Reform Of State Owned Enterprises In China:

A Metaphorical Analysis of the Large "Enterprise Group" Approach

Vipin Gupta
Grand Valley State University
guptavi@gvsu.edu

and

Jifu Wang
University of Houston - Victoria
wangj@uhv.edu

ABSTRACT

Chinese government has been focusing on a large enterprise group policy for the reform of the state owned enterprises. Research suggests that though some of the Chinese large enterprise groups have been very successful internationally, most have not been that successful. The reasons for the lack of success, of the large enterprise policy, are not very well known. In this article, we conduct a metaphoric analysis of the large enterprise group policy, using a case study of Sichuan Chemical Works, a major chemical enterprise in China. Our findings support the hypothesis that the modernization process of the large enterprise groups is guided by the "political metaphor". At different points in time, different metaphors became salient. The domination metaphor, for instance, encourage reengineering of the organizational machine. To meet the challenges of the flux and transformation, the organization was entrapped in a "psychic prison"; the entrapment was induced by the government priorities on a product-market segment unrelated to the technological competencies of SCW. The discussion highlight implications for more sustainable reform of the state owned enterprises.

INTRODUCTION

With the opening of China, many foreign firms have rushed to take advantage of cheap labor and a marketplace touting nearly 1.3 billion people. China's 305,000 state-owned enterprises, including 118,000 industrial firms (Gao, & Chi, 1997), account for 50 percent of all Chinese firms, excluding smaller firms owned by local townships (World Bank 1997).

Under the central planning system, competition for markets, products, or prices was non-existent, and people, capital, and natural resources were allocated according to the central plan. Managerial competences, technological innovations, competitive product offerings were discouraged and economic incentives were non-existent. In little more than two decades, these conditions reversed and CEOs face challenges for survival and competition in a global market. To improve their capital structures, the state-owned enterprises have adopted modern corporate structures and convinced government ministries and banks to convert excessive debt into stock holdings. Several firms have issued stock in Hong Kong and the USA capital markets. Others have developed joint venture partnerships to provide additional capital, as well as needed expertise and market access. Some have improved financial structures by either spinning out operations into new joint ventures, merging with similar domestic operations, and/or selling assets for cash. To improve the basic cost structure, local and national, governments are taking responsibility for healthcare and unemployment, thereby reducing some of the state owned enterprise welfare burdens.

Below we review two streams of literature. First, the contextual literature on the policy of large enterprise groups in China; second, the conceptual literature on the relevance of metaphoric analysis. Thereafter, we present the research methodology for conducting the metaphoric

analysis using descriptive, transcriptive, and prescriptive perspectives. We then conduct a metaphoric analysis of one large Chinese enterprise group - Sichuan Chemical Works (Group) Ltd. (SCW). We summarize key insights in the discussion, and present implications for more sustainable reforms of the state owned enterprises in the emerging markets.

Literature Review

Contextual Review: Policy of Enterprise Groups in China

Since the opening of its economy to the global markets in late 1970s, the Chinese government has pursued a deliberate strategy of supporting a team of national champions, or large firms, to compete globally with the world's multinational corporations (Nolan, 2001). A belief in the perfect competition model has encouraged many transitional markets to break up large enterprises, and to promote small and medium enterprises. However, a small number of multinational enterprises dominates a large number of industries worldwide; most of which are "system integrators" and have become national, regional or transnational champions based in Japan, Europe, or the US (Nolan, 2001). Therefore, the Chinese government has sought to develop national champions through several trial policies, including Mergers and Acquisitions, protection, and preferential stock market listings. A general principle in the reform of state-owned enterprises has been to "grasp the large, let go of the small," which is premised on the view that these enterprises should be allowed to develop or shut down according to the principle of "survival of the fittest." (Nolan, 2001: 69) Yep (2001: 70) interviewed a Chinese government official, who stated, "In the past, we emphasized the flexibility of having enterprises of medium and small size. It is just like traveling in a small boat; it is easy to turn around twists and corners and is, hence, more adaptable to market fluctuation. But now, we need a bigger boat to withstand storms of fierce market competition and so we need large enterprises. That's crucial for survival and growth."

More specifically, the reform of state-owned enterprises in China is based on eight major policy goals: i) develop and perfect relevant laws and regulations, ii) set up supervising and administrative bodies of state-owned assets. iii) set up an accountability system for management of state-owned assets based on clear criteria for assessing the performance of state-owned enterprises, their capital and managers. iv) authorize large-scale companies or enterprise groups with the management of state-owned assets. v) introduce diversified ownership, improved corporate governance and listing

on overseas stock markets. vi) develop new systems of selecting and appointing management of state-owned enterprises and new incentive and obligation systems for managers. vii) accelerate the strategic restructuring of state-owned economy, and close down bankrupt enterprises and viii) improve the ethics of the state-owned enterprises through cultural development (Rongrong, 2003).

Pursuant to these goals, the government privatized a large percentage of small state-owned enterprises. Several small state enterprises, such as those with obsolete technologies, low productivity, poor product quality, and polluting processes, were forced into bankruptcy. The policy thrust was on helping large enterprise groups develop their own intellectual property rights, outstanding business operations, powerful core competencies, core products, high management standards, strong central leadership, and global competitive edge through mergers and acquisitions, alliances, restructuring, and public listing. The government encouraged adoption of a corporate form, and setting up of supervision systems to realize the responsibility of maintaining and increasing the value of the state-owned assets. These incentives were expected to accelerate the technological upgrading, and to launch Chinese enterprises onto the international market. The focus was on industries with internationally comparative advantages; large enterprise groups were deemed as better qualified to enter international markets in terms of scale, technology, products, and competitiveness. In the 9th five-year plan (1996-2000), 166 key technology projects were related to 120 trial enterprise groups, and 512 preferred large and medium enterprises. The top 120 state enterprise groups in China account for 10% of entire nation's GDP, 25% of the state enterprise sales, and 50% of the state enterprise profits (Nolan, 2001: 69).

Following the national policy, provincial governments also launched independent initiatives to nurture regional enterprise groups who would be able to compete on the national level and gain a name at the international level using the increased collective resources. They would become the motors of local economic growth, the key players and pillars in industrial readjustment and advancement.

The formation of enterprise groups usually started with the absorption of several small enterprises by a big one. First, asset valuation of the smaller enterprises was conducted, and shares were issued. Then the controlling shares of these enterprises were transferred to a big enterprise,

which forms the core of the group. In most cases, two or three enterprise groups were formed in a township. The enterprise group system has allowed a separation of government administration from enterprise management with reduced administrative intervention and increased decision making-power delegated to the enterprise groups. The emphasis is to learn from the top 500 global companies and to utilize the learning for developing enterprise groups in China. For instance, there is an emphasis on separating core business from other businesses and enhancing the core business through diversified investment.

However, several problems related to the policy of the national champions began to surface. Nolan (2001), while generally endorsing a need for large enterprise group policy for competing in global oligopoly industry structures, observes that the Chinese domestic market is generally low value, with poor purchasing power. There is huge competition from small and medium enterprises, which deploy low entry cost strategies, evade safety and pollution controls, and offer inferior products in a seller's market. The phenomenon of strategic herding is widespread (Nattermann, 2000). A strategy pioneered by the large enterprise groups is widely adopted by its competitors, making it difficult for customers to differentiate among the products of those companies. In addition, most large enterprises are located away from the economically prosperous coastal regions; so their supplier networks remain quite weak (Nolan, 2001). High transport costs in China further accentuate the challenges for the large enterprises (Nolan, 2001). Moreover, Chinese large enterprises, caught in a vicious circle with tendencies of diversifying, view to exploit their under-utilized assets in the face of constrained supplier networks and demand conditions (Nolan, 2001). They have low levels of R&D combined with low R&D budgets that further dilute through allocation into multiple product-market segments. Only small core businesses are profitable, but they are surrounded by a large number of inefficient children and grandchildren (Nolan, 2001). Most global multinational enterprises have refocused on core businesses, with more intensive R&D budgets and greater cash flows; thus creating a very challenging competitive environment for the Chinese large enterprises. As an illustration, thirteen of the world's fifteen strongest airfreight companies established routes into Mainland China in 2001, after deregulation of the air cargo business,. The four major express delivery companies (FedEx, UPS, DHL and TNT) reduced Chinese airlines' revenue from air cargo services by 20 percent on air routes to the United States (ChinaOnLine, 2001).

Consequently, the experiment to create large enterprise groups in China has fallen short of achieving its intended goals.

Conceptual Review

The thesis of this article is that the policy makers and the top managers must understand the multi-faceted reality of the individual enterprise groups. There is a need not only to define the "central characteristics" of the enterprise group, but also to understand the ways in which the enterprise group enacts a scenario for itself, and mobilizes a cast for that purpose (Gupta, Macmillan & Surie, 2004). We propose that an effective way to map the menu of ways pursued by any enterprise group striving to realize the defined "central characteristics" is the concept of "organizational metaphors". Morgan (1986), in a highly influential work, suggested a menu of eight metaphors. He saw these metaphors as offering different "mental maps" about the organizations. These eight metaphors include:

Machine metaphor: A goal seeking organization, which gains efficiency through single-minded pursuit of specialization and formalization, along with a centralization of those responsibilities.

Organism metaphor: A biological organization, which continually adapts to changes in its environment; different species of organizations evolve to cope up with different environments.

Brain metaphor: An organization with central intelligence, which are focused on collecting and processing information, making decisions on the basis of this information and communicating these decisions to various constituencies; the organizations seek predicting changes in the environment, backed with appropriate controls and feedback.

Culture metaphor: An organization focused on developing shared values, beliefs, and accepted norms for behavior that provide guidelines for action; a cooperative and informal mode is used as opposed to a written and monitored code of conduct.

Political metaphor: An organization as vehicle to achieve aspirations of groups of individuals, who form temporary coalitions for the purposes of self-interest and negotiations.

Psychic prison metaphor: An organization trapped in its favored way of

thinking due to strong norms of behavior, with tendency to stick to tried and tested status quo, and group think; so that creativity is stifled.

Flux and transformation metaphor: An organization understood not as a snapshot, but through different knowledge or myths of events that occur over several time periods or generations.

Domination metaphor: An organization as the instrument through which dominant power groups impose their will on and exploit other employees, exploit and pollute their environment, and exploit and dominate the host communities.

One may use metaphorical analysis using three perspectives (Fredericks, 2002). These are (1) descriptive: describe the features, processes, and dynamics of the organization, thereby generating information based on which further development could occur; (2) transcriptive: make sense of how events are shaped and transformed within the organization, when information about those events is already available; and (3) prescriptive: understand the effects of following the prescription, by moving attention beyond the obvious.

METHODOLOGY

We propose that the descriptive perspective may be used to develop hypotheses on how the organization would develop. The transcriptive perspective can help us investigate those hypotheses based on the available information. Finally, the prescriptive perspective offers directions for managerial and research interventions, by uncovering deeper implications of the received prescriptions. We deploy a combination of the descriptive, transcriptive, and prescriptive perspectives for conducting a metaphoric analysis of the Chinese policy of fostering large enterprise groups as champions capable of competing in the global markets.

A descriptive perspective calls for specifying the metaphor characterizing the policy, and to identify an organization that shares similar features, similar processes and similar dynamics. We suggest that the "political metaphor" is most appropriate for characterizing the large enterprise groups. These enterprise groups gain their legitimacy from the aspirations of the political coalition in China to gain visibility and competitiveness in the global arena. Based on the political metaphor, one may hypothesize that several camps and fractions would influence the workings of the enterprise groups – each emphasizing their own

worldviews of how international competitiveness may be achieved by a large enterprise group.

A transcriptive perspective requires establishing an epistemology for collecting and interpreting the information. A case study methodology is an outstanding approach to collect "telling" information that clarifies the obscure theoretical relationships (Mitchell, 1984), and to establish the generative mechanisms using "sequential process tracing" (Bennett & George, 2001). In addition, the "congruence" method in the case study methodology allows one to use a theoretical lens for predicting the outcomes, so that a causal relationship may be inferred when the outcomes are consistent with the theoretical lens (Yin, 1994). By combining sequential process tracing with the congruence method, the results may be triangulated and validity established. An interview-based research methodology is particularly helpful in conjoined application of the process tracing and congruence methods.

Finally, a prescriptive perspective can be deployed to identify the implications of the large enterprise group policy in light of the validated relationships.

For the purposes of our analysis, we rely on the case of Sichuan Chemical Works (Group) Ltd. (SCW). In many respects, we found SCW an ideal enterprise group to study. Based on the generally and publicly available information, SCW appeared to be very successful in accomplishing the mandate of national and international competitive advantage given to it, and falsify the premise of political factions constraining the development of the organization. SCW is one of 18 super-large-scale chemical firms in China, mainly producing fertilizers. It produces 25 major and several minor varieties of products in 50 major and 150 minor specifications including ammonia, urea, ammonia nitric acid, sulphuric acid, melamine, high pure argon and catalysts for ammonia and sulphuric acid production. It was founded in 1956 in the Southwestern Sichuan Plain. It is a state-owned corporation structured as a holding company with 9 subsidiaries, equity in 14 companies, and a strategic cooperative relationship with 50 firms. It has a workforce of about 10,000 (of which 4,000 are technical personnel), assets of about 2 billion RMB, and annual revenues of about 1 billion RMB. SCW has a leadership position in Chinese chemical industry for its superiority in production, technology, management, talented people and location. SCW is committed to the research and development of product and technology and has cooperative arrangements with several renowned domestic research institutes and

universities, in particular Sichuan University and Chengdu University. Historically, SCW has several firsts to its credit. It developed China's first indigenous medium-scale nitrogenous fertilizer plant (1959) and large-scale ammonia plant (1990); it also commissioned China's first imported large-scale fertilizer plant (1976) and large-scale melamine plant (1984). Table 1 summarizes various technical achievements of SCW since its foundation.

Table 1 .Important Technical Achievement

Year	Item	Cooperators	Award
1978	Triple tube internal of NH3 converter	Qinghua University	Award from National Conference of Science
1978	NH3 synthesis catalyst Type A9	Research Institute of Nanjing Chemical Corporation	Award from National Conference of Science
1978	Perforated tray with non-homogeneous opening rate for copper liquid scrubbing column	Chengdu University of Science and Technology	Award from National Conference of Science
1978	Modified A. D. A. de-sulphuration process		Award from National Conference of Science
1978	CO_2 removal process of DETA catalyzed K_2CO_3 solution	Sichuan University	Award from National Conference of Science
1978	Intermittently catalytic reforming of natural gas	Chemical Research Institute	Award from National Conference of Science
1985	Treatment of NO_x in HNO_3, tail gas by selective catalytic production process with NH_3	Chengdu University of Science and Technology	National Third Prize for Technical Innovation
1985	Technical innovation of an imported large-scale fertilizer plant		National Third Prize for Technical Innovation
1986	Solid ammonium sulphite from treatment of SO_2 in sulphuric acid tail gas		Second prize from Technical Innovation from Ministry of Chemical Industry

Year	Item	Cooperators	Award
1987	Primary reforming catalyst Z109-1Y, Z109-2Y	Chengdu Research Institute of Organic Chemical of Science Institute; Chengdu 715 Factory	National Second Prize for technical innovation; First prize for technical innovation from Sichuan Province
1987	Computer controlled large-size NH_3 plant	Shanghai Chemical Research Institute; Nanjing Chemical Research Institute	First prize for technical innovation from Ministry of Chemical Industry; National third prize for technical innovation
1989	Modification of the melamine plant stripper with triphase perforated tray by SCW		First prize for technical innovation from Sichuan Province; National third prize for technical innovation
1990	Computer control system for fertilizer manufacturing	Eastern China Chemical Institute; Shanghai Chemical Research Institute	Second prize from Technical Innovation from Ministry of Chemical Industry; National third prize for technical innovation
1992	China-made 200,000 tons of Ammonia Plant	13 cooperators including C C E C C	Special prize from Technical Innovation from Ministry of Chemical Industry; National first prize for technical innovation
1992	A technical revamping project for energy-saving and production of the outmoded ammonia plant		Second prize for technical innovation from Sichuan Province
1995	Porous granular ammonium nitrate		Second prize for technical innovation from Sichuan Province

In the following paragraphs, we would present the findings from a deeper investigation based on looking at the firm "from the inside", using interviews with the CEO and senior managers of the company. Our findings indicate that several metaphors have been at work at SCW at different points in time. The influence of these multiple metaphors can be attributed to the politics of different logics on how SCW could accomplish its goal of becoming a globally recognized player.

Sichuan Chemical Works and the Domination Metaphor

SCW was Sichuan Province's first attempt at establishing an enterprise group, aimed at modernizing management and building national champions. SCW was structured into a limited liability company in 1996, and given a mandate to transform itself into an enterprise group. Its charge was to become the most competitive in the region, the best in the nation, and one of the influential enterprises in the world. SCW had earlier acquired several companies, including Chendu Wangjiang Chemical Corporation in 1992; it further acquired Chuanxi Phosphorous Chemical Group Company in 1996 and joined the list of the 500 largest industrial enterprises in China. SCW was organized into 22 departments, covering chemical production, research and development, chemical engineering, anti-corrosion and design, equipment maintenance and manufacture, inspection of pressure vessels, construction and erection, real estate development, technical support, purchases and sales, storage and transportation, education and training, and employee welfare. In 1998, SCW issued an initial public offer of 200 million shares in the Hong Kong share market–only the second Chinese agricultural enterprise to do so — and mobilized about HK$400 million (US$51 million) in equity capital. The vast resources gave SCW a very strong muscle in the local, national and international market, helping it to surge ahead of its smaller rivals.

Put differently, SCW became an instrument of domination for the provincial government at Sichuan. Through mergers and acquisitions, preferential support, and financial resources, SCW became China's largest producer of ammonia, nitrogenous fertilizer, lysine, and pure argon. SCW extended the sales of its products to more than 20 countries, including USA, Japan, Russia, Germany, Korea, and Indonesia. It built a good reputation for its trademark —"Tianfu Pei" – both in China and overseas. In the late 1990s, SCW invested heavily into melamine, first using foreign technology and recently using local technology, to become one of the largest players of melamine – a key raw material in several fertilizer-related products – in the world.

Sichuan Chemical Works and the Organism Metaphor

During its early history, organic adaptation to the environmental contingencies was the dominant theme influencing the priorities at SCW. SCW was perceived to have a dangerous and threatening factory environment, with high pressure and high temperature production facilities, and highly flammable and explosive materials. Consequently, safety management and control were the primary goals at SCW throughout the 1960s and 1970s. The focus was on an organized control of manufacturing processes, oriented towards "safety and stabilized operation" of its chemical industrial facilities.

Sichuan Chemical Works and the Brain Metaphor

In the 1980s, SCW faced a more challenging environment as the government sought to transform the centrally planned economy to market economy. A passive adaptation to the issue of safety was no longer deemed viable. A need for more systematic and centralized "brain" type processing of information was identified; conjoined with an imperative of sharing this information with various employees to gain their participation in the safety initiative. The concept of safety management took a larger meaning as total safety control (TSC), within the context of total quality management (TQM). The principle of total safety control underscored the primacy of safety and prevention, backed by a belief that hard data speaks louder and that safety control involves the participation of all employees in the entire value chain process.

In 1986, the Safety and Technology Department, with 120 safety inspectors, was entrusted with the responsibility to collect and process safety information on a timely basis and compile a manual for training. It bought together the best facilities among all the professional safety and technology teams in the industry and created 36 safety management systems, 46 safety technical procedures, 400 commonly used safety information indexes, and more than 100 management forms, cards and pamphlets. Besides conducting more than 700 training classes within SCW, the department also ran six training classes in the nation and eleven in the province, training over 30,000 people. In addition to lectures, the training included various learning-oriented activities through arts, literature, exhibitions, calligraphy, a TV safety-knowledge contest, dancing, and cross talks. Gradually, the culture in the organization shifted from a mindset that

"I am required to work safely" to "I need safety," and "I am doing my best to operate safely".

Sichuan Chemical Works and the Machine Metaphor

SCW reasoned that a brain-centered coordination would not assure the realization of its goals, without the backing of an infrastructure to enact the cast. To ensure an efficient operational system, SCW invoked the "machine metaphor" focused squarely on the goal of safety. SCW developed a scientific assessment system, summarized in Figure 1. Every production unit submitted its written safety information to the Safety and Technology Department. Using 17 criteria, each production unit was assessed and graded. The grading basis determined levels of performance payments that were given.

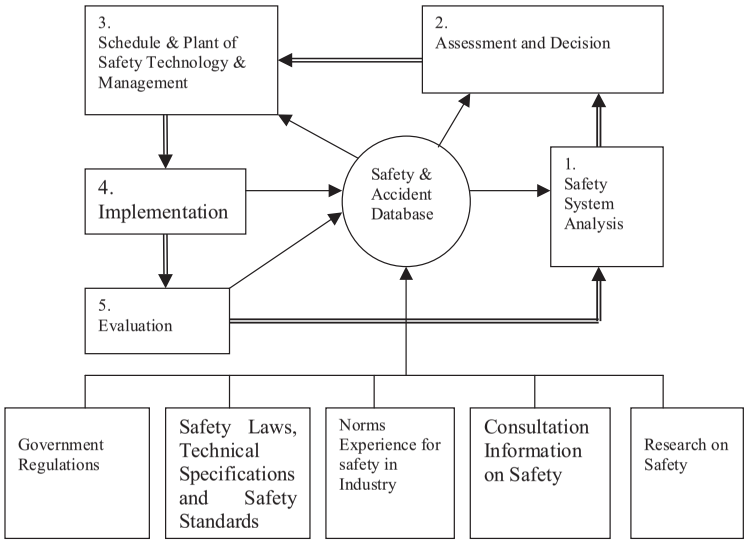

Figure 1. Systematic Safety Management Implementation Process

SCW also established a three-tiered safety hierarchy to oversee the enactment of the scientific assessment system. First, the decision layer, comprising of the top management team, union chairman and heads of functional departments, was in charge of making strategic decisions on safety issues, and the related inter-department and inter-subsidiary coordination. Second, the management layer: consisting of the managers from the functional departments, was focused on comprehensive management. Third, the execution layer, comprising of supervisors of

workshops and manufacturing teams; was responsible for the entire process of safety in daily operations. The safety hierarchy regulated procedures for both technological operations and labor, to prevent facilities from any incidents such as dangerous leaks of liquid or gas, and to ensure a hygienic production environment.

Sichuan Chemical Works and the Culture Metaphor

Despite a highly efficient machine, with a record of accomplishment boasting no major industrial accident, SCW faced a performance decline in the early 1990s. Natural gas—a key raw material – was in short supply. The prices for chemical fertilizers – the products where SCW operated –could not be changed since they were restricted under government regulation. Consequently, cash flows deteriorated, forcing SCW to go into debt and to delay modernization of several of its deficient and outdated production facilities. In 1994, SCW identified a need for reorienting the organization using the "culture metaphor". The firm adopted a motto of "creating a superior reputation and establishing a civilized organizational culture" founded on an organizational spirit of "solidarity, self-improving, hardship and innovation." To cultivate and promote these shared cultural values and beliefs, SCW began to clarify different horizontal and vertical layers of responsibilities, and contracted accountability for those responsibilities to management teams at different levels and in different departments or subsidiaries. The collectively defined organizational goals were used to allocate critical resources such as labor, capital, raw materials, energy and facilities. The new culture put emphasis not just on safe operations, but also on low cost and high quality. The new value on low cost and high quality was linked to the enterprise group mission of increased market share in both domestic and international markets, and enhanced reputation.

Consistent with the multifaceted goals of the new culture metaphor, the organizational machine was also reengineered. The reengineering of the organizational machine into what SCW termed as the "Risk Responsibility Goal Management System" was implemented in four steps: simulation of market costs, internal financial accounting, assessment of goal accomplishment, and evaluation of cost, quality and safety.

First, a market price system was introduced into the transactions among all the departments. The market costs of all the products were calculated based on the actual costs of raw materials, partly processed

materials, energy, workforce, and other direct and indirect costs. Information on these market costs and product margins, both adjustable every six months, was provided to the employees, so that they understood the need for cost savings.

Second, transactions among departments were accounted the same as those among firms in the marketplace, using an internal banking account for each functional department.

Third, a clear performance assessment system was established to carry out the principle of "Profitability decides reward distribution." Detailed evaluation procedures were laid out for economic contracts with functional units after breaking down the total goal of the enterprise into detailed departmental goals. In addition, individual compensation and rewards were tied to departmental profitability and growth. As the CEO Xie observed, the aim was to assure complete goal accountability, where performance assessment determined the pay for employees in each functional department. The goal was to change the traditional "iron bowl"[1] attitude embodied in the notion of "Get your salary when you come to work and get bonus when you work". To help employees meet the goals, SCW adopted a system of team building and work floor management and pursued management standardization, information sharing, and employee education. All supervisors were trained through special training classes.

Fourth, SCW committed its employees to three goals: - cost, quality and safety. Any deviation from these goals resulted in repudiations of pay level. CEO Xie held that each of these three goals is premised on the other two; a deviation in any of them would influence the other two, leading to poor performance of the firm. The employees surpassing the goals were given a monthly bonus. A part of the employees' pay – averaging 40 RMB – was withheld for risk-sharing money, as a way to reinforce motivation. The risk sharing money and bonus were put together and termed "Performance Pay." The performance pay was withheld for any work unit that did not achieve the contracted target for cost and profit, that did not meet the quality requirements for its work and products, and/or that suffered any major accident or death owing to safety negligence. Special awards were given to the department teams that surpassed the goals. The following two equations were used for monthly pay.

[1] The expression commonly used in China referring to equal pay without considering performance and contribution under the central-planned economic system

$W_1 = C\ Q\ S\ (PP + CP) - N$

$W_2 = C\ Q\ S\ [20\ (URI) + 20\ (RSI) + UPI\ (CAP) - N$

W_1: Performance pay for manufacturing employees for chemical products;

W_2: Performance pay for administrative employees;

C: Cost repudiation index;

Q: Quality repudiation index;

S: Safety repudiation index;

PP: Pay of production yield;

CP: Pay for cost savings;

URI: Unit responsibility index;

RSI: Risk sharing index;

UPI: Unit performance index;

CAP: Average bonus for chemical production employees;

N: Total deduction from three repudiations.

Summarizing the logic of the reengineering organizational machine, CEO Xie observed that, "Enterprise management involves every aspect of activities in the company, including people, finance, assets, manufacturing, marketing, etc. It is extremely significant to handle appropriately the relationship among risk, responsibility and benefits for our employees. That is why SCW employed the Risk Responsibility Goal Management Approach to merge mechanically the three together in order to overcome the motivation problems derived from the central-controlled economy. This approach has put the major management factors in a nice scientific order and greatly enhanced the comprehensive management level."

The new system substantially enhanced the quality and cost-effectiveness of different processes, including research and development, production, storage and transportation, sales and service. Consequently, SCW gained an ISO9002 certification in 1997. It enjoyed significant improvements in product quality and gained the trust of its customers. There was also a steady decline in total production costs. Substantial

savings, amounting to 10 percent of the overall costs or 10 million RMB annually, were realized in the costs of labor, materials, and especially in major maintenance because of improved operational practices. As a result of the margin improvement efforts, branded products accounted for 87 percent of the total output. The accident rate was kept at less than 0.15 percent, against the industry average of 0.30 percent; and there were no fatalities since the implementation of the system.

Commenting on the results, CEO Muxi Xie observed, "In the ever increasing market competition today, the external constraining factors are, of course, significant considerations in the firm's decision making, but for organization itself, appropriate management is the most crucial and decisive determination for the firm's performance.... In essence, the aim to reinforce management is to do a better exchange job with input for output. A better result of exchange is a good illustration of better management. Since the implementation of the Risk Responsibility Goal Management Approach, the enterprise's economic profits have increase so much that major economic indexes have reached historical heights." (Xie, 2000) In recognition of these results, SCW received a second prize in the Fourth National Innovation for Enterprise Management Modernization in 1997, and a first prize for Enterprise Management from the Ministry of Chemical Industry. The CEO Xie himself received commendation as one of the Top 50 Chinese Enterprise Directors by China Enterprise Confederation.

Sichuan Chemical Works and the Flux and Transformation Metaphor

By 1999, new problems began surfacing at SCW as both national and international environments were changing rapidly and dynamically. Though various functional departments and subsidiaries appeared to be working efficiently, there was little coordination among them. CEO Xie explained his dilemma, " Once centralized, these firms became very rigid and lost their vitality, but became chaotic when given full autonomy in management." (Xie, 2000) Clearly, the flux and transformation metaphor was gaining salience at the reengineered SCW.

A major constraint in managing flux and transformation was the over-dependence of SCW on the chemical fertilizer segment, which constituted 65% of its revenues. Though SCW was able to compete effectively in the Sichuan Province, it was not easy to compete in the

chemical fertilizer segment at the national and international levels. SCW identified some niche markets for further growth: for instance, it doubled its melamine capacity to gain a leadership position. To become one of the world's largest suppliers of lysine, it diversified into the biochemistry product lysine, set up its first plant through a joint venture with a Japanese firm, expanded further through import of Italian technology, and then commissioned another plant using its internally developed technology. However, these niche products constituted a small portion of its overall revenues and did not help revive its enterprise growth.

Sichuan Chemical Works and the Psychic Prison Metaphor

A key question at this point was whether SCW could be able to translate its acclaimed reengineered machine into a sustainable competitive advantage? A major risk was that the political metaphor might degenerate organizational flux and transformation into a "psychic prison". Indeed, the Chinese central and provincial governments introduced new laws and policies for environmental regulations, signaling their intention to encourage an accelerated shift towards fine and specialty chemical products. Being value-added performance chemicals with many varieties, these products were perceived to be hi-tech and more efficient. They had a wide variety of applications across various industry sectors such as agriculture, textile, health care, electronics, food and feed, medicine, household and industrial cleaning, automotive, paper, and plastics and rubber, etc.. Since the Chinese government first began investing into the fine and specialty chemical industry in the 1980s, ten technology-development centers had been set up. The government issued a series of preferential policies to promote a value-added fine and specialty chemical sector in China. The policies offered several investment incentives, intended to attract foreign collaboration in the sector. Several US firms, as well as firms from Germany, Britain, France, Italy, and Japan, established operations in China. Overall, China had more than 3,800 companies producing more than 9,200 kinds of fine and specialty chemicals. Still, fine and specialty chemicals constituted just 35 percent of gross chemical output in China, compared to a ratio of up to 55-65 percent in the industrialized nations. Moreover, the quality and product variety of domestically produced fine chemicals in China was poor and limited and could not satisfy the needs of even domestic users.

Given a high profile policy thrust on fine and specialty chemical products, SCW saw this market as a potential solution to its problems of

IBAT Journal of Management

growth and leadership. In 2000, SCW issued 13,000 shares of stocks in the Chinese Stock Market to finance the development of fine and specialty chemical products and to improve the product variety and quality to meet the market demand. The goal was to derive 20 percent of the enterprise revenues from the fine and specialty chemical products in five years.

However, SCW faced substantial challenges in developing its own intellectual property in fine and specialty chemicals that were in line with the vision for the enterprise groups. CEO Xie identified key impediments as the shortage of applied research, technical services, high technologies, funds, and market exploitation. As a result, SCW was unable to revive its overall performance. SCW's sales went down from 1.5 billion RMB in 1999, and 1.04 billion RMB in 2000, to 0.95 billion RMB in 2001. Pre-tax profits declined from 130 million RMB in 2000 to 74 million RMB in 2001; and net profits fell from 93 million RMB to 55 million RMB in 2001. Return on assets declined from 6.84 percent in 2000 to 3.98 percent in 2001. This decline occurred even though the government exempted SCW from value-added tax on its products from August 1, 2001, resulting in a savings of 25 million RMB in 2001 alone. Of the 1,940 million RMB of total assets owned by SCW at the end of 2001, 103 million RMB were locked in inventories, and another 75 million RMB were stuck in account receivables.

DISCUSSION

In this article, we underlined the relevance of using a metaphor analysis for understanding the effectiveness and the limitations of the large enterprise group policy of the Chinese government. We specifically relied on eight metaphors of Morgan (1986) to understand the process of modernization and the leadership problems at a well-known state-owned enterprise group in the chemical sector — Sichuan Chemical Works. Using a descriptive perspective, we hypothesized that the modernization process at SCW would be guided by the political metaphor. Several fractions and coalitions would emerge to define the developmental trajectory at SCW.

Using a transcriptive perspective, we tried to make sense of the development and modernization process at SCW over a period of time. The idea of entrusting enterprise group with responsibility appeared to be guided by a "dominance metaphor", as the regional government sought to use SCW as an instrument of dominating the national and international markets.

During its early lifetime, though, an "organism metaphor" was found to be salient at SCW – the key contingency facing SCW was a dangerous factory environment on account of its chemical based production operations, and SCW put a top priority on safety management to deal with this key contingency. Subsequently, as the Chinese government adopted an open door policy in the late 1970s, SCW felt a need for systematic and centralized "brain metaphor" to process the best practice information. It created a central safety department, in charge of developing safety regulations and sharing this information with different employees through a series of training programs. The intent was to gain a total employee participation in the safety initiative.

Soon, a need for developing a rational infrastructure emerged, in order to reliably and efficiently enact the safety responsibility. Safety issues were so pervasive throughout the value chain process that brain-centered coordination alone would not assure the goal of total safety. Therefore, consistent with the "machine metaphor," SCW developed a scientific assessment system focused squarely on the goal of safety. It also established a three-tier safety hierarchy, comprising of top management, departmental management, and supervisors; each level having specific and specialized safety responsibilities.

In the 1990s, shortage of one of the key raw materials brought "culture metaphor" into the forefront in the SCW organization. Government fully regulated the prices of final chemical products. Owing to raw material constraints, SCW cash flows were seriously hindered because of its capital-intensive nature of operations. SCW therefore sought to foster a new set of shared beliefs and values, which emphasized three goals of low costs, high quality, and safety. To support this new cultural change, SCW launched a new risk responsibility goal management system to reengineer the organizational machine, which was brought in line with the concept of modern management, based on the accountability for costs, quality, and safety, through a clear link between performance and rewards.

However, as the national and international environment changed rapidly in the late 1990s, partly as a result of the East Asian crisis, the demands for the "flux and transformation metaphor" proved to be overwhelming for the departments and employees at SCW. SCW sought to focus on some niche segments, where it did quickly gained market leadership; yet its core business segment – the chemical fertilizers where it

had a dominant 65% share of the national market - was becoming intensely competitive. Growth was thus difficult to come by.

In the final analysis, the "psychic prison metaphor" thwarted the attempt of SCW to enact an attractive scenario, even though the cast appeared to be quite motivated and prepared to take up the challenge of leadership. Specifically, the political metaphor emerged to steer SCW away from a path of further reinforcing its technological and commercial capabilities in the fertilizer segment. The government began showcasing fine and specialty chemicals as the wave of the future, inducing SCW to identify that segment as core to its future growth prospects. However, SCW lacked relevant technological and commercial capabilities. Despite mobilizing additional funds based on the reputation built from its reengineered machine, the expected growth remained elusive. Consequently, the financial and market performance of SCW declined on several parameters during 2000 and 2001.

In summary, our findings affirm the overall salience of the political metaphor in the modernization process of Sichuan Chemical Works. However, at different periods of time, different metaphors dominated the organizational functioning. Nevertheless, the political metaphor played a decisive role in reengineering the organizational machine and in the entrapment of the organizational transformation in a psychic prison that was unrelated to the organizational competencies and resources.

CONCLUSIONS

In conclusion, this paper demonstrates that a policy of reforming the state owned enterprises using a large group approach might entrap the organizations into a psychic prison. The Chinese government tends to have several political goals and ambitious mandates, and expects that the state owned enterprises will be able to attain commanding heights by virtue of being large. This expectation may encourage the enterprises to seek direction from the government for fulfilling their mandates. However, reengineering the organizational machines through the adoption of market principle and performance accountability is only one aspect of reform for state-owned enterprises. For a sustainable advantage in the global market place, firms need to develop fundamental capabilities for upgrading their current products and for replacing older products. By transforming into large-scale enterprises, the challenges for the state-owned enterprises

increase many fold. Even though these enterprises could effectively introduce several new products to gain a leadership position in national and international markets and to reinforce the image of their brands, these new products are likely to constitute only a small proportion of their large-scale business. The attempts to grow core business may lead to enhanced competition and performance deterioration as competing firms from various regions seek to imitate and duplicate the practices implemented at the pioneering state-owned enterprises.

Thus, a large size and economies of scale alone are not sufficient for competitive advantage and growth in the competitive global markets. In fact, a large size operation in slow-growing and hyper-competitive markets can be a liability as it can overwhelm the benefits from innovative initiatives of a firm. There is a need to analyze and investigate if the state-owned enterprises could perform their leadership role in the critical and commanding sectors of the economy through a focus on selected core functions in the product segments entrusted to them. Rather than being engaged in the full value chain as integrated enterprises, these firms could play a role through pilot initiatives in selected areas of national weaknesses, such as research and development, quality improvement and branding. Once successful, the pilot initiatives could be made available through licensing or sales to various private enterprises, which could act competitively, even at far lower scales of operations within specific industry sectors based on their distinct competencies.

REFERENCES

ChinaOnLine (2001). *China airfreight buffeted by foreign carriers.* Sept 20.

Gao, S. & Chi, F. (1997). *Reforming China's State-Owned Enterprises*. Foreign Language Press, Beijing.

Gupta, V., Macmillan, I.C., & Surie, G. (2004). Entrepreneurial Leadership: Developing and Measuring a Cross-cultural Construct. *Journal of Business Venturing.* 19(2): 361-380.

Morgan, G. (1986). *Images of Organizations.* London: Sage Publications.

Nattermann, P. M. (2000). Best Practice Does Not Equal Best Strategy. *The McKinsey Quarterly,* 2: 22-31.

Nolan, P. (2001). *China and the Global Business Revolution.* Basingstoke: Palgrave.

Rongrong, L. (2003). *China sets targets for government assets management,* Xinhua (China), May 22.

Xie, M.S. (2000). *CEO and Chairman of SCW,* Interviewed September 18, 2000 in SCW.

World Bank. (1997). *China 2020: Development Challenges in the New Century.*

Yep, R. (2001). The evolution of shareholding enterprise reform in rural China: A manager empowerment thesis. *Pacific Affairs.* 74(1): 53-74.

ABOUT THE AUTHORS

Dr. Vipin Gupta has a Ph.D. and Senior Fellowship from the Wharton School, and a PGDM from IIM Ahmedabad (1990 batch gold medallist). He has published numerous articles in reputed international journals, and has edited three books published by Sage Publications. He is the Principal Investigator of GLOBE India study involving interviews of 40 CEOs, and surveys of top management teams, in each of the States of India.

Dr. Jifu Wang has a Ph.D. from Auburn University. He has served as an executive in top management for several firms in the Shenzhen Special Economic Zone, China. He has published several articles in reputed international journals. His research interest includes international strategy and organizational change.

The Effect of Environment, Learning, and Values on Strategic Decision-Making:

A Case Study of an American healthcare clinic

Lei Wang
New Mexico State University
wlei@nmsu.edu

Janice A. Black
New Mexico State University
janblack@nmsu.edu

Kim T. Hinrichs
Minnesota State University, Mankato
kim.hinrichs@mnsu.edu

ABSTRACT

This study examined the strategic decision-making patterns of a healthcare clinic in the US through in-depth interviews with two partners of this office. The study shows that strategic decision-making is not a purely rational process. Instead, it is largely determined by environmental factors, initiated by actions, accompanied by learning, and driven by values, attitudes and philosophies that are not necessarily dependent on economic calculation.

INTRODUCTION

The rationality of human decision-making has been debated for decades. According to the classic theory of decision-making, human beings follow a series of steps in order to select an action that maximizes personal