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Asian Association of Business Incubation

CONGRATULATORY MESSAGE

It is with great pleasure as President of Asian Association of Business Incubation (AABI) to congratulate on fourth volume of Asia Pacific Journal of Innovation and Entrepreneurship (APJIE).

With the financial crisis has spilled over to affect the global economy at all levels, significant job losses and widespread social hardship are becoming realities. It is also threatening a lasting economic recession, affecting both governments and citizens.

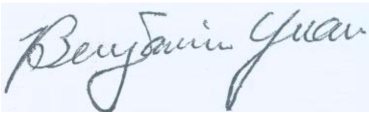
At the same time, to stimulate the economy, many countries have announced fiscal rescue packages – cutting taxes and boosting spending. Several countries have also taken some action to mitigate the labor market and social consequences of the crisis.

I believe that we should take it as a great opportunity to figure out how the financial crisis came about, what it means for all of us, and what are our options for getting out of it. Also, how SMEs in Asia play their role appropriately to provide the stronger growth channel for regional development.

AABI has been playing an important role in the growth of Asia Pacific economies by providing a platform for integrating incubation theory, and increasing information about the application of innovation and entrepreneurship research particularly during times of economic crisis.

This journal is a refereed and highly professional journal covering entrepreneurship, innovation, incubation and relates topics. It aims to establish channels of communication and to disseminate knowledge between policy makers, experts and professionals working in universities, government departments, research institutions, as well as industry and related business.

Thank you.



Prof. Benjamin J.C. Yuan Ph.D.
President
Asian Association of Business Incubation

CONGRATULATORY COMMENTS

I am very pleased that the journal has published its fourth edition successfully, and I would like to give many thanks to the authors, experts and presenters for their concern and support in order to help entrepreneurs, incubators and researchers in the academic world. The various academic achievements gained by the experts' efforts are willing to be shared beyond the Asia Pacific to the world.

The journal presents a variety of papers in terms of the present condition of the Chinese venture capital market, the Entrepreneurial Innovation, Malaysia's case for the entrepreneurship development and Business Success Story of the DongHwa Pharmaceutical Company in South Korea. Especially Malaysia's case and the success case of the DongHwa Pharmaceutical Company can be good examples for the start-ups to have creative, innovative motives. I undoubtedly suppose that publishing and distribution of these papers will stimulate entrepreneurs, managers, policy makers and academicians in the business incubation and entrepreneurship development area.

Entrepreneurship is truly necessary in the global economy. Particularly, when the global economy is depressed, entrepreneurial start-ups through the youth will probably provide the impulse for economic recovery and the base of future prosperity.

These days in spite of financial crisis from the Europe and the global economic contraction, aggressive investment and various entrepreneurship policies are needed for economic revitalization. It is possible that the academic and empirical comments of this journal will be helpful to develop business incubation and entrepreneurship in the Asian Pacific region.

The endeavors for creating high technology and value-added products can be essential so as to enhance the success rate of the start-ups and keep up the growth of companies. I wish that various views and cases of the authors can support both well-established and emerging countries.

I also again would like to show my appreciation for the full support of the Editor-in-Chief, Professor Bong Jin Cho, Professor Benjamin Yuan, the President of AABI, the AABI Secretariat in Shanghai and all the AABI members.

Thank you.

Yeung-Shik Kim

Chairman

Institute of Korea Entrepreneurship Development

CONTENTS

INTRODUCTION

Bong Jin Cho, Ph. D., Editor in Chief

The characteristics of a journal should be self explanatory with a name to match the contents of the published edition. The Asia Pacific Journal of Innovation and Entrepreneurship (APJIE), from this stand point, should be faithful to the research and study of the innovation and entrepreneurship in its contents. As entrepreneurship is concerned with the creation of wealth and growth of industry, it is a strong measure, especially in this period of economic downturn, to revitalize the national and local economy. Peter Drucker believed that entrepreneurship is neither created nor gifted but it is a learned artifact through practice and personal effort. In this sense, it is quite meaningful to introduce successful case studies of entrepreneurship for the education of future entrepreneurs.

The Volume 4, No.1 introduces the unique case of the extremely long product lifecycle medicine, Hwalmyungsoo, an over-the-counter medication. The first paper is “A 100-Year Business Success Story of the DongHwa Pharmaceutical Company – Its Innovation and Entrepreneurship.” The authors of the paper try to uncover the reason of the 100 year long lifecycle of Hwalmyungsoo (meaning “life saver”), which has been beloved by the Korean people as the digestive medication taken in emergency. The authors identify several key success factors of the DongHwa Company in the unique characteristics of the entrepreneurship of the former CEOs.

The key success factors of the DongHwa Company are to 1) have a growth oriented entrepreneurship, 2) have a vision sharing entrepreneurship, 3) have an innovative entrepreneurship, 4) have a flexible adaptive entrepreneurship, 5) have a creative oriented entrepreneurship, with the virtues of practice such as, the credit first policy, the customer satisfaction first policy, the person of talent first policy, the spirit of pursuing rationality, the spirit of originality and innovation, the spirit of honesty and ethical management, and the spirit of social responsibility. The success story of the Hwalmyungsoo is the role model of many youths who dream of running their own startup business today.

The second paper is “A Strategy Implementation Framework for International SMEs.” This paper is a conceptual application of the military strategic thought as an implementation framework for efficient management of international SMEs. This paper is intended to help improve the overall understanding of the strategy process within the context of international SMEs. The C4I framework customized by the paper ensures international SMEs can use a time tested framework to help them compete more effectively in their target region. The customized C4I framework provides the sector with a single explicit framework that will lower the friction of realizing the initial vision of the owner and management. By understanding greater clarification between the concepts of "strategic" and "tactic," SMEs can make more efficient use of their management.

The third paper is titled as "An Entrepreneurial Innovation: Mega Cooperatives." This paper introduces the successful case of the Fonterra Mega Dairy Cooperatives in New Zealand, which gains the significant advantage of economies of scale. The mega cooperatives usually involve a large degree of horizontal and vertical integration in order to ensure sufficient efficiencies and economies of scale as well as the international competitiveness in the global market. The authors note that this mega cooperative in New Zealand is motivated by the changes in the external operating environment of agricultural cooperatives produced by the liberation and deregulation of economic policies. The authors also suggest some interesting points of further research that include the challenges of group formation during the merger of cooperatives and the relative performance of the new cooperative structure including the economic impact of a monopolistic cooperative.

The fourth paper is "Entrepreneurship Development in Malaysia: Based on the Findings of the Global Entrepreneurship Monitor (GEM) 2009." This paper presents the results and research findings of the global Entrepreneurship Monitor (GEM) 2009 for Malaysia. In this paper, the research findings and the results compared Malaysia's standing against the other four participating countries from the Asia Pacific region focusing on China, Hong Kong, Japan and Korea of the 54 participating countries in the GEM 2009 study. The research findings include the reports on the entrepreneurial attitudes, perceptions and entrepreneurial activity studies. The GEM data for 2009 is a useful measurement and provides a benchmark for assessing the effectiveness of the government's current and future initiatives.

The fifth and last paper is titled "Venture Capitalists' Herd Behavior: Theoretical Analysis of Chinese Venture Capital Market." This paper investigates the generating mechanism of the volatility of the Chinese venture capital market. It extends the information cascades proposed by Banerjeer by modeling the investment in the high-tech industry in the presence of uncertainty. The authors developed a model based on Banerjeer's model which better displays the generating mechanism of Chinese venture capitalists' herd behavior. As many countries are suffering from great uncertainty in an immature economy such as in China, the authors changed the information structure in Banerjeer's model by introducing a noisy public signal observable and equal to the actual uncertainty for each firm so that it could have a higher feasibility. The proposed model properly explains the Chinese venture capital market's volatility as well. The authors, however, did not forget to note some limitations of the research framework and its implications.

Finally, we are mostly grateful to the authors of the five papers upon the publication of this volume 4, No.1. Though we had 10 papers submitted for the volume, only these five papers passed the final review process executed by the sincere reviewers of the APJIE. It seems that our paper reviewers are getting more sensitive to the quality of the manuscripts than ever before. We understand that the APJIE is getting higher quality manuscripts in a sense that the rejecting rate is getting higher. With the pleasure of improved quality and readability of our journal, as the editor in chief, I would like to express my hearty thanks to the editors and reviewers of the APJEI, who devoted their time and efforts for the evaluation. We would like to pay our continued thanks to the IKED (Chairman, Yeungshik, Kim), AABI (President, Benjamin Yuan), and the SMBA (Administrator, Dong Sun, Kim) for their financial support with encouragement in publishing a quality journal. With their hearty commitment and support, we are most grateful to the dedicated global readers of the APJIE always.

A 100-Year Business Success Story of the DongHwa Pharmaceutical Company - Its Innovation and Entrepreneurship.

Bong Jin Cho[*] and Chan Gon Kim[**]

Abstract

In 1997 DongHwa Pharmaceutical Company, which started with the innovative medicine Hwalmyungsoo, an over-the-counter medication, celebrated its 100 years of the establishment. It is a unique case that a product item has been beloved by customers for over a century. The main reason that we pay attention to the thinking and behavioral patterns of the top management is that the enterprise is not the device to build personal wealth. But the creation and development of good enterprises are the requirements for the sound foundation for building a healthy society.

The purpose of this paper is to find the secret causes of the long product lifecycle of the Hwalmyungsoo from the entrepreneurs. It is also the authors' intention to identify the unique characteristics of the types of the entrepreneurship with an investigation into the entrepreneurship practiced in the management of Hwalmyungsoo. The key success factors of the DongHwa Company are to 1) have a growth oriented entrepreneurship, 2) have a vision sharing entrepreneurship, 3) have an innovative entrepreneurship, 4) have a flexible adaptive entrepreneurship, and 5) have a creative oriented entrepreneurship. It also includes the virtues of practice such as the credit first policy, the customer satisfaction first policy, the person of talent first policy, the spirit of pursuing rationality, the spirit of originality and innovation, the spirit of honesty and ethical management, and the spirit of social responsibility.

The great entrepreneurship with philanthropic personality is one thing; however, the outstanding qualifications of the top management of the DongHwa as strategists are even more impressive. The success story of a long lifecycle product, Hwalmyungsoo is the role model of many youths who dream of running their own start up business.

Key words: *Entrepreneurship, Innovation. Systematic Renunciation, Vision Sharing*

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1. Introduction

On September 25th 1997, DongHwa Pharmaceutical Co. Ltd., who first introduced the FAN brand "Hwalmyungsoo[1]" (meaning “life saver), celebrated its 100th anniversary of the establishment. Incidentally, it was the same day and year of Korea’s national anniversary of founding, September 25th, 1897. The history of DongHwa's 100 years is the history of modern business and that of modern Korea itself. DongHwa Company experienced all the dynamic social changes of the Japanese annexation government, such as August 15, 1945 national independence, Korean war, April 19 revolution, and May 16 military takeover during its 100 year history (Yea, 2009, 254-255). The fan brand "Hwalmyungsoo" (hereafter “the life saver”) has been beloved by the people as the national digestive medicine. It is an unprecedented case that a brand has been beloved for 100 years by its customers.

There could be several reasons for the life saver being beloved by the people for so long a time. Recently, there is a trend of searching for the reasons of that long success from the business entrepreneurship of the entrepreneurs. Such business entrepreneurship research, however, has been focused on the management philosophy of the entrepreneurs without much considering the strategic decision making process.

Accordingly, the determinant factors of business entrepreneurship are diversely classified, such as personality and spiritual factors, innovation, environment that creates the business activities, organizational structure, and strategic factors, as entrepreneurship is multidimensional concepts of product market, technological innovation, and adventurous behaviors. Especially, as the entrepreneurship is understood as a positive counter measuring strategy against the organizational and environmental changes by some researches, there is a trend that it is a progressive response mechanism to the changing environment (Chandler & Lyon, 2001). As it is a process of corresponding with the organizational changes to cope with the changes in environment, entrepreneurship is a major factor to improve the business competitiveness.

According to the case studies of the business success stories, it has been noted that almost all of the successful business firms are mostly founded by entrepreneurship and innovative management. In this sense it is quite certain that a business’s success depends on external factors such as economic policy, relationships with government, and organizational structures, and internal factors like entrepreneurship (Knight & Cavusgil, 2004). It is understood that a strong sense of entrepreneurship as well as the efficient management system is essential to the continued success after establishment.

The purpose of this paper is to investigate the unique entrepreneurship with the leadership of the progressive behaviors and innovations made by the DongHwa Company indigenous to Korea. This paper is looking especially into the way the CEO's entrepreneurship has been practiced in response to the environment. In this paper the authors analyze the contributing factors of DongHwa's entrepreneurship exercised in the successful progress of the firm for over 100 years.

2. Theoretical Background

2.1 Innovation and Entrepreneurship

According to Drucker (1973), the only valid entrepreneurial objective is to “create customers". To pursue this objective, only two basic functions of innovation and marketing are fundamental (Kim, 2007, 49). In this case, the innovation is to create customers in more creative method and is the unique function of the entrepreneurship. Drucker believed that entrepreneurship is neither created nor gifted but it is a learned artifact through practice and personal effort. He thought that the kernel of entrepreneurship is innovation—something seemingly simple but not easy to achieve without continued efforts and improvements.

Generally speaking, it is understood that innovation is something related to technological improvements such as product development and process changes; however, Drucker (1973) classified innovation into the following three categories.

Firstly, the core tasks of innovation, in the traditional business concept, are to move the efficiency to the center of the operation, thus enabling the management to transfer the superior assets and capabilities of the company for the future opportunities. As any business firm that could not perform well at present may not be able to acquire the necessary vision and energy for the future, it is emphasized the importance of the present operation. To say that it is a fundamental duty of the entrepreneurs to run the existing firm to be productive and to define the business field of the firm.

Secondly, by comparing the importance of the present and future business, “How can we adapt to the new business opportunity?” should be the fundamental question of innovation. At the present business stage, as the management is apt to be facing the uncertainty of the future, it is needed to optimize the ability of entrepreneur. Drucker (1985) insisted that the old and hackneyed businesses need to be systematically taken out to move the business energy to the new business of opportunity. In this stage, the core question of business has to be changed from "What is the business?" to "What will the business be?" (Flaherty and Drucker, 1999). Thus the business should not to be tied to the banal business of the present.

Thirdly, in the process of innovation, when it comes to new product and service development, we need the process of the”organization of ignorance” not that of the ”organization of knowledge”. In this phase, the question of “What should the business be?” has to be raised (Flaherty and Drucker, 1999). Accordingly, the vision of the future business appearance is set, followed by the effort of pursuing innovation in the everyday process.

2.2 The Research Methodology in Entrepreneurship

The definition of entrepreneurship in the literature contains some of the following concepts. Entrepreneurship is the ability of an entrepreneur who can make changes in resources, the environment, and technology to develop new products and new markets. The essence of the entrepreneurial capability includes challenge, pioneer spirit, vision, creativity, motivation, and innovative leadership. In this sense, innovation is the fundamental characteristics of entrepreneurs and thus it is the fundamental requirement of not only the startup entrepreneurs but also existing businessmen who also need growth and change (Lordkipanidze & Backman, 2005).

The approaches to studying entrepreneurship in the literature are shown in Table 1 below

<Table 1> Approaches to the study of entrepreneurship

Approach	Research Focus	Premise
Congenital orientation	Psychological characteristics Physical characteristics Human relationship characteristics	Entrepreneur has congenital characteristics
Acquired orientation	Personal value system Creativity oriented Risk taking oriented	Entrepreneurs are acquired through learning
Growth orientation	A growth path	Entrepreneur perceives development and growth As the survival of the entity
Adaptable orientation	Agility of adaptability	Entrepreneur is talented in perception of environment with higher adaptability for the development and survival
Innovation orientation	Creativity and innovation	Entrepreneur interested in creation and innovation to make profit rather than ownership
Managerial orientation	Improvement in ability	Entrepreneur has technical function of management
Leadership orientation	Motivation and leadership	Entrepreneur achieve the objectives under leadership rather than personally achieve it

※Source: Yoon and Park (2007)

It is understood that the entrepreneur could have the characteristics of both learned and congenital talents, such as eagerness for growth, adaptability, innovation, management and leadership. Whatever the approach, innovation has been studied focusing on the essential factor of entrepreneurship such factors as described above in pursuing the fundamental entrepreneurial capabilities.

2.3 The Key Words of Entrepreneurship that Is Successful and Failed in the Korean Business Climate.

It is not easy to identify the entrepreneurship that is successful and failed in Korean business cases; however, the following key words are shown in the <table 2>.

<Table 2> The key words of entrepreneurship that is successful and failed

Successful entrepreneurship	Failed entrepreneurship
-Challenge and pioneer sprit	-Unethical
-Credit first policy	-Insincerity and lack of credibility
-The sprit of creed	-Persecution complex
-The spirit of thrift and saving	-Lack of judgment
-Customer satisfaction first policy	-Lack of patience
-Person of talent first policy	-Lack of business knowledge
-The spirit of originality and innovation	-Lack of management system
-The spirit of social responsibility	-Lack of nimble mind
-The spirit of pursuing rationality	-Lack of belief
-The spirit of labor-management community	-Lack of challenge and pioneer spirit
-The spirit of honesty and ethical management	-Personal conceit and obstinacy
-The spirit of patriotic way of running business	-Personal interest first policy

※source: Tabulated by the authors based on the source by Kim, Sung Soo (2007)

3. The Managerial Philosophy, Innovation, and Entrepreneurship

3.1 The Managerial Philosophy

DongHwa's life saver has been the people's digestive medicine for 112 years, experiencing many dynamic social disturbances since it was introduced in 1897, during the Japanese annexation government. In 2008, the Hwalmyungsoo sold 97 million bottles, marking a sales volume of US$46 million dollars. Since 1897 some 8 billion bottles of the Hwalmyungsoo have been sold—the length of the bottles sold could make 24 laps of the globe (Yea, 2009, 5)!

The history of the Hwalmyungsoo is the footprints of the modern Korean businesses as well as that of modern Korea itself. In the history of the DongHwa Company, there were many outstanding CEOs such as Min Byung Ho, who developed the Hwalmyungsoo and started the DongHwa Drugstore (the former name of DongHwa Co., Ltd.); Min Kang, the founding president of DongHwa Co., Ltd., the son of Min Byung Ho was a fighter for national independence. President Yoon Chang Shik was a social activist; and the next president Yoon Kwang Yeol, the son of Yoon Chang Shik, practically built the modern foundation for the DongHwa Co., Ltd. (Kim, 2007, 49) In the history of the preceding presidents' management, we can find the pride and self esteem of being the people's respected entrepreneur.

The motive of the DongHwa Company for its continued development, despite the troubled business environment of the Japanese annexation government, is found in the philosophy of the management: "Never ever manufacture any medicine if it is not good. As the DongHwa Company is established for all the families of the company as well as all Korean people, work with all your heart for the wellbeing of the family and the people." (Koh, 2007, 23) This is the philosophy of the top management and DongHwa Company. To practice the above philosophy, firstly, DongHwa has stressed serving the people by manufacturing good medicine at a reasonable price. It means to not only make a profit but to serve the people and society with good medicines. Secondly, the DongHwa has kept the right path and has been faithful to the principle. This is the spirit of honesty and not to harm any people and to be faithful to the customers. Thirdly, DongHwa has emphasized that the employees are to work hard when they are young and live an affluent life when they get old. That is the spirit of fostering the habit of thrift and saving, living for the future with hope.

Fourthly, DongHwa has emphasized that to make mistakes is common to employees, but it is to make a blessing in disguise by honestly confessing their mistakes. Employees are encouraged to push forward by acting according to their beliefs to make it a blessing in disguise by finding the reasons for the mistakes. The president of DongHwa Company, Yoon Kwang Yeol, who learned the above stated philosophy from his father Yoon Chang Shik while working together, announced the following statement by adding his own philosophy to establish the management philosophy of DongHwa (Yea, 2009, 183). Firstly, as to live in honest mental attitude is the most important thing in the sense of the publically managed business image of the DongHwa Company, honesty is always emphasized. Secondly, to live in thrift and saving is also emphasized, as the employees thought that human beings are more satisfied with happiness in the future rather than in instant gratification. "The belief that someday I could be a happy man is derived from the sense of saving." Thirdly, to live in the sense of co-prosperity is also emphasized. In the modern society, co-prosperity is the virtue of the society. As human beings, however, are more often pleased with self complacency, self conceit, and a blissful life by forgetting the co-prosperity of other human beings, the sense of co-prosperity is emphasized. The people of DongHwa have never forgotten the tradition of the people's enterprise with a sense of pride and patience.

DongHwa Company has emphasized the following instructions to practice the above stated management philosophy. To say that in pursuance of the excellence in management, the top management of DongHwa Company has been faithful to the principles of the company by avoiding injustice and serving the employees better before benefiting the entrepreneur. Thus they have served the customers better with good medicines at a lower price through the excellent research and development in integrity and sincerity to help with the health of the Korean people. The management philosophy of DongHwa is the fundamental source of its success and development for over 112 years since the Hwalmyungsoo was introduced. At the same time, the management philosophy of the company has been shared among the employees of the DongHwa as the vision of the future.

3.2 The Innovative Strategy of DongHwa

Drucker (1985) indicated that innovation is a learned rule that can be practiced rather than the one created by a few smart elites. He suggested some practical methods of innovation and entrepreneurship as follows.

3.2.1 A systematic Search for Chances

It is often thought that new innovative ideas could be found by a smart elite; however, Drucker suggested some of the do's and the don'ts for systematically pursuing the chances that can be learned. The do's includes (1) to check and analyze the sources of the chances for objective and systematic innovation, and to organize regular and systematic research and development, (2) as innovation is a conceptual and cognitive activity, one must go out and look, ask, and listen to others to understand the acceptance level of the innovation in the society, (3) to achieve the objective, the contents of innovation should be simple and focused on a meaningful matter, (4) innovation should start on a small scale so that it could have more flexible time for adjustment and correction in the innovation process. The three don’ts include (1) not to pursue the breakthrough only, (2) not to diversify, not to dissect, and not to do too many things at one time, (3) not to pursue anything innovative too far into the future.

DongHwa Company had a high growth through a systematic search for chances. Through the introduction of professional management and an initial public offering, the company took on a more modern aspect with continued innovation inside of the management for the speedy growth. As a result, the Hwalmyungsoo was the engine of growth in the 1980's as well. In 1982, the actual output of the total pharmaceutical production by items shows that two items' sales volume marked over US$10 million dollars, while eleven items marked in over US$5 to less than US$10million dollars. Seventeen items were in over US$3 million dollars to less than US$5 million dollars and 185 items were reported in over one million US$ dollars. It totaled 215 items' sales reported in at over one million US dollars (Koh, 2007, 94-95).

In 1982, DongHwa listed two items among the 10 best selling items in the nation. The national total output for the pharmaceutical products marked over US$100 million dollars. The national production capacity in the pharmaceutical product marked US$150 million in 1984, showing a rapid growth in the nation, and DongHwa had a total of 234 items that reached over one million US dollars (Yea, 2009, 203). As guided by the government, the rapid growth rate has been more stabilized since 1983, and accordingly DongHwa also set the year 1984 for ensuring internal stability and optimizing the profit through the management system. Based on its internal strength and stability, the company urged the mental rearmament of its sales force and asked to maintain the listed price of the products in the market.

The company exported US$2.8 million of pharmaceutical products and raw material for medicines to over 20 countries, reaching a sales volume of US$41.2 million dollars with a profit of US$3.19 million in 1984 (Koh, 2007, 96). In 1985, the Korean government adopted an open door policy with the liberalization of capital movement that brought keen competition in the field, resulting in low profits with increased sales costs. To overcome these difficulties, the company set the year 1985 for the second big push to take the leap by encouraging touching visiting with the customers and by practicing the management by objectives.

In 1985, the pharmaceutical industry was very slow and sales volume and profits were naturally low. It was due to the hiked exchange rate that increased the cost of the raw materials and the price freezing by adoption of the standard retail price system. DongHwa Company declared the year 1986 to be "the year of productivity improvement through innovation" to resolve the low turnover ratio rather than simply pushing its sales force. Also liquidating insolvent traders and improving customer relations, sales volume of the Hwalmyungsoo returned as one of the 10 biggest sellers of the nation in the mid 1980s. The Hwalmyungsoo marked a production capacity of US$10.4 million in 1987 and a higher sales volume of US$13.2 million in 1988, and US$15.8 million in 1989 (Yea, 2009, 206).

3.2.2 A Systematic Renunciation

Drucker (1985) emphasized the importance of systematic renunciation in order to practice entrepreneurship through innovation. Renunciation is the precondition of efficient capital distribution and is the criterion for creating appropriate profit earning capability in a competitive market. Despite this fact, there are many unnecessary activities and wrong practices in business due to the forces of institutional inertia and the pledges in the past.

Systematic renunciation, which is to abandon the battered things and unproductive systems, is always necessary and important for an efficient management process. The starting point of growth strategy begins with how and what to forsake rather than how and where management should focus. DongHwa has been a very good example of success through systematic renunciation. In the 1990s, the pharmaceutical industry was in a structural transition period in the era of globalization with its open market policy. With the beginning of the public health insurance system, the financial structure of the pharmaceutical industry became vulnerable, accelerated by the inflexible regulation of the medicine price, which made it an unfavorable management environment. Under these circumstances, the Korean pharmaceutical industry suffered from the monetary crisis under the IMF control in November 1997. Due to the monetary crisis, the industry suffered from severe financial restraint. The higher foreign exchange rate, increased cost of manufacturing, foreign exchange losses, and difficulty in issuing company stock that caused an inability to pay debt, and a chain reaction of bankruptcies of the wholesale traders kept many companies of the industry from doing business as usual. In particular, many companies suffered from a shortage of working capital that caused the chain reaction of bankruptcies.

Eighteen pharmaceutical companies went bankrupt from the end of 1997 through 1998. Many companies avoided the crisis by applying for composition with their creditors or by filing for court receivership. The industry production output decreased by 2.6% with a total output of US$783.3 million in 1998 compared with US$845.8 million in 1997 (Yea, 2009, 257). It was the only period of negative growth in the history of the Korean pharmaceutical industry.

DongHwa Company converted from a management style focusing on rapid growth to one of ensuring internal stability by reducing long and short term debt through severe organizational restructuring. With these series of efforts, DongHwa recovered from the crisis earlier than other companies in the field and of many other industries. The monetary crisis dealt a blow to the whole country; however, it was an epoch marking point for DongHwa, strengthening its competitiveness in the market. It was a good display of the entrepreneurship that best practiced innovation process.

3.2.3 The Emphasis on the Principle of Focusing

Drucker (1985) emphasized the principle of focusing rather than diversification to practice entrepreneurship through innovation. He also noted that a successful CEO is full of conceit if he also thinks that he is going to be successful in other fields, as different business fields have their own nature and need different management styles to succeed.

Focusing on a few superior capabilities of the company is the criterion for distinguishing between the superior enterprises and the ordinary ones. In the 1990s, GE removed some barriers to make a superior company upon the special advice given by Peter Drucker in his interview with the CEO, Jack Welch. Drucker asked if Welch would begin this business again if he were not in the business at that moment. If the answer were no, he advised that it is not worth doing the business. The corporate intention should be simple; otherwise the employees will do the job in a state of confusion, bringing inefficiency. It is to emphasize that it is not efficient if we have too many irons in the fire.

DongHwa Company successfully kept continuous growth by emphasizing the principle of focusing. Throughout the 1990s, DongHwa marked the second largest production capability among the whole Korean pharmaceutical industry (Yea, 2009, 227). The driving force of the achievement was indebted to the devoted product items, including the Hwalmyungsoo. The brand of big contribution could not be built in a short period of time, and it was not possible to be successful without continued efforts for difficult times. Sometimes, even desperate efforts do not guarantee the success of a brand in the market. A successful brand may be built out of many new products. Accordingly, a company should establish a department exclusively responsible for new product development taking challenges under the culture of not to be afraid of failure in R&D. This means that the company should have a lot of new products developed waiting a new launching whenever it is needed. Once again, here it is also emphasized to be faithful to the principle of focusing and to be able to deal with a dangerous situation with agility.

As it is necessary to be alert to situational changes in the market and consumer needs and wants, DongHwa has been always well prepared. The situational changes in the market and consumer needs and wants keep the product lifecycle short because of the risk of obsolescence. The higher a company is in a specific business, the higher the risks involved. As the sales proportion of the mammoth item of the life saver, Hwalmyungsoo, increases, the risks involved increase also. Because it is easy for the organization to be fall into mannerism, the organization is prone to idleness. Accordingly, companies always need to prepare new core business projects to deal with the risky environment in the future. The new core business project could be a breakthrough item; however, it is, more often than not, derived from the existing business field. The latter could have an even higher chance of success than the former. Since the separation of dispensary from medical practice, DongHwa has diversified its business as well as strengthened the competitiveness of its existing items faced in the strong market pull situation of prescription medicines. It is a skillful diversification strategy practiced while still keeping faith with the principle of focusing.

3.3 Business Entrepreneurship in the DongHwa Company

3.3.1 The Spirit of Vision Sharing

Despite many enterprises having announced a vision for their firms, in many cases, it is true that it is nothing but the unilateral hope of the CEO. As the bond of sympathy could not be developed between employees of the company, the vision of the firm becomes an emotional burden to the workers. However, DongHwa Company, based on a unique management philosophy, developed a bond of sympathy between the employees and management. DongHwa initiated a public welfare improvement movement by opening a center to help people who are suffering "from rare maladies." This was the actual practice of the spirit of philanthropy that became an organizational culture (Chang, 2007, 39). This kind of social activity also helps to build a good image of the company regardless of the will of the company. Eventually, this activity devoted to the brand equity of the Hwalmyungsoo and other medicine brands, which also come to enhance with the self esteem of the employees.

Despite knowing the importance of remuneration for the motivation of the sales force, many companies often do not consider the compensation of the salespeople. Even though the management cares for the pay for the sales forces, in most cases, they only care for the monetary rewards of them. However, DongHwa Company was concerned about educating and nurturing salespeople to improve the quality of its employees. DongHwa also made greater efforts to increase its employees' self esteem and sense of belonging. As a result, the salespeople returned the top sales volume achievements per person in the whole pharmaceutical industry, and most of them became the main executives of the company later.

3.3.2 Innovation Oriented Entrepreneurship

DongHwa Company established its marketing department with an executive in charge and the placement of sales headquarters to activate the organization of the company. This is a part of organizational restructuring and is a strategy of increasing the motivation of the sales force to meet the challenge of new organizational targets. As noted earlier, DongHwa paid keen interest to the education and nurturing of new employees and its sales force, investing much money. The content of the education included not only the knowledge associated with works but also, to a certain degree, much content was focused on improving the quality and capability of the employee through increased self esteem (Lee, M. S., 2007, 31). The employees who received the education became central figures of the company later.

During the period of president Yoon, Chang Shik, the second CEO, DongHwa Company adopted a system of product manager (PM) who has practical control over the marketing management. And then it developed into the system of management expert in the period of Yoon, Kwang Yeol, the third president. This kind of innovative system has the benefits of role division between the owner and the management expert, improving the efficiency of the management as well as motivating employees with the feasibility of promotion into the top management.

It is possible for a company to develop new product items only when the accumulation of the technology is available within the company. The president Yoon, Kwang Yeol, in spite of the difficult conditions of the company, established the R & D center to set the foundation for long term development. DongHwa Company, by adopting a stock-sharing plan for the employees and monthly payment schedule for all the employees, always has tried to practice profit sharing with the workers. The introduction of the profit sharing system produced the mutual benefits of keeping the employees responsible and faithful to their roles and and enhanced their affection and vision for the future.

3.3.3 A Pioneer Entrepreneurship

The life saver, Hwalmyungsoo, born at the time of Korean modernization, was a pioneer product that had several features that a successful product should have. For the marketing dimension, the item has had all the factors needed for success, introduced as follows.

The brand naming mostly stands out in the product strategy. Hwalmyungsoo, meaning “the water that saves human life,” has a strong appeal to the customers. The most important feature that a brand should have in creating strong brand equity is a strong appeal to customers that exactly fits the needs of the situation of that time. The conditions of a good brand name are to 1) represent the benefits and characteristics of the product, 2) easy to identify and remember, 3) matched with the image of the company, 4) easy to advertise and use for sales promotion, 5) have uniqueness itself, 6) easy to pronounce, 7) bring positive associations to the consumers, 8) matched with the packages, 9) have a modern image, 10) be able to express in English, and 11) be able to get legal protection (Lee, 2007, 39). In other words, a good name is short and simple, thus making it easy to remember and pronounce as well and representing the benefits of the product. In this sense, the brand name Hwalmyungsoo meets the requirements of a good name.

Pricing is one of the most important components of the marketing that practically determines the market share and profitability of the product. Hwalmyungsoo was introduced at a skimming price to the opinion leaders of the market with an image of high quality and innovation, and then was slowly switched to penetration pricing at a lower price to appeal to the low-income bracket. The Hwalmyungsoo is one of the most successful examples of price skimming.

According to an advertisement published in the *Daehanminbo* newspaper dated February 4th, 1910, the price of Hwalmyungsoo was 40 Jon, or 17,900 Won of the present currency (Yea, 2009, 35), which is approximately US$15. According to the stories which have circulated by word of mouth by the employees, the price of Hwalmyungsoo was equivalent to that of two dishes of beef soup, "Seolnungtang"; it was an excellent example of price skimming.

A successful channel management is acquired when the organization is successful in recruiting many talented channel members. It is worth noting that Hwalmyungsoo secured a nationwide sales force from the start; foreign marketing channels were established in Manchuria 10 years later (Yea, 2009, 37). The owners of the special distribution agents and local branches in the starting period of time were the opinion leaders of the regions as the managers of daily newspaper distribution. This indicates how much DongHwa was concerned about the importance of the qualified channel members for a successful distribution.

The company also pursued a win-win strategy of mutual benefits with the channel members by establishing a good partnership from the beginning. It was certainly an ahead of our time strategy; many leaders often fail to establish a good partnership by not understanding the symbiotic relationship between the channel members, only pursuing their own profits, finally leading to self-destruction.

DongHwa Company placed its first advertisement, a Happy New Year greeting, in the newspaper *Daehanminbo* in 1910 (Lee, 2007, 42). The peculiarity of the advertisement was that it advertised not only the major products such as Hwalmyungsoo but also the business philosophy of the founder and the management regulations for their special agents. For the years 1917 through 1919, DongHwa focused on the advertisement of major products only and did not advertise for all products. This change was much influenced by the philosophy of the entrepreneur. As sales promotion is a strong tool to increase sales volume in a short period, DongHwa Company introduced this marketing method for sales promotion from the beginning. Especially, it is surprising that DongHwa Company practiced sales promotional activities for the consumers and intermediaries separately.

3.4 A Critical Review on the Life Saver, Hwalmyungsoo

DongHwa Company was not an exception in suffering from the difficulties of the Korean pharmaceutical industry. Upon the government decision of the separation of prescribing and dispensing pharmaceuticals, many foreign invested companies come to have a competitive edge in the market. DongHwa Company had produced higher portion of non-prescription medicines, thus coming to loose market competitiveness. From the late 1980s through 1995, DongHwa Company marked the second largest production capacity in the pharmaceutical industry before spiraling downward to the fifth in 1996 and the tenth after 1999.

The sales volume of the Hwalmyungsoo category of products, including the Hwalmyungsoo-Q, has increased steadily, reaching US$4.31 million dollars in 2008, making up 19.8% of the total sales volume of US$21.72 million. The proportion of sales of Hwalmyungsoo decreases when the total sales volume is high while the proportion increases when the total sales volume is low because the sales volume of Hwalmyungsoo has remained quite constant for over ten years. Having no ebb and flow of the season, the Hwalmyungsoo was the steadily growing for over a century which has been great devotion to the company (Yea, 2009, 263 -265). In spite of the growth, looking back over the last 112 years, we can see that DongHwa is in crisis because during that time the company never experienced a state of stagnancy for over ten years.

From the view point of product lifecycle theory, Hwalmyungsoo is in its maturity stage. There are many repeated demands rather than new demands with the extremely long lifecycle. However, it is certain that Hwalmyungsoo needs a new growth strategy as there are not many new customers coming in like the typical growth stage market and there are not many competitors who want to enter this market.

One thing that is certain is that whether the lifecycle is in that stage of growth or maturity, Hwalmyungsoo has to be the wooden support for the DongHwa Company in the coming years. It is also important not to forget that Hwalmyungsoo's sales volume has contributed to the company's growth for the last hundred years but there is no guarantee that it will continue in the future simply because it has been. To make it worse, development in the pharmaceutical industry is more rapid than ever before, and the lifecycle of pharmaceutical products is getting shorter and shorter. DongHwa needs to get out of the stagnant period. Hwalmyungsoo is a cash cow item that has a high market share with low growth rates; however, it could be dangerous if DongHwa is highly dependent on the single item even though Hwalmyungsoo has been contributed to the company

At this point, therefore, it is necessary to establish a strategy to make Hwalmyungsoo another hundred year contributing item to the company. Not only to keep the reputation of the longest product lifecycle in Korea but also for the future of DongHwa that is in a situation of crisis, the company has to seek new strategies that can extend the life of Hwalmyungsoo. In the 112 years history of DongHwa, it is the time to overcome another crisis.

4. Conclusion

There are many examples of successful domestic entrepreneurs who have practiced sound entrepreneurship in Korea. Some of them have inherited assets or benefited from situational fortunes. However, the most important thing is that the entrepreneurship of the founder and the top management could be the key factors of the success.

The main reason that we pay attention to the spirit and behavioral patterns of the top management is that an enterprise is not a device to build personal wealth. But the creation and development of good enterprises are the requirement for the sound foundation of a healthy society. The efficiency of a society will be enhanced when the citizens take after the entrepreneurship of the innovative entrepreneurs.

The Hwalmyungsoo story is the story of a successful enterprise that shared the ups and downs of its society. This case history gives many impressive lessons to students of management. Entrepreneurship with philanthropy is great. The top management of DongHwa as the outstanding strategist is even more impressive. The success story of Hwalmyungsoo is a role model for many youths who dream of running their own business

In the recent economic downturn of the world economy, the Korean economy is also suffering. In the history of Hwalmyungsoo, there must be some hidden wisdom that could overcome these difficulties. Hwalmyungsoo has suffered through the turbulence of the Japanese annexation government, the difficulties from the chaos after the August 15th, 1945 independence from Japan, and the Korean War as well as the monetary crisis in 1997. Hwalmyungsoo went through these various sufferings wisely at every difficult moment of the management by the outstanding strategies of DongHwa. It is fortunate that many members of top management can gain some wisdom from the forefathers of the DongHwa Company. It is our hope that all of us can also get some wisdom from the management philosophy and entrepreneurship of Hwalmyungsoo and DongHwa Company to overcome any difficulties of today.

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[1] Hwalmyungsoo is an over-the-counter medication.

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A Strategy Implementation Framework for International SME's

Zulfiqar Deo[*]

Abstract

This article is a summarised version of a research based project (30% of the authors MBA course) which has separated the notion of business strategy implementation and business strategy execution. Prior to this project business strategy implementation and business strategy execution were considered to be synonymous both in academia and industry. This project cross applied a military framework for strategy implementation and customised it for International SME's. This article limits itself to the theory generated by the project and is intended to improve the overall understanding of the business strategy process within the International SME sector focused around the senior management of the company.

The project helped an International SME to understand the need for a framework at the SBU level, customised one for the purpose, and showed how to practically use it. This aided senior managers to make more effective decisions at the SBU level. It also helped to clarify what is strategic and what is tactical, the need to dynamically manage the risks and complexities, and engrain the need for interactions between various management levels in the decision making process to ensure flawless realisation of the Owner/ Manager's vision for the company.

This project used the realist research paradigm as the research strategy and case study as the research method. Combined they allowed the use of innovative research tools like social media.

The strategy implementation solution for the Medium Sized Company has been accepted by the case company to provide greater insight into current operations. Other companies in the SME sector have also accepted the value of the customised framework. The university has accepted and graded this project. The case company solution is confidential and therefore unavailable.

Key words: *International SME's, SBU, Risks, Complexities, Strategy Implementation, Strategy, Tactics, C4I Framework.*

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1 Introduction

In this project an effort has been made to accurately identify the tacit concerns of an International SME, research these concerns and provide the International SME with a solution to successfully allow it to grow in its target region. The overall objective of this research is to ensure the executive management of the case company have an accurate understanding of how to successfully compete in their target region via the Strategic Business Unit being built for this purpose.

1.1 Area of research

The research area to be targeted by this project is the notion of strategy implementation. This will highlight which levels of management deal with what kinds of concerns. For instance, it will highlight why it is important to separate strategy implementation from strategy execution. This is to be achieved by comparing military strategic thought to contemporary business strategic thought. Highlight the areas of clarification that emerge and cross apply a relevant framework by customising it for the sector in general.

1.2 Research strategy and methods

The research strategy dictates the framework used to gather data and the overall structure of the research. Here the realist paradigm is used. The research methods used is case study, which allows the use of multitude of different sources. The data used is qualitative.

Informal unstructured in depth interviews were used to gain an understanding of what the company was trying to achieve and how. Background courses were then taken to understand the prevalent concerns management have in a company. Further, research was then conducted to understand the strategy implementation phase of strategy. Combined this allowed the relevant theory to be generated and applied in a way to answer all the supporting sub questions and finally the research question itself.

1.3 Expected outcomes of the research

The primary outcome is to answer the research question of how the case company can use the C4I framework to implement its international business strategy in the EU. Other outcomes this project will provide are:

- Separation of SME's from International SME
- Separation of strategy implementation from strategy execution
- Customised C4I framework for strategy implementation in the International SME sector
- How to use social media to conduct research to the standard acceptable by a university

1.4 Key terminology

This section provides a list of the key terms used in the extract. This section helps the reader to familiarise him/herself with the terminology used. They are presented in order of association, i.e. Clausewitz is a military strategist therefore appears under strategy.

Strategy: Refers to a plan of action designed to achieve a particular goal. The word is of military origin, deriving from the Greek word strategos, which roughly translates as general. In military usage strategy is distinct from tactics and the four levels of warfare are: political goals or grand strategy, strategy, operations, and tactics. (Wikipedia, 15/03/10)

Clausewitz: Introduced systematic philosophical contemplation into Western military thinking, with powerful implications not only for historical and analytical writing but for practical policy, military instruction, and operational planning. (Wikipedia, 15/03/10)

Friction: Variation between the intention and the outcome

International business strategy: At this level business strategy looks at how a company can compete successfully in a particular market (de Wit and Meyer 2004, 71)

Joint Ventures: A legal entity formed between two or more parties to undertake an economic activity together and sharing the risk in formation (Wikipedia, 15/03/10)

Strategic Business Unit: Business unit within the overall corporate identity which is distinguishable from other business units because it serves a defined external market where management can conduct strategic planning in relation to products and markets (Wikipedia, 15/03/10)

Via Group's Holistic Leadership Model: A management consultancy's decision making model to analyse various management levels within a company

LSE: Large Scale Enterprise: Enterprise's with over 250 employees

SME: Small and Medium Sized Business's: With less than 250 employees

International SME's: Companies that target the international markets from their inception

Framework: paradigm: A set of assumptions, concepts, values, and practices together form a way of viewing reality. (Dictionary.com) Eshun (2009) highlights how frameworks can have an impact on mental models, which in turn can have an impact on behaviour. They can help to change perceptions, cultural values and to encourage new ways of behaving.

Implicit frameworks - (Epstein 2008): Frameworks we as individuals build and use in our own way of conducting an act.

Explicit frameworks - (Epstein 2008): Frameworks we as a group are trained to use for a common purpose

C4I Framework: An explicit framework used by the military at the strategy level

SECI frame work of **knowledge creation**: Socialisation, Externalisation, Combination and Integration (Nonaka 2009, website: Cyberartsweb.org)

Not Risks: the probability of an event not occurring

Complexities: derived from **complex:** Composed of many different parts. (Dictionary.com)

2 The SME sector

> “SMEs are a major source of entrepreneurial skills and creativity and contribute to economic and social cohesion. They hold the key to innovation and are also emerging as global players, by participating in worldwide production and supply chains.”(Reener, Vetter, & Scheiding 2008, 8)

This statement by the Deputy Director- General for Enterprise and Industry, European Commission SME envoy reflects on the growing importance of SME's to the EU economy. It also highlights how SME's add value by providing large scale companies of the future. Their life cycle dictates that they grow from a small company to a medium company to a large scale company. According to the EU SME's are companies with 250 people or less and have a turnover of no more than 40 million Euros. In 2005 the DTI (Department of Trade and Industry in the UK) reported that 99.9% of business enterprises in the UK were SME's, with a total of 51% of total turnover. (Wynn 2009, 79) This shows the importance of the SME to the economy, this figure is also reflected in other economies across the world. Businesses from this sector form the basis of the other 1% of businesses classed as LSE's by the DTI. Here implicit is the notion that the SME sector has a significant influence on the LSE sector by way of evolution, where as SME's evolve into LSE's organisations they bring with them their business culture, their business practices and bring change overall. A good example here would be Easy Jet, a regional low cost airline that has evolved into a LSE which primarily uses the internet to communicate with its customers. Its corporate culture has been built on how it operated as a SME and its current offering to its customers is based on the business model it built as a SME.

2.1 SME’s and business solutions

The SME sector business solutions tend to be based on the experiences of the LSE sector. However, LSE experiences are not replicable for the SME sector, where the common experience is to learn from the LSE sector and then attempt to down size it for the SME sector. For instance, a common perception is that because the LSE sector does business in a particular way therefore it is appropriate for the SME sector to imitate their practices to make them more successful. This, however, does not take into account the differing set of concerns the SME sector has and the creative problem solving expertise they build along their way up to the LSE sector. In other words, by focusing on the LSE sector and using their methods of business as templates for the SME sector they may be crowding out what allows the SME's to become worthy replacements for the LSE's in the future. Further, this discourages them from building new innovative business models.

There is also a growing recognition that the SME sector in itself should be treated as sector in its own right *(*Reener, Vetter & Scheiding 2008, 28*)* and therefore should be the subject of investigation and research.

This growing recognition of the greater need for the SME sector to be treated as a sector worthy of research is based on the understanding that the SME sector has a different set of experiences, a different set of problems, such as financial constraints, human resource issues and the emergent nature of their planning. Therefore their solutions are different. (Bell, Crick and Young 2004, 28) For instance, majority of the SME's in the UK have no systems and structures to conduct research, both market research and product research, however they do provide the majority of the commercial innovations in the UK (What can small business do for Europe? 2006, 17) Another example, of how different the sector is to their LSE counter parts is that the majority of learning that goes on is informal. (Ibid, 10) These examples show how different the SME's can be to their LSE counterparts, why it should be researched in its own right and highlights the need to better understand a category in which majority of the worlds businesses fall into.

2.2 SME's and International SME's

The SME sector can be segmented into SME's and born International SME's, here the differentiating factor is how the SME's evolve. In the born International SME's the company grows as an international company and gains firsthand experience of doing international business from day one. (Bell, Crick and Young 2004, 29) The standard SME tends to evolve from being a domestic player to gradually building an international presence. This difference in evolution helps each to gain an in depth understanding of how they build their businesses. One from inception will have a global market in mind and this will be reflected in their HR policies, their marketing, their alliances, their core values, how they leverage technology, etc. For instance, born global companies regardless of sector are more likely to be using ICT technologies to a greater degree than their standard counterparts. The other, Standard SME, will build its presence locally and then gradually target other markets and this has been the traditional pattern of growing SME's. This is confirmed by McKinsey & Co.,. As per McKinsey born International companies tend to be ones that target the international markets from their inception and do not follow the standard experience of building their presence locally and then gradually enter the global economy. (Bell, Crick and Young 2004, 29)

Overall, the SME sector is where the majority of the worlds businesses operate. They are different to their LSE counterparts. The SME sector has traditionally provided the LSE sector with new and innovative members who bring their creativity and new business models along with ensuring the survival of the economy. There is a greater need to understand SME’s as a sector and this need is gradually being researched and concerns of SME's being highlighted. For instance, research is starting to highlight how the SME sector can be segmented between standard SME's and born International SME's. The more research this sector manages to involves itself in the more likely its concerns are to be understood and the more precise the solutions. For example, by participating in this project the case company will benefit by gaining a more accurate understanding of some of their concerns.

3 What is the current state of international business strategy in the SME sector?

International business strategy here is taken to mean the Business Unit level strategy of a company expanding internationally. In other words, this project deals primarily with the implementation concerns at the SBU level. At this level business strategy looks at how a company can compete successfully in a particular market (de Wit and Meyer 2004, 71).

The following quotes highlight the complex nature of strategy and the problems that can arise when trying to understand the overall the notion of strategy:

> “Another issue influencing the study of strategy implementation is the perspective one has on strategy. Is strategy first formulated and then implemented, or vice versa? If one believes that strategies are explicit (Mintzberg, 1978), implementation means carrying out the pre-determined strategic plans. If, on the other hand, one holds the emergent view on strategy, one does not believe that strategy is first created and then implemented, but that strategy emerges and evolves without interventions by the strategic planners, or in spite of them.” (Aaltonen and Ikavalko 2002, 415)

> “In order to formulate suitable strategies, they must consider all aspects of dynamic environments and situations which they encounter. Generally speaking, there are two approaches to consider in competitive decision-making – the science and the art. It seems easier to apply the scientific approach in strategic decision-making, but research literature

tends to indicate that to make the strategies more effective, application of the art approach may be the essential one." (Wann-Yih Wu, Chih Hsjung Chou and Ya-Jung Wu 2004, 396)

In military strategic thought the distinction between the various phases of strategy and the strategy and tactics interplay has been studied and researched for centuries, where authorities like Clausewitz and Corbett are regarded for their observations of war. Clausewitz, for instance, highlights : The distinct differences between the policy level, the military level and the execution level; The interrelationship between strategy and tactics (Clausewitz 1911, 143); And, how well these two levels streamlined lead to victory, including continuous feedback from tactics to strategy.(Clausewitz 1911, 166) He also highlights how strategy makes the senior manager's course easier, more certain and ensures his/her understanding would be as close as possible to the objective truth. (Clausewitz 1911, 118)

Figure 1, below highlights the breakdown of the Leadership Model as highlighted by Clausewitz. It shows the breakdown into the Policy level, the Military Level and the Execution Level. The pyramid reflects on the importance of the decisions at each level. For instance, the closer to the top of the pyramid the higher up the Leadership Model the decision. For example, here the Visionary level would be higher up the Leadership model than the Strategy or Execution level. This helps to establish how Clausewitz viewed the decision making model used by the Prussian State during the mid 19th Century.

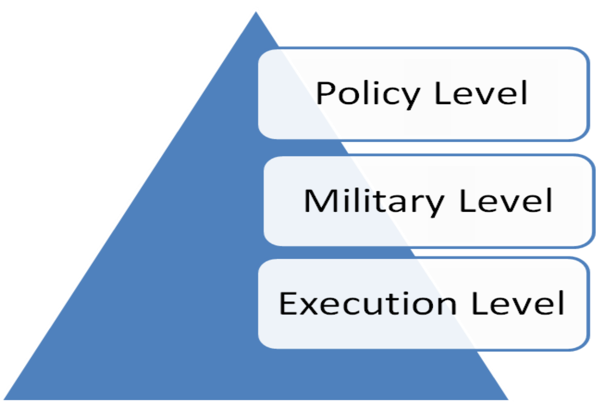

Figure 1: Clausewitz's Leadership model

Therefore strategy generally tends to have three distinct phases: Strategy formulation, strategy implementation and strategy execution. Here strategy formulation refers to the phase before a decision is taken to expand into a particular market and tends to deal with the vision for instance. Strategy implementation is taken to be the concerns in a particular market at the SBU level and strategy execution refers to the concerns at the operational to the individual levels where the line managers are given targets at the functional level, for instance. (See below for further details) This process has been broken down to highlight some of the concerns within each phase, however, as a whole the strategy process is difficult to breakdown into phases. This article takes the overall view that strategy is emergent and non linear (especially in the SME sector) and the interplay of the three phases together ensures the success or failure of the company to crystallize its vision into reality. Moreover, strategy is treated as an art and not a science where intuition, feelings and other holistic faculties of human beings are used to formulate a judgment based on less information than desirable (Kazmi 2008, 1567).

Furthermore, because the artistic process is not understood by main stream society therefore in the context of business strategy instead making the effort to understand the artist's mindset this article places emphasis on encouraging the artist to use frameworks which better allow for the vision to be externalised. Here externalisation refers to the process of making explicit the tacit and highlighting issues the senior management have to contend with before they start the execution phase. For instance, in the SME sector to ensure the Owner / Manager (who may be classed as the artist) has taken a broad range of considerations into account. This would help build a more accurate understanding of the concerns that need to be dealt with and help the staff to build a common base of understanding from which to execute the strategy and helps to minimise friction. Friction as per Clausewitz is the variation between the intention and the outcome. (Clausewitz 1911, 80) This variation can be minimised before the execution of the strategy by ensuring risks and complexities are dealt with. For instance, uncertainties are identified, converted into risk and minimised by factoring them into the execution. Therefore, by attempting to understand the uncertainties the Owner/ Manager of a SME can discuss the vision for the company with his/ her senior managers ensuring they all have the same understanding of what they are trying to achieve and ensured their areas of responsibility are discussed around a set of variables that allow them to externalise and cross pollinate their concerns on regular basis in a consistent way before committing resources to the execution phase. (This is further explained later in the article)

The notion of externalisation and cross pollination has been taken from the SECI frame work of knowledge creation, where the externalisation stage refers to where the individual becomes a member of the group (Nonaka 2009, website: Cyberartsweb.org) and cross pollination refers to the combination stage where communication and diffusion of the externalised knowledge takes place. (Ibid, website: Cyberartsweb.org) In context the externalisation process refers to the process where the Owner/ Manager (who is the artist) has to make explicit his/ her vision and the senior management have to ensure they understand accurately what the vision is. The cross pollination, (combination) process allows them to discuss the relevant matters centred around the made explicit vision as they have understood it, helps them to make contributions, and allows them to highlight their concerns. The C4I framework is used at these two stages to ensure the tacit to explicit process and the cross pollination process is focused around the variables in this frame work. This allows all parties concerned to have a degree of certainty, knowing what the prime focus of the interaction will be, what areas will be discussed and how they can add value to the process by attempting to communicate these matters in greater depth than otherwise, knowing the framework they are using will allow them to more effectively conduct business.

The three distinct phases of strategy highlighted above are broken down and explained in greater details below:

3.1 Strategy formulation

Mintzberg highlights how in SME's the strategy planning process is top down, it is informal, and is focused around the CEO. However, he also highlights how over the life cycle of the business this process tends to become more formal. He further highlights how this lack of formality and the emergent nature of strategy does not necessarily equate to a lack of a clear strategic vision. (Bell, Crick and Young 2004, 23) This combined with the personal nature of the relationships, the lack of resources and treating strategy formulation more of an art than a science shows how the strategy formulation experience is different. This different experience of strategy formulation in the SME sector also highlights a disadvantage that is seldom mentioned in that to understand the company's strategy the Owner/Managers mindset would need to be understood, however this cannot be done in the conventional way simply because of the lack of interest in the SME sector (see above). This lack of support at the strategy formulation phase further encourages the Owner/ Manager to be inward looking and reinforces a greater degree of subjectivity than otherwise, hence creating further problems with externalising the vision and communicating it to the senior management.

Overall, in terms of strategy formulation in the SME sector the Owner/ Managers are likely to be the centre of strategy formulation with an informal planning process and an in depth tacit understanding of what they would like for the company. (Harrington and Kendall 2006, 1387) Further, the strategy formulation phase is difficult to understand simply because there are no systems and structures commonly used to formulate strategy and the greater emphasis on the artistic school of decision making further complicates matters for others to understand what is being communicated and how to realise the vision accurately.

3.2 Strategy implementation

"…. - effective implementation of an average strategy, beats mediocre implementation of a great strategy every time." (Sterling 2003, 27)

"Thus it is suggested that there is a lack of agreed theoretical frameworks such that the current state-of-play resembles a somewhat incoherent knowledge base, with some consensus (as above) but many important gaps remaining to be filled-in." (Atkinson 2006, 1444)

Combined the two statements highlight how the lack of emphasis on strategy implementation can have a negative impact on how the strategy of a company is implemented. The first highlights the need to place a greater emphasis on the implementation as it highlights the common tendency of more emphasis on the formulation phase. They also highlight how the Implementation level and Execution level are considered to be one and the same. There is also a lack of research and interest in the implementation phase where there are no industry standards of any frameworks. The balanced score card framework is a performance management/operational level framework that companies tend to use at implementation level (Ibid, 1142), for example. Quotes below highlight the current state:

> "The noteworthy statement ". . . great strategy, shame about the implementation . . . " (Okumus and Roper, 1998, 218) captures the essence of the problem that strategy implementation suffers from a general lack of academic attention (Alexander, 1985; Edgar and Taylor, 1996; Noble, 1999; Aaltonen and Ika°valko, 2002; Otley, 2003). Indeed, Okumus and Roper (1998, 219) go on to observe that ". . . despite the importance of the strategic execution process, far more research has been carried out into strategy formulation rather than into strategy implementation . . . ", while Alexander concludes that

literature is dominated by a focus on long range planning and strategy “content” rather than the actual implementation of strategies, on which “. . . little is written or researched . . . ” (Alexander, 1985, 91). Reasons put forward for this apparent dearth of research effort include that the field of strategy implementation is considered to be less “glamorous” as a subject area, and that researchers often underestimate the difficulties involved in investigating such a topic – especially as it is thought to be fundamentally lacking in conceptual models (Alexander, 1985; Goold, 1991; Aaltonen and Ika°valko, 2002).” (Atkinson 2006, 1441)

“Thus there would appear to be a significant “gap” in the knowledge base at a time when the commercial environment is exhibiting significant changes. The transformation from the industrial to the information age is signalled by increasingly sophisticated customers and management practices, escalating globalisation, more prevalent and subtle product differentiation, and an emphasis on intellectual capital and enhanced employee empowerment (Johnson and Kaplan, 1987; Eccles, 1991; Kaplan and Norton, 1992; Hope and Hope, 1997; Huckstein and Duboff, 1999; Brander Brown and Atkinson, 2001). In this new world order successful strategy implementation becomes ever more important. Simultaneously, new performance measurement frameworks are evolving to fill the gap between operational budgeting and strategic planning.” (Atkinson 2006, 1442)

Given the lack of consensus and limited research in strategy implementation it is therefore appropriate to look to other sectors, such as the military, which are considered to be similar to business (Clausewitz 1911, 121) and apply lessons from their research and understanding. For instance, the military as a sector has greater depth of research on strategy to fall upon and has tried and tested systems and structures which can be customised for the business sector.

The primary purpose of theory here therefore is to clarify concepts and ideas which have been mixed together. Strategy and tactics tend to be two such notions, which are intrinsically differing activities yet tend to be mixed with one another. A clearer understanding emerges of each once their natures are better understood. (Clausewitz 1911, 94) Clausewitz highlights the difference between strategy and tactics, where “strategy is the theory of the use of combats for the object of war and tactics is the theory of the use of the military force in combat” (Ibid, 86) Via Group's (a management consultancy) Holistic Leadership Model (Class handouts 11/09/09) see figure 2 helps to highlight this separation between strategy and tactics in the business world, where level 1 and 2 focus on the Individual and Operational levels of the business and Levels 3 and 4 focus on the Strategy and Visionary levels, respectively.

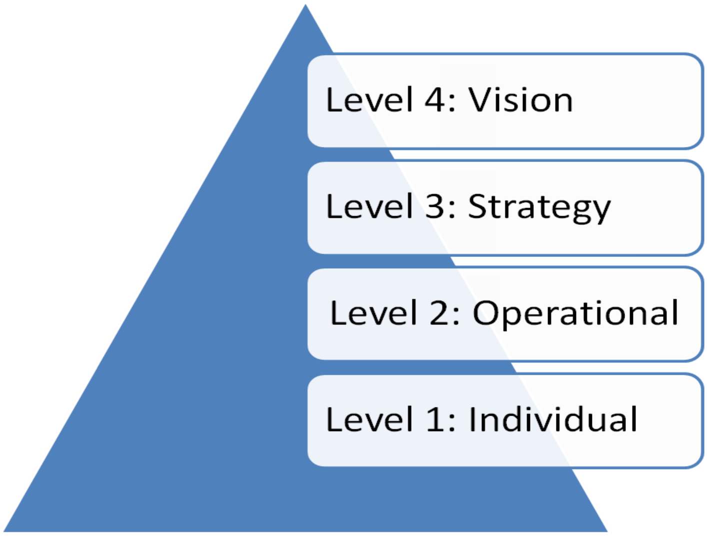

Figure 2: Via Group Holistic Leadership Model, highlighting the various levels of decision making

This model highlights how at the tactical side highlighted by Clausewitz falls into Levels 1 and 2. The strategy side as defined by Clausewitz falls into Level 3 and vision and leadership concerns fall into Level 4, respectively. In context, Level 4 is where the policy level concerns are dealt with, such as whether or not to use the military as an instrument for war and Level 3 is where the military level concerns are dealt with, such as how combats are to be coordinated, controlled, commanded and what the intelligence has to say about the target theatre. This military level of strategy is, therefore, between the policy level strategy and the operational/executional level strategy.

The policy level is where a decision is made to use the military to gain a set objective. (Clausewitz 1911, 25) Here Clausewitz highlights how the military is a means to attain a particular objective set by the state. The military strategy is where the military as a profession takes ownership and decides how to implement the mandate provided to it by the state. The identified uncertainties are then converted into risk and these risks are then minimised and managed in ways that deliver the scope. The complexities are also understood and managed to ensure negative side effects are managed positively before turning to the operational level and executing the relevant tactics to deliver the scope. This process ensures there is a continuous two way system, where new uncertainties and complexities are factored in as they emerge and dealt with at appropriate levels depending on their importance.

In other words, main stream business thought currently does not distinguish between the Implementation level and the Execution level (Robin Speculand Comment, Linked In forum October/ November, 2009, not included). For instance, in the context of risk and complexities at the SBU level. SBU level of risks are different to that of the operational level, where senior managers tend to make decisions that involve a higher degree of risk and operational managers tend to execute knowing that these risks have been considered and factored in. As in project management portfolio risks are different to program levels risks, which in turn are different to project level risks. The levels of risk senior management have to deal will help them to identify the risks by converting uncertainty into risk, (Wickham 2008, 202) deal with the variation between the actual risks and perception of risks (Ibid, 203), and how to lower the risks by understanding their target market more accurately. Therefore, by attempting to distinguish between the implementation risks and operational risks the management of a company can help to identify uncertainties, convert them into risks, attempt to understand them, try to negate their impact, and lower the degree of friction in realising the initial vision before they commit resources to the operational phase.

Further, in an International SME complexity can generally be beyond comprehension and may stem from causes that cannot be eliminated therefore the scale of complexity tends to be high (Klaas 2008, 241). 25 - 35% of costs have been identified as complexity driven (Ibid, 239), it can fossilise in the organisation (Ibid, 242) and managing complexity requires complications are identified and eliminated if they do not add value. (Ibid, 242). The scale of complexity managers have to deal with is proportional to their level of responsibility. Here complexity is seen as the by product of everyday managerial decisions (Ibid, 239) and are a side effect of the number of challenges a company has to contend with (Ibid, 240). Adding complexity is seen as acceptable as long as the added value is proportional. (Ibid, 240) However, once diminishing returns start to set in complexity management starts to become a significant concern given the impact on fixed costs. (Ibid, 238) For Instance, the scale of complexity SBU managers have to deal with is different to the scale of complexity operations managers have to contend with. Therefore by separating the two helps each level of management to more effectively identify the hidden linkages between costs, activities and the decisions that produce them (Ibid, 242). Where the complications add no value they can be managed in a way that fixed cost are reduced (Ibid, 242) without having aproportional impact on the company's competitiveness. The common way in which to deal with complexity in a company is a mix of the two basic approaches of simplification and reconfiguration (Ibid, 240-241).

The Holistic Leadership Model helps to identify what levels of risks and complexities are to be dealt with at what level. The interactions at level 4 and level 3 will deal with the uncertainties and complexities highlighted between the visionary and senior management and the interactions between 3 and 2 will highlight the operational level risks and complexities, which have to be vertically incorporated into the overall vision before operations levels decisions are made. For instance, senior managers and the Owner/Manager may decide that expansion into a particular market may be the future, however operational managers may highlight that their functions do not have the capacity to realise the vision as intended profitably, given the complexities that may be generated and highlight factors that may not have occurred in the level 4 and 3 interaction. The greater the interaction the greater the number of uncertainties and complexities the management can identify, convert and manage and thereby lower the friction between the initial vision and the actual outcome.

Overall, strategy implementation currently is considered to be the same as strategy execution in current main stream business thought, whereas military strategic thought states otherwise. Further, the differing levels of risks and complexities at SBU level and operational level justify the need to separate strategy implementation from strategy execution. This separation helps to clarify the difference between strategy and tactics and allows various levels of management to interact with a greater understanding of what to expect from their interactions. For instance, the level 4 and level 3 interactions will expect to deal with a particular level of risk and complexity as a matter of design and ensure level 2 risks and complexities have been externalised and cross pollinated before the execution phase starts. In the context of International SME’s by separating the strategy implementation from strategy execution allows each level of management to understand more comprehensively the kind of risks and complexities that need to be dealt with and allows for a more accurate understanding of how to realise the vision of the Owner/ Manager.

3.3 Strategy execution

The strategy execution phase of strategy tends to deal more with operational matters such as budgets, forecasts, variation analysis, operations management, quality management and other systems, structures and functions that ensure operational risks are identified, minimised, and the impact of the risks do not hinder realising the vision. There is significant research in this area (Atkinson 2006, 1447) in relation to strategy implementation. This level of the strategy process appears to be well understood, researched and executed. They are numerous frameworks from TQM to the ISO's which ensure that the objectives set are achieved and the company attains the set targets. Here the frameworks commonly used by the LSE sector are used by the SME's where they are expected to scale up onto them. This is understood to give them credibility in their target markets and ensures they have recognised quality management systems in place.

Overall, the depth of research in this phase of the strategy process shows how well it is understood and how it helps companies to gain recognition among its peers in other parts of the world. For instance, a Six Sigma black belt would mean the same in any part of the world and this helps with understanding the systems and structures used. For instance, if a company is trying to communicate their systems and structures and mention Six Sigma their audience would understand the quality management systems and structures in place.

4 What is a C4I Framework?

Epstein highlights how using frameworks (Models) is a standard experience. He suggests where they are no formal frameworks implicit frameworks are used. These implicit frameworks tend to be person specific and their logical sequences are unknown. (Epstein 2008, 1) In other words, we all use frameworks of some kind, where we do not use formal frameworks we use our own frameworks not realising the variables we use and they may be different to every ones else's. These implicit frameworks therefore have the potential of lacking consistency, make communication in a social environment more difficult and increase the complexity of the interaction.

Explicit frameworks tend to allow assumptions to be considered in detail and the impact of each variable can be the areas of focus. (Ibid, 2) For instance, 'if this than that' dialogues can be built, where the nature of the subject area can be better understood. Explicit frameworks allow all members to externalise their understanding of the variables in the framework and by cross pollinating their understandings build a common base of their understandings. This allows for a dialogue to be built in a disciplined and constructive way. (Ibid, 2)

Further, Eshun (2009) highlights how frameworks can have an impact on mental models, which in turn can have an impact on behaviour. They can help to change perceptions, cultural values, and can help to encourage new ways of behaving. (Eshun 2009, 164)

Frameworks therefore help to build an understanding of how a company can consistently convert uncertainty into risk, identify, and mange complexity before it attempts to minimise their impact along with allowing International SME's a framework to help to externalise and cross pollinate the tacit understanding of the Owner/ Managers, senior management, and operational management at the SBU level. C4I frameworks are commonly used by NATO to implement their military strategy. Department of Defence uses C4I systems as the nervous system of the military (National Research Council 1999, 27) and they are used to help commanders to make more informed decisions ensuring the execution of those decisions are more accurate. (Ibid, 28)

C4I stands for Command, Control, Communications, Computers and Intelligence. (C4I.org, web article). Command refers to the authority a commander has by virtue of his rank or assignment. Control refers to the regulations that need to be considered. Communications refers to the means of sending messages and receiving messages. Computers refer to the ability to electronically compute information. And Intelligence refers to information about an enemy. These general definitions have been taken from a standard dictionary (Dictionary.com) and highlight the general the use of the words in common practice.

The C4I framework provides the military level commander with an explicit framework to help consider the necessary assumptions focused around the variables highlighted. This ensures each variable has been considered and matters relating to each variable are discussed, accurately understood and communicated to the relevant people. For instance, by continuously using the C4I framework a military level commander will build a process of thought that will ensure he/she focuses on the variables of the framework as matter of routine. This allows commander to build a mental mode of thought where all his interactions will be based around the variables in the framework. These interactions will highlight the uncertainties that he/she has to deal with, which to convert into risk, and how the risks are to be managed. Further, which risks are strategic, which are tactical, and allow complexities to be identified and managed in a similar way. This framework helps to narrow the focus of the commander onto a set of core variables that ensure all the relevant information and has been considered and all relevant issues related to them have been discussed with the relevant people.

5 Customised C4I framework for strategy implementation in the International SME sector

The customised C4I framework can aid the senior management of an International SME to identify the uncertainties of the target market in structured, consistent way, and help to identity the complexities that are likely to be generated. By having a framework to help identify and understand risks and complexities at the SBU level can assist a company to build internal capacities to effectively manage them. Where the company as a matter of routine converts uncertainty into risk and tries to understand how complexities can be managed and incorporated into operational level concerns before they commit resources. For instance, the proposed C4I framework allows the senior management to gain an understanding of the leaderships concerns, collaboration variable allows for the alliances needed to considered as a matter of course, communication highlights the image and identity perceptions issues that may help with realising the vision, the computing variable allows them to consider the ICT concerns and how the processing power of computing can be leveraged. And, finally, intelligence ensures all relevant background information, both internal and external, is taken into account along with the operational concerns of managers at the SBU Level.

The C4I framework variables to be used are those that are more relevant to the International SME sector. This framework will allow International SME's to better understand the implementation phase of their strategy. In other words, it will allow senior managers to understand how to implement their international business strategy by converting uncertainty into risk and attempt to understand and manage the complexities that exist and will be generated. It ensures the overall vision of the Owner/ Manager is communicated effectively and the related tacit concerns are externalised, cross pollinated and understood accurately by the senior managers. And, finally, it engrains the strategy tactics interplay vital to success to be part of everyday business management. The variables of the C4I framework here are: Command, Collaboration, Communications, Computing and Intelligence. The Command variable refers to the leadership, the control of the process and the coordination of various aspects. The Collaboration variable refers to the alliances, partnerships and working relationships the company has to build in order to implement the set vision. The Communications variable refers to all the communications from the corporate level to internal and external communications used to build the company image and ensure their identity is maintained. The Computing variable refers to the ICT technologies available that can be used to ensure the data gathering, the data analysis, the conversion into information, the utilisation of information as an asset, its storage, its access, life cycle and impact on the company as a whole is taken into account. The final variable Intelligence looks at the market research capacity of the company. The various strategies, methods and tools used to gather data and information externally about the target market and internally about the capacity of the company before operational execution takes place. This helps senior management to gain a more accurate comprehension of the state of affairs and ensures they have a more accurate understanding of how to realise the vision. In a sector where strategy is accepted to be emergent, non linear and an art the need to identify uncertainties and complexities is higher. This is in a sector where the Owner/ Managers tend to have in depth tacit understanding of their vision, which may not necessarily be externalised and cross pollinated with the senior managers accurately (See above). This framework customised for the purpose helps to ensure the senior management nurture their mind sets to help build their capacities to identify these uncertainties and complexities using a common base, are able to consistently convert them into risk and understand how to minimise the impact of these risks and complexities before they start to deal with operational concerns.

5.1 Command

International SME's tend to have an informal decision making process which is emergent in nature. The informal nature of the Command variable in the International SME sector allows greater access of the decision maker to the front line of the company. In terms of coordination, the senior management have to ensure their activities are being coordinated both vertically and horizontally. Vertically, by ensuring the company is growing internally and their identity is being maintained. For instance, it is a common experience in companies to change various aspects of their business hoping this would help them grow more sustainably ignoring what has worked for them in the past. This variable allows the senior management to consciously consider the impact of their decision on these kinds of matters. Horizontally, the senior management have to ensure that business units are complementing each other’s activities. For instance, the activities generate the synergy effect, where 1+1 = 3 or more and not less than 2. In other words, all the business units are working towards achieving the overall vision of the company's Executive Management.

The Control variable ensures the activities of the company are regulated to how the senior management wish them to be. Types of regulations can be the legal considerations they may need to take into account. For instance, the decision makers are aware of how to ensure the company’s activities in the new target market are regulated. This combined with the other sub variables in the Command variable ensures that the senior management of the SME have consciously discussed and thought about these matters before going on to the performance management stage where the budgets, targets, and other operational level matters are considered.

5.2 Collaboration

The Collaboration variable highlights the various relationships the company may need to consider. These relationships range from working relationships with companies on a project by project basis to strategic alliances. Here by having working relationships each member benefits by having access to the skills and expertise of the other based on a need basis. Each company would work with the other if their in house capacity was insufficient to deliver the customer requirements. For example, if a company took on a project where some aspects would need additional capacity added to the company, here instead of adding this additional capacity they may simply have a working relationship with another company that may be willing to take on the extra work on a demand basis. Strategic alliances on the other hand are partnerships built by the companies to co produce a product or service where each member commits to providing skills, expertise and resources for the specific purpose. These alliances vary depending on the needs of the companies but usually show a deep understanding between them centred on a product. Further, the need for collaborative efforts in the SME sector tends to be higher for reasons ranging from financial constraints to lack of in house capacity to take on large Projects/Contracts.

5.3 Communications

The Communications variable ensures that the company communicates with its various publics effectively highlighting who they are and what they are about. "The nature and role of communications are rarely the focus of research or discussion because they are taken to be self explanatory (e.g. Tourish and Hargie, 2004b)." (Kalla 2005, 303) This highlights the common concern of why communications can be over looked at the SBU level and how by having this variable as part of a framework ensures the Senior Managers of a company are aware of its importance. In other words, because:

> "Communication is viewed as a complex, multi-issued, and dynamic process in which global managers exchange meaning."(317, Corporate Communication Challenges)." "All

business activity involves communicating. Within global businesses, activities such as leading, motivating, negotiating, decision making, problem solving, and exchanging information and ideas are all based on the ability of managers and employees from one culture to communicate successfully with colleagues, clients and suppliers from other cultures. Communicating effectively challenges managers even when working domestically with a culturally homogeneous workforce (Adler, 2002)." (Ibid, 320)

In the case of International SME's this becomes a significant concern given their international exposure and the greater degree of complexity they have to deal with. Here the different cultures they are exposed to on daily basis ensure the communications understanding of the company is stretched. This is true for the corporate level, internal and external communications of the company. Here the corporate level is where the company deals with the board range of stakeholders ranging from the all external publics to identity issues to image perception via the brand image. The Internal Communications refers to the communication within the company and the external communications refers to the target market publics of the company. There are various models of communication which are used by companies to build their systems and structures around. The three most common are: The Western Model; Intercultural Communications Model; And, the Dialogical Communications Model. The Western communications models treats communications as a linear process of transmitting a message from the sender to the receiver where the main parts of the process are: message, channel and receiver. (Ibid, 320) The Intercultural Models factors in the cultural context of the communication. For instance, a typical process would be sender, message, channel, noise, receiver, feedback and cultural context (Jandt, 1998). (Ibid, 320) And the final model is dialogical communications model (Yoshikawa, 1987) where the interchange of communications is considered to create meaning "It depicts the symbolic representation of a search for ways of understanding interpersonal, intercultural, and international relationships within which people of diverse cultures can reflect on their cultural differences as well as their similarities." (Ibid, 321)

By being exposed to these models of communications the company can then decide which to use, when to use and to what effect. For instance, an International SME may decide in one region where there is a large degree of diversity (such as the EU) a particular model may be appropriate in one part and not in another. For example, the Latin side of the European Union is different in many ways to their Northern European counterparts. The Italians, French and Spanish have a different business culture to their Northern European counterparts such at the Germans, Dutch and Danes. This is also reflected in their communications and how and when various communications models are deemed appropriate. For example, in the UK the traditional Western model of communications may be appropriate given various formalities. This diversity would need to be factored into any SBU communications understanding if their target market is the European Union. The communications variable overall highlights the need to look at the communications channels, models and publics at the SBU Level to ensure these concerns are understood and factored in before the performance management targets are sets and managers are asked to meet them.

5.4 Computing

The Computing variable refers to the power and speed of the information processing and how this has an impact on a company. This combined with access to ICT technologies allows a company to benefit disproportionately from streamlining its operations and building sustainable competitive advantages based on knowledge creation, information management and leveraging information to a greater degree than otherwise would be possible. This is particularly true in the case of service based medium sized companies than product based companies in the US. (Iansiti, Favalovo, Utzschneider, and Richards 2005, 11) Computing allows a company to increase its capacity to gather data, convert it into information, add value to it and convert it into knowledge. For example, a SME can use a database to gather data and store it, convert it into information based on the context and add value to it by analysing it and converting it into knowledge in near real time. This has an impact on the information life cycle and the accuracy of information at the disposal of the decision makers is improved. This helps with the decision making by allowing senior managers to have an accurate understanding of the developments in the market place and how their smaller size can used to be gain a competitive advantage, for example.

A recent study by HBS (Ibid) looked into if IT added value to medium sized companies, here they defined medium sized companies as companies that employed between 250 – 500. Overall they found that IT helped Medium sized companies to grow more profitably and improved their prospects for further growth. They suggested that the growth of the company dictated the investment in IT and hence the leading factor for the investment being the company's need to grow which entailed greater computing power.

5.5 Intelligence

Intelligence is commonly taken to mean superiority of understanding (Oxford English Dictionary). In context therefore it delivers a superior position of understanding. In the business context intelligence is treated to be the same as market research in this thesis. Here market research allows for an understanding of the target market, for instance, and the accuracy of this comprehension then has an impact on the decision making within a company and relates to the information that managers use to reduce uncertainty and complexity. For instance, at the SBU Level, to have a sound understanding of the target market would allow senior managers to decide when to enter, how to enter, what to offer, how to offer, what will work and why it should work externally and staff motivation and any related concerns internally. This allows them to understand more accurately the friction the managers are likely to come across and any major interferences at this stage. For example, in the case of a company entering the EU market, the senior managers understanding will be improved if in the strategy implementation process they understood how the different markets within the EU operated. Unlike the US the EU is not a homogeneous market and if senior managers are used to dealing with the US market then market research can highlight these differences, which may be of importance when deciding on a product range for the new target market for instance. In terms of the SME sector in particular market research is often a neglected aspect of conducting business, as highlighted earlier majority of the SME's in the UK have no systems and structures to conduct research, both market research and product research, however they do provide the majority of the commercial innovations in the UK (What can small business do for Europe? 2006,17) This highlights the current state of affairs where in a major economy the majority of the business have no systems or structures to understand their target market in a formal manner.

Further, market research helps to ensure their resources are more accurately directed. This encourages the International SME to understand the risks and their impact before they commit resources to the execution of the strategy. Market Research can be divided market into: External and Internal. Where External deals with external environment in general and target markets in particular. The internal side of market research deals internally within the company and attempts understand what is going on within an organisation. For instance, staff satisfaction may be a concern, but not highlighted because no systems and structures exist to tap into this concern. Here by understanding staff the company can help them build their skills and expertise and ensure the company benefits at the same time. Further, the concerns that cause friction during the execution stage can be understood in a more formal manner and can be dealt with as a matter of routine. (Schraeder, Matuszek, Morrison & Self 2008, 187)

Overall, the market research 'I' can help a company to build an in depth understanding of their target markets and lower the business risk of entering new markets, introducing new product ranges, understand the complexities being generated, making sure the company is internally capable of delivering the set vision and understanding how the company is progressing in various ways. For example, front line staff feedback is vital to the decision making process and internal market research provides this link in a growing company where managers have an understanding how the company is progressing.

6. How International SME's can use the C4I paradigm to implement international business strategy?

International business strategy deals with how a company can successfully compete in a target market. This target market can be as broad as a region like the EU and the US or as narrow as a single country. In the context of International SME's a company is likely to be targeting and operating in multiple international markets at the same time. This creates a degree of complexity which can further complicate the strategy process in a company where the Owner/ Manager has an in depth tacit understanding of the vision and has no explicit frameworks to help externalise and cross pollinate it with his/ her Senior Managers. The lack of explicit frameworks generates a greater degree of friction and can have an impact on the implementation and the execution of the strategy. This potential for friction combined with the high degree of complexity International SME's face creates greater uncertainties and can have an impact on the risk of failure. For instance, to illustrate this a hypothetical company who fits the profile of an International SME is discussed below. This helps to highlight the likely uncertainties and complexities any International SME will have to deal with, provides a deeper understanding and greater clarification.

If a company is based in Singapore (Zooters Ltd) with a research and development centre in India and a manufacturing base in China with SBU's for the Japanese and US markets. Zooters Ltd international exposure alone dictates that the level of complexity would be high. If the Owner/ Manager decides to expand into the EU. This would need to be externalised and communicated to the senior management who then communicate this vision to the operational level managers. This process creates further complications because in the SME sector strategy is emergent, non linear, more of an art than a science and the distinction between strategy and tactics can be blurred. (See above) In the case of Zooters Ltd this would mean the Owner/ Manager discussing the vision with his/ her senior managers, level 4 and level 3 interactions. Here the Owner/ Manager externalises the vision by interacting with the senior managers. A greater degree of externalisation is encouraged by ensuring all the variables in the explicit framework are discussed to a sufficient depth for them to understand the vision accurately. Once this vision has been externalised the senior managers then add value to the interaction by ensuring they, along with the Owner/ Manager, cross pollinate their understandings. This helps to build a common base of understanding for all members to the interaction, ensuring they all can attempt to identify uncertainties that need to be converted into risk, identify the complexities, and ensure the senior managers have an in depth understanding of how to manage them at the SBU level. The next level of interaction allows for the senior managers to interact with their operational managers (level 3 and level 2 interactions) to factor in the operational risks and complexities that are likely to result from realising the vision. There by increasing the effectiveness of the communications and the staff motivation by building a more inclusive process with an explicit framework. This helps to lower the sources of conflict and resistance, which are considered to be leading reasons for why strategies fail (Schraeder, Matuszek, Morrison, Self, 2008, 187).

Overall by dividing the interaction into different levels (level 4 and level 3 and level 3 and level 2) ensures the company gains a better understanding of what is strategic and what is tactical, allows for a more accurate understanding of the vision and a common base of understanding for all members to the interactions. This also allows Zooters Ltd to externalise the vision, cross pollinates it, identify the relevant uncertainties, understand the complexities and clarify the differences between strategy and tactics. Hence, reducing friction, formalising the strategy process to a greater degree, ensuring the company growth is sustainable and the risk of failure being lowered by allowing the company to more effectively compete in the target market. In other words, by consistently using this explicit framework at level 3 Zooters Ltd builds in house capacities to identify the various risk, complexities, and helps to separate the strategic from the tactical on a regular basis as part of daily management of the company.

The management perspectives to be used here are to highlight the kind of uncertainties and complexities that are likely to arise in the process of this expansion and are: Cultural Management, Financial Management, Marketing Management and Human Resource Management. Each of the management perspective will have a strategic impact and an operational impact. The interaction between level 4 and 3 will look at each management perspective from its strategic aspect and the level 3 and 2 interaction will look at the management perspective from its tactical aspect. This allows for the variation between the strategic and tactical to be understood more accurately and therefore a clearer understanding of what is to be dealt with at what level and by who emerges. This centred around the explicit framework allows an emergent non-linear artistic in nature strategic process to be more accurately understood and lowers the friction factor. In other words, the risk of failure is reduced and the complexities to be managed are more accurately understood. For example, in the case of financial management one aspect to be considered could be the impact of exchange rate push through (ERPT) on the goods and services on offer in the new target market and another aspect would be SWAPS and forward contracts that would need to be entered into. The former is more a strategic concern and the latter more an operational concern, where the former deals with the impact changes in the exchange rates can have on profitability and its knock on impact on marketing concerns, for instance, and the latter deals more with the day to day financial interactions that need to be managed. Here at the level 4 and level 3 interactions the ERPT is more likely to be discussed and considered using the C4I framework and the level 3 and level 2 is more likely to deal with how the payments are going to be received and made and how to reduce the complexity and uncertainty using various financial tools based around the C4I framework. This helps to clarify what is strategic and what is tactical, helps to build a mindset based around an explicit framework for this purpose, ensures the vision is accurately understood, friction is minimised, uncertainties and complexities are more accurately understood.

Further, this helps to externalise various aspects of the vision in the level 4 and 3 interaction and allows the senior managers to add value by cross pollinating them and thereby building a common base of understanding. The level 3 and level 2 interaction in similar fashion helps to externalise concerns that may not otherwise be highlighted and allows the senior managers to gain an understanding of what is going on in the company and the direction the company is taking based around the variables in the framework. This kind of interaction also provides operational managers an opportunity to highlight areas of concern and makes them feel part of the process. By cross pollinating with the operational managers the senior managers build a common base of understanding of how the company is to progress and provides the linkage between strategy and tactics. Thereby ensuring the strategy tactics interplay becomes a normal experience and the variation between the two are explicitly understood. This lowers the risk of failure and an accurate realisation of the artistic vision of the Owner/ Manager through flawless implementation and execution of it.

Dealing with each management perspective focused around the C4I framework in turn.

6.1 Cultural management perspective

The command variable also incorporates the control and coordination variables as sub variables. In the context of Zooters Ltd expansion into the EU this explicit variable encourages the interactions (level 4 and 3 and level 3 and 2) to focus their attention on matters related to it. Dealing with the level 4 and 3 interaction first. The cultural management perspective would encourage them to consider the various leadership/ management styles and which are relevant to their target market. For example, Germans may prefer a different management style to their British counter parts. This has an impact on how the local staff respond to their managers and how they are able to motivate them to achieve their targets. This variation between the differing cultural aspects highlights the complexities of arranging the structure of the SBU for the EU. For instance, given this variation in styles would it be more appropriate to break down the SBU into regional offices where each regional office covers a target region and the HQ office coordinates their activities. This would help to ensure the control measures are dealt with locally to make sure regulations are being met. This variable at this level highlights the kind of uncertainties and complexities that are externalised and cross pollinated between the Owner/ Managers interaction with the senior managers. The level 3 and level 2 interaction around this variable would ensure the operational managers understand why a particular course of action is appropriate and helps to externalise their tacit concerns and cross pollinates it with the senior managers. For example, in this case if the level 4 and 3 interactions have built a common understanding that a number of regional offices in the target region would be better and their activities would be coordinated by the HQ office in Singapore, the operational managers may highlight how inefficient this may be and cause problems for their functions in that they would have to deal with multiple offices, which may cause problems with how many staff they need to have to ensure all matters are dealt with appropriately. This concern can then be vertically integrated into how the regional offices are organised.

The next variable is the collaboration variable. Using the Cultural Management perspective the level 4 and level 3 interactions would look at the potential of working with other companies in various ways. For instance, the Owner/ Manager may like Zooters Ltd to be part of an ecosystem of companies where their products would be of value and allow them to build a presence in the EU. Therefore building collaborative initiatives with other companies to supply larger companies may be part of this vision. However, the level 4 and level 3 interaction may highlight how the differing working cultures may lead to greater complexities than can be managed at this stage.

They may decide to look for ecosystems where their working cultures are more similar (this in the context of the EU may mean looking for regions and sectors where they believe their working cultures would be similar). Therefore, reducing the complexities of the interactions and reducing the risk of failure of the collaboration. When this interaction occurs between level 3 and 2 other issues may be considered like languages used even when there is one company language. For instance, operational experience may show that even though Zooters Ltd company language is English each regional centre tends to use their local language for their day to today interactions and their local version of English tends to be different. This then creates complications when dealing with someone from another region. Thereby, helping senior managers to understand what concerns to look for in potential Collaborations and how to ensure win win relationships are fostered.

The communications variable allows the level 4 and level 3 interactions to discuss how to build their communication capacity in the EU centred around the management perspective of culture. This may include looking at the appropriate communications models to use for internal communications. For instance, parts of the EU may prefer the Western Communications model, where there is a sender, receiver and the message. This may not be appropriate for all the EU regions, given how different the cultures are. The interaction here would allow them to consider how to build a mix of communications models to ensure all their internal communications for the Business Unit has some consistency for internal marketing purposes. The level 3 and level 2 interactions would highlight the experiences of the operational managers and allows senior managers to understand what has been working, how the company culture is growing, and the direction it is taking. This allows the operational managers to highlight their thoughts focused around this variable helping to build greater sense of ownership and allows for plurality of thought to be incorporated. Any concerns that are considered to be of value can then be vertically integrated into the vision and helps the senior managers gain a better understanding of the kind of complexities there are likely to be experienced and are able to identify a larger number of uncertainties.

The computing variable allows the level 4 and level 3 interaction to focus how cultural management can be used to build their competitive advantage based around technology in the EU. For instance, they may discover the variation in how people use technology is different across the EU. For example, in the UK there is a tendency not use technology as much as say in the Nordic region, where the vast areas the countries cover encourage people to use technology to a greater degree. This may then have an impact on how technology is viewed in the work place. They may also have to look at how the various regions within the EU use the same technology but in different ways. For instance, mobile phone usage may be higher in the Nordic Region than the UK, but in the UK the phone users may be used the phone to listen to music more than voice calls. This variation in behaviour can then be seen using the cultural perspective to see if it's a common cultural trait and how it is different across the target region. The level 3 and level 2 interactions can then highlight how their existing functions are using technology, the direction they are taking and how to ensure the 4 and 3 interaction factors this in.

The intelligence variable would allow the level 4 and level 3 interaction to consider the market research they have conducted. This focused around the perspective of culture would allow them to understand what other companies are doing, how they have managed this kind of market entry, what has worked for them and the impact this has had on their corporate cultures, externally. Internally, this variable would allow them to look at how their company culture is developing and the direction it is taking and how it fits the vision and how to build it in the target market. For instance, because there is little social welfare coverage in most of the host countries of their existing markets this is reflected in the employees benefits. This package may be of limited attraction in the EU given the members states tend to offer these benefits funded by taxation. How they build a compensation package then has implications for their perspective employees and the impact on the internal identity. For instance, they may be building an internal brand where they are considered to be a sensitive and caring employer and their package may reflect this. However, the new package would have to reflect this in the local markets according to local standards. The level 3 and level 2 interactions would then highlight the operational managers' views on the variation in the packages and how they may have an impact on the current staff see and feel about what parts of the package are being discussed. For instance, a concern may be if a staff member has to spend time in the EU his/ her package would change to local standards. When he/ she returns the package would revert back to the original package, however this may mean loss of benefits by no contributions for the duration while he/ she away. This helps to highlight the kind of complexities and uncertainties that may arise and allow these matters to be factored in early on in the process. It further allows the senior management to incorporate what kind of risks they are willing to take, which risks they are not and the kind of complexities that are likely to arise. Here by going through this process the Owner/ Manager has increased his understanding of the kind of uncertainties involved in the process and the kind of uncertainties and complexities that are likely to emerge. The senior managers have a more accurate understanding of the vision by going through the cross pollination phase and have a better understanding of the complexities from a tactical point of view and are able to build a communications channel with their operational managers, where these complexities are highlighted and incorporated into the strategy as they emerge. This helps to build the tactics strategy interplay which once streamlined leads to victory and allows the senior managers course more certain and therefore more successful as highlighted by Clausewitz.

6.2 Financial management perspective

Using the first variable of the framework, command. The level 4 and level 3 interactions would look at how the financial aspects are to be managed, controlled and coordinated. For instance, their current bank may have a presence in the UK and not in any other country, however given the relationship with them they would like to keep their business with them. This raises the complexities factor. How are these matters to be coordinated? For example, if the HQ office is to coordinate the various offices activities in the target region, how is this to be organised with the flows of cash. How are the local managers to build the financial side of their offices? What kind of local financial privileges are they to have? Can they enter into financial transactions locally? These kinds of concerns would highlight the kind of uncertainties and complexities that are likely to arise. The level 3 and level 2 interactions would highlight how the budgets have been working and what kind of variation analysis has been used to what effect. The various experiences operational managers have in their local markets and what kind of experiences are normal and how the lessons these experiences can be used in the target region.

The collaboration variable helps to ensure the level 4 and level 3 interaction looks at the potential of working with other companies in the target region or in the HQ country that may have a presence in the target region. This interest will be focused around the financial management perspective. The kind of collaborations may range from cost sharing of offices to sharing staff for various purposes. For instance, it is common to outsource or employ local sales companies to build momentum and gain access to local companies. The level 3 and level 2 interactions may highlight the operational complexities of using outside skills and expertise and the high cost of integration. These kinds of complexities and uncertainties then allow the level 3 managers to understand how to more effectively realise the vision.

The communications variable will ensure matters such as the accounting standards and financial reporting matters are considered at the level 4 and 3 interaction. For instance, Zooters Ltd currently follows the International Financial Reporting Standards. This may be common in the UK and but other EU countries may follow their own standards or may not have migrated onto these standards yet. This creates further complexities and identifies areas of uncertainties that need to be converted into risks. Different financial communications methods can easily cause confusion and show a profit where there is a loss. The level 3 and 2 interaction can remind them of the need for consistent accounting methods and the complexities of changing or using other standards.

The computing variable would allow the level 4 and level 3 interactions to look at the financial management perspective using the technology factor. For instance, this interaction may highlight how complexities can be lowered by working with their current bank and using their local branch in the UK for major transactions and other online payment players for smaller transactions. Companies like Paypal could be used to pay for travel expenses directly from the HQ office or their current bank can issue the company corporate credit cards with extended limits to cover expenses, for instance. This helps to lower financial risk of operating in a new region where Zooters has not built a local presence yet. The level 3 and 2 interaction may highlight operational manager's knowledge of how the current staff feel about these issues. This helps senior managers understand the risks that are likely to emerge and how to manage them along with understanding the complexities that are to be generated.

The intelligence variable would allow the level 4 and level 3 to understand the financial climate in the target region. They may decide the local markets are too over heated to enter immediately and prefer to wait till matters have stabilised. The market research would also help them understand what the normal experience is from a financial management perspective. How companies in the region conduct cross border transactions, what sources of payments they use and other similar concerns. The level 3 and 2 interactions would then help to highlight the internal methods that are being currently used. This ensures they understand what is going on in the company at the moment and helps them ensure the management of the direction is in line with the overall vision.

In terms of externalisation and cross pollination. Here by using the C4I framework the cultural and financial management perspectives. The level 4 and level 3 interactions have ensured the vision is more accurately understood by having to look at it from the various management perspectives using the explicit framework. This helps to externalise a greater depth of the vision and the cross pollination allows senior managers to identify relevant uncertainties and complexities from a strategic view point. Thereby, ensuring all members at this level have a common understanding of what the vision is and their part in realising it. It helps the senior managers to accept the vision and gain an in depth understanding of what the artist is trying to achieve via their skills and expertise. The level 3 and level 2 interactions ensure that tactical concerns are factored in and any operational matters that may be seen as limiting factors can be dealt with before resources are committed to realising the vision. The Management perspectives used help to highlight the kind of uncertainties that may exist, the kind of complexities that may arise and need to be managed. The greater clarity between strategy and tactics helps the senior managers to understand what is strategic and what is tactical and how they can be managed. It also helps to develop a mental process of how to think about what matters and whose responsibility they should be. This increases the flow of communication between the various levels based around the explicit frameworks ensures the communications are focused around variables that help to realize the vision.

6.3 Marketing management perspective

Some of the key concerns they would use in the externalisation and cross pollination process are: The kind of account management capacity to build, Innovating the product for the local market, distribution of the products and how to price them in the EU region. The command variable would ensure the level 4 and level 3 interactions focuses on how the marketing is managed, how it is to be coordinated and how it is to be controlled within the target region. For instance, who will be responsible for what and where he/ she will be based, how will the activities be coordinated, and how will they ensure all regulations are adhered to. For example, local laws may not allow for some kinds of marketing activities to take place while other regions may see the same activities as normal. The level 3 and 2 interactions would then ensure operational complexities and risks are considered and are factored in. For Instance, if the account management is to have a regional focus there may be problems with accounts from international customers. In terms of product innovation if the product is to be customised for a local market within the EU the changes in distribution channels that may be needed and other such matters.

The collaboration variable will allow the interaction to focus on what marketing aspects will have to be outsourced or in house capacity built in the target region. Here the level 4 and level 3 interactions would help externalise the vision from this aspect and helps the Senior Managers to build a common understanding around what aspects of the managing the marketing perspective would be best outsourced and which aspects would should be organically grown within the SBU. The level 3 and level 2 interactions would highlight the operational concerns focused around this variable for this perspective. For instance, operational managers may highlight how they would prefer organic growth of this capacity given the complications they have had in the past with buying in expertise and not being able to integrate them into the company or how the managing of marketing assets with third parties has an impact on the brand capital. The communications variable will allow the interactions between level 4 and level 3 to externalise the vision focused around it. The cross pollination would build a common understanding of how to communicate their marketing within the target market and internally within the company. The level 3 and 2 interactions would highlight the operational risks and complexities involved in realizing the vision from this perspective. For instance, the complexities of communicating in multitude of different languages in the target market would create additional costs that their budgets may not allow for. The loss of the message in translation may be another concern, for instance.

The intelligence variable would ensure market research focused around this perspective has been considered. The level 4 and 3 interactions would ensure vision is externalised and cross pollinated in line with the trends highlighted by market research. For instance, if market research is showing there is a growing general demand for a particular product range this is considered during this phase. For example, a product range with a declining demand would be highlighted at this stage, along with the legal regulations that need to be considered for each region within the target market. The level 3 and 2 interactions would highlight the increase in complexities that having multiple regulations to contend with may generate and the knock on impact on budgets and quality assurance standards.

6.4 Human resources management perspective

The command variable would ensure level 4 and 3 interactions consider matters such as how the staff will be managed, what type of management style will be used and what kind of staff will be targeted. The control variable would ensure the local legal regulations of employing and managing staff are considered and the coordination sub variable would ensure all talent development and retention concerns are considered. This helps to externalise the vision and build a common understanding of these matters. The level 3 and 2 would highlight the operational level concerns of how the new SBU staff will be integrated into the overall company. For instance, the need to build good working relationships may mean ensuring the new staff spend time in other regions to ensure they understand the kind of other people who work for the company and build a sense of company identity. This helps to ensure the current company values and culture is fostered in the new Business Unit. Here budgetary concerns and time allocations for these activities would be a concern. The uncertainties and complexities that are identified can then be factored into the overall vision.

The collaboration variable will allow the level 4 and 3 interactions to externalise the vision and build a common understanding of how they are to work with third parties to recruit and retain staff in the target market. For instance, are they to work with local recruitment agencies to help target new staff? What kind of relationship are they looking for? Would they consider third parties to take over the whole management process till they build in house skills and expertise? Would Zooters Ltd want to fully outsource this aspect of their local operations or only a degree of it? The impact of these concerns on the vision. The level 3 and level 2 interactions would highlight the operational complexities and highlight uncertainties of having to work with third parties and discussing internal company processes and systems. The communications variable at the level 4 and level 3 interactions would ensure the vision is externalised and cross pollinated focused around how the communications with the staff for the new business unit are to take place. Would new communications models be considered? Would the existing ones be customised for it? These kinds of concerns would ensure the senior management have an in depth understanding of how to realise the vision and build communications with the new talent in the business unit. The level 3 and level 2 interactions would highlight the operational complexities and uncertainties of dealing with people with a range of different languages and cultures.

The computing variable at the level 4 and level 3 interaction would ensure that technology/ people trade off is considered and the vision is externalised and cross pollinated around this focus. For instance, new translation technologies may mean a lower ratio of linguist is needed in the business unit. However, the level 3 and level 2 interactions may highlight the preference for direct human interaction and limitations of whole sale migration in the favour of technology. The Intelligence variable at the level 4 and level 3 interactions would ensure the vision is externalised and cross pollinated considering the market research focused around the Human Capital issues in the target region. For instance, there may be skills shortage in a particular region or there may be clusters of skills and expertise in particular sectors in particular regions that would help to build an understanding of whether or not to focus on building the regional offices based on comparative advantage or not, for instance. The level 3 and 2 interactions would highlight the operational level uncertainties and complexities of working with people from a business unit with such great diversity.

The explicit frameworks in the case of Zooters Ltd has shown how having a set variables can develop a common understanding by ensuring the vision is externalised more accurately, a deeper common understanding of the vision is possible, a clearer understanding of what is expected from the interactions at the various levels becomes routine and the strategy and tactics interplay becomes part of the process. This helps to ensure in a sector where the Owner/ Managers formulates the vision using a multitude of sources, both formal, informal and external he/she can externalise it more accurately. The personalised nature of formulating the vision for the company encourages a greater degree of subjectivity. The implicit frameworks used by the Owner/ manager may be different to those used by the senior managers thereby increasing the chances of misunderstandings because of the gaps between their implicit mental models. By using the C4I framework the Zooters Ltd experience has shown how the normally emergent in nature strategy can be given some degree of deliberate direction without having to make any significant changes. The only major change is the conversion from using a multitude of implicit models to one standard explicit model. The various levels of interaction highlighted already take place, the explicit framework changes the expectations for them. For instance, Zooters Ltd already has a flow of communications between the Owner/ Manager, Senior Managers and the Operational Managers. The explicit framework changes the expectations from the interactions and helps to formalise the process. This helps to clarify the various levels between vision, strategy and tactics. It helps to externalise the intuitive and the tacit without crowding out the innovative and creative nature of these faculties, allows for a more comprehensive analysis of the various concerns involved and helps to build mental models which then have an impact on behaviour in social entities (Eshun 2009, 164). This also has an impact on the uncertainties and complexities that are identified, how are they to be dealt with, what can be converted into risk and then managed and what risk is not acceptable. What kinds of complexities exist and how best to manage them. For instance, all companies have to consider the kind of management perspectives highlighted above, regardless of if they have an in house capacity to deal with these concerns. By ensuring each variables considers the strategic and tactical implications the strategy and tactics clarification interplay is engrained in the strategy process. This clarification ensures the separation between implementation and execution is better understood and the levels of risk and complexities are appropriately associated. For instance, a strategy level risk after some analysis may be moved to a tactical level given how the company has grown and the directions the company is taking. This can be done on a continuous basis once an explicit framework is used. Further, this helps each level of management to focus on their level of responsibility and ensures a more accurate realisation of the initial vision. Furthermore, by continuously managing risk and complexities they can be dynamically managed. When a risk becomes a tactical concern it can be downgraded to the tactical level and if it becomes of strategic concern it can be up upgraded to the strategic level as a matter of routine. This ensures crisis management of these risks and complexities does not become the norm and allows for greater deliberation of how to deal with them before they do become a concern.

Overall, the conversion from using an implicit framework to an explicit framework has allowed the level 3 management for the EU business unit at Zooters Ltd to gain an accurate understanding of the vision, add value to the interaction, build a common understanding, maximise the understandings of the various uncertainties and complexities, ensure the strategy/ tactics interplay vital to success is present, and their decision making delivers the results as accurately as possible. This part has also helped to build an understanding of how the framework can be used as a solution and some additional factors have emerged that allow the solution to be of greater use than other wise.

7. Analysis

The single explicit framework at level 3 ensures the interactions between the levels 4, 3 and 2 are clarified. It helps each level to understand more comprehensively what to expect from the interaction that occur on an ongoing basis. For instance, even if a company has not divided itself into the various levels highlighted by the Via Group Holistic Leadership Model they will still experience the same interactions. For example, all International SME’s will have an Owner/ Manager, they will have senior managers, middle managers, and front line staff. Combined they will have the Via Group’s Holistic Leadership Model in its generic form if not in its explicit form, i.e. they will be a visionary, some staff in the company will be more responsible than others for various activities and there will be staff who deal only with very specific aspects within the company.

By ensuring a customised framework is available ensures the various levels have some understanding of what to expect from their interactions. This helps to lower the dependence on the holistic faculties that are dominate in the SME sector and allows the tacit understanding of various perspectives to be highlighted and utilized for the benefit of the company. For instance, by understanding what the command concerns are they can approach the interaction knowing what the issues are and allow them to focus on building deeper dialogues with their senior managers. This helps the senior managers to ensure they understand as accurately as possible what the initial vision is and what kind of uncertainties exist, what uncertainties they can convert into risk, how the risks can be managed, what risks are strategic and what are tactical, and how to continuously manage them to ensure any new developments are appropriately managed. This helps senior managers deal with risk and complexities more effectively and helps them to nurture their capacity to deal with them for the benefit of the company on an ongoing basis. Therefore, the framework allows the company to understand the notion of risks and complexities from a non financial perspective. For instance, Modern Economic Psychology highlights how risk influences the thought of those involved in the strategy of the company. (Wickham 2008, 201) Here the emotional response to risk is being referred to (Ibid, 203). This then has implications on the perception of risk and how it is managed. For instance, in the case of an International SME expanding into a new market it is common to have a limited understanding of their target region. This lack of knowledge of the target region has an impact on the perception of dealing with the region. These perceptions may be different to the actual situation and the variation can cause friction that can be minimized by using a framework. This allows the uncertainties to risk converters to understand the risk and the perceptions that they may generate. For instance, if the level 4 and level 3 interactions have highlighted uncertainties and they have decided to convert only a small portion of the these uncertainties into risk they will also understand the nature of the risk more effectively and therefore be able to deal with the perceptions of the risk. If then during the level 3 and Level 2 interactions the risk is being discussed has any misperceptions they can be dealt with and all parties will know who will be the managers of the risk. It may be that the risk is thought to be a tactical risk when it is a strategic risk and the perception of the risk may make something more (or less) of it than what it actually is. (Ibid, 203) This also holds true for complexities, how they are identified, and managed.

The framework also helps as a tool that can be used for decision making. By allowing the participants to focus on the variables it allows them to use the notion of heuristics for their interactions knowing the concerns they need to focus on. Here the notion of heuristics refers to the simplification of the decision making process, where the decisions making is quicker and demands less effort. (Ibid, 205) This helps to ensure the companies that use customized frameworks for their strategy implementation have a more accurate understanding of what uncertainties they normally face and the kind of uncertainties they are willing to accept. Identify the relevant risks and complexities and mange them in a more effective manner than is currently the case. For Instance, the separation between strategy implementation and strategy execution allows for a customised framework to be used to identify uncertainties and complexities as matter of routine and allows them to be effectively managed. The current performance measurement frameworks tend not to allow their users to focus on the risk and complexities that are likely to emerge from realizing the vision. For Instance, the balance score card does not consider the notion of risk explicitly. (Ibid, 206) Therefore, in the context of heuristics the C4I framework allows the decision makers in the company to identify the relevant uncertainties and complexities, understand the major concerns, who is responsible for dealing with them and at what level they are to be managed. This ensures there is a greater degree of clarity and a greater degree of accountability is ingrained in the systems and structures of the company. This when combined with the concerns of explicit and implicit models we use during social interactions provides a solution that allows level 3 to perform more effectively based around their core responsibilities of dealing with risks and complexities. Further, by providing senior managers with more accurate situational awareness it allows them to use their judgment to make more effective decisions by combing uncertain data, human behaviour and negative side effects of the decisions. (Gomport, Davis, Johnson & Long 2008, 28)

The case company has certified the value the framework can add to a company in a real life. The framework also helps the interactions between the various levels (Executive Management, Business Units Head Level management and Line management) to interact more effectively and gain greater clarity of what the vision is, how to go about realising it, who is responsible for what, how dynamic those responsibilities are, and how the overall management process is aligned to deliver flawless realisation of the vision. The C4I framework also helps the case company to understand what set of variables to use at what level for what purpose. For instance, the C4I Framework when used between level's 4 and 3 it will help to externalise the vision more accurately and help the owner/ manager to understand the concerns of the senior managers as a matter of design. This helps with ensuring the tacit knowledge of the management are used more effectively and allow the company to benefit from its tacit assets. Further, this allows for a more organised approach to be taken in a sector where the non linear decision making is common, strategy is emergent in nature, and the artistic influences allow for innovation to flourish. In other words, it allows for greater organisation in an organised chaos environment without crowding out the positive aspects of the chaos. This helps to lower the uncertainty associated with growth and the impact growth may have on the existing systems and structures. In simpler terms, this allows the company to clarify what is to be dealt with at what level and whose will be responsible for it. This framework has been accepted by other SME's, who feel it does add value to their experience.

8. Conclusion

The aim of the project was to provide a practical and usable strategy implementation solution for the case company. This has been achieved to the company's satisfaction. The sub questions below have all been answered.

- What is the SME sector?
- What is the difference between the SME sector and the International SME sector?
- What is the current state of business strategy in the SME sector?
- What is the C4I Framework?
- What will the customised framework for the International SME sector look like?
- How can International SME's use the C4I framework?

They provided a step by step approach to constructing the strategy implementation solution for the case company. This ensured the solution was accurate to the needs of the company and helped to clarify various notions that helped to provide greater clarity of how to deal with the complex notion of strategy. Together the sub questions helped to ensure the quality of the solution was the highest grade possible and the risk of failure of the solution was minimal.

The cross application of applying military strategic thought to business strategy allowed me to use tried and tested frameworks (which have consistently delivered results for the military) to an area of business where there are no current industry wide frameworks. This allowed to me to add to business theory by customising the dominate strategy implementation framework used by NATO forces for International SME's. Further, this helps business theory by highlighting an area where more research can be conducted and provides future researchers with some direction of how to go about conducting research and what kinds of areas to focus on.

In context of this article, the focus of the theoretical side of the project helps to exposes the variation between business strategy implementation and business strategy execution to an international audience. It has shown why it is important to see Level 3 managers and Level 2 managers as having a different set of responsibilities. This is already common in project management, where each level has a defined set of risks to deal with to ensure the project is completed in the manner initially intended. Business strategic thought simply has not considered this variation. This article is intended to draw attention to this and the help to generate discussion around the areas highlighted.

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An Entrepreneurial Innovation: Mega Cooperatives

Leo Paul Dana *and **Jason Schoeman****

Abstract

Cooperatives internationally are pursuing horizontal and vertical integration at time when businesses globally are increasingly focussing on limited sets of value adding activities in order to satisfy customer needs and maintain competitive advantage. This paper explores this seeming paradox by looking at a recently formed mega dairy cooperative, which has monopolistic control over the New Zealand domestic and export markets. The paper assesses the changes and challenges for the dairy cooperative in its infant years before assessing the relative performance of the cooperative against several key performance indicators

Key words: *Dairy, Fonterra, Cooperatives, Macro Marketing*

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1. Introduction

At a time when external environmental forces are leading businesses around the world towards focusing their operations and decreasing their horizontal and vertical integration, why are cooperatives moving in the opposite direction? Globalisation, the deregulation of economic markets, technological convergence and the evolution of the internet, is leading to firms downsizing and specialising on limited sets of value adding activities (Prahalad & Ramaswamy, 2000; Vervest, 2005). Traditional manufacturing firm dominated hierarchies are being replaced by complex cooperative relationships, fundamentally changing the way in which firms operate and compete (Achrol & Kotler, 2006). Paradoxically, research has identified agricultural cooperatives trending towards larger cooperatives with higher degrees of vertical and horizontal integration, particularly in developed countries (Barton, Schroeder, & Featherstone, 1993; Hedberg, 2004; Misra, Carley, & Fletcher, 1993; Sankaran & Luxton, 2003; Schroeder, 1992; Sykuta & Cook, 2001). The size and international operation of these new cooperative structures pose unique problems and challenges for managers. They require new and unique skills, and management competencies. Examining this seeming paradox is the purpose of this research paper.

The agricultural industry in New Zealand (NZ) is similar to that of many other nations. The industry consists of many small sized producers (farmers) producing relatively homogeneous products, which compete against other producers both domestically and internationally. The process of converting the raw products leaving the farm gate into desirable consumer products and exporting the products internationally, is an expensive and complicated process in which economies of scale are critically important to financial success. The agricultural industry is a significant driver of NZ's economy, earning 30.8% of the total export revenue and contributing 12.6% of NZ's gross domestic product (GDP) (EconData Pty. Ltd, 2008; New Zealand debt management office, 2009). Twenty years of economic reforms has removed all but one of NZ's government established marketing boards, has forced NZ cooperatives into international marketing and business. The importance of the agriculture industry's contribution to NZ's economy cannot be overlooked, and research needs to critically assess these changes to ensure the continued success of this industry. This research paper reviews literature to examine the changing roles in the management of cooperatives, and the moving from a micro to a macro marketing approach. Content analysis is conducted to look at the successful mega dairy cooperatives Fonterra. Changes in the operation, problems, managerial tasks, strategic direction and marketing activities are discussed and analyses of key performance indicators are presented.

2. Literature Review

2.1 Cooperatives

The cooperation between agriculture producers to exploit market opportunities has a long history. Karki (2006) identities that archaeological discoveries provide evidence that agricultural cooperative structures have existed since the time of Babylonians and Ancient Egyptians. Present day research can be traced back to the 1800s (Finlay, 1896; Kies, 1891). Cobia (1989) as cited in Karki (2006) identifies three distinguishing features of cooperatives: firstly, those who own the cooperative are those who use the cooperative; secondly, those who use the cooperative control the cooperative; lastly, those who use the cooperative are the primary benefactors of the cooperative. The International Co-operative Alliance (1995) identifies a list of seven principles by which cooperatives are governed; open and voluntary membership; democratic member control; member's economic participation; autonomy and independence; education, training and information; co-operation among co-operatives; concern for the community. The primary objective of cooperatives is to increase the economic wellbeing of the producer/owner of the cooperative (Barton, et al., 1993). This is achieved through purchasing individual farm's outputs and marketing them collectively. Benefits accrue through the reduction in transaction costs and increased efficiencies. These benefits are distributed to the owner/producers usually though higher farm gate prices and the redistribution of earnings. Barton et al. (1993) acknowledges that the objectives of cooperatives are commonly viewed as distinct from that of investor orientated firms, a view shared by Karki (2006).

Increased economies of scale in cooperatives are highlighted as the primary benefit of operating in cooperative structures. Increased economies of scale translated into lower per unit costs during production and processing of raw produce, and the distribution of products to retailers and end users (Barton, et al., 1993; Hill, 2007; Schroeder, 1992). Other benefits include broader product ranges, stimulation of demand for outputs, securing access to production inputs, innovation and the sharing of risk between cooperative partners (Barton, et al., 1993). Karki (2006) explains that in developed countries cooperatives are focused on increasing the value of their products, while cooperatives in developing countries focus on increasing the volume of production. Historically, agriculture cooperatives have been primarily focused on serving the domestic market with exporting being carried out by government initiated marketing boards, with the exception of speciality products (Sankaran & Luxton, 2003). Deregulation of markets and economic policies coupled with the forces of globalisation, has created new market opportunities for cooperatives (Karki, 2006). This article will focus on the aspects of those cooperatives which engage in international activity. However, even cooperatives which operate solely domestically, are also affected by the international competition, because if the opportunity exists other nations will export and compete directly with local producers.

2.2 Changing Structure of Cooperatives

Cobia (1989) and The International Co-operative Alliance (1995) describes the traditional cooperative formation. However, due to external forces, there are now several variations on the traditional structure. Consistent with Doyon (2005) this section presents three general models of “new” cooperative structures; Public Limited Cooperatives, New Generation Cooperatives and the Hybrid Model. The Public Limited Company cooperative structure is essentially a cooperative which has raised extra equity by means of selling a portion of its business to a non supplier owner. This can be done by either a, placing a portion of the cooperative on the stock exchange or seeking a corner stone investor. Usually, the new structure will have two boards of directors, one representing the cooperative and one representing the company. The cooperative’s board still have their voice on the company board of directors, however the influence of the privately owned company governance structure is said to provide greater levels of flexibility and efficiency (Doyon, 2005). The New Generation Cooperative structure is similar to that of the traditional cooperative structure, except there is closed membership rather than open membership. Upon membership to the cooperative members, make a significant capital contribution, normally by means of the purchase of shares in the cooperative relative to their use of its resources. Additionally there is also generally an obligation to supply/use the cooperative. New Generation Cooperative structures are said to have better access to capital than that of the traditional cooperative structure. However, they are still constrained in accessing additional finance. The Hybrid Model of cooperatives has governance and capital structures, which are blended from both cooperative and private company characteristics. Voting occurs both on per share (private) and per supplier basis (cooperative). The board of directors contain both elected members (cooperative) and external members (private). Lastly, hybrid model cooperatives utilise external capital sources through interest bearing capital notes, which bear no voting rights.

2.3 Changing Business Environment

The liberation and deregulation of markets and economic policies has thrust many cooperatives into international business (Sankaran & Luxton, 2003). In NZ, cooperatives now replace many of the pre-existing marketing boards, which governments had granted monopoly control over the exporting of specific agricultural products. Internationally as well as within NZ, there has been an identified trend towards larger cooperatives, through mergers and acquisitions (Barton, et al., 1993; Hedberg, 2004; Misra, et al., 1993; Sankaran & Luxton, 2003; Schroeder, 1992; Sykuta & Cook, 2001). The larger cooperatives have been shown to produce greater benefits for its owners/users, principally through the attainment of greater economies of scale (Hedberg, 2004; Sankaran & Luxton, 2003; Schroeder, 1992). Economies of scale become increasingly important in an increasingly liberated and deregulated global market place. Cooperatives can no longer settle for being efficient relative to their domestic competition; rather cooperatives need to ensure they are competitive relative to their increasing international competition. Due to the geographic isolation and limited size of New Zealand, achieving the desired production, processing, and distribution efficiencies, has required a high level of horizontal and vertical integration. This has resulted in the formation of the ‘mega’ dairy cooperative Fonterra, and the attempted formation of a similar mega cooperative for the sheep and beef industry, commonly referred to as the ‘mega’ meat merger. Fonterra now effectively holds a monopoly control of the NZ dairy industry. A similar position would have also been held if the proposed mega meat merger was successful.

2.4 The Transition from Micro to Macro Marketing

The size and international operation of these new mega cooperative structures, requires new and unique skills and management competencies. The required shift in managerial operation can be viewed as a change from micromarketing to macromarketing. Zif (1980) and Hunt (1977) describe the transition of a firm to macromarketing as when the firm is said to be high on either Hunts (1976) dimension of the ‘level of aggregation’, or Moyer’s (1972) dimension of ‘impact on society’. Both the mega cooperative structures have/would have had a significant effect on NZ’s society as a whole, both through their direct responsibility for the international competitiveness of two of the largest industries in the NZ economy, and the resulting impact on the domestic market supply and price. The necessary changes can be viewed from Zif’s (1980) study of the managerial approach to macromarketing. Macromarketing managers responsibilities can be broadly defined by asking two questions: Has central marketing authority been established? and is management responsible for directing the flow of goods and services? The result is a two by two matrix which attempts categorise a two dimensional continuum into four neat categories.

		Central Marketing Authority: Yes	**Central Marketing Authority: No**
Directing the flow of goods and services	**Yes**	Comprehensive Macro-management	Joint micro/macro management
	No	Central coordination and/or regulation	Specialized macro management

Figure 1 Classification of managerial responsibilities

Source: Zif (1980)

Joint micro/macro management involves the directing and flow of socially important products from a near monopoly position, but without the central authority over marketing activities. Through their dominant market positions, these firms marketing activities can have significant societal consequences and therefore their freedom of actions is reduced (Zif, 1980). The comprehensive micromanagement perspective is most common in communist countries. However, Zif (1980) identifies that there are also comparable examples in the western developed world. The most common examples are the government-sanctioned marketing boards, which have been mentioned previously in this article. The New Zealand economic reforms of the 1980s led, to the dissolution of many of these marketing boards, resulting in a lack of a coordinated international marketing effort of many New Zealand agricultural products (Le Cren, Lyons, & Dana, 2009). The formation of large mega cooperatives representing a vast proportion the nations processors of specific agricultural goods, are filling the void to ensure sufficient efficiencies and economies of scale to secure the international competitiveness of the dairy industry.

Zif's (1980) study of the management approach to macro marketing, can also be used to examine the managerial objectives of these mega cooperatives. The aggregate marketing behaviour and societal consequences of macro marketing requires managers to balance several organisational goals simultaneously. An examination of marketing boards by Zif and Israeli (1978) found that the basic goals of these organisations can be grouped into the following generalised categories: profitability, productivity, market development, social responsibility, and innovation. While these organisational goals are recognised to be similar to that of micromarketing, Zif (1980) highlights that their scope is enlarged and their relative importance is different, particularly the goals of profitability and social responsibility. Profitability at the

Macro marketing level is not only concerned with the attainment of desired profit margins, but also how these profits are distributed within the vertically and horizontally integrated organisation. Social responsibility is regarded as one of the greatest challenges faced by macro marketers. The goals consist of economic as well as non-economic sub goals, which are dynamic and often poorly defined. Social responsibility often receives public attention and usually conflicts with short-term profitability. Managing these diverse goals therefore presents a challenge for macro marketing practitioners, and it is assumed that managers will use vey general terms when stating goals and evaluating performances.

		Managerial control	
		Yes	**No**
Cultivating public support	**Yes**	Social performance orientation	Political orientation
	No	Business orientation	Passive orientation

Figure 2 Managerial objectives: A dual macro marketing concept

Source: Zif (1980)

Zif (1980, 39) explores the notion of a "dual macro marketing concept" to manage the often conflicting requirements of macromarketing. This concept recognises that in macro marketing the exchange process occupies both the market place and the political arena, and managerial tasks associated with each exchange process differ considerably. In the market place, mangers are expected to maintain and exercise control through marketing organisation, information systems, investment projects, research and development, marketing mix decisions and product quality decisions. The political arena consists of three distinct groups; the public-at-large, political intermediaries and special interest groups. Gaining support from these groups is regarded as an imperative for macro marketers in three common situations: the determination of objectives and public support, the seeking of approval for capital investment and organisational or marketplace action, and the negotiation of transactions with government representatives. Zif (1980, 40) therefore proposes a two dimensional continuum to represent managerial objectives given the relative priority of managerial control and cultivation of public support.

3. Formation of Fonterra

Fonterra cooperative group was established in late 2001 through the merger of the NZ Dairy Group and Kiwi Cooperative Diaries. Fonterra controls 95% of NZ's total milk production, accounts for 20% of NZ's total export receipts and represents 7% of the nations GDP. Fonterra exports to over 140 countries and is the second largest exporter of milk products internationally. The goals of Fonterra at formation were:

- To lead the world wide race to develop dairy products potential, through nutritional products ranging from quality food ingredients to FMCGs, in order to meet the changing preferences of the global market place.
- To enable the scale in New Zealand's milk processing and international export marketing, to enhance and unlock efficiencies, to increase the returns provided to farmers.

Currently Fonterra has 10724 (2333 fewer than 2002) owner/suppliers and a multi layer corporate structure. The business is involved in the production, processing, and marketing of New Zealand dairy products.

3.1 Fonterra's Governance Structure

The governance structure of Fonterra includes four key sets of players which are represented in Figure 3. The New Zealand dairy farmers are the owners and users of the Fonterra mega cooperative group. The shareholder's council purpose is to represent the interests of the farmer/suppliers. The 35 shareholders on the council are elected by dairy farmers and represent 35 identified regions of the country. The board of directors' responsibility is for the strategic direction of Fonterra. The board consists of 13 directors, nine of which are elected by the shareholders and the board appoints the remaining four. The four appointed directors are said to provide the skill and competences needed to manage a global company. Lastly, the milk commissioner is appointed by the shareholders council to resolve disputes between the shareholders council and the board of directors (Fonterra, 2009). The control which the farmers have over the board of directors (electing 9 of the 14 directors), is criticised for limiting the technical knowledge and expertise needed to run a global firm (Doyon, 2005). This is a common criticism of cooperative governance structures (Beverland, 2007; Doyon, 2005)

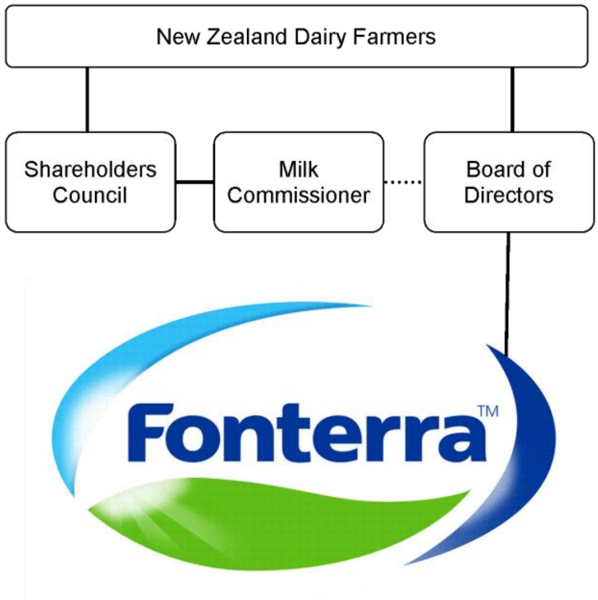

Figure 3 Fonterra governance structure

Source: Fonterra (2009)

Before the establishment of Fonterra, the NZ dairy industry consisted of four major dairy cooperatives; New Zealand Dairy Group, Kiwi Dairies, Tatua and Westland. The largest two cooperatives, New Zealand Dairy Group and Kiwi Dairy, collectively represented around 90% of NZ's milk production. These cooperatives marketed their products internationally through the New Zealand Dairy Board, while domestically they marketed and distributed their product independently. This structure was seen as inefficient and dysfunctional, due to years of government intervention, internal politics and poor governance (Ohlsson, 2004). In late 2001, the larger two cooperatives (New Zealand Dairy Group and Kiwi Dairy) merged together to form Fonterra (Ohlsson, 2004). The formation of Fonterra established a company with monopolistic control over the domestic and export markets NZ dairy products, processing 90% of NZ's milk production and 95% of NZ's dairy exports (including the exporting of products from Synlait and Westland) (Le Cren, et al., 2009). Regulation however ensures the fair pricing of raw milk supplies to competitor processors.

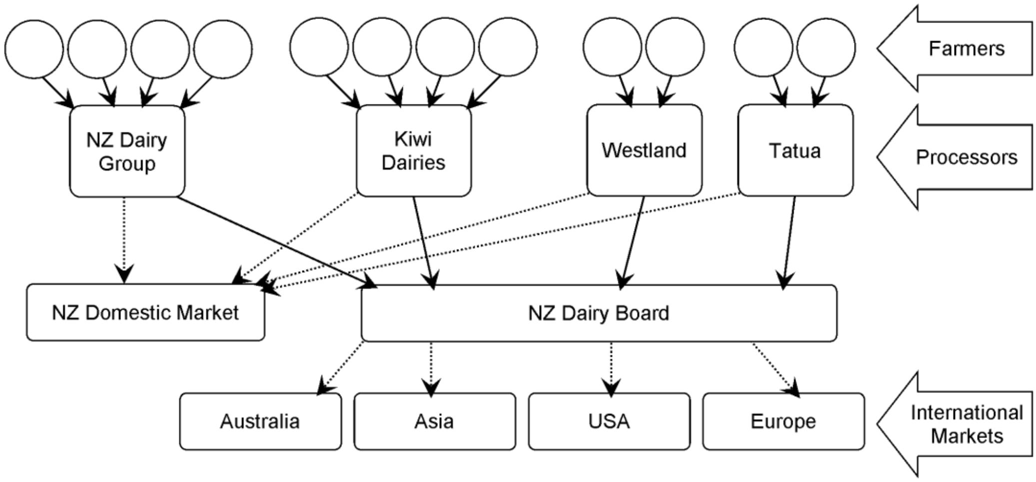

Figure 4 NZ dairy industry structure before the formation of Fonterra

Source: Le Cren et al. (2009)

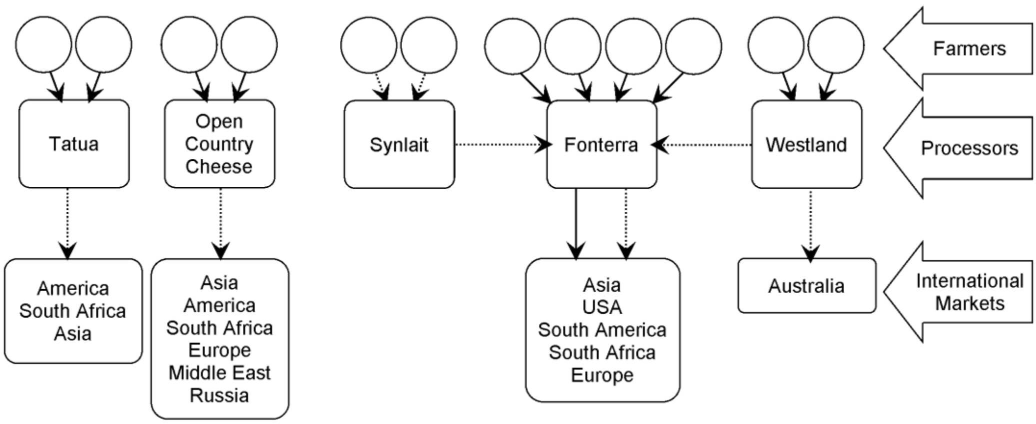

Figure 5 NZ dairy industry structure after the formation of Fonterra

Source: Adapted from Le Cren et al. (2009)

4. Changes at Fonterra

The next section of this report looks at the key business changes and challenges faced by the new mega cooperative Fonterra. Data was collected via the use a content analysis strategy. According to Hall and Valentin (2005) content analysis is "an observational research method used to systematically evaluate the actual and symbolic content in all forms of recorded communication" (191). Such analysis can be conducted on a variety of data forms, particularly in mass communication media which includes web based newspapers, tabloids and magazine articles (Hall & Valentin, 2005; Harwood & Garry, 2003). This report utilised the content analysis of various news sources available over the World Wide Web.

Upon formation of Fonterra, management and directors needed to deal with a company which doubled in size in almost every facet almost instantly. This represented a significant increase in the level of aggregation of the organisation relative to the NZ dairy industry as a whole, and a move toward macro marketing (Hunt, 1976). The Fonterra organisation is often refereed to as a monopoly of the NZ Dairy industry (Schroeder, 1992). The near monopoly position of Fonterra, makes the management team responsible for a high degree of the direction and control of the flow of raw and processed milk products. Additionally it places responsibility on Fonterra for the successful marketing of dairy products domestically and internationally. According to Zif (1980) this would place Fonterra in a comprehensive macro-management role. The content analysis several substantial reviews and changes which Fonterra has made to deal with these changes. These were arranged around the following areas; transfer pricing between business units/subsidiaries; foreign currency hedging; production efficiencies; logistic optimisation; and consideration of the NZ brand.

Fonterra's new macro marketing responsibilities has produced a potential conflict between cultivating public support and meeting organisational goals (Zif & Israeli, 1978). Zif (1980, 39) identifies the solution as a "dual macro marketing concept" to manage the conflicting requirements. Cultivating public support for Fonterra's actions involves the careful management of various parties with sometimes conflicting interests. The content analysis revealed the following stakeholders which Fonterra relied upon for public support; environment groups, the Commerce Commission, central government, owners/suppliers and the general public. Fonterra was frequently questioned by environmental groups, the Commerce Commission, and its owners/suppliers. Through Fonterra's early years, the competences of its managers were frequently questioned and there was substantial evidence of boardroom disagreement which resulted in several directors resigning from the board.

The content analysis revealed a strong focus on the building of international business relationships. Joint venture, acquisitions, and the establishment of foreign subsidiaries were common occurrences, and were viewed as critical for the ongoing growth and performance of

Fonterra. The problem with the ongoing international expansion of Fonterra was the lack of access to capital finance. This is common among growing businesses, but is accentuated due to the general capital constraints of cooperative structures (Barton, et al., 1993; Beverland, 2007; Fazzari & Petersen, 1993). The constraint of access to capital funding, is two fold for cooperatives. Firstly cooperatives have few options when seeking new capital funding since few owners/farmers are willing to make extra investments and the investment of capital by outsiders is normally not allowed under cooperatives' constitutions. Secondly, cooperatives are restricted in their ability to retain earning because of the strong voice of the owners/suppliers over the election of board directors (Barton, et al., 1993). These constraints have led to several cooperatives amending their constitution with agreement from their owners/farmers, to allow for external capital funding. Doyon (2005) presents these new cooperatives as Public Limited Cooperatives, New Generation Cooperatives and the Hybrid Model cooperative. Fonterra fits the Hybrid Cooperative Model for its capital sourcing. Fonterra sources outside equity using interest bearing capital notes sold to the public, which bear no voting rights. Access to sufficient capital remains a key challenge for Fonterra, and was reported by many in the content analysis to be constraining the growth of Fonterra. Currently Fonterra is seeking support from farmers for a new capital structure which will allow Fonterra's owners/farmers to trade shares with each other to provide greater security for Fonterra's capital structure (Law link, 2009).

5. Fonterra's Performance

This section assesses the performance of Fonterra over several important key performance indicators. Primarily, information was sourced from Fonterra's annual reports, however comparison statistics are sourced and included where relevant. The first graph represents Fonterra's efficiency in processing raw milk into refined dairy products, and its ability to generate sales revenue for its owners/suppliers. The processing costs line shows the average cost of goods sold (COGS) for each kilogram of milk solids (KGMS) (Fonterra, 2009). The COGS figure excludes the cost of the raw milk, as this milk price also represents the shareholders return for investment. Additionally all prices have been converted to 2009 prices using the dairy PPI statistics to account for the various cost of production inputs (EconData Pty. Ltd, 2008). This line shows substantial support for Fonterra providing increased economies of scale during the transformation of raw milks to finished products, with a 46% decrease in 2004 the cost of production compared to previous year (2003). This represents a significant efficiency gain, and is in line with the expectations set on the formation of Fonterra. Fonterra however has failed to continue its efficiency gain as it increased it milk production over the following years.

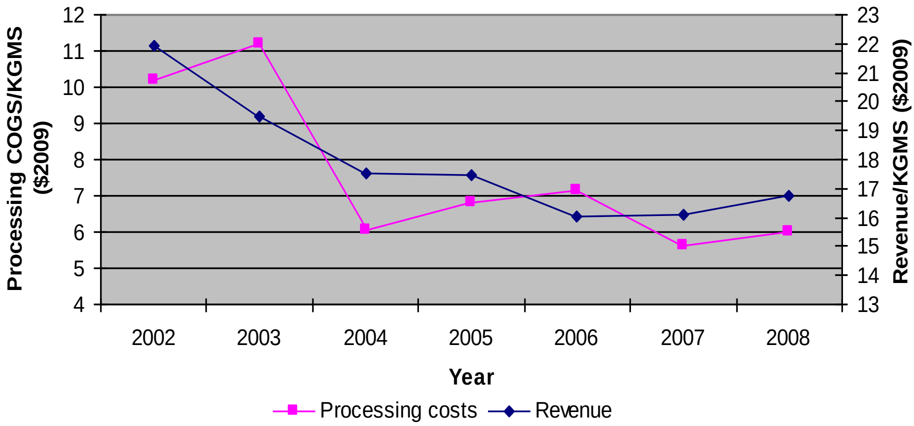

Figure 6 Processing and distribution efficiency of Fonterra

Data Sources: Fonterra (2009), EconData Pty. Ltd (2008).

The second line represents the revenue which Fonterra generates from each KGMS it collects from its farmers. The revenue figures have been adjusted for inflation, and are therefore representative of $2009 (EconData Pty. Ltd, 2008). It is interesting that the revenue generated per KGMS has declined over time, while commodity prices have generally increased. There are several possible reasons for this; the effect of the strengthening NZ dollar eroding the gains from increased commodity prices; possible move to products with lower value added components; international subsidiaries receiving lower payment for their output. This trend line is concerning however. It is expected that Fonterra principally manufacturing in a developed country like NZ, would be focusing on value added products to generate more value from each unit of its owners/suppliers output (Karki, 2006).

The report now looks at Fonterra’s performance measured by farm gate prices, which was one of the reasons for the formation of Fonterra. Increase payment for raw product is highlighted as one of the key means by which cooperative’s redistribute the benefits of belonging to the cooperative (Barton, et al., 1993). Since Fonterra controls 90% of NZ’s milk production, there is no market price for milk in NZ. Instead, a working group consisting of Fonterra directors and external representatives’ set a fair milk price which is externally audited (Fonterra, 2009). This price is shown in nominal terms on the graph below, and is read on the right hand axis. Additionally, the price has been standardised and compared against that of NZ’s three largest competitors (US, Australia and the UK) (Le Cren, et al., 2009). The cooperative has managed to maintain parity with its international competitors, of which some receive substantial government assistance (Le Cren, et al., 2009). However, Fonterra has failed to significantly increase the milk price payout to its suppliers/owners.

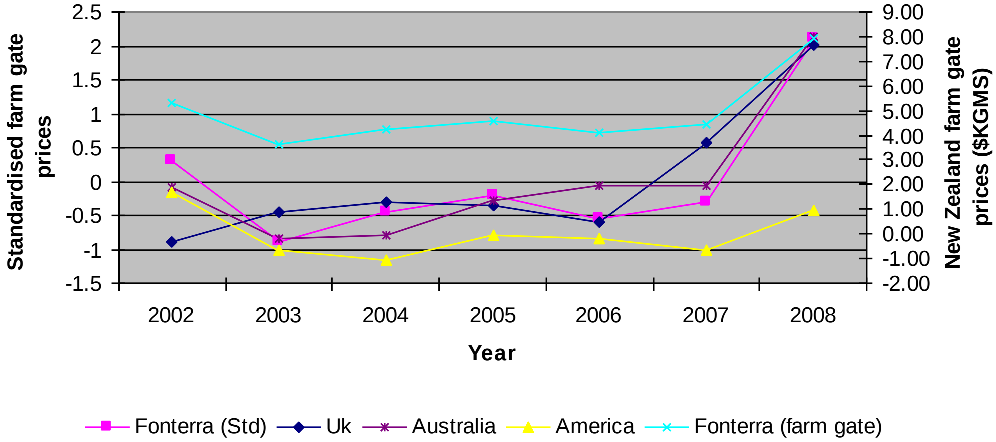

Figure 7 Farm gate milk prices

Data Sources: Fonterra (2009), EconData Pty. Ltd (2008), Dairy Australia (2009), Dairy Co Datum (2009), CLAL.it (2009)

Another means by which farmers/owners benefit from being part of the Fonterra cooperative is though an increase in the fair share price. The fair share price is set in a similar way to the milk purchase price. A specialist working committee determines the price annually, with the price being externally audited. A farm must own a share for each KGMS produced by the farm each year. The shares represent each farms investment in Fonterra (Fonterra, 2009). This ownership structure is common in many new generation cooperatives (Doyon, 2005). The graph below shows the annual percentage increase/decrease in the value of the fair share price, as well as the annual percentage increase of the NZX50. The NZX50 provides a benchmark for the opportunity cost when investing in Fonterra shares. The graph shows a fairly consistent increase in value of around 10-15% over the first four years since the formation of Fonterra, followed by a dramatic drop over the last two years. This drop is most probably due to the global recession and is consistent with the performance of the NZX50. Over the last seven years, the value of Fonterra shares has increased by 15% compared to an increase in the value of the NZX50 of 25%. However, care must be taken to recognise the value of the annual milk payout in comparison to potential dividends. Lastly, it will be interesting to see how Fonterra’s share price compares to that of the NZX50 when the world emerges out of the recession.

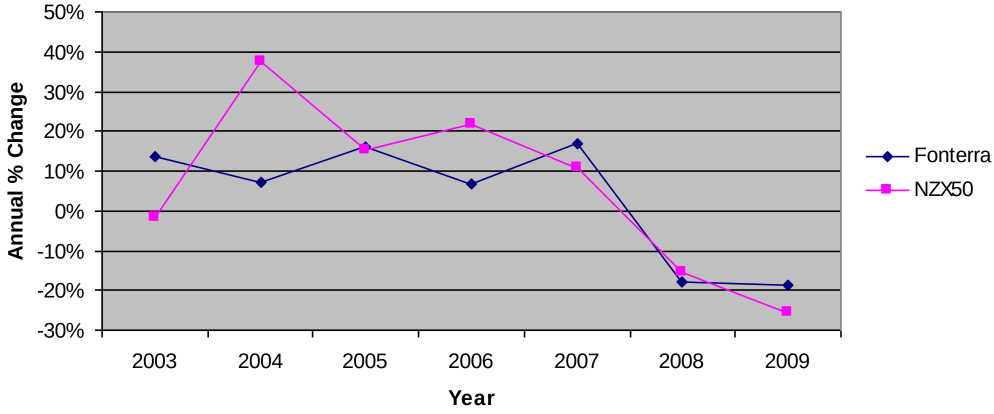

Figure 8 Return on investment

Data Source: Fonterra (2009), NZSE (2009).

One of the government mandates for allowing the formation of Fonterra to bypass the Commerce Commission, was that the dairy industry is of significant importance to the nation though its substantial contribution to the New Zealand economy (30.8% of total export revenue and 12.6% GDP) (EconData Pty. Ltd, 2008; New Zealand debt management office, 2009; Sankaran & Luxton, 2003). The formation of the mega cooperative was predicted to increase/maintain the competitiveness of New Zealand's dairy industry (Sankaran & Luxton, 2003). The graph below shows the value of dairy exports before and after the formation of Fonterra. There appears to be a greater annual increase in the value of dairy exports after the formation of Fonterra. However, there is also greater variation in the value of the exports.

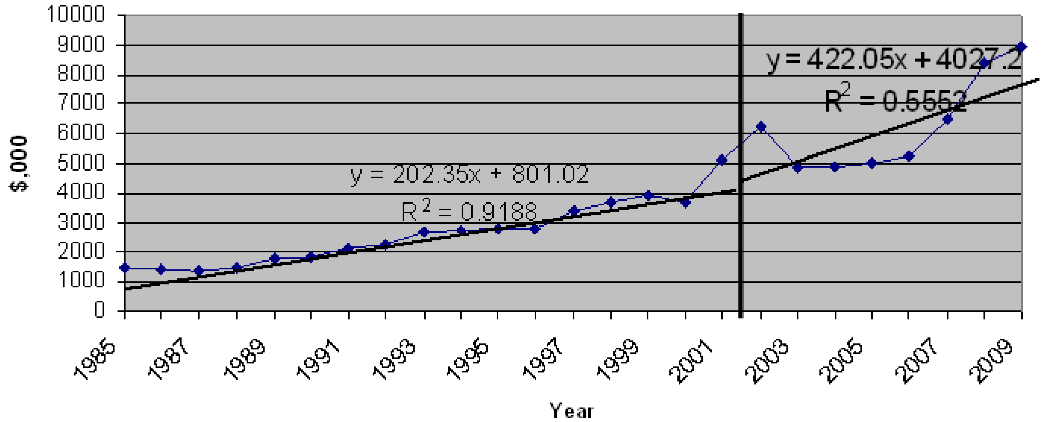

Figure 9 Value of New Zealand's dairy exports

Data Source: EconData Pty Ltd (2008)

The last performance indicator used to access Fonterra's performance was the investment activity in foreign markets. The above details the significant foreign entities partially owned by Fonterra. This type of foreign investment by Fonterra is not typical of cooperatives and reflects the business side of the cooperative (Doyon, 2005). This investment provides additional revenue and economies of scale to Fonterra and its owner/suppliers. The investments provide offshore milk production, product development, research and development work and access to foreign markets. The above table shows a significant amount of international partnerships and joint ventures since the establishment of the Fonterra foreign

Dairy Partners America Argentina S.A	**Argentia**	**50%**
DPA Manufacturing Holdings Limited	**Burmuda**	**50%**
Dairy Partners Americas Brazil Limitada*	**Brazil**	**50%**
Shijiazhuang San Lu Company Limited	**China**	**43%**
Ecajugos S.a	**Ecuador**	**50%**
AFF P/S	**Denmark**	**25%**
DMV Fonterra Excipients GmbH & Co KG	**Germany**	**50%**
Dairy Industries (Jamaica) Limited*	**Jamaica**	**50%**
Dairiconcepts Management, L.P.	**USA**	**50%**
Dairiconceptss Management, L.L.C.	**USA**	**50%**
Corporacion Inlaca, C.A	**Venezula**	**25%**

Table 1 Table of Fonterra's substantial foreign investments

Data Source: Fonterra (2009) *Acquire/established before the formation of Fonterra

6. Discussion

The changes have fundamentally changed and complicated the managerial objectives and tasks of cooperative entities. Within the new environment, there is an apparent conflict between the different goals of the various stakeholders of the organisation. Zif's (1980) dual marketing concept suggests, that a dominant confliction will be between the cultivating public support and the managerial control of the organisation. Additionally Barton et al. (1993) highlights the issues present in determining the fair distribution of profits between the various partners of the cooperatives. With the high degree of horizontal and vertical integration within mega cooperative structures, managers may face increased challenges in the integration of different cooperative partners. Therefore, managers will need to consider a wide range of relational issues and objectives when integrating and maintaining such complex cooperatives, to ensure the successful completion of the new structure goals.

The assessment of Fonterra's performance produced mixed results. The most encouraging piece of evidence to support the formation of a mega cooperative was the economies of scale, which Fonterra was able to realise two years after formation. The 45% drop in cost of goods sold per KGMS (excluding the price of raw milk) was achieved though greater processing and distribution efficiencies. The cost of goods sold has remained relatively, stable since. This poses the question where will future cost savings come form since economies of scale in the New Zealand market are effectively exhausted, with Fonterra already processing 90% of NZ's dairy production (Fonterra, 2009). Possible answers are; through technological advances in processing; technological advantages to increase farms productivity; and international expansion and investment. This report found Fonterra to be heavily involved in the investment in international joint ventures, acquisitions and international subsidiaries, and the recognised view that NZ farms produce are comparatively small and shrinking proportion of the world's total dairy production. A less encouraging statistic was however, the steady decline in the revenue generated by Fonterra per KGMS produced. This drop is particularly concerning since cooperatives operating in developed economies are said to be focused on value added products (Karki, 2006). The assessment of farmers return on investment for being part of the Fonterra group did not produce any compelling evidence to support investment in Fonterra. Since the formation of Fonterra, the company has failed to produce return for investors greater than that of the NZX50, and the farm gate prices for milk solids has not significantly out performed the other major milk producing nations.

7. Conclusion

To summarise, the changes in the external operating environment of agriculture cooperatives produced by the liberation and deregulation of economic policies, has motivated some cooperatives to merge into mega cooperatives (Barton, et al., 1993; Doyon, 2005). These mega cooperatives involve a large degree of horizontal and vertical integration in order to ensure sufficient efficiencies and economies of scale, to secure the international competitiveness of the owners/users (Doyon, 2005). The new monopoly position of these mega cooperatives and international marketing activities has transformed their managers responsibilities from a micromarketing approach to a macromarketing approach. These changes have the desired effect of moving competition from between domestic cooperatives to between international businesses. The success of the Fonterra Mega dairy cooperative was found to produce significant gains in economies of scale. However, the information from the other key performance indicators did not provide conclusive support for the mega cooperative structure. These findings are limited by the resources available for research, and therefore should be interpreted with care. Additionally, the Fonterra cooperative is only eight years old and further benefits may take time.

This research does provide an interesting area of study as cooperatives continue to merge to achieve economies of scale and adapt their governance and management structure in the face of changing external environmental forces. Interesting points of further research would include; the challenges of group formation during the merger of cooperatives; the relative performance of the new cooperative structures identified by Doyon (2005); An extensive study of the economic impact of a monopolistic cooperative.

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Entrepreneurship Development in Malaysia Based on the Findings of the Global Entrepreneurship Monitor (GEM) 2009

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Abstract

This paper presents the results and findings of the Global Entrepreneurship Monitor (GEM) 2009 for Malaysia in which the country is represented by the research team from the Bank Rakyat School of Business and Entrepreneurship (BRSBE), Universiti Tun Abdul Razak (UNIRAZAK). Notably, GEM has become the world's most comprehensive research consortium dedicated to understanding the relationship between entrepreneurship and national economic development. It has provided the most comprehensive comparative data about attitudes toward entrepreneurs, start-up business activities, and plans for starting and building businesses, globally, by country, by geographic region and by phase of economic development. The 2009 study, the 11th in the GEM series, was based on interviews with at least 2,000 individuals in each participating country. This paper focuses and highlights the results and findings on Malaysia and in some related aspects, will compare Malaysia's standings against other participating countries in the study especially with the other 4 countries from the Asia Pacific region namely China, Hong Kong, Japan and Republic of Korea (54 countries participated in the GEM 2009 study). This paper presents and discusses on the results and findings on the characteristics of entrepreneurial activity, entrepreneurial attitudes and entrepreneurial perceptions which have been collected via the Adult Population Survey (APS). Several recommendations are drawn from the discussion.

Key words: *Development, Necessity Entrepreneurship, Opportunity Entrepreneurship, Economic Development, Entrepreneurial Activity, Entrepreneurial Attitudes, Entrepreneurial Perceptions*

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Introduction

Entrepreneurship is concerned with growth and wealth creation. In fact, growth and wealth creation are entrepreneurship's defining objectives. Entrepreneurship is also increasingly being viewed as a stimulus to wealth creation in emerging, developing and developed economies as a result of the actions of individual firms (Ireland, Hitt and Sirmon, 2003). In their review of the entrepreneurship literature, Audretsch, Keilbach and Lehmann (2006) argued that the most striking features of entrepreneurship are that it crosses a number of key units of analysis. At one level, entrepreneurship involves the decisions and actions of individuals. These individuals may act alone or within the context of a group. At another level, entrepreneurship involves units of analysis at the levels of the industry, as well as at spatial levels, such as cities, regions and countries. In addition, entrepreneurship has come to be perceived as the engine of economic and social development throughout the world (Acs and Audretsch, 2005).

Notably, GEM has been the world's leading research consortium dedicated to understanding the relationship between entrepreneurship and national economic development. For the past ten years GEM reports have been the only source of comparable data across a large variety of countries on attitudes toward entrepreneurship, start-up and established business activities, and aspirations of entrepreneurs for their businesses.

To examine cross-country entrepreneurship development in the context of the relationship between entrepreneurship and economic development, this paper extracts the results and findings of the Global Entrepreneurship Monitor (GEM) 2009 in which Malaysia was represented by the research team from the Bank Rakyat School of Business and Entrepreneurship (BRSBE), Universiti Tun Abdul Razak (UNIRAZAK). This paper focuses and highlights the results and findings on Malaysia and in some related aspects, compares Malaysia's standings against other participating countries in the study especially with the other 4 countries from the Asia Pacific region namely China, Hong Kong, Japan and Republic of Korea (54 countries participated in the GEM 2009 study). This paper presents and discusses on the results and findings on the characteristics of entrepreneurial activity, entrepreneurial attitudes and entrepreneurial perceptions which have been collected via the Adult Population Survey (APS).

THE GEM MODEL AND METHODOLOGY

GEM 2009 was framed around a model, introduced in the GEM 2008 report, that includes a distinction among phases of economic development, in line with Porter's typology of "factor-driven economies," "efficiency-driven economies" and "innovation-driven economies" (Porter, Sachs and McArthur, 2002). GEM 2009 reiterated that necessity-driven self-employment activity tends to be higher in less developed economies. Such economies are unable to keep pace with the demand for jobs in high-productivity sectors, and so many people must create their own economic activity. As an economy develops, the level of necessity-driven entrepreneurial activity gradually declines as productive sectors grow and supply more employment opportunities. At the same time, opportunity-driven entrepreneurial activity tends to pick up with improvements in wealth and infrastructure, introducing a qualitative change in overall entrepreneurial activity.

Among the 54 participating countries in the GEM 2009 study, there were only 5 countries from the Asia Pacific region namely Malaysia, China, Hong Kong, Japan and Republic of Korea (constituting 9% of total number of countries). Malaysia and China were grouped in the "efficiency-driven economies" while Hong Kong, Japan and Republic of Korea, were considered as "innovation-driven economies".

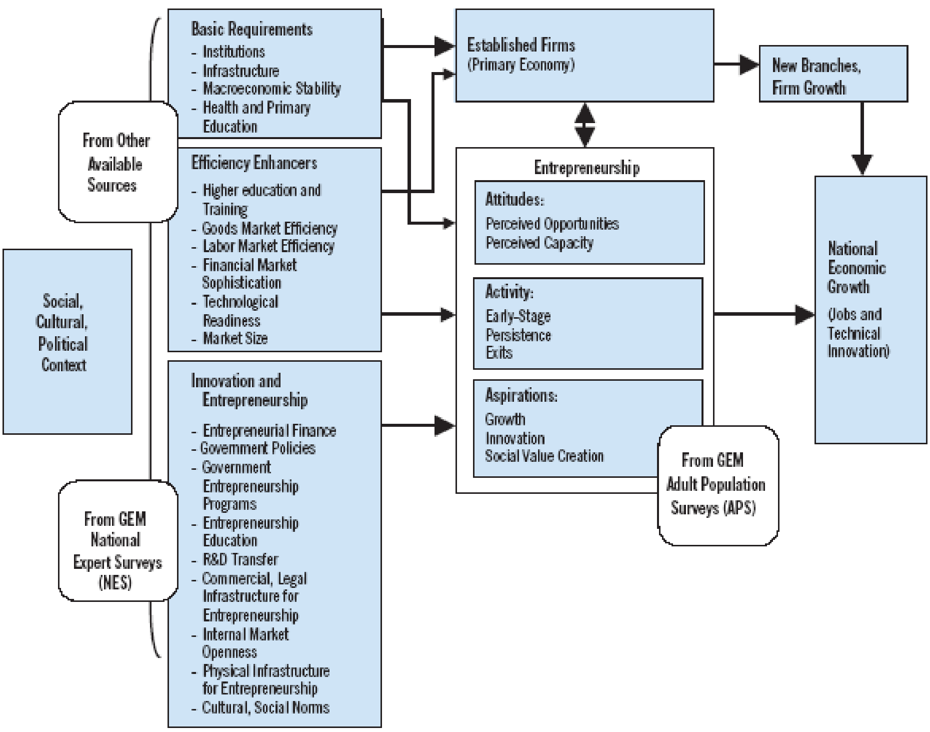

Figure 1: The GEM Model

The GEM model documents how entrepreneurship is affected by national conditions. It also shows that GEM considers three major components of entrepreneurship: attitudes, activity and aspirations. GEM monitors entrepreneurial framework conditions in each country through harmonized surveys of experts in the field of entrepreneurship. Components of entrepreneurship are tracked using the GEM Adult Population Surveys. Thus, GEM generates original data on the institutional framework for entrepreneurship and entrepreneurial attitudes, activity and aspirations using its own methodology that is harmonized across countries. Different types and phases of entrepreneurship may impact economic growth differently in different parts of the world (Sternberg and Wennekers, 2005). In addition, in theory the relationship works both ways: entrepreneurship may impact economic development, which in turn may impact entrepreneurship.

GEM focuses on three main objectives:

- To measure differences in the level of entrepreneurial activity among countries;
- To uncover factors determining national levels of entrepreneurial activity; and,
- To identify policies that may enhance the national level of entrepreneurial activity.

Entrepreneurship is a complex phenomenon which spans a variety of contexts. In line with its objectives, GEM takes a broad view of entrepreneurship and focuses on the role played by individuals in the entrepreneurial process. Unlike most entrepreneurship data sets that measure newer and smaller firms, GEM studies the behavior of individuals with respect to starting and managing a business. This differentiates GEM data from other data sets, most of which record firm-level data on (new) firm registrations, as highlighted in the GEM 2008 Global Executive Report (see Bosma et. al., 2009, 12). New firms are, most often, started by individuals. Even in established organizations, entrepreneurial attitudes, activities, and aspirations differ in each individual.

Another guiding principle of GEM research is that entrepreneurship is a process. Therefore GEM observes the actions of entrepreneurs who are at different stages of the process of creating and sustaining a business. For GEM, the payment of any wages for more than three months to anybody, including the owners, is considered to be the “birth event” of actual businesses. Individuals who are actively committing resources to start a business that they expect to own themselves, but who have not reached this “birth event” are labeled nascent entrepreneurs.

Individuals who currently own and manage a new business that has paid salaries for more than three months but not more than 42 months are known as new business owner-managers. The cut-off point of 42 months has been made on a combination of theoretical and operational grounds. The prevalence rate of nascent entrepreneurs and new business owner-managers taken together may be viewed as an indicator of early-stage entrepreneurial activity in a country. It represents dynamic new firm activity – the extent of experimentation in new business models by a national population.

Established business owners own and manage an established business that has been in operation for more than 42 months. Their businesses have survived the liability of newness. High rates of established business ownership may indicate positive conditions for firm survival. However, this is not necessarily the case. If a country exhibits a high degree of established entrepreneurship combined with low degree of early-stage entrepreneurial activity, this indicates a low level of dynamism in entrepreneurial activity. Finally, GEM identifies individuals who have discontinued a business in the last 12 months. These individuals may enter the entrepreneurial process again.

Figure 2 summarizes the entrepreneurial process and GEM's operational definitions. The GEM 2009 Global Executive Report includes 54 countries across the globe. In each of these 54 countries, a survey was conducted among a representative sample of at least 2,000 adults. More than 180,000 adults were interviewed between May and October and answered questions on their attitudes toward and involvement in entrepreneurial activity.

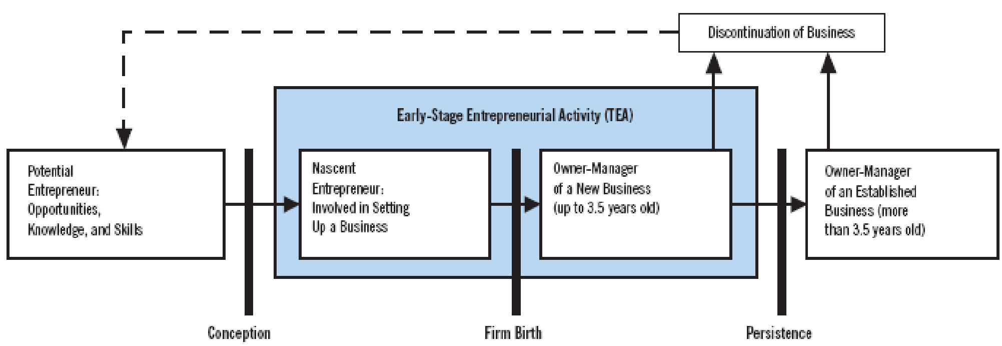

Figure 2: The Entrepreneurial Process and GEM Operational Definitions

KEY RESULTS AND DISCUSSION

Characteristics of Entrepreneurial Activity

Table 1 summarizes the involvement in entrepreneurial activity over several phases of the entrepreneurial process (refer Figure 2 for an overview of these phases) for each of the 54 GEM 2009 countries. Countries are grouped according to the major phases of economic development. Taken together, the numbers in the table provide a picture of the characteristics of overall entrepreneurial activity for each country, i.e., all types of entrepreneurial activity covering the entire economic spectrum.

One of the principal measures in Table 1 is of early-stage entrepreneurial activity, or TEA. The TEA rate is the proportion of people aged 18-64 who are involved in entrepreneurial activity as a nascent entrepreneur or as an owner-manager of a new business. The average pattern for the three country groups is of a decline in overall levels of early-stage entrepreneurial activity with increasing economic development, and relatively low levels of necessity entrepreneurship in innovation-driven countries. However, there are large variations in entrepreneurial activity within the groups, since each country has a unique set of economic and social conditions which can affect entrepreneurial activity.

Table 1: Entrepreneurial Activity in 54 GEM Countries, By Phase of Economic Development

	NASCENT ENTREPRENEURSHIP RATE	NEW BUSINESS OWNERSHIP RATE	EARLY-STAGE ENTREPRENEURIAL ACTIVITY (TEA)	ESTABLISHED BUSINESS OWNERSHIP RATE	DISCONTINUATION OF BUSINESSES	NECESSITY-DRIVEN (% OF TEA)	IMPROVEMENT-DRIVEN OPPORTUNITY (% OF TEA)
Factor-Driven Economies							
Algeria	11.3	5.6	16.7	4.7	7.9	18	51
Guatemala	17.1	12.2	26.8	3.3	6.0	23	30
Jamaica	13.0	10.6	22.7	16.3	10.7	33	45
Lebanon	6.7	8.8	15.0	16.0	4.6	18	60
Saudi Arabia	2.9	1.9	4.7	4.1	2.9	12	63
Syria	3.4	5.1	8.5	6.7	7.4	37	43
Republic of Tonga	6.5	11.1	17.4	2.3	3.6	33	39
Uganda	12.4	22.7	33.6	21.9	24.2	45	45
Venezuela	13.3	5.4	18.7	6.5	3.0	32	42
West Bank and Gaza Strip	3.0	5.9	8.6	6.9	7.1	37	33
Yemen	22.8	1.2	24.0	2.9	2.0	35	16
average (unweighted)	10.2	8.9	17.9	8.3	7.2	29	42
Efficiency-Driven Economies							
Argentina	6.1	9.3	14.7	13.5	6.2	47	37
Bosnia and Herzegovina	3.1	1.3	4.4	3.9	3.1	39	20
Brazil	5.8	9.8	15.3	11.8	4.0	39	48
Chile	9.6	5.6	14.9	6.7	6.4	25	42
China	7.4	11.8	18.8	17.2	6.6	48	29
Colombia	15.0	8.0	22.4	12.6	7.1	34	45
Croatia	3.5	2.2	5.6	4.8	3.9	37	39
Dominican Republic	8.8	9.2	17.5	11.4	12.9	34	26
Ecuador	6.3	9.7	15.8	16.1	6.0	32	43
Hungary	5.4	3.7	9.1	6.7	3.2	24	45
Iran	8.2	4.1	12.0	6.5	6.0	35	35
Jordan	5.9	4.9	10.2	5.3	6.8	28	35
Latvia	5.3	5.4	10.5	9.0	3.3	32	54
Malaysia	1.7	2.7	4.4	4.3	2.7	25	44
Panama	6.2	3.5	9.6	4.2	1.4	24	59
Peru	16.1	5.1	20.9	7.5	7.1	28	42
Romania	2.8	2.3	5.0	3.4	3.6	34	31
Russia	1.8	2.3	3.9	2.3	2.2	29	37
Serbia	2.2	2.8	4.9	10.1	1.9	41	46
South Africa	3.6	2.5	5.9	1.4	4.2	33	38
Tunisia	2.2	7.2	9.4	10.2	4.8	20	57
Uruguay	8.1	4.2	12.2	5.9	4.9	22	57
average (unweighted)	6.1	5.3	11.2	7.9	4.9	32	41
Innovation-Driven Economies							
Belgium	2.0	1.6	3.5	2.5	1.3	9	55
Denmark	1.6	2.0	3.6	4.7	1.1	7	56
Finland	2.9	2.3	5.2	8.5	2.1	19	62
France	3.1	1.4	4.3	3.2	1.9	14	67
Germany	2.2	2.1	4.1	5.1	1.8	31	43
Greece	4.5	4.7	8.8	15.1	2.6	26	47
Hong Kong	1.6	2.2	3.6	2.9	1.5	19	49
Iceland	7.6	4.2	11.4	8.9	4.0	10	58
Israel	3.4	2.7	6.1	4.3	4.0	25	48
Italy	1.8	1.9	3.7	5.8	1.1	14	57
Japan	1.9	1.3	3.3	7.8	1.4	30	62
Republic of Korea	2.7	4.4	7.0	11.8	3.9	45	37
Netherlands	3.1	4.1	7.2	8.1	2.5	10	57
Norway	5.0	3.9	8.5	8.3	3.7	9	74
Slovenia	3.2	2.1	5.4	5.6	1.3	10	69
Spain	2.3	2.8	5.1	6.4	2.0	16	41
Switzerland	4.3	3.5	7.7	8.4	2.1	7	67
United Arab Emirates	6.5	7.4	13.3	5.7	6.5	9	79
United Kingdom	2.7	3.2	5.7	6.1	2.1	16	43
United States	4.9	3.2	8.0	5.9	3.4	23	55
average (unweighted)	3.4	3.1	6.3	6.8	2.5	17	56

Source: GEM Adult Population Survey (APS)

The ratio of TEA to established business owners also decreases with increasing economic development. This reflects the reduction in the churn rate of new business owners to discontinuances, which is particularly noticeable in innovation-driven economies. Each respondent who had discontinued a business in the previous 12 months was asked to give the main reason for doing so. The GEM 2009 results identified financial problems were cited as the reason for quitting the business by no more than 55% of all respondents; they were cited more often by respondents in the factor and efficiency-driven economies (50% and 60%, respectively) than innovation-driven countries (about 40%). The business itself not being profitable was the most reported financial problem. Problems with raising finance were considerably lower in innovation-driven countries where the Entrepreneurial Framework Condition "Entrepreneurial Finance" is generally more developed. "The opportunity to sell" and in particular "retirement" were mentioned more often in innovation-driven countries as the most important reason to discontinue the business. Personal reasons caused around 20 to 30% of all discontinuations.

The results demonstrated that in factor-driven countries, failure rates are quite high as a proportion of discontinuations, and almost all non-failure discontinuations are for personal reasons. These are likely to be mainly due to illness, bereavement, civil unrest and other reasons associated with relatively unfavourable basic requirements. Failure rates are somewhat higher in efficiency-driven countries as a proportion of discontinuations, reflecting the increasing importance of scale and efficiency in business in these countries. Failure rates, both in absolute terms and in proportion to all discontinuations, are lowest in innovation-driven economies, because entrepreneurs have better skills and environments are more favourable.

Extracting the results for the 5 Asia-Pacific countries into Table 2, it is interesting to see the comparison between them. China has the highest TEA rate and Japan has the lowest. China has the highest established business ownership rate also but Hong Kong seems to have the lowest. Interestingly, discontinuation of businesses is also higher in China. China and Republic of Korea have a higher proportion of necessity-driven entrepreneurship in the TEA while other countries' seem to have a higher proportion of opportunity-driven entrepreneurship in the TEA. It also seems that Malaysia is fairly better than Hong Kong in terms of its entrepreneurial activity in 2009 but still way behind China and Republic of Korea.

Table 2: Entrepreneurial Activity in Asia-Pacific Countries in 2009

Economies	Nascent Entrepre-neurship Rate	New Business Ownership Rate	TEA	Established Business Ownership Rate	Discontin-uation of Businesses	Necessity-Driven (% of TEA)	Improve-ment-Driven Opportu-nity (% of TEA)
Malaysia	**1.7**	**2.7**	**4.4**	**4.3**	**2.7**	**25**	**44**
China	7.4	11.8	18.8	17.2	6.6	48	29
Hong Kong	1.6	2.2	3.6	2.9	1.5	19	49
Japan	1.9	1.3	3.3	7.8	1.4	30	62
Korea	2.7	4.4	7.0	11.8	3.9	45	37

For Malaysia, its early-stage entrepreneurial activity measures 4.4%, this represents a combination of nascent entrepreneurs at 1.7% and new business owner-managers at 2.7%. This represents an overall decline from the 11.1% indicated in the 2006 study (where nascent entrepreneurs were at 4.9% and new business owners at 6.2%) (Note: The 2006 study was not published even though data was collected and analyzed). Further, in comparison with other efficiency-driven economies, Malaysia's TEA rate is the second lowest (the lowest being Russia with a TEA rate at 3.9%) and similar to Bosnia and Herzegovina's TEA rate. The percentage of established business owners (owning a business for more than 42 months) measures 4.3%, while, the discontinuation of businesses rate measures 2.7%. Malaysia has a higher proportion of opportunity-driven entrepreneurship (44%) as compared to necessity-driven entrepreneurship (25%) in the TEA.

The measures indicated above may have been caused by a few factors. Firstly, banks and nongovernmental credit agencies in Malaysia have essentially adopted a prudent and much more stringent approach to credit and lending. However, the government has cautioned these financial institutions against adopting a 'knee-jerk' reaction to the financial crisis and has adopted aggressive measures to address the credit freeze. They have also introduced two stimulus plans to try and arrest the situation. Additionally, retrenched workers have been redeployed and absorbed into other sectors. To some extent this has afforded a soft landing for a declining economy.

Further, Venture Capital and Business Angel activity has been redirected to industries that seem to be immune to the external financial crisis, mainly industries that relied on internal consumption. Additionally, greater rigour is applied to sieving such opportunities and a long-term focus has been adopted. There is an imperative to now move from a resource-led economy to an innovation-led economy and this initiative is being championed directly by the Prime Minister through the Ministry of Science, Technology and Innovation (MOSTI), Economic Planning Unit (EPU), Ministry of Finance (MOF) and other key agencies. This is pursued through two key models i.e. technology-driven innovation model and market-driven innovation model, both of which requires an entrepreneurial approach, utilizing government and private sector collaboration with the government taking the role of risk mitigator via risk capital and grants. Thus, science and technology research grants are made available. These have been outlined in the 9th Malaysia Plan’s Mid-term Review (EPU, 2008).

Characteristics of Entrepreneurial Attitudes and Perceptions

Table 3 lists several GEM indicators concerning individuals’ own perceptions toward entrepreneurship for each of the 54 GEM 2009 nations. Some countries have favourable perceptions of entrepreneurship combined with low rates of intentional entrepreneurship. This is the case for many innovation-driven economies in Europe. In other words, although attitudes and perceptions toward entrepreneurship are fairly high, the attractiveness of becoming involved in entrepreneurship appears to be low for many Europeans compared to other possible sources of income. As for the 5 Asia Pacific countries, a similar pattern is seen except for China and Republic of Korea where the rates of intentional entrepreneurship is quite high relative to entrepreneurial perceptions (refer Table 4). It is also interesting to note that the rate of perceived opportunities is higher than the rate of perceived capabilities for Malaysia. Does this mean that the adult population of Malaysia perceives that there is a lack of capabilities to capitalise on possibly greater perceived opportunities? Further, the rate of Malaysia’s entrepreneurial intentions is very low.

Table 3: Entrepreneurial Attitudes and Perceptions in 54 GEM Countries in 2009, by Phase of Economic Development, GEM 2009

	PERCEIVED OPPORTUNITIES	PERCEIVED CAPABILITIES	FEAR OF FAILURE*	ENTREPRENEURIAL INTENTIONS **	ENTREPRENEURSHIP AS A GOOD CAREER CHOICE	HIGH STATUS TO SUCCESSFUL ENTREPRENEURS	MEDIA ATTENTION FOR ENTREPRENEURSHIP
Factor-Driven Economies							
Algeria	48	52	31	22	57	58	39
Guatemala	57	64	24	18	77	69	68
Jamaica	42	77	24	29	76	77	74
Lebanon	54	77	21	22	85	79	65
Saudi Arabia	69	73	49	34	80	89	78
Syria	54	62	18	54	89	89	55
Kingdom of Tonga	56	53	65	6	91	52	80
Uganda	74	85	29	58	81	85	74
Venezuela	48	59	26	29	76	69	49
West Bank and Gaza Strip	50	56	36	24	88	78	52
Yemen	14	64	65	9	95	97	96
average (unweighted)	51	66	35	28	81	77	66
Efficiency-Driven Economies							
Argentina	44	65	37	14	68	76	80
Bosnia and Herzegovina	35	57	32	17	73	57	51
Brazil	47	53	31	21	81	80	77
Chile	52	66	23	35	87	70	47
China	25	35	32	23	66	77	79
Colombia	50	64	29	57	90	74	82
Croatia	37	59	35	8	68	49	53
Dominican Republic	50	78	27	25	92	88	61
Ecuador	44	73	35	31	78	73	55
Hungary	3	41	33	13	42	72	32
Iran	31	58	32	22	56	78	61
Jordan	44	57	39	25	81	84	70
Latvia	18	50	40	10	59	66	51
Malaysia	45	34	65	5	59	71	80
Panama	45	62	26	11	74	67	50
Peru	61	74	32	32	88	75	85
Romania	14	27	53	6	58	67	47
Russia	17	24	52	2	60	63	42
Serbia	29	72	28	22	69	56	56
South Africa	35	35	31	11	64	64	64
Tunisia	15	40	34	54	87	94	70
Uruguay	46	68	29	21	65	72	62
average (unweighted)	36	53	32	19	71	70	62

	PERCEIVED OPPORTUNITIES	PERCEIVED CAPABILITIES	FEAR OF FAILURE*	ENTREPRENEURIAL INTENTIONS **	ENTREPRENEURSHIP AS A GOOD CAREER CHOICE	HIGH STATUS TO SUCCESSFUL ENTREPRENEURS	MEDIA ATTENTION FOR ENTREPRENEURSHIP
Innovation-Driven Economies							
Belgium	15	37	28	5	46	49	33
Denmark	34	35	37	3	47	75	25
Finland	40	35	26	4	45	88	68
France	24	27	47	16	65	70	50
Germany	22	40	37	5	54	75	50
Greece	26	58	45	15	66	68	32
Hong Kong	14	19	37	7	45	55	66
Iceland	44	50	36	15	51	62	72
Israel	29	38	37	14	61	73	50
Italy	25	41	39	4	72	69	44
Japan	8	14	50	3	28	50	61
Republic of Korea	13	53	23	11	65	65	53
Netherlands	36	47	29	5	84	67	64
Norway	49	44	25	8	63	69	67
Slovenia	29	52	30	10	56	78	57
Spain	16	48	45	4	63	55	37
Switzerland	35	49	29	7	66	84	57
United Arab Emirates	45	68	26	36	70	75	69
United Kingdom	24	47	32	4	48	73	44
United States	28	56	27	7	66	75	67
average (unweighted)	20	43	36	5	56	64	45

* Denominator: 18-64 population perceiving good opportunities to start a business
**Denominator: 18-64 population that is not involved in entrepreneurial activity

Source: GEM Adult Population Survey (APS)

A variety of national characteristics could be underlying this phenomenon. It could be that there is a lot of red tape (administrative burdens) attached to starting a business, reducing the attractiveness of entrepreneurship. It could also be the case that employment protection is high. This could discourage employees with positive entrepreneurial perceptions from switching to entrepreneurship. A different effect of stringent employment protection is that potential entrepreneurs may think carefully before hiring employees due to the substantial losses they would incur if their employees became unfit for work, or if they had to reduce the number of workers.

Every year, GEM asks respondents if fear of failure would prevent them from starting up a business. Table 3 shows that in factor-driven and efficiency-driven countries, those with the highest fear of failure rates have the lowest intention rates. In order to grasp the importance of the "fear of failure" effect, it makes sense to examine how prevalent this view is among those who perceive good opportunities for setting up a business. If fear of failure is particularly prevalent among these people, interventions to reduce fear of failure may be justified. In most countries, the fear of failure prevalence rate is lower among those who see good opportunities to start a business than among the population in general. This is shown in Figure 3, where most countries are situated to the left hand side of the 45° diagonal line. Exceptions to the rule include Tunisia, Japan, Yemen, and Malaysia. In these countries, fear of failure may be holding back people who see most opportunities.

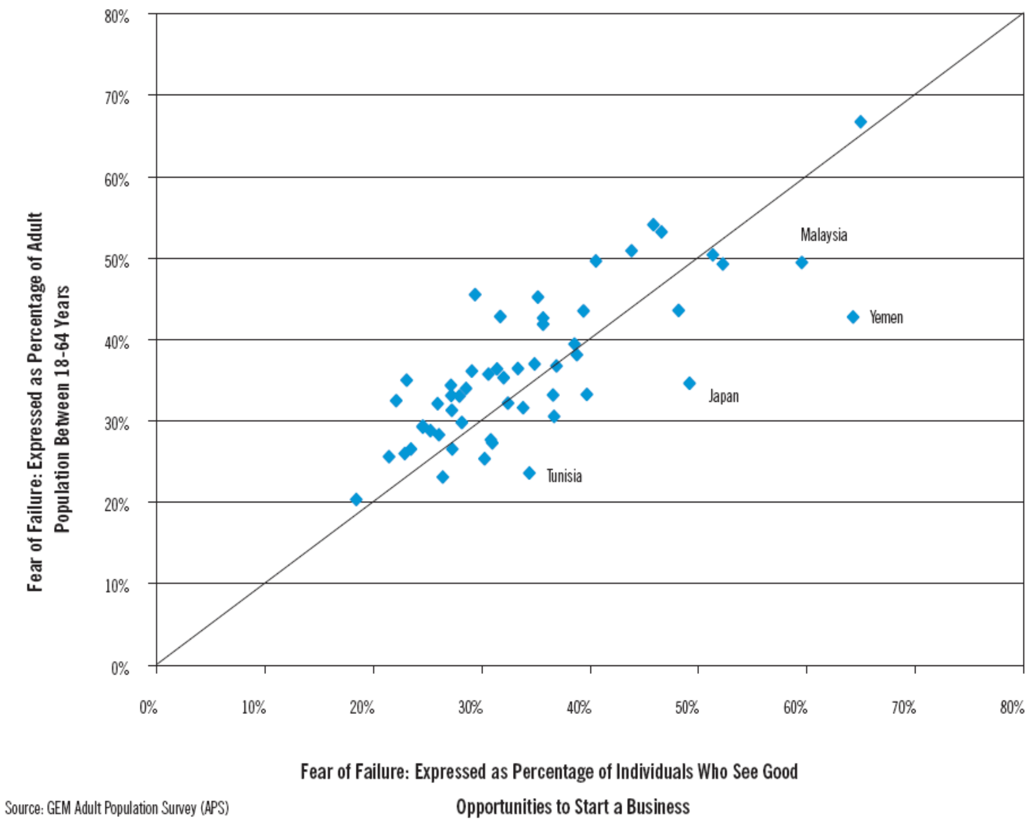

Figure 3: Fear of Failure Would Prevent You from Starting a Business: Prevalence Rates for those who Perceive New Business Opportunities and Total Working Age Population, GEM 2009

Table 4: Entrepreneurial Attitudes and Perceptions in Asia-Pacific Countries in 2009

Economies	Perceived Opportu-nities	Perceived Capabili-ties	Fear of Failure	Entrepre-neurial Intentions	Entrepre-neurship as a good career choice	High Status to successful entrepre-neurs	Media attention for entrepre-neurship
Malaysia	**45**	**34**	**65**	**5**	**59**	**71**	**80**
China	25	35	32	23	66	77	79
Hong Kong	14	19	37	7	45	55	66
Japan	8	14	50	3	28	50	61
Korea	13	53	23	11	65	65	53

On the right-hand side of Table 3 are results of three indicators measuring national attitudes to entrepreneurship. The first one assesses the percentage of inhabitants who feel that in their country, starting a new business is considered a desirable career choice. This indicator varies widely within each of the three phases of economic development, but on average it is lower with increasing levels of economic development. This makes sense: As economies develop, more employment opportunities open up. The second indicator describes how the inhabitants feel about entrepreneurs that are successful: Do they receive a high status or are they generally not seen as role models within the society? Here, there is also wide variation within country groups, but the extent of the dip with increasing economic development across the three country groups is much smaller. On average, most people (close to three-quarters of working age adults) feel that successful entrepreneurs have high status.

Even though overall there is a mildly positive correlation between these two measures, they do not always match. In some countries, perception of new business creation as a good career choice is accompanied with low status for successful entrepreneurs. This is the case for Croatia and the Kingdom of Tonga. Finland displays the reverse results: Here successful entrepreneurs receive high status but a minority of people would agree that starting a new business is seen as a good career choice. As for Asia Pacific countries in Table 4, a positive correlation between these two measures appears for China, Republic of Korea and Malaysia. It seems that most people in these 3 countries perceive that entrepreneurship is a good career choice and there is high status for successful entrepreneurs. Interestingly, most people in Hong Kong and especially in Japan do not view new business creation as a good career choice. In Hong Kong, successful entrepreneurs are still highly regarded. However, in Japan, it can be both ways.

The third indicator relates to the popularity of entrepreneurship and asks for respondents' opinions on the media coverage for new businesses in the country. In some countries, deliberate media campaigns are underway to promote entrepreneurship, while in others, there appears to be little media activity. Among innovation-driven countries, Belgium and Denmark scored low here in 2009, while Finland, Norway and the United Arab Emirates scored high.

In countries with primarily factor-driven economies, these attitudes should not be the main concern of government as entrepreneurship is to large extent necessity-driven and there are other pressing priorities. In countries with mainly efficiency-driven economies, attention should begin to be paid to attitudes, as they may affect the extent of opportunity-driven entrepreneurship. The measures also show that Latin American countries and countries in Northern Africa and the Middle East (with Algeria being an exception) have in general quite favourable attitudes, while Eastern European countries score lower in this respect.

Looking at innovation-driven countries, some anomalies are apparent. These could provide governments with clues as to what they could do to encourage entrepreneurial activity. For example, in Japan, most people agree that there is a lot of media attention to entrepreneurship, yet starting a business is still not regarded as a good career choice – and perceived opportunities are very low while fear of failure is very high. In Denmark, the status attached to successful entrepreneurs is high but the media attention is low.

For Malaysia, the government could pay greater attention to improving entrepreneurial capabilities, reducing fear of failure thereby enhancing entrepreneurial intentions. The measures indicated that government campaigns to augment the status of entrepreneurship, to boost the perception of entrepreneurship as a career choice have borne fruits. However, more efforts and initiatives are needed to strengthen the entrepreneurial framework, mindset and culture among the general population. Thus, more emphasis, structure and system, is needed for entrepreneurship education and entrepreneurial finance.

IMPLICATION FOR RESEARCH

In comparison with other countries within this GEM analysis, Malaysia's GDP per capita is relatively low coupled with a very low TEA rate. This is at odds with the norm where generally low GDP per capita is associated with high TEA rates. There is comparatively limited entrepreneurial activity in Malaysia and its explanation is made harder as factors such as attitudes and aspirations need also to be included in the equation. It is clear that successful entrepreneurs are accorded a high status but it may be that their perception or actual skills, knowledge and experience may be lacking and this impact upon their attitude towards entrepreneurship.

Additionally, the data supports Malaysia's general lack of skills and ambition for high growth and innovation ventures and this impact negatively upon overall aspirations. That said, the opportunity costs of starting an entrepreneurial activity may be too high as there remains less risky opportunities for people both from the private sector and government. Furthermore, the data shows that fear of failure may be holding back people who see most opportunities.

The low entrepreneurial activity rates coupled with Malaysia's relatively low per capita income is generally an indication of a sustainable scenario and predicates political stability and economic growth i.e. an abundance of opportunities. This distilled; recommends that entrepreneurially, Malaysia as a nation needs to go forward exploiting opportunity-driven entrepreneurship. And the way forward is through knowledge-intensive and innovation-led initiatives/ventures/enterprises.

Thus, future research in the area of entrepreneurship development in Malaysia should consider the factors and enablers in fostering opportunity-driven entrepreneurship via innovation. Can the current drive, policies and strategy boost productivity and push Malaysia into an innovation-driven type economy. And, whether the ambition for high growth, new products, process innovation and internationalization contributes to Malaysia successfully embracing the 21st century? Future researchers are also recommended to review other data sets and findings which have been generated from empirical studies conducted locally and compare, where possible, with the GEM data. Future researchers are also encouraged to review the other parts of the GEM 2009 study since this paper only highlights two key results of the study i.e. characteristics of entrepreneurial activity and characteristics of entrepreneurial attitudes and perceptions.

CONCLUSION

There are still a lot more results and findings produced from the GEM 2009 study but this paper focuses only on the updates on the characteristics of entrepreneurial activity, entrepreneurial attitudes and perceptions. These updates can be used to identify areas for improvement and where greater attention and efforts are needed. These indicators are also useful for policy-making especially in relation to entrepreneurship and economic development.

Fervently, the Malaysian government has continued its emphasis on high growth firms and industries, and these include value added industries especially biotechnology and ICT. In this regards, entrepreneurial attitudes, perceptions and entrepreneurial activity studies become crucial as a basis to formulate its plans. GEM data for 2009 is a useful measurement and provides a benchmark for assessing the effectiveness of the government's current and future initiatives.

In fact, the use of GEM data is now more commonplace across all agencies. For example, the Malaysian Productivity Corporation (MPC) relied on GEM data to further understand entrepreneurial propensity, the Malaysian Institute of Economic Research (MIER) also used GEM information in putting forward suggestions for the design of an entrepreneurship policy and further, universities across the country rely on GEM data as an information database for teaching and research.

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Venture Capitalists' Herd Behavior: Theoretical Analysis of China's Venture Capital Market

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Abstract

The paper is trying to explore the behavior generating mechanism of the characteristics of the volatility of China's venture capital market. It extends the information cascades proposed by banerjeer by modeling the investment of high-tech industry in the presence of uncertainty about the investing industry itself and the economic environment. This paper found that the cascades model can better explain the generating mechanism of venture capitalists' herd behavior which could properly explain the venture capital market's volatility. This paper offers an important theoretical instruction and policy inspiration for the steady development of China's venture capital market, which is filling the gap of analyzing herd behavior of venture capitalists.

Key words: *Venture Capital, Venture Capital Market, Herd Behavior, China.*

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1. Introduction

Since the introduction of venture capital in 1980s, venture capital in China has grown fast along with the robust national economy (figure 1, figure 2). Today China’s venture capital industry in the year of 2007 owns funds worth 120.585 billion Yuan RMB in total (Annual Report of Chinese Venture Capital, 2007). In the sole year of 2007, it was estimated that 89.338 billion Yuan RMB being raised by venture capital firms to invest in China, up from RMB 3.702 million Yuan in 2002 (Annual Report of Chinese Venture Capital, 2007). Recently, there were over 500 venture capital firms in China and a similar number of domestic venture capitalists (Annual Report of Chinese Venture Capital, 2007). There are mainly four distinct types of venture capital firms operating in China: (1) foreign firms, (2) government firms, (3) university firms, and (4) corporate firms, of which foreign venture capital firms are most active. The foreign venture capital firms represented about eight of the top ten venture investors in China. More foreign venture capital firms are expected to as there are more and more venture capital firms entering Chinese market.

Despite the tremendously rapid growth of venture capital industry in China, the industry may not be characterized by the maturity and perfectibility of a market as that in a developed country. Evidence shows that the legal framework and the rule of law for the venture capital are weak, as there are no major capital market channels for venture capital to exit and the central government’s industry policy for venture capital remains unstable. Venture capitalists would face more governmental involvement (such as regulation and intervention), resulting in the tendency of enlarging uncertainty in the market and causing significant market volatility.

Another distinct characteristic of the market is that the industries invested by all the venture capitalists are relatively focused (figure 3), and the volatility of the venture capital market coincides with the volatility of the invested amount of the focused industry (figure 4). A case in point is the Internet Bubbles around the year 2000 which directly led to the following depression of venture capital industry in the USA. The Chinese venture capital industry also decreased sharply around the year 2002, which was later than that in the USA. It is reported that the total amount of venture capital invested in China increased to 4.32 billion Yuan RMB in the year 2001 from 0.2 billion RMB in 1995, but decreased to 3.4 billion Yuan RMB in the year 2002. The venture capital investment developed slowly in the following two years and at the year of 2005, the venture capital industry was recovered as about 14.36 billion Yuan RMB was invested in the year 2006. Therefore, the total amount of venture capital in China would have a great volatility (figure 5). Although the general IT industry in China is straight to be one of the most popular investment fields in the past several years, the percentage of the cases invested in general IT industry was also taking on a great volatility (figure 6), which shows a similar trend with the volatility of venture capital market. Therefore, the investing behavior characterized by focused industry tends to cause the volatility of the market.

As a result, investing behavior in China's venture capital markets may be different from that in other markets. Venture capitalists may base their actions on the others' decisions that may be more well-informed and sophisticated about market, by following the market consensus. China's venture capital market is characterized by more given significance, unique microstructure and a government which is increasingly becoming market-oriented. These characteristics should be taken into serious consideration in understanding venture capitalists' actions and behaviors in Chinese venture capital markets in the process of transition. The high-tech bubbles in the year 2000 may give a convincing answer to the irrational prosperity announced by some sophisticated scholars in the market. Inspired by the announcement, it is reasonable to propose that there might be herd's behaviors among venture capitalists in China in the investment processes. Due to the limitation of the venture capital data, the paper would give a theoretical analysis of the generating mechanism of herd behavior in china's venture capital market rather than make an empirical test. In such a way, the paper hopes to give a deep insight into emerging venture capital market, especially with the characteristics of transitional economy background like China. There is no doubt that it will add new information to the fields of world financial markets.

The structure of the paper is as follows: Part 2 is literature review, which will combs up the literature related to herd behavior's concept, generating setting and its application in financial market: most importantly, we will verify the emerging probability of herd behavior in China's venture capital market. In part3, we will develop a model based on Banerjee (1992). Part 4 is solely to discuss the payoff among venture capitalists and Part 5 is the conclusion and implication.

2. Literature review

Herding, is the phenomenon by which ''everyone does what everyone else is doing, even when their private information Suggests doing something quite different'' (Banerjee, 1992). Several views have been proposed on why investors would tend to mimic the actions of other investors. One view approaches the problem by focusing on the psychology of the investor who may have a preference for conformity with the market consensus (Devenow and Welch, 1996).

The other view suggests that others may know something about the returns on the particular investment and their actions reveal such information (Chari and Kehoe, 1997, Calvo and Mendoza, 1998 and Avery and Zemsky, 1998). Another approach focuses on the principal–agent relationship where money managers might be drawn to imitating others as a result of the incentives provided by the compensation scheme, terms of employment or with the purpose of maintaining their reputation (Scharfstein and Stein, 1990 and Maug and Naik, 1996).

The most general explanation of herding is information cascades introduced by Banerjee (1992), Bikhchandani et al. (1992) and Welch (1992). The idea based on informational asymmetries is that agents gain useful information from observing previous agents' decisions, to the point that they optimally, rationally and completely ignore their own private information. The model can explain universal herding on an incorrect decision, low consensus (when polled) and fragility (in which a little bit of public information can reverse long-standing cascades, because herding can arise after only very little information has been publicly aggregated), and strong dependence on initial conditions. The herd behavior is also implicated to explain agent’s behaviors in many fields, such as financial crisis (Corsetti, G. 2001; Chari, Kehoe 2002; Corsetti, G., 2004; Chamley, C., 1997; Choi, J. P., 1997), technology adoption (Cecilia Vergari, 2005), mutual fund (Grinblatt, M., Titman, S., Wermers, R., 1995; Wermers, Russ, 1999; Borensztein, E.R., Gelos, R.G., 2000), and some other fields (Graham1999; Geanakoplos1989; Celen2004; Hwang2004; Grinblatt2001; Hirshleifer 2003; Shapira2001). In China, the research on herd behavior is much popular among many scholars. What’s more, herd behavior is mainly applied to give explanation to investor’s herd behavior in securities market (Song Jun & Wu Chongfeng, 2001; Peng Hui, 2000; Rao Yulei; Wang Sheng, 2004); whereas the mutual managers’ herd behavior is also explained by the model (Wu Xuchuan, He Peng, 2005; Wu Fulong; Zeng Yong; Tang Xiaowo, 2004; Zhao Jiamin; Peng Hong, 2004). Recently, the herd behavior is employed to analyze and test the QDII investor’s investment behavior (Liu Chengyan Hu Feng, 2007). However, there is no research on venture capitalists investing behavior.

The paper aims to explain China’s investors’ behavior in venture capital market by employing the pioneer information cascades model proposed by Banerjee (1992). The reason why we choose Banerjee’s model is as follows: Firstly, agents may have some information about investment object on the basic hypothesis of information asymmetry model, but he is uncertain about whether his own information that he decided on can lead to a satisfying return or not. The safe choice for agents is to mimic other investors’ action. This is an outstanding feature in venture capital market. Since the market can only transform limited information in venture capital financing, venture capitalist and entrepreneur are all superior to each other in one’s private information. Investors will select venture project based on the information which may be got from business plan and due diligence. If the information in key need is limited and unbelievable due to the principal and agency relationship between venture capitalist and entrepreneurs, venture capitalists will not be able to make a decision dependent on such information and have to face large uncertainty. In China's venture capital industry, the large uncertainties are characterized by institutional context. One of the important issues is that in an emerging economy such as in China, private capital and enterprises have little history or legitimacy (Ahlstrom & Bruton, 2001; DeSoto, 2000), so investment in new projects and technologies in emerging (transitional) economies would face much more challenging factors than in matured economy. Furthermore, the institution and regulations of the macroeconomics in China is changing all the time. The two characteristics above have added much uncertainty to the investment in China's venture capital industry, which made China's venture capital investment have high degree of uncertain information. Obviously, it is consistent with the basic hypothesis of the model. Local governments follow the industry policies of the powerful central government, which provide better opportunities for the high-tech industry. Thus the possibility of the herd behavior in high-tech industries multiplies. Secondly, the banjeer's model is simple and convenient to sufficiently display the generating mechanism of herd behavior in venture capital market.

Although the paper is developed from banjeer's model, there are distinct differences from the classical model. On one hand, the information that investors may own includes general information of certain industry and the information of economic environment (such as policies, information from predictability on the economic environment, and some other uncertain information of economic settings), as analyzed above, the information about economic environment is hard to obtain, so venture capitalist cannot nicety predicate the information invested in certain industry. Consistent with banjeer's model, the venture capitalist in our model is sequential to make decision, but the information she decided on is based on the predecessor and mainly obtains from economic environment. Here the general information is public and the information structure is symmetric, whereas the informational externalities come from the economic environment.

On the other hand, most of the herding models reviewed above are characterized by the fact that individual payoffs are independent on the other's actions. In many settings, it is important to incorporate payoff externalities. So, the venture capitalists' payoff are included in our model, where we let the former venture capitalist that entered certain industry get higher payoff, the first with the highest payoff. Avoiding unnecessary complicated analysis, we assume that the payoff all venture capitalists got is higher than the social average level.

At last, it is necessary to note the difference from the previous model, which results from the investment object from high-tech industry in China. Though venture capitalists select project to invest actually, the belonged to industry project is the most important pre-consideration. Besides, it is also necessary to take the industry as the investment object in our goal, because one project cannot be invested by too many venture capitalists. So, we believe it is reasonable and feasible to select an industry as the investment object to investigate venture capitalists' herd behavior.

Accordingly, the purpose of the paper is to extend the analysis of herd behavior to venture capitalist under the transitional economic environment. Our model as the first paper will undoubtedly provide an insight to analyze the generating mechanism of venture capitalists' herd behavior in the context of China's venture capital market.

3. The Herd Behavior Model of Venture Capitalist

3.1 A simple Basic model of Venture Capitalists' herd behaviour

We model the investment of high-tech industry in the presence of uncertainty. Uncertainty can be of different kinds. Firstly, the seminal paper by Farrell and Saloner (1985) introduces uncertainty as incomplete information about the other firm's preferences. Secondly, many researchers introduce uncertainty about the entrepreneur having more information than venture capitalist in investing process. Finally, we introduce uncertainty about the economic environment.

Our analysis abstracts from the first kind of uncertainty and rests on the other two kinds: the uncertainty about uncertainty about the investing industry itself (including entrepreneur's superior information) and its economic environment. The uncertain economic environment turns out to play an important role in industry investing choice. Moreover, it allows the final performance of the investing industry not to be revealed at the beginning, but to be closer to the reality faced later by venture capitalists experimenting with an industry invested. Indeed, the payoff from choosing the industrial project depends on its intrinsic benefit; the number of investors entered in the marketing as well as the potential economic environment that change through all the investing process.

Suppose that there are N venture capitalists, each of which is risk-neutral. They have the same knowledge about the investment return in certain industry. There is a set of projects from different industries indexed by numbers in $[0,1]$. Define the invested industry being the i th industry, where $i=0$ represents one industry not being invested by venture capitalist. Assuming that there is a unique i^*, this is essentially the assumption that the excess return of one industry is strictly greater than that of any other industries.

Of course, every venture capitalist would like to invest in given these payoffs i^*. The trouble is no one knows which industry it is. We assume uniform priors，so there is not even one likely candidate for i^*. However, some venture capitalists know which one it might be. Formally, there is α probability that each venture capitalist receives a signal telling that the true i^* is i'. The signal need not, of course, be true, and the probability that it is false is $1-\beta$. If it is false, then we assume that it is uniformly distributed on [0,1] and therefore gives no information about what i^* really is.

The decision-making in this model is sequential. Firstly, one venture capitalist chosen at random takes her decision. The next venture capitalist, once again chosen at random, takes her decision next but she is allowed to observe the choice made by the previous venture capitalist and can benefit from the information contained in it. However, she is not allowed to find out whether or not the venture capitalist before her actually got a signal.

The rest of the game proceeds in the same way, with each new venture capitalist after venture capitalist making her decision on the basis of the past decisions and their own signal. If they make sure that every venture capitalist has made her choice, all the alternatives that have been chosen are tested, and if any of these turns out to be with high return, those who have chosen it receive high rewards. If no venture capitalist has chosen an option that proved to be with certain return, the industry with high return remains undiscovered, and venture capitalists will get low rewards.

As the game among venture capitalists that depend on certain critical tie-breaking assumptions, we will list assumptions as follows:

Assumption A. Whenever a venture capitalist has no signal and everyone else has chosen $i=0$, she always chooses $i=0$.

Assumption B. When venture capitalists are indifferent between following their own signal and following someone else's choice, they always follow their own signal.

Assumption C. When a venture capitalist is indifferent between following more than one of the previous decision makers, she chooses to follow the one who has the highest value of i.

Based on the assumptions above, the decisions made by the previous venture capitalists are as follows.

The first venture capitalist's decision will clearly depend on whether she has a signal or not. If she has a signal, she will certainly follow her signal, whereas if she has no signal, according to our Assumption A, she will choose $i = 0$. This choice minimizes misinformation**,** the only case where this will cause confusion is when $i^* = 0$, but since it happens with probability 0, we can ignore this possibility.

If the second venture capitalist has no signal, then she will certainly imitate the first venture capitalist and invest in the same industry. However, if she has a signal and the first venture capitalist has not chosen $i = 0$, she will be confused. She knows the first venture capitalist has a signal which is right as similar as her own signal. She is therefore indifferent about following the first venture capitalist's signal and following her own signal. In this situation our Assumption B becomes relevant. By invoking such assumption, we determine that the second venture capitalist will, in this case, follow her signal.

The third venture capitalist can observe four possible histories: one or both of her predecessors may have chosen $i = 0$, and if neither of them had chosen $i = 0$, they could have still either agreed or disagreed. If they both choose $i = 0$, the third venture capitalist should follow them if she has no signal and follow her signal otherwise. In all the other cases, if she does not have a signal, she should follow the venture capitalist that has not chosen $i = 0$. If both the others have chosen $i = 0$, but have not agreed with each other, of course, this does not determine a course of action. Since she is indifferent, however, we can invoke our third tie-breaking rule Assumption C, which tells us that she should follow the venture capitalist with the highest return i. On the other hand, if the third venture capitalist does have a signal about i', she will follow her own signal, unless both venture capitalists before her have chosen the same option and this option is neither $i = 0$ nor $i = i'$. When both of her predecessors have chosen $i = 0$, this is obvious. When only one of them has chosen something different from $i = 0$ and $i = i'$ and the other has chosen $i = 0$, this is a consequence of our Assumption B. And, of course, when the third venture capitalist's signal matches the choices made by one or both of her predecessors, she must choose to follow her own signal since this could not happen unless her signal was correct.

The last point is much more general than this specific situation and deserves to be emphasized. Whenever some venture capitalist's signal matches the choice made by one of her predecessors, she should always follow her signal, which follows from the fact that the probability that two venture capitalists should get the same signal and yet both are wrong with zero. To deal with the following case, we could employ the result proved by Banerjee (1992), namely, if the first and the second venture capitalist have both chosen the same $i \neq 0$, the third venture capitalist should choose to follow them.

Now we could display the previous three VCs' decisions as Figure. 7.

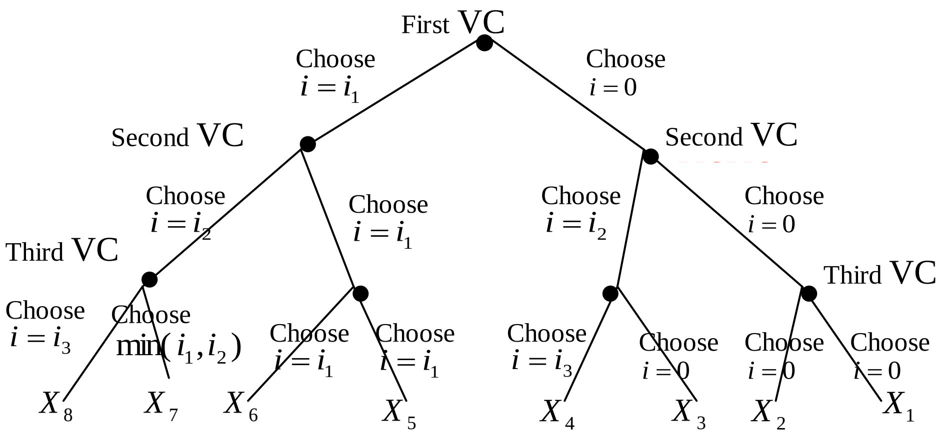

Figure 7: Game tree of three previous venture capitalists' investment decision[1]

3.2 More than two venture capitalists' decision in investing process

Based on the analysis of previous three venture capitalists' decision in investing process above, we could extend the analysis to many venture capitalists no matter whether they have information or not(as Figure.8).

Situation1. One venture capitalist chooses a project in an industry to invest, but has no idea of the industry in an uncertain economic environment; so she has no information about the prospecting return of the venture capital investment in the industry. Then, she will adopt the following four investment strategies:

1. If other venture capitalist does not choose to invest in the industry except the first venture capitalist, the k th venture capitalist will not choose to invest in the industry.

2. If all the other industries were invested by venture capitalists except $i = 0$, the k th investor will choose to invest in the industry with higher return.

3. If there is only one industry (excluding $i = 0$) was invested by two venture capitalists, the k th venture capitalist will choose to follow the two investors' decision.

4. If there exist two industries (excluding $i = 0$) were invested by two or more than two venture capitalists, the k th investor will choose to invest in the industry that was firstly invested.

Situation2. The k th venture capitalist has information about potential return of an industry.

1. If the k th venture capitalist has a signal, she will choose to follow her own signal when her signal matches some option that has already been chosen.

2. If the k th venture capitalist has a signal, she will choose to follow her own signal. No option other than $i = 0$ has been chosen by more than one venture capitalist.

3. If any option (among those already chosen) other than the one with the highest i has been chosen by more than one person, the k th venture capitalist will choose this option, unless her signal matches one of the other options that has already been chosen. In this case she chooses the latter option.

4. If the option with the highest i, (among those already chosen) has been chosen by more than one venture capitalist and no other option (except $i = 0$) has been chosen by more than one venture capitalist, she will choose this option unless her signal matches one of the options already chosen. In this case she chooses the latter option.

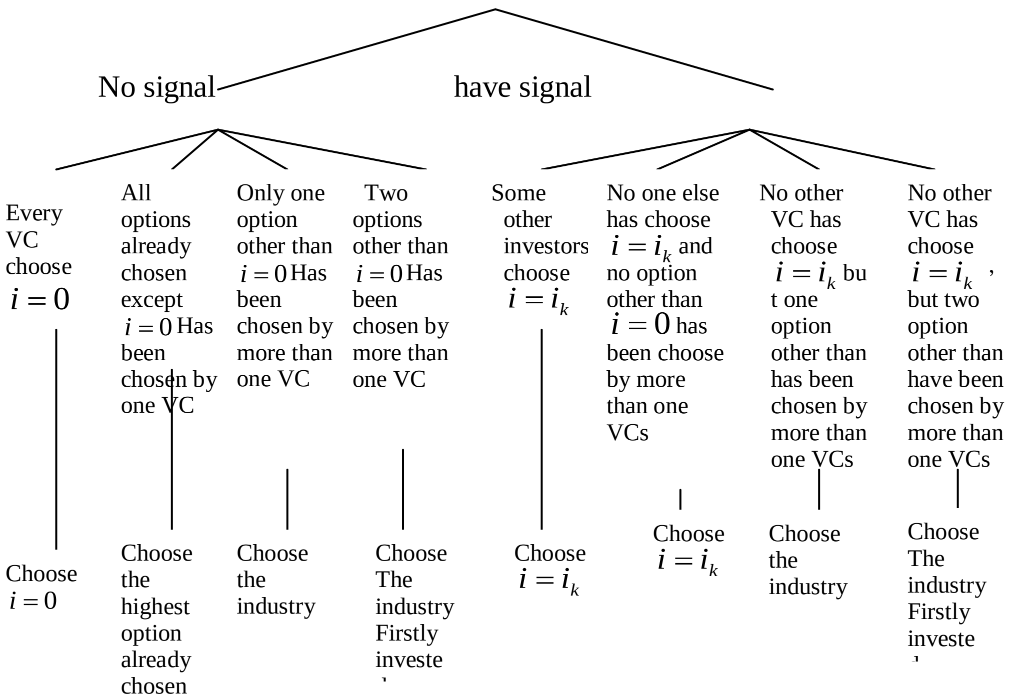

Figure 8: The k th venture capitalists' investment choice[2]

4. Venture Capitalists' Payoff

Different from the pioneering research, we consider the influence on each player's payoff by the others action during the process of the game. Thus this paper adopts the psychological game theory to analyze venture capitalists' payoff. A psychological game is defined as a game where at least one player's utility depends not only on the strategy choices of players, and hence indirectly on beliefs about strategic choices through their influence on such choices, but also directly on the beliefs of a player about another player's choices and possibly beliefs about such beliefs about choices, and so forth.

Suppose that venture capitalists have the same preference, venture capitalist would face two choices when she select venture project, namely, following the other's decision or following her own information to make decision. There exists externality benefits, that is, venture capitalist that firstly invested in the industry will have much more profits, and the venture capitalist after entering will get decreasing profits.

Let K be the cost of the venture capitalist affording investing in a selected industry, p be the proportion of the venture capitalists choosing to invest in the industry, whereas let R be the proportion of the venture capitalists that any single venture capitalist expects who will choose to invest in the industry. Supposing that the net profits, $\prod$ to any venture capitalist of investing in the industry are described by the equation:

$$\prod(p) = B - K$$

Where the benefits, B can be decomposed into an absolute component, A and a relative component, $C(P)$. Assuming that $C(P) = CP$, for some constant with $C > 1$. P is unknown at the time that any single venture capitalist has to decide whether to invest in the industry, besides, the venture capitalists are risk-neutral and maximize expected profits, their expected profits can be described by the equation:

$$E\prod(R) = A + CR - K$$

This functional form means that the more other venture capitalists are expected to invest in the industry, the more a single venture capitalists benefit from investing in it. This captures the idea that no investing in the industry is much more costly than investing in it.

Assuming that $A + C > K$, which means that if all other venture capitalists invest in the industry, any particular venture capitalist also has to invest in it just to "keep up" with the other venture capitalists?

Furthermore, assuming that $A < K$, if investing in the industry has such large profits that even when no other venture capitalist invests in it, any single venture capitalist would choose to invest in it. A venture capitalist compares her profits $\prod = A + CR - K$ from investing in the industry when it expects the proportion R that other venture capitalists invest in the industry with 0, the normalized value of net profits from no investing in the industry.

When venture capitalists attain to a psychological game-theoretic equilibrium, part of the meaning of the equilibrium is that the players' beliefs are correct in the sense of being self-fulfilling, which means that in a psychological equilibrium, the expected proportion of venture capitalists choosing to invest in the industry must be equal to the proportion that actually chooses to invest in it, that is $R = P$. The second part of the psychological equilibrium is that the players' strategies are best responses to each other given their beliefs. There are six psychological equilibriums.

In the first equilibrium, no venture capitalist invests in the industry with $R = 0$, $A - K < 0$ and $P = 0$; whereas, in the second equilibrium, all venture capitalists invest in the industry with $R = 1$, $A + C - K < 0$ and $P = 1$. In the event of $K - A < C$, there is a third equilibrium, in which an intermediate proportion P^* of the venture capitalists invest in the industry, while the complementary proportion $1 - P^*$ does not invest in the industry. The critical value of P^* is solved for by setting $\prod = 0$ or $A + CR - K = 0$. Thus, $P^* = (K - A)/C$.

Only at that value of P will venture capitalists be indifferent between investing in the same industry and not investing in such industry. The last equilibrium might be unstable in the sense that if P is perturbed away from P^* , it may either go to zero or one, instead of returning to P^* (this depends on the industry dynamics of adjustment).

Of the two remaining equilibrium, the one where no venture capitalists invest in the selected industry is the status quo. The one where all venture capitalists invest in the industry is assumed to be individually profitable for all venture capitalists (by making the assumption that $A + C > K$).

The model above has discussed the previous three venture capitalists sequential decision by the venture capitalists' information structure with having information or no information, extends their decision behavior to many more venture capitalists, and analyzes the situation under which may lead to venture capitalists' herd behavior in their investing process. At last, we have discussed venture capitalists' payoff equilibrium under their different decision behaviors by employing the psychological game-theoretical approaches.

We can provide a complete game tree to the previous venture capitalists by analyzing the model above, in the event that the venture capitalists' payoff satisfy the equipments of game tree discussed above. Supposing venture capitalist's payoff is described by: $\prod_{i1} = A_i + CR - K$ (where $\prod_{ij}$ stands for the jth venture capitalist choose to invest in the project of the i th industry; we might suppose the return of the i th industry is different from each other in the stable part of A, and might described by A_i), it is simply signed when only one venture capitalist choose to invest in only one industry. Therefore, when there are two venture capitalists invest in the same industry, their payoff can be described by $\prod_{i2} = A_i + CR/2 - K$; whereas when there are three venture capitalists invest in projects of the same industry, their payoff can be described by $\prod_{i3} = A_i + CR/3 - K$; however, when venture capitalists choose to invest $i = 0$, their payoff is 0.

So, the game tree of previous three venture capitalists can be described as follows in great details:

Firstly, if the first venture capitalist choose $i = 0$, and when the second venture capitalist choose $i = 0$, then, no matter the third venture capitalist has information or not, she will choose $i = 0$, and their payoffs are respectively by（0， 0 ， 0）， （0，0，0）. But when the second venture capitalist chooses $i = i_2$, then, if the third venture capitalist has no signal, she will choose $i = 0$; whereas if the third has signal, she will choose $i = i_3$, and now their payoff are respectively by （0, $\prod_{i1}$, 0）， （0, $\prod_{i2}$, $\prod_{i2}$）.

Secondly, if the first venture capitalist chooses $i = i_1$, but the second venture capitalist has no signal, she will choose $i = i_1$ too. Accordingly, the third will choose $i = i_1$, no matter whether she has signal or not. Based on the two situations above, their payoff are respectively by （$\prod_{i3}$, $\prod_{i3}$, $\prod_{i3}$）， （$\prod_{i3}$， $\prod_{i3}$， $\prod_{i3}$）. However, when the second has signal, she will choose $i = i_2$, but if the third venture capitalist has no signal, she will choose $\max(i_1, i_2)$, if she has signal, she will choose $i = i_3$, Based on these two situations above, their payoff are respectively by [$\prod_{12}$， $\prod_{22}$， max($\prod_{12}$， $\prod_{22}$)]， （$\prod_{11}$， $\prod_{21}$， $\prod_{31}$）.

In a word, venture capitalists' payoff in the game tree above can be described by: X_1=（0， 0 ， 0）， X_2=（0， 0 ， 0）， X_3=（0, $\prod_{i1}$, 0）， X_4=（0, $\prod_{i2}$, $\prod_{i2}$）， X_5=（$\prod_{i3}$, $\prod_{i3}$, $\prod_{i3}$）， X_6=（$\prod_{i3}$, $\prod_{i3}$, $\prod_{i3}$）， X_7=[$\prod_{12}$， $\prod_{22}$， max($\prod_{12}$， $\prod_{22}$)]， X_8= （$\prod_{11}$， $\prod_{21}$， $\prod_{31}$）。

5. Conclusions and implication

The paper employs a perspective of behavioral finance to inspect the venture capitalists' investing behavior in China's venture capital market. Through analyzing the characteristic of high-tech industry and China's venture capital investing behavior under a special context of transition economy, we propose there would be herd behaviors in venture capital investing process. Then, we have discussed the herd behavior generating mechanism of China's venture capitalists by employing a game model of information cascade; furthermore, we have covered the venture capitalists' payoff.

Even though in a mature marketing economy, the high-tech industry face much more uncertainty. Therefore, the industry suffers from much great uncertainty in immature economy, especially in China within the context of the changeable institution. Introducing uncertainty that venture capitalist are facing in investing process, we have changed the information structure in Baneejer (1992) by introducing a noisy public signal observable and equal for each firm and the actual uncertainty about the economic environment changeable. When a leader venture capitalist invested in a certain industry, many followers may mimic the leader's investing behaviors, and then the herd behavior is arising. Besides, as there are more following investors, the latter follower's payoff becomes smaller. At this time, if the following investors stop their investing direction, the market would be walking to stable scale. Unfortunately, being in the high-tech project's investment payback period, venture capitalists have not realized their payoff until the end of one project. So the herd behavior of venture capitalists may lead to industry investing bubbles. Thus, the government intervention is badly needed at the very time.

At present, venture capital market is developing at start-up stage in China. During this stage, there are many uncertainties including government policies and the volatility of market itself, which augmented the uncertainty of venture capitalist investment. Under the situation of imperfect information, it may lead venture capitalists to choose the same industry to invest whether it is based on safety or on investment return of certain industry. When many venture capitalists act on these behaviors, the venture capitalists' herd behavior is going to continue. Besides, many Chinese venture capitalists are apt to choose to follow the leading investor, because they are usually lack of sophisticated investment experience or weak of decision-making on investment project of certain industry's future. Investors' herd behavior not only can be inspired with some new industry to be born, but also can lead to over-expansion of the industry and then go to recede. So it is necessary for government to give confident signal to investors and take proper supervision at right time, so as to assure venture capital industry steadily development.

As far as we know, it is the first paper to analyze the herd behavior of China's venture capitalists. It also introduces a framework to investigate the venture capitalists' herd behavior which leads to volatility of venture capital market. While it also arises some difficulties. Firstly, all of the venture capitalists should own the same investment preference in the model, and their investment just limit to one round. Hence, this model does not give a good explanation about venture capitalists' behavior with the heterogeneous investment preference. Secondly, although this paper's motivation comes from the high-tech bubbles, the model is too abstract to be directly applied. Finally, this is a simple analysis of herd behavioral generating mechanism in China's venture capital market. An depth analysis requires a much richer structure. But anyhow it undoubtedly provides an important theoretical instruction and policy inspiration to the steady development of China's venture capital market.

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[1] Where payoff in game tree is temporally by simply figure, it will be described detail after discussing payoff function.
[2] VC in the figure 2 is short for venture capitalist

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Appendix

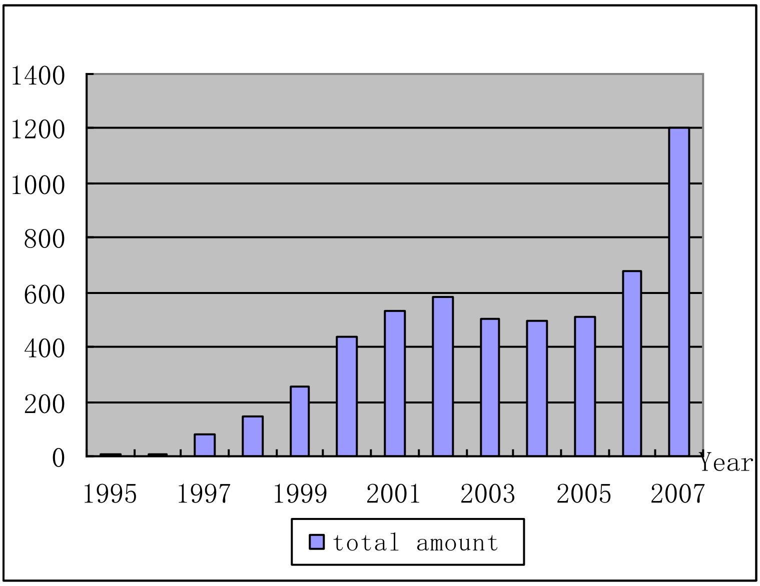

Figure 1: The scale of venture capital industry in China (Billion RMB)

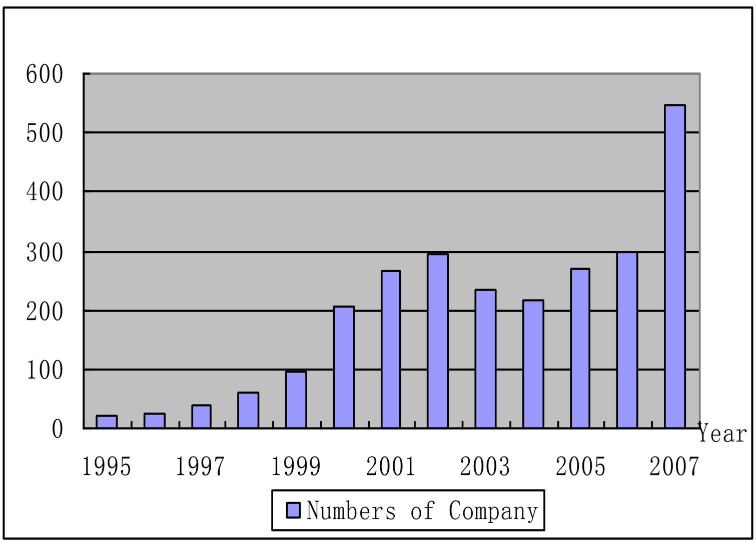

Figure 2: Total numbers of venture capital Company in China (number)

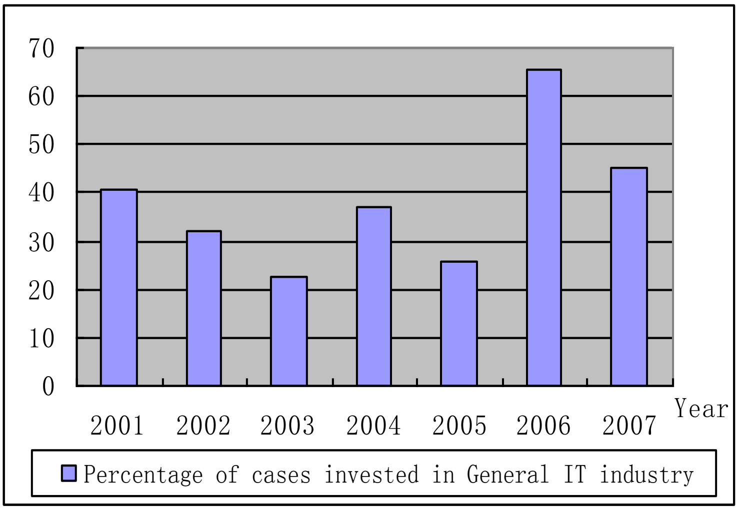

Figure 3: Percentage of cases invested in General IT industry

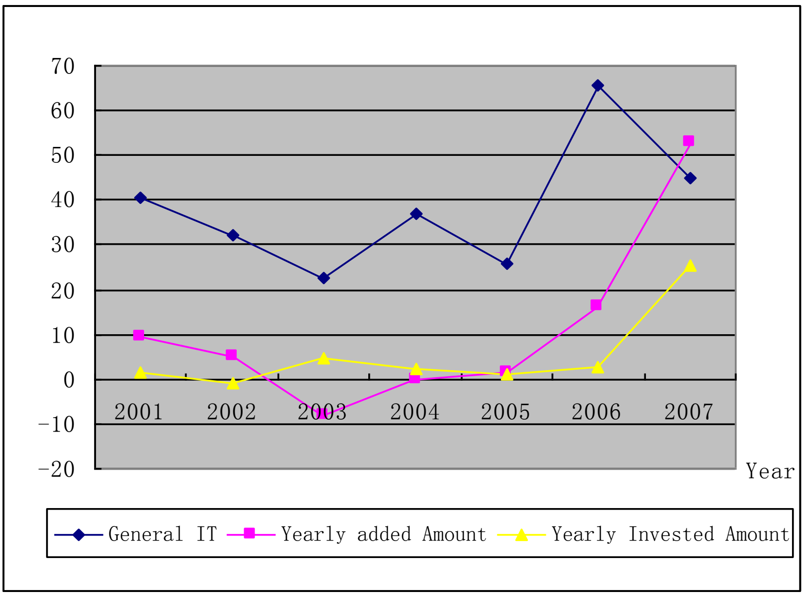

Figure 4: The General IT Invested Percentage and Venture Capital Market in China (Percentage/Billion RMB)

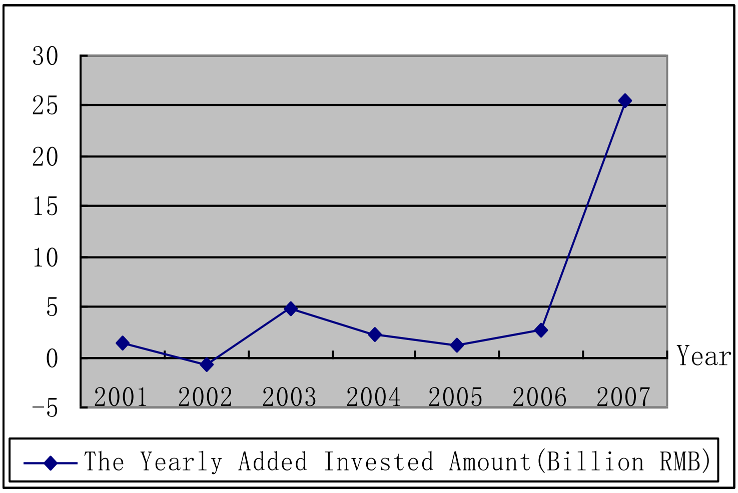

Figure 5: The Yearly Added invested Amount (Billion RMB)

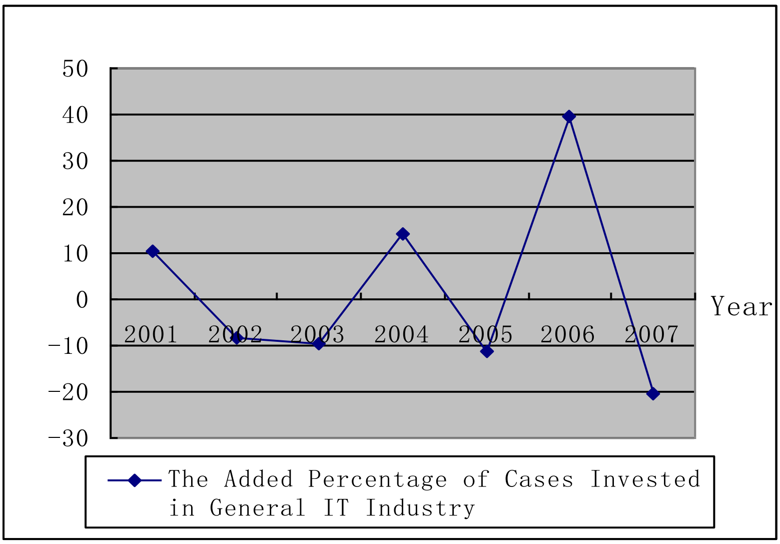

Figure 6: The Added Percentage of Cases Invested in General IT Industry

Data Sourses: The data of the figures(1-6) is sourced from Annual Report of Chinese Venture Capital, 2002-2007.

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