy the position of the structural hole can coordinate the behavior between two individuals, obtain information benefits and control benefits, and play the role of "bridge"(Bourdieu, 1997) .

Divided capital into three basic forms: economic capital, cultural capital and social capital. Social capital is "the collection of actual or potential resources that are in the possession of lasting information shared with a familiar and recognized and institutionalized relationship". He believes that "the amount of social capital possessed by a particular actor depends on the scale of contact information sharing that the actor can use effectively, and on the amount of (economic, cultural, symbolic) capital occupied by each person with his own power" (Lin Nan,2005) ,pointed out that social capital is an investment in social relations, through which the resources of other actors can be used and borrowed(Emerson,1972) .

Further proposed the concept of exchanging information sharing, which is defined as: a group of actors (people or Enterprise); Distribution of valuable resources between actors; opportunities for free exchange between actors; A set of exchange relationships developed through long-term exchange opportunities; interconnected exchange relationships form a relational information sharing .

Management

Contemporary organizational structure has undergone a series of changes, from the linear function system to the continuous innovation of M-shaped organizational form, but Even M-shaped organizations do not break through the limits of corporate boundaries. With the change of the external living environment of enterprises, between organizations The boundaries are blurred. Dong (2005), believes that enterprises should not stick to the tangible enterprise boundary, but should choose to expand or narrow its enterprise boundary from the perspective of contract selection and contract combination(Zhao Shuang,2024) .

Proposed three forms of enterprise boundary: property right, virtual and mixed enterprise boundary. From the perspective of three forms of enterprise boundary, The continuous consolidation of the core business of the enterprise and the stripping of the non-core business make the property rights boundary or increase or decrease, but the enterprise is inclined To establish cooperative relations with the outside world, that is, the virtual enterprise boundary shows a trend of expanding .

In this form of enterprise boundary change, the perspective of management regards enterprise information sharing as an emerging organizational form, and how to balance in enterprise information sharing Differentiated relationship between enterprises and the

operation of enterprise information sharing pose new challenges for scholars(Grandori, Soda,1995) .

Summarizes some columns to adjust and maintain the information sharing mechanism: communication, decision-making and negotiation mechanism, social coordination and control mechanism, integration and connection hub role, full-time staff, hierarchy and authority relationship, planning and control system, incentive system, selection system, information system, and public support and infrastructure(Liu dong,2005) ,points out that the core enterprise dominant market main body beyond their "duty", beyond the market relations, and the counterparties on the market interface, and to some extent in the dealing party internal production management process, play the original only exist in the entity enterprise "intervention", "command" and "coordination" role (Qiu Guodong,2003) ,pointed out that enterprises should adapt to the dynamic changing environment and make use of the external resources of the enterprise The visible hand controls the invisible hand outside the enterprise boundary to reduce the risk .

Believes that with the participation With the deepening of management degree, enterprises will establish a set of basic code of conduct generally recognized by information sharing members to guide information sharing operation Hkansson (1987), first proposed the concept of information sharing capability (networkingability), which was defined as the ability of enterprises to improve their comprehensive status of information sharing and deal with individual information sharing relationships Moller, Halinen (1999), from the perspective of information sharing theory, put forward the management of business relationship and information sharing, industrial information sharing, enterprise information sharing, relationship combination and transaction relationship, and the corresponding information sharing, management ability (networkmanagementcapability), by the network Network vision, information sharing management, portfolio management and relationship management framework constitute Based on the concept of resource foundation, the branch of strategic management theory proposes the concept of information sharing resource Eisenhardt, Schoonhoven (1996), points out two situations in the construction of enterprise information sharing: when the enterprise is in a fragile position in the strategy (emerging market, technological innovation and high competition), it obtains resources through information sharing (technical know-how, cash, gold and legitimacy), and relies on the whole information sharing to obtain the competitive position; secondly, when the enterprise is in a strong strategic position, it builds information sharing and value resources Release the value of key resources . Jinguang, Jingmei, (2003), define information sharing resources as a kind of enterprise — — club The type of resources from the perspective of learning is the result of the long-term interaction between people and enterprises .

With the change of the competitive environment, enterprises should shift from the strategy of acquiring traditional resources and sharing risks to the strategy of learning and acquiring knowledge. Information sharing provides an important scenario for knowledge acquisition and transmission. The difference and complementarity of enterprise grasp resources are the premise of knowledge transfer. Those dedicated and tacit knowledge can only be obtained through repeated and frequent games between organizations, which cannot be realized by enterprises and the market. The transmission of knowledge between organizations requires a series of management systems (Dyer, Nobeoka,2000) ,pointed out

that Toyota information sharing is very good in the transmission of knowledge between organizations Efficiency comes from its establishment of the universally recognized information sharing norms — "co-existence" philosophy system .

Enterprise

Based on the above combing of the research context of enterprise information sharing, three research enterprises are divided into the perspective of information sharing — Economics Perspective, sociology perspective, and management perspective.

Economics perspective reveals the enterprise information sharing is the source of value creation, break through the traditional economic judgment choice governance structure only consider the limitations of transaction costs, introducing the concept of trading benefits, more rational analysis of enterprise information sharing is an important scene of value creation, especially the cooperation value is unique and difficult to imitate, put forward the concept of information sharing rent. The contribution of economic perspective lies in the fact that it clarifies that the form of information sharing is the third resource allocation mode to obtain value, redivides the traditional resource allocation mode, and points out a new way for enterprises to obtain performance improvement. The flaw in the economic perspective is that it is a bit There is no specific way to improve the performance of enterprises in information sharing.

Sociological perspective reveals that the embeddings of information sharing relationship and the embedding of information sharing structure will affect the allocation of information sharing resources And the size of individual power in information sharing. Access resources is an important goal for enterprises to participate in information sharing, which is subject by the information sharing relationship And structure; occupying a position in information sharing can affect the power in information sharing. The contribution of the sociological perspective lies in that it provides a series of favorable analysis tools for studying enterprise information sharing, revealing the impact of embeddedness on enterprise performance. The defect lies in the research of information sharing from the perspective of sociology, and the lack of the active construction of information sharing from the enterprise level And passive embedded information sharing differences between the two scenarios.

The perspective of management reveals that enterprise information sharing needs the management of a "visible hand". The ability of enterprises to deal with the information sharing relationship and structure plays a decisive role in the normal operation of information sharing. This normal "intervention" can ensure the allocation of information-sharing resources. Any enterprise is embedded in a specific information-sharing relationship, whether it is actively built or passively embedded. Some enterprises actively manage information sharing relationships and obtain excess information sharing profits, while some enterprises passively participate in information sharing activities and obtain average information sharing profits may even lose their own advantages. Therefore, the ability to share information will have a positive or negative impact on enterprise performance. The drawback of the management perspective is the lack of in-depth exploration of enterprise performance based on information sharing capabilities Efficiency improvement path and empirical analysis. This paper based on information sharing ability concept based on the perspective of management, that the enterprise information sharing is a set of dynamic relationship between enterprises,

whether enterprise is waiting into the existing enterprise information sharing or has entered the information sharing, it can according to the information sharing environment dynamic and rational input enterprise resources, the necessary management of information sharing, in order to obtain the results of enterprise performance improvement.

This study stands at the enterprise level, starts from the information sharing ability, integrates the perspective of economics and sociology, and uses their classic analysis tools to deeply analyze the theoretical framework of enterprise performance improvement path based on the information sharing ability.

Tab.2.4

The Theoretical Framework of Network Competence

	As the structure of enterpriseHow to effectively identify execution of value activities,the relevant information information sharing constitutessharing and its implication
Level 1: Industrial information sharing — Information sharing vision	the environment of enterpriseThe opportunity to contain? embedding. Information sharingHow to understand, is not transparent, and information sharing enterprises need to learnevolution through interaction.To identify strategic Understanding the structure,development opportunities? passage, process and evolution ofHow to divide information sharing are crucial to Analysis of enterprise information sharingstrategy combination and
Level 2: Enterprise information sharing — Information management	management. The strategicform a focus network behavior of enterprises inNetwork to respond, information sharinginformation sharing can beinformation sharing passed competition? The focus, information sharingHow to form and manage and the role in informationstrategic information sharing sharing (for Role, status to analyze. Identify,Should be information
Level 3: Relationship combination management	evaluate, sharing, distribution —The ability to build and maintaininformation sharing, and the location and relationships ofcustomer network information sharing isnet-like things)? How to enter indispensable in informationthe new information sharing sharing management. (Mayor
Level 4: exchange relationship — management	Enterprises are a collection of Enter, new products / resources and activities. Whichservices areas)?in compliance activities are done within thewith enterprise, and which activitiesWhere to manage the are there information-sharing External completion is anlocation? important strategic issue. How to develop the most optimal customer / supplier

assemble? How to manage it from the perspective of organizational analysis
Customer / supplier mix?

A single customer / supplier How to evaluate the potential relationship forms an value of the relationship? information sharing process How to proceed from the Basic unit of the relationship effective formation, analysis method. found, management, and The ability to manage and termination terminate important Relationship. What is a relationships is the enterprise relationship? How to be effective
A core resource of the industry. Some relationship events?

Methods

The variables needed to be measured in this part of the study include: inter-organizational learning, network power, and enterprise performance. The general measurement surface of measuring organization learning, network power and enterprise performance, and then further generated the initial measurement questions by combining qualitative testing and pretesting Complete the reliability and validity assessment of each study variable according to the aforementioned study method.

Norman from "through alliance we have improved existing management skills", "through alliance we have formed new management skills", "through alliance we have developed new technical capabilities" and " through alliance we have improved existing Technical ability " These four items measure the knowledge acquisition in the high-tech alliance, and the reliability coefficient A is reached 0.82165. Lyles measured the degree of knowledge acquisition from foreign parent companies. The specific items include product development and foreign knowledge, including: new technology knowledge, new marketing knowledge, product development, Knowledge of foreign culture, management technology knowledge, manufacturing process knowledge, reliability coefficient of 0.88129. Cohen to measure the absorption capacity of the enterprise .

Divides the absorption ability of enterprises into knowledge acquisition ability and knowledge diffusion ability, And adopted 12 terms to measure. Wu Xiaobo, Liu Xuefeng, Hu Songcui borrowed from other scholars to absorb Ability research, from the acquisition, digestion, application of three aspects of measurement, a total of 11 questions?93. In the aspect of knowledge innovation measurement, many scholars have made beneficial explorations from different perspectives. This study mainly uses the product innovation perspective. Huang Yancong dopted six terms to measure the product innovation of OEM enterprises, and the reliability coefficient reached 0.89711296. Lin Wenbao studied the impact of knowledge integration on process innovation and product innovation, Among them, eight clauses were used to measure the product innovation, and the reliability coefficient a reached 0.89297.

Data Collection

Before testing the scale, it is necessary to analyze the skewness and kurtosis of each item in the scale to verify whether the data obtained by the survey obey the normal distribution. Whether the data obey a normal distribution will have a crucial impact on the analysis of the later structural equation model. The results are presented in Table 5.4, Table 5.5, and Table 5.6. The statistical results show that, The evaluation value of each measured variable can follow a normal distribution.

Tab.4.1

Descriptive Analysis of the Items in Interorganizational learning

Item code	sample capacity	mean statistics	standard error statistics	skewness statistics	kurtosis standard error	Statistical deviation	standard
KG1	318	3.81	.780	-.421	.137	.374	.273
KG2	318	3.62	.945	-.587	.137	.409	.273
KG3 ^{knowledg}	318	3.54	.893	-.351	.137	.168	.273
KG4	318	3.41	.958	-.217	.137	-.227	.273
KA1	318	3.76	.778	.080	.137	-.724	.273
KA2	318	3.69	.859	-.343	.137	-.034	.273
KA3 ^{Knowledg}	315	3.91	.884	-.632	.137	.326	.274
KA4	318	3.65	1.063	-.591	.137	.171	.273
KI1	317	3.81	.864	-.637	.137	.749	.273
KI2	317	3.66	.903	-.669	.137	.892	.273
Knowledge innovation	318	3.99	.812	-.694	.137	.615	.273
KI3							
KI4	318	3.82	.886	-.408	.137	-.509	.273

Tab.4.2

Descriptive Analysis of the Items in Network Power

	Item code	sample capacity statistics	mean statistics	standard error statistics	skewness Statistical standard deviation	kurtosis Statistical deviation	standard
coercive power	CP1	318	2.54	.977	-.022.137	-.488.273	
	CP2	318	3.02	.974	-.168.137	-.400.273	
	CP3	318	3.28	.898	.057.137	-.170.273	
Information power	IP1	318	3.53	.883	-.003.137	-.456.273	
	IP2	318	3.30	1.009	-.467.137	-.108.273	
	IP3	318	3.49	1.035	-.550.137	.046.273	
Influence power	EP1	318	3.84	.826	-.174.137	-.675.273	
	EP2	318	3.89	.854	-.185.137	-.863.273	
	EP3	318	3.79	.747	-.139.137	-.097.273	
	EP4	318	3.87	.875	-.708.137	.663.273	

Tab.4.3

Descriptive Analysis of the Items in Firm Performance

Item code	SD of sample size mean			skewness		kurtosis	
	statistics	statistics	statistics	statistics	standard error	statistics	standard error
FP1	318	3.80	.727	-.259	.137	.471	.273
FP2	318	3.63	.833	-.474	.137	.653	.273
FP3	317	3.55	.808	-.340	.137	.505	.273
FP4	316	3.27	.827	-.157	.137	.413	.273
FP6	318	3.92	.676	-.212	.137	-.032	.273

ScreePlot

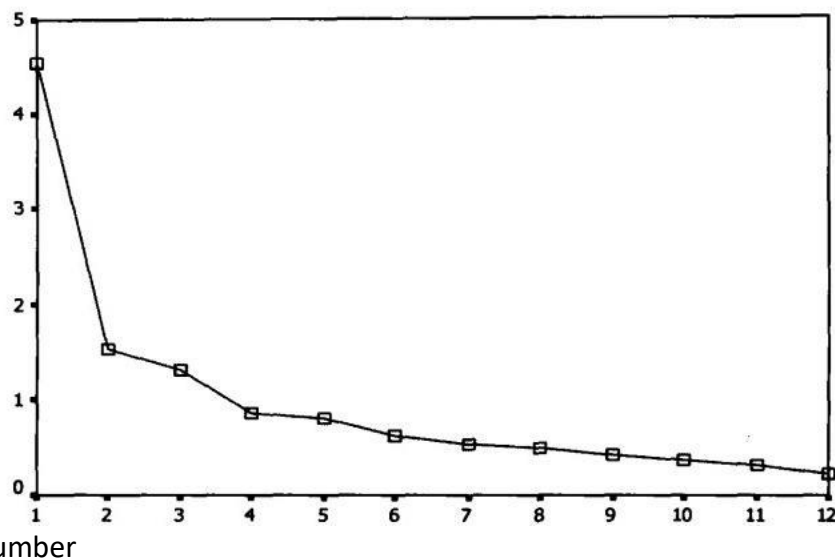


Fig.4.1 Component Number of Interorganizational learning

Tab.4.4

Comparison among fit indices of two interorganizational learning models

model	χ^2	df	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	SRMR
Single dimensional model	131.11	48	2.73	0.88	0.80	0.92	0.94	0.105	0.073
three-dimensional model	54.92	45	1.22	0.95	0.91	0.98	0.99	0.037	0.048

Aggregation Validity and Discriminatory Validity Test

The correlation coefficients between the dimensions of learning reached significant levels (all passed the significance test), indicating that the strong aggregation validity of the dimensions of learning this construct was measured. At the same time, the correlation coefficient (0.39-0.53) between all dimensions is less than the reliability coefficient of each dimension (0.74-0.82), indicating that the meaning of each dimension of the model is relatively independent and can be distinguished from other dimensions, proving that the inter-organization learning scale has better discriminatory validity.

Internal Consistency Reliability Test

As can be seen in Table 5.9, the Cronbach'a coefficient of all three dimensions of learning is greater than 0.7. The inter-tissue learning scale had a relatively good internal consistency.

Tab.4.5

One-way ANOVA results of the Age of Network Power

	enterprise ageThe (I)	Enterprise size (J) is less than 3 years old 4~5 Years 6~10 Years	MeanDifference	Std.Error	Sig.
			0.198	0.187	0.890
			0.137	0.168	0.955
			0.340	0.161	0.348
			0.412	0.158	0.152
coercive power	More than 21 years	11~20 Years			
		Under 3 years	0.311	0.182	0.576
		4~5 Years	0.312	0.164	0.136
		6~10 Years	0.439	0.157	
Information power	More than 21 years	11~20 Years	0.410	0.154	
		For 4 to 5 years below 3 years and 6 to 100	0.073	0.169	0.996
			0.187	0.152	0.823
			0.177	0.145	1.000
Influence power	More than 21 years	11~20 Years	0.001	0.143	

Note: The significance level of the homogeneity of variance test is 0.05

Tab.4.6

One-way ANOVA results of the Size of Firm Performance

	scale (I)	Enterprise size (J)	MeanDifference	Std .Error	Sig.
		Less than 300 people	0.407	0.150	0.053
Enterprise performance	More than 1,001 persons	From 301 to 500 persons	0.451	0.147	0.054
		From 5,01 to 1,000 people	0.392	0.155	0.057

Note: The significance level of the homogeneity of variance test is 0.05

Tab.4.7

One-way ANOVA results of the Age of Firm Performance

	enterprise ageThe (I)	Enterprise size (J), less than 3 years, 4~5 years 6~10 Years 11~20 Years	MeanDifference	Std.Error	Sig
			0.274	0.109	0.179
			0.359	0.134	0.061
			0.389	0.922	0.054
Enterprise performance	More than 21 years		0.282		0.056

Note: The significance level of the homogeneity of variance test is 0.05

From the test results in the table above, for the investigated sample, it is considered at the level of 95% confidence Model and enterprise age had no significant effect on enterprise performance. To sum up, this study concluded that the enterprise scale and enterprise age of learning between organizations, information sharing power and enterprise performance has no significant impact on the conclusion, one of the possible reasons is when doing the

questionnaire, the scale of the sample enterprise prior limit, ruled out the extreme situation, such as, too small enterprises, set up time is too short, large and small enterprises in the proportion of small.

The analysis results are only applicable to the sample enterprises, which does not mean that in other cases, enterprise size and enterprise age have no significant impact on inter-organization learning, information sharing power, and enterprise size. According to the data analysis of the sample enterprises, the enterprise size and enterprise age have no significant impact on the inter-organization learning, information sharing power and enterprise size, so In the later structural equation hypothesis testing process, no longer considered.

The school of industrial organization regards strategy more as a positioning, emphasizing the choice of highly profitable industries and gaining a favorable position in the industry (Porter, 1979), states that the task of strategists is to position the enterprise in providing the best defense against competitors; or to influence the balance of forces; or to predict future changes and take appropriate measures to change the competitive landscape before the competitors. This emphasis on positioning is the first priority of the strategy, and its essence is to focus on "doing the right thing". Interface management theory is the interface management (interfacemanagement) is defined as, enterprises to complete the same task, enterprise, the organization and members between the information, material, financial elements such as interaction, solve the interface in the contradiction between the professional division of labor and collaboration needs, control, collaboration and communication, improve the overall function of management, realize the optimization of enterprise performance.

Through the interface management between organizations, on the one hand, solve the contradiction between the interface parties and the collaboration needs, and realize the overall control, collaboration and communication; on the other hand, handle the relationship between organizations, improve the quality of cooperation, and finally improve the performance of the enterprise. This the management of the species interface layer focuses more on "doing things right". Follow the principle of efficiency (Principle of Efficiency), under the condition of the given input and technology, enterprise resources without waste, or the maximum use of resources, therefore, need to "do the right thing" and "right" organic unity, specifically, need to strategic target effective into short-term goals and concrete actions.

This study believes to clarify the cooperation purpose and positioning of enterprises in information sharing, and the management of various information sharing activities has clear direction and norms. Information sharing strategy capability is a fundamental capability that belongs to the strategic level to tell the other two capabilities are directly applied to interface management, handling various information sharing activities and belongs to the interface layer to tell enterprises how to do things efficiently and correctly. These two types of information sharing capabilities differ in research objectives, orientation, content, task, scope of influence and degree of measurement. Strategic level ability pay attention to find and use of information sharing opportunities, focusing on the value of enterprise information sharing, clear what enterprises do, by shaping information sharing, information sharing, vision, action strategy, grasp the evolution trend of information sharing, value orientation, is

a long period of strategic positioning, relatively not easy to adjust and difficult to measure. Interface level ability is according to the information sharing, environmental coordination, information sharing operations and information sharing relationship, to obtain scarce information sharing resources, through planning, organization, coordination, control, management relationship quality activities, such as activity orientation, is the short positioning, according to the actual situation of the interface interaction, relatively easy to observe, can through the number of organization meetings, production operation, partnership the quantity and quality of the objective phenomenon to assess.

Conclusion

The Conceptual Model of Information Sharing Capacity

Based on the research on the theory of enterprise information sharing in the fields of economics, sociology and management, this research is conducted from the dynamic perspective of information sharing ability. The concept of information sharing ability, and the model mainly develops from the connotation, classification and structure level of information sharing ability.— Information sharing ability is the enterprise sharing through identifying information Strategic opportunities, the sum of the ability to deal with information sharing relationships and manage information sharing location to obtain scarce information sharing resources, as enterprises Dynamic research perspective of industry information sharing.

The connotation of three types of information sharing ability — information sharing strategy ability, information sharing operation ability and information sharing relationship ability is analyzed in detail. Put forward two layers of structure division of information sharing ability, strategic level and interface level. Strategic level ability is a value-oriented ability, telling enterprises how to "do the right thing", belongs to a long period of strategic positioning, not easy to change, not measured, mainly including information sharing strategy ability; interface level ability is an activity-oriented ability, emphasizing the enterprise "how to do things correctly", belongs to a short period of strategy formulation, easy to change, easy to measure, mainly includes information sharing and operation ability, information sharing and relationship ability.

Based on the actual situation of enterprises in our country, mainly investigated the manufacturing type of enterprise, through scientific rigorous empirical research, through exploratory factor analysis and validation factor analysis scientifically information sharing ability is divided into three dimensions, 3 d model compared with other model has the best fitting index, shows that the 3 d model has good construct validity. From the perspective of aggregation validity and differentiation validity test, both show that information sharing energy scale has good aggregation validity and discrimination validity, so there are 5 measurement items with information sharing strategy capability, reliability coefficient of 0.77,6 measurement items, reliability coefficient of 0.75,5 measurement items and reliability coefficient of 0.71. Therefore, this study divides the information sharing capability into information sharing The three dimensions of strategic ability, information sharing operation ability and information sharing relationship ability are scientific and reasonable.

Import the Two Intermediary Variables

First of all, based on the theory of enterprise information sharing and organizational learning, the concept of inter-organizational learning is summarized, that is, the systematic process of

enterprises to acquire, absorb and innovate knowledge from information sharing. By reviewing the research of relevant scholars on the inter-organization learning process model, the classification of inter-organization learning is redivided into three categories: — knowledge acquisition, knowledge absorption and knowledge innovation. Based on the theory of enterprise, information sharing and power dependence, the concept of information sharing power is summarized, that is, the power of enterprise information sharing for an enterprise to influence the behavior of other enterprises to satisfy its own interests. By reviewing the definition of information sharing power and the perspective of management power

The division of power divides the information sharing power into three categories: compulsory power, information power and influence power. Secondly, inter-organization learning is rooted in enterprise information sharing, and information sharing ability operates and maintains information sharing through active management information sharing Relationship, help to eliminate a series of obstacles in inter-organizational learning, and then affect the effect of inter-organizational learning, The discovery of this path tests why many enterprises belong to the same information sharing in the real world, but the learning effect between enterprises is significantly different. Power dependence is rooted in the information sharing relationship of enterprises, and the scarcity of information sharing ability will affect the size of information sharing power. Have higher, information sharing ability of enterprises can through the dynamic management of information sharing operation and maintenance of information sharing, relationship, in, the establishment of a comparative advantage, reduce the dependence on other information sharing enterprise, sex, enhance the voice in information sharing, then affect the size of the enterprise information sharing power, the path also found in the real world, why in the same information sharing the inequality of power, some is the core enterprise is to follow the enterprise, with the network at the same time In the evolution of collaterals, the power structure also evolves.

Therefore, this study introduces the two intermediary variables of learning and information sharing between organizations, and power, to make up for the existing domestic and foreign research to explore the enterprise performance in the information sharing environment from a single perspective, and to improve the enterprise performance from a more comprehensive and rich perspective This paper opens up a new theoretical perspective on the relationship between information sharing ability and enterprise performance.

The Path Relationship Model

With the background of enterprise information sharing theory, based on the external theory of enterprise performance, organizational learning theory and power dependence theory, the information sharing ability as an important variable between learning and information sharing power, learning and information sharing power as a intermediary variable, build the enterprise performance promotion path based on information sharing ability theory framework, further analyze the hypothesis of the relationship between the variables, finally put forward the relationship model of this study, and the empirical test. Through empirical test, it is found that:

The impact of information sharing ability on enterprise performance is multifaceted, and the impact of the three information sharing ability on enterprise

performance improvement is not exactly the same, and the impact on enterprise performance is from large to small: information sharing relationship ability and information sharing operation ability force and information-sharing strategic capabilities.

The intermediary role of learning and information sharing power between organizations was tested. Inter-organization learning and information sharing power are the complete intermediary variables between information sharing strategy ability and enterprise performance. The power of learning and information sharing among organizations is part of the intermediary variables of the ability of information sharing operation and information sharing relationship. Specifically, compulsory power, information power and knowledge acquisition are part of the intermediary variables in the ability of information sharing operation and the improvement of enterprise performance. The three dimensions of inter-organization learning and information sharing, and the three dimensions of power, are all some intermediary variables of the ability of information sharing relationship and the improvement of enterprise performance.

The study also found that there is a relationship chain between the three dimensions of information sharing ability. Information sharing strategy ability has a significant positive impact on information sharing operation ability and information sharing relationship ability, and strategic ability has an important role in guiding operation ability and relationship ability, which also verifies this study on the network Structural division of the collateral capacity.

Theoretical Foundation: Dynamic Capabilities Theory

This study primarily employs the dynamic capabilities theory to explore the relationship between network capability and corporate performance within Chinese manufacturing enterprises. Dynamic capabilities theory, a framework that emphasizes an organization's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments, provides a robust foundation for this research. In the context of network capability, dynamic capabilities theory suggests that firms must develop the ability to effectively manage and leverage their inter-organizational networks to adapt to market changes, seize new opportunities, and maintain a competitive edge.

This theoretical approach underscores the importance of continuous learning, strategic flexibility, and the capacity to reconfigure resources in response to external pressures and opportunities. By framing network capability as a dynamic capability, this study highlights how Chinese manufacturing enterprises can enhance their performance through strategic network management. It posits that firms with strong network capabilities are better equipped to sense changes in the external environment, integrate external knowledge, and realign their strategies and resources accordingly.

This perspective is particularly pertinent in the rapidly evolving economic landscape of China, where the ability to respond swiftly and effectively to changes is crucial for sustaining competitive advantage. Through empirical testing, this study aims to validate the proposed relationships between network capability and corporate performance, providing valuable insights into how dynamic capabilities theory can be applied to understand and improve the strategic management of networks in the Chinese manufacturing sector. This

theoretical foundation not only enriches the academic discourse on dynamic capabilities but also offers practical implications for managers seeking to enhance their firms' performance through effective network management.

Findings

Significance to Existing Knowledge

This study offers several significant contributions to the existing body of knowledge on network capability and corporate performance. Firstly, it provides a redefined conceptual model of network capability tailored to the unique characteristics of Chinese manufacturing enterprises. This redefinition is crucial as it acknowledges the distinct economic, cultural, and regulatory environments in which these enterprises operate, differing substantially from Western contexts where much of the existing research has been conducted.

By integrating insights from Chinese business practices and management philosophies, this study bridges a critical gap in the literature, offering a more globally relevant understanding of network capability. It underscores the importance of context-specific factors, such as *guanxi* (personal connections) and the role of government policies, which are often overlooked in mainstream theories developed in Western settings. This localized perspective not only enhances the theoretical robustness of the concept but also provides practical insights for managers operating in similar environments.

Role in the Relevant Context

In the context of rapid globalization and technological advancements, the ability of enterprises to effectively manage and leverage inter-organizational networks has become a key determinant of competitive advantage. This study highlights the strategic role of network capability in enhancing corporate performance, particularly in the manufacturing sector, which is the backbone of China's economy. By proposing a framework that links network capability to corporate performance, this research provides a structured approach for enterprises to evaluate and improve their network management practices.

The empirical testing of the proposed relationships among variables offers robust evidence of the impact of network capability on various dimensions of corporate performance, such as innovation, operational efficiency, and market competitiveness. This empirical validation is particularly valuable in the Chinese context, where anecdotal evidence and case studies have often dominated the discourse. By employing rigorous quantitative methods, this study adds a layer of scientific credibility to the discussion, paving the way for more evidence-based decision-making among practitioners.

Theoretical Implications

Theoretically, this study contributes to the evolving discourse on dynamic capabilities and resource-based views of the firm. Network capability, as conceptualized in this study, can be seen as a dynamic capability that enables firms to adapt to changing environmental conditions and exploit new opportunities. By situating network capability within the broader framework of dynamic capabilities, this research enhances our understanding of how firms can develop and sustain competitive advantages in dynamic and complex environments.

Moreover, this study extends the resource-based view by highlighting the importance of external resources accessed through inter-organizational networks. Traditional resource-based theories have primarily focused on internal resources and capabilities. However, in an interconnected world, external resources and relationships are equally crucial. This study's findings underscore the need for firms to not only develop internal capabilities but also to strategically manage their external relationships and networks.

Practical Contributions

From a practical standpoint, this study offers actionable insights for managers and policymakers. For managers, the proposed framework provides a diagnostic tool to assess their firm's network capability and identify areas for improvement. The study's empirical findings offer concrete evidence of the benefits of investing in network capability, thereby making a compelling case for incorporating network management into strategic planning processes.

For policymakers, the study's insights into the unique challenges and opportunities faced by Chinese manufacturing enterprises can inform the design of supportive policies and initiatives. By recognizing the importance of network capability, policymakers can facilitate the creation of environments that encourage inter-organizational collaboration and knowledge sharing. This, in turn, can enhance the overall competitiveness of the manufacturing sector and contribute to broader economic development goals.

Recommendations

This study makes a substantial contribution to the theoretical and practical understanding of network capability and its impact on corporate performance. By focusing on Chinese manufacturing enterprises, it fills a critical gap in the literature and provides valuable insights for both scholars and practitioners. The redefined conceptual model and empirical findings not only enhance our theoretical knowledge but also offer practical guidance for improving network management practices. As the global business environment continues to evolve, the insights from this study will remain relevant, highlighting the enduring importance of network capability in achieving corporate success.

References

- Dai, O., & Liu, X. (2009). Returnee entrepreneurs and firm performance in Chinese high-technology industries. *International Business Review*, 18*(4), 373–386. <https://doi.org/10.1016/j.ibusrev.2009.03.004>
- Kumar, V., Singh, R. K., Dwivedi, Y. K., & Pandey, A. (2018). An empirical analysis of supply and manufacturing risk and business performance: A Chinese Manufacturing Supply Chain Perspective. *Supply Chain Management: An International Journal*, 23*(6), 461–479. <https://doi.org/10.1108/scm-10-2017-0319>
- Li, Y., Cui, V., & Liu, H. (2017). Dyadic specific investments, absorptive capacity, and Manufacturers' Market Knowledge Acquisition: Evidence from manufacturer–distributor Dyads. *Journal of Business Research*, 78*, 323–331. <https://doi.org/10.1016/j.jbusres.2016.12.028>
- Liu, X., Wright, M., & Filatotchev, I. (2013). Learning, firm age and performance: An investigation of returnee entrepreneurs in Chinese high-tech industries. *International Small Business Journal: Researching Entrepreneurship*, 33*(5), 467–487. <https://doi.org/10.1177/0266242613508147>
- Liu, Y., Yang, M., Wei, Y., & Zhang, L. (2024). A chain mediation model of entrepreneurial teachers' experience and teaching competency — evidence from China. *The International Journal of Management Education*, 22*(1), 100946. <https://doi.org/10.1016/j.ijme.2024.100946>
- Naz, F., Naveed, R. T., Yang, M., Khan, A. N., & Jabeen, F. (2024). The effect of green supply chain management practices on carbon-neutral supply chain performance: The mediating role of logistics eco-centricity. *Journal of Manufacturing Technology Management**. <https://doi.org/10.1108/jmtm-09-2023-0401>
- Niu, B., Li, J., & Chen, X. (2024). Impact of channel co-opetition and taxes on a multinational firm's resilient local production decision. *Production and Operations Management**. <https://doi.org/10.1177/10591478231224924>
- Zhang, X. Y., Li, Y., & Teng, X. (2023a). Author response for 'How does green entrepreneurial orientation improve enterprises' sustainable performance? evidence from agricultural sector in China'. *Business Ethics: A European Review**. <https://doi.org/10.1111/beer.12706/v3/response1>
- Zhu, G., Zhang, Y., Chen, M., & Liu, Y. (2023). Pushing AI to wireless network edge: An overview on integrated sensing, communication, and computation towards 6G. *Science China Information Sciences*, 66*(3). <https://doi.org/10.1007/s11432-022-3652-2>