

# Contribution of Historical Social Capital to Innovation-Oriented Learning

## — Case of Chinese Logistics Public Corporation

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**ABSTRACT:** 21<sup>st</sup> century is called as the era of “Knowledge Society”. Knowledge is increasingly recognized by modern organizations as their most important tool and basis of innovation and the indispensable source of lasting competitive advantage. China has been in the transition stage from planned economy to market economy since 1978. Generally speaking, Chinese firms’ internal and external environments have changed greatly. It is essential for Chinese firms to accumulate and create knowledge through effective organizational learning for innovation capacities and future development.

In this research, one successful case of a Chinese public corporation in the background of China’s transit economy is studied. The case company tried to make full use of its social resources, such as government authorities, universities, research institutes, to educate and train its employees, to maintain its brand fame, and to establish its own operation routines and knowledge base. Inside the enterprise, several measures were taken to establish close human networks, based on some historical heritage, such as Youth League<sup>1</sup>.

It is implied in the paper that: 1. Human network as a platform of knowledge communication is more and more important for Chinese firms’ organizational learning, especial when the learning is innovation-oriented. 2. Shared vision is an indispensable element of forming a close human network favorable for innovation-oriented learning. 3. To establish such a human network, some kind of social capital, such as historical culture, social relations, may be very helpful.

**KEYWORD:** innovation-oriented learning, tacit knowledge, human network, shared vision

### 1. INTRODUCTION AND BACKGROUND

21<sup>st</sup> century is called as the era of “Knowledge Society”. Knowledge is increasingly recognized by modern organizations as their most important tool and basis of innovation and the indispensable source of lasting competitive advantage. According to Nonaka (1995), knowledge can be transferred from outside, but competitive knowledge can only be created inside the organization. The creation of

knowledge is based on the circulation of explicit mode and tacit mode. Knowledge creation as a source of innovation of business/industries strongly depends on tacit knowledge produced in individual persons and the way to share tacit knowledge and transform it to explicit knowledge in organization. On the other hand, according to researchers (e.g. Thomas et al., 2001), both knowledge management and knowledge creation utilize theories of

organizational learning as a platform for providing insight into how organizations can acquire, interpret, distribute, and acculturate knowledge to facilitate and create competitive distinction. In addition, organization theory, industrial economics, economic history, and business, management and innovation studies all approach the question of how organizations learn. However, research on these subjects is concentrated mainly in advanced countries (e.g. Argyris and Schon, 1978, Dodgson, 1993, Nonaka and Takeuchi, 1995, Utterback, 1994, Von Hippel, 1988). Despite the fact that many developing countries have made significant progress in industrial, educational, and technology development, research on learning, capability building and innovation in those countries is scanty.

China has been in the transition stage from planned economy to market economy since 1978. Strictly speaking, there were no real enterprises in the sense of modern company theory in planned economy age, because they were just “workshops” subordinate to the government. Not until the economic reforms since 1980s have there appeared independent corporate enterprises. Currently, China is a developing country with unique characteristics because it is still keeping socialism and at the same time it is moving towards a market economy with a centralized innovation system in transition, which could not be seen in the history of the world. Generally speaking, Chinese firms’ internal and external environments have changed greatly. It is essential for Chinese firms to accumulate and create knowledge through effective organizational learning for innovation capacities and future development. Studies on organizational learning issue in transition economy countries, such as China, will contribute to understand the theories on organizational learning and knowledge management created in advanced

countries.

In this research, one successful case of a Chinese logistics public corporation in the background of China’s transit economy is studied. Facing drastic changes of external and internal environments, the case company needed innovation of its business scheme and optimization of the operation flows. To accumulate and create knowledge for such innovation and optimization, the company has been proactively constructing a close human network inside and outside the company for organizational learning. This paper consumes that human network derived from social capital is one of the most important factors in the case and attempts to seek how this factor contributes to the company’s organizational learning and tacit knowledge management.

The rest of the paper is organized as follows. Section 2 presents a brief literature review of organizational learning, knowledge management and social capital. A detailed description of a logistics public corporation in Xiamen, China is arranged in Section 3. Section 4 provides an analysis and discussion on how social capital contributes to the company’s organizational learning and knowledge management. The paper ends in conclusions and implications.

## **2. LITERATURE REVIEW**

### **2.1 Organizational Learning**

Organizational learning is a function of an organization’s absorptive capability, which is the capability to recognize valuable new knowledge, integrate it into the organization and use it productively (Lane and Lubatkin, 1998). Organizational learning takes place at both the

individual level and the organizational level. Individuals within the organization are the prime actors in the process of organizational learning. Organizational learning is not, however, the simple sum of individual learning (Hedberg, 1981); rather, it is the process whereby knowledge is created, is distributed across the organization, is communicated among organization members, has consensual validity, and is integrated into the strategy and management of the organization (Duncan and Weiss, 1979). Organizations learn only when individual insights and skills become embodied in organizational routines, practices and beliefs (Attewell, 1992). Only effective organizations can translate individual learning into organizational learning (e.g. Shrivastava, 1983). All organizations are learning systems. Organizational factors (intention, autonomy, fluctuation and creative chaos, redundancy, requisite variety and leadership) affect formal and informal processes and structures that facilitate organizational learning (Nonaka and Takeuchi, 1995).

## 2.2 Knowledge Creation

Knowledge is delineated as two dimensions: explicit knowledge and tacit knowledge (Polanyi, 1966, Nonaka, 1995). Explicit knowledge can be codified and transmitted in formal, systematic language, such as in the form of books, technical specifications, product blueprints, or as embodied in machines. Tacit knowledge, in contrast, is so deeply rooted in the human mind and is difficult to codify and transfer in formal language between individuals and organizations. Tacit knowledge can only be acquired through experience such as observation, imitation and practice. As shown in Figure 1, knowledge creation is depicted as a spiral process of

four modes of conversion between the two dimensions of knowledge (Nonaka, 1994, Nonaka and Takeuchi, 1995). Organizational learning takes place primarily through this dynamic process.

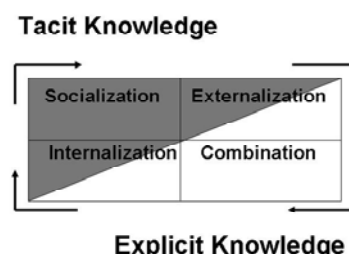


Figure 1 SECI model on knowledge creation by Nonaka, 1995

## 2.3 Knowledge, Organizational Learning and Social Capital

Theory of knowledge and organizational learning (e.g. Polanyi, 1962, 1966, Nelson and Winter, 1982, Spender, 1996a, 1996b, and Nonaka, 1994) seeks to understand the nature of knowledge and organizational learning from a pluralistic epistemological perspective. It makes a distinction between explicit and tacit types of knowledge and argues that the interaction between these two modes of knowing is vital for the creation of new knowledge. Their emphasis on the importance of tacit knowing as the origin of human knowledge indicates the social and interactive nature of knowledge and learning. The resource- or knowledge-based theory (e.g. Penrose, 1959) sees the firm as a body of knowledge residing in its structures of coordination and organizing principles, which in turn, defines the social context for cooperation, communication and learning (Nelson and Winter, 1982; Kogut and Zander, 1992; 1996;

Fransman, 1995). At the heart of this theory is the idea that the primary role of the firm and the essence of organizational capability is the integration and creation of knowledge (Spender, 1996a; Grant, 1996; Tsoukas, 1996). Differences in the organizing principles of firms thus can be seen as reflecting their differing knowledge base and learning capabilities. The 'societal effect' approach, associated particularly with the work of the 'Aix group' (Maurice et. al., 1986; Sorge et. al., 1986; Maurice, 1995), demonstrates how external societal institutions interact with internal organizational structures and processes to generate societally distinctive organizational forms. Literature on 'national innovation systems', most notably the work of Freeman (1987; 1995), Lundvall (1992) and Nelson (1993), seeks to understand the link between national institutions, primarily at the macro-level, to the innovative performance of firms and economies. These two approaches both underline the 'specificity' and 'interconnectedness' of national institutions bearing on industrial innovation.

Based on these theories, the contribution of social capital to organizational learning and tacit knowledge management is discussed.

### **3. CASE STUDIES**

We found a typical successful enterprise in China taking advantage of social capital to execute innovation-oriented learning through our field study. By direct interviewing to the managers and related staffs on July 2007 and collecting detailed data

through publicly available sources, such as company prospectus, annual reports, reports from investment analysts, and the web site of the company, the following research on a logistics public corporation in Xieman was established.

#### **3.1 Business Overview of PENAVICO Xiamen**

PENAVICO Xiamen was founded in 1953 as a state-owned and state-run company. The history of the enterprise can be roughly divided into two parts.

##### **3.1.1 A branch of PENAVICO China under the state's protectionist policy**

In 1953, People's Navigation Company (PENAVICO) was approved to be founded by the Central Government. Since then, PENAVICO China had been the sole public international shipping agent. As one of the main fields of Chinese shipping industry, international shipping agency services had been under the state's protectionist policy. PENAVICO Xiamen was a branch company of People's Navigation Company (PENAVICO) and entirely controlled by PENAVICO China. PENAVICO Xiamen was the only shipping agent in Xiamen Port until mid-1990s when China partially opened the business to other domestic shipping company or shipping agents. In the end of 1980s, ocean shipping agency was the only business of the company, and less than 30 employees worked in the company.

##### **3.1.2 "Second Start-up" to be a public corporation**

Since 1990s, especially China's entrance into WTO, with the evolvement of Chinese economy reforms and acceleration of globalization, Chinese

shipping agency market has been opened up gradually. Many protectionist policies do not exist any more. Shipping agency services is becoming increasingly competitive. In mid-1990s, PENA VICO Xiamen began its SOE reform, which was called “Second Start-up” by themselves. In 1996, co-invested by Xiamen Port Development Co., Ltd and China Ocean Shipping Agency, PENIVICO Xiamen was reconstructed as a state-owned joint stock limited company – China Ocean Shipping Agency Xiamen Co., Ltd. (Because PENA VICO is still used as the brand logo, Thereinafter PENA VICO Xiamen is used for short in the article.) Among the stock holders, Xiamen Port Development Co., Ltd is a publicly listed corporation holding 60% of the stocks, and China Ocean Shipping Agency is an entire state-owned company, holding 40% of the stocks. Since then, PENA VICO Xiamen has been trying to establish a modern enterprise system for their business operation. On the other hand, the company has extended their business scope from sole shipping agency services to integrated logistics services in order to add the profit sources. They are also planning to extend their business to Third Party Logistics services in the future.

### **3.1.3 Current status**

After years’ development, PENA VICO Xiamen has become the largest international shipping agency, a well-known international forwarding and an excellent provider of integrated logistics in the south-east coastal area of China. A definite corporate concept “Professional Agent, Personalized Service” is becoming a common sense in PENA VICO Xiamen’s company management and business operation. Currently, PENA VICO Xiamen possesses an asset of RMB 580 million and five subsidiaries,

including an international freight & forwarding company, an air freight company, a customs broker company, a navigation company and a warehousing company. PENA VICO XIAMEN is also the equity participant of three companies, including a logistics company, a freight & forwarding company and a container company. PENA VICO Xiamen has developed close business relationship with thousands of shipping and trading enterprises from more than 180 countries and regions and has set up a diversified business frame providing integrated shipping and logistics services including international shipping and container agency, sea freight and passenger agency, air freight, international exhibition cargo handling, international transshipment, NOVCC (Non Vessel Operating Common Carrier), coastal feeder service, Customs and CIQ brokering, bonded warehouse, sea & rail transportation, etc. PENA VICO Xiamen is the biggest market-sharer in Xiamen Port, say, more than 60% of agency market share of break-bulks, more than 70% of agency market share of container liners, and 100% of agency market share of foreign passenger ships, dealing with annually 8,500,000 tons of cargo, 350,000 documentations and more than 5,600 voyages of vessels.

### **3.2 To Establish Close Social Network Outside the Enterprise**

In compliance with business extension and recruitment of many young employees, PENA VICO Xiamen needs to enlarge their knowledge base, including not only explicit knowledge, such as professional logistics knowledge and market information, but also tacit knowledge, such as management know-how and corporate culture. One of our findings in the case study is that the enterprise

has been trying to establish close social networks with parties concerned outside the enterprise.

### 3.2.1 B2G and B2B E-commerce Based on Information System

Since mid-1990's, PENAVIDEO Xiamen has begun to invest funds and human resource in R&D of their own information system with intelligence property right.

As is shown in Fig.2, PENAVIDEO Xiamen's E-commerce system links with many parties and users, such as Customs, Immigration, Quarantine and Maritime Bureau, shipping carriers, terminal operators, container yards, and cargo forwarders, etc. All data is exchanged very smoothly. All users can achieve following operation via internet including booking, declaration and confirmation, EIR and E-bill issuance, inbound and outbound cargo manifest transmission, container gate-in and gate-out message transmission.

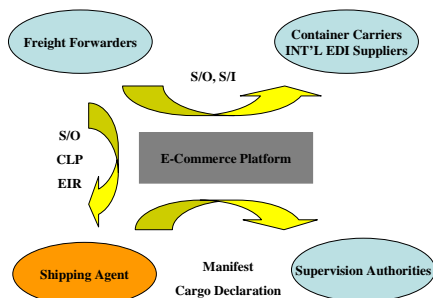


Fig. 2 E-commerce System of PENAVIDEO Xiamen

Another information system is Automatic Inspection System (AIS). PENAVIDEO Xiamen is the sole user of AIS in the shipping agency industry at Xiamen Port. Their AIS can identify the vessel and trace its movement. On the E-chart, they can capture visual messages such as vessel name, direction, route, and cargo on board. More than that, they are also

able to offer vessel's timely information to the port authorities, governmental departments, terminals and the principals, thus uplifts the level of vessel's maneuvering by technical application.

As we can see in Fig. 3, PENAVIDEO Xiamen's information system helps to form a smooth operation chain and to connect the company with the parties concerned to be a tie network. Through such system, business information, which is mainly explicit, can be transferred and exchanged conveniently.

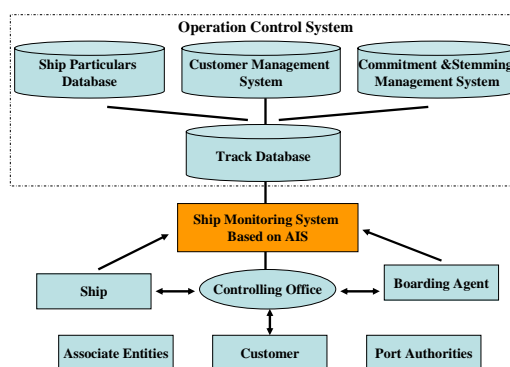


Fig. 3 PENAVIDEO Xiamen's Information System Based on AIS

### 3.2.2 Increasing Intercommunication Channels

In the integrated logistics age, PENAVIDEO Xiamen realizes that personal communications with the outside organizations are critical for them to upgrade their service quality and to create new business scheme. Hence, PENAVIDEO Xiamen has been trying to establish and maintain close intercommunication channels with outside, such as:

- 1) Becoming a member of Chinese Logistics Association: As a member enterprise, PENAVIDEO Xiamen is qualified to participate in legislation of industrial specifications and business symposiums. In this way, the company is able to obtain knowledge on business developing orientation;
- 2) Establishing on-job education practice base with

universities: They invite professors to give lectures on logistics theory to the employees, send talented employees to study for a degree, and provide education practice for university students;

3) Co-researching information technology with research institutes;

4) Setting project manager in important shipping companies;

5) Helping partner companies to join in their E-commerce and information system;

6) Inviting customers to join in their vocational meeting, listening to customers' suggestions;

7) Having "Get-together" activities with government authorities.

### **3.3 To Reinforce Human Networks inside the Enterprise**

Another one of our findings is that PENAVICO Ximen has been trying to reinforce human networks inside the enterprise based on some historical heritages, such as Youth League and Youth Civilized Units.

#### **3.3.1 Youth League Learning Organization**

In 2001, PENAVICO Xiamen launched a campaign "Youth League Learning Organization". The purpose of the campaign is to facilitate individual learning, group learning and a sense of collectivism for the young staffs, utilizing Youth League as a platform of many activities. Youth League is a traditional youth movement in the company. The enterprise provides chances for Youth League members to join in collective activities focusing on corporate culture and business development. The collective activities include:

1) Political education and corporate culture

education: The Company periodically invites senior staffs, scholars and government officials to have a discussion with the League members about the related laws and regulations and the developing tendency of the industry. The new recruits are organized to learn the company's history.

2) Project teams: The Company provides financial support and bounty to encourage League members to form project teams voluntarily involving in researches.

3) Youth symposium: The Youth League holds youth symposium twice a year. The excellent League members make presentation in the symposiums. The top leaders are also invited.

4) Suggestion contest: Every year, there is a suggestion contest in the company. In such contest, many young staffs have an opportunity to display their talents and excellence.

5) Recreation activities: The Youth League organizes many recreation activities, such as sports teams, Karaoke, outings.

6) Commonweal activities for the community, such as voluntary blood-donating, offering assistance to poor people, voluntary cleaning-up.

#### **3.3.2 Youth Civilized Units**

Youth Civilized Unit is one part of Youth League. Every working section in the company has the right to apply to be a Youth Civilized Unit, but only the best one can be awarded the title of honor. The evaluation is based on four criteria, including working achievement, group learning, team work and societal contributions. It is a great honor for the unit members, because their achievements will be praised on the billboard. In addition, the group members will have the chance of encouragement, such as bounty and promotion.

The picture shown below is an activity record of a Youth Civilized Unit. As is shown in the picture, the purpose of Youth Civilized units is to make every member in the group identify a sense that “We are a family!” In this family, the members try to provide “First-class service”, to learn to be “First-class talents”, to form a spirit of team work, and to contribute to the society with a spirit of civilization.



#### 4. ANALYSIS AND DISCUSSION

As is mentioned in the literature review, the creation of knowledge is based on the circulation of explicit mode and tacit mode. Knowledge creation as a source of innovation of business/industries strongly depends on tacit knowledge produced in individual persons and the way to share tacit knowledge and transform it to explicit knowledge in organization. In this sense, there must be a platform for tacit knowledge transferring and creation when a firm’s organizational learning is innovation-oriented.

By observing the described case company, we recognize that human network derived from social capital is an indispensable platform for such innovation-oriented learning.

Here, we analyze the case focusing on its human network by answering the following

questions:

1. Why did the company need to establish close human networks?

1) External factor: Since 1990s, especially China’s entrance into WTO, the environment of logistics industry has changed greatly. Government’s protections have been vanishing. The market of shipping industry has become open and competitive. In addition, industry trend was changing from traditional shipping agency to integrated logistics. In this sense, the company was experiencing an industrial paradigm-shift. Under such circumstance, the company needed to shift its business strategy to match the industry developing tendency. It means that the company had to extend its business scope and change its business scheme. Meanwhile, this was followed by a transition of the corporate institution structure.

2) Internal factor: Inside the enterprise, with the extension of business scope, the size of the company was becoming larger, operation chain becoming more complex. In addition, many young employees were recruited. They came from different professions with various knowledge backgrounds. This means that all the individuals in the company needed to learn new knowledge, and furthermore, to create new knowledge for the company’s business innovation.

All these factors urged the company to learn new knowledge to enrich its knowledge base. Explicit knowledge, such as market information, technology instructions, operation routines, could be obtained through information system and formal education. While tacit knowledge, such as management know-how, service concept, and corporate culture, were more important for the company’s business innovation and could not be obtained in the same way. A solution the company



found was to establish close human networks inside and outside the enterprise as a personal communication platform.

2. What were the favorable conditions originated from social capital for the company to form such human networks? Or, how could the company establish such human networks?

1) Social relationships

A. The company was a state-owned company in its history. It has a traditional good relationship with government authorities and the community.

B. The company is a leading company with good brand fame in the market. The parties concerned in the market would like to have a close tie with the company.

2) Historical culture: The Company has a very long history. They have many historical heritages, such as Youth League, Youth Civilized Units. In addition, the president of the company was a leader of Youth League when he was in the university. He is familiar with the affairs of Youth League movement. More than 70% of the employees are young people less than 30 years old. It is suitable for the company to launch the campaign of “Youth League learning organization”. Therefore, the company was able to utilize this historical culture to carry out many activities and to foster a sense of collectivism.

3. What were the contributions of such a human network to the company’s organizational learning?

1) Such a human network forms a platform or “Ba”, as was mentioned by Nonaka, for close meetings and face-to-face communications. On this platform, individuals could share experience, make sense, empathize and practice with each other. Thus, innovated tacit knowledge on business or technology

could be exchanged, transferred and converted. In this sense, such close human network could also become a knowledge network favorable for innovation-oriented learning.

2) A sense of collectivism and solidarity derived from common historical culture formed a strong shared vision for the company’s innovation of business scheme. As is shown in Fig.4, on the one hand, based on the shared vision, knowledge flowed smoothly on the platform, where individuals exchanged their knowledge with each other; on the other hand, many activities, such as vocational meeting, youth symposium, suggestion contest, created chances for individuals to transfer their innovated knowledge to the groups, and then to the organization.

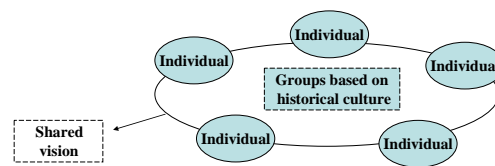


Fig.4 Knowledge flow in groups based on shared vision

## 5. CONCLUSION AND FUTURE STUDY

In this paper, a case of a Chinese public corporation described in detail and analyzed carefully. In spite of some of its uniqueness, several important implications are essential and suggestive for Chinese firms in their organizational learning and tacit knowledge management for business or technology innovation, because each enterprise in any industry should take account of tacit knowledge management for forming the core competence. The implications are summarized as follow:

1. Human network as a platform of knowledge communication is more and more important for Chinese firms' organizational learning, especial when the learning is innovation-oriented. In such a human network, close meetings and face-to-face communications between individuals are favorable for tacit knowledge exchanges, and knowledge circulation between explicit mode and tacit mode.

2. Shared vision is an indispensable element of forming a close human network.

3. As far as Chinese firms are concerned, to establish such a human network with shared vision, some kind of Chinese-style social capital, such as its orient historical culture, unique social relations, may be very helpful.

We know one case study is not enough to clarify all the above-mentioned propositions. To enforce the research and to further evaluate these propositions, more cases of Chinese enterprise will be studied in the next step.

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## Notes

1. Youth League: The China Youth League (中国共产主义青年团) is a youth movement for youth between the ages of fourteen and twenty-eight. Most high school students are Youth League members when graduating. The movement of Youth League

remains in many of Chinese enterprises, especially state-owned or former state-owned enterprises.

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