

2014

# BioTechnology

*An Indian Journal*

FULL PAPER

BTAIJ, 10(10), 2014 [4298-4305]

## Analytic framework of Chinese pharmaceutical firms internationalization based on "Environment--Strategy--Performance" model: Tasly pharm. as a case

Gui Yuan<sup>1\*</sup>, Zhang Can<sup>2</sup>

School of Management, Tianjin Polytechnic University, 300387, Tianjin, (CHINA)

### ABSTRACT

The early internationalization theory argues that firms' internationalization is a gradual and sequential process. This paper adopts strategic perspective, basing on "Environment--Strategy--Performance" Model, constitutes the framework of Chinese pharmaceutical firms' internationalization. This paper analyzes the Internationalizing Situation of Chinese Pharmaceutical Firm. Then analyzes the internationalization of Tasly Pharm. in the framework. In our idea: (1) the desirability, need and ability of Chinese pharmaceutical firms are the three major factors that affect the internationalization strategy of Chinese pharmaceutical firms; (2) the development and implementation of internationalization strategy help the success of firms' internationalization; (3) firms' performance in turn affects the desirability, need and ability of internationalization.

### KEYWORDS

Chinese pharmaceutical firms; Internationalization; Strategic perspective; "Environment--Strategy--Performance" Model; Traditional Chinese medicine (TCM).



## PREFACE

Internationalization is an important option for firms, which allow firms adapting economic globalization tide, taking economic globalization opportunities, embracing economic globalization challenges. From the 1970s, western scholars start research on firms' internationalization and achieve fruitful research findings. However, these research aiming at firms from western developed countries. The guidance of the finds an Chinese firms' internationalization is limited. Thus, this paper researched and analyzed Chinese pharmaceutical firms' internationalization. It is significant to guide and promote the process of Chinese pharmaceutical firms' internationalization.

## REVIEW AND CLASSIFICATION OF RELATED LITERATURE

Research on firms' internationalization started at 1970s. Scholars gain rich achievements in studying the fields.

### **UPPSALA mode**

In 1975, After research on Swedish four pharmaceutical enterprises, Johanson found these enterprises operating overseas have followed this gradually escalating sequences: "occasionally export activities -- exporting by overseas agents -- establishment of overseas sales agency -- overseas production". To better explain this phenomenon, in 1977, Johanson and Vahlne established a dynamic mode, which is UPPSALA Mode. The basic hypothesis is: The lack of foreign market knowledge is the main factor to hinder firms' internationalization. The mode starts from market knowledge, knowledge of the market influence investment decision, investment decisions decide business activities, business activities to enable firms to obtain market knowledge, reduce the perceived market risk and increase outward investment. This is a cycling process which include acquisition of knowledge, risk reduction and input increase.

### **Export stage division theory**

In 1977, Bilkey and Tesar had researched export activities of 423 middle-sized and small-sized pharmaceutical firms. They divide six stages of export activities based on managers' concerns about overseas market. That is: exporting without concerns, accepting overseas orders, seeking export possibilities actively, beginning to export to neighboring countries, becoming experienced firms, struggling to develop psychological distanced and geographic distanced overseas market. In 1980, based on managers' consecutive decision-making behavior within a period, Cavusgil divided 5 stages of exporting activities: selling in domestic, pre-exporting, obtaining export experience, engaging in export activities actively and beginning to engage in direct investment activities. In the aim of promoting efficiency of exporting activities management, Czinkota divided firms into 6 sorts: firms without exporting interest, firms interesting export, exporting firms, firms with exporting experience, small exporters with exporting experience, big exporters with exporting experience. Vozikis and Mescon introduced three-stage mode. We can find that these theories focused on firms especially the process of middle-sized and small-sized firms.

### **International new ventures' mode**

In recent years, more and more advanced of firms' internationalization did not fit former two theories. With regard to the new phenomenon of firms' internationalization, Oviatt and McDougall explained by building International New Ventures' mode. The theory thinks that international new ventures seeking competitive advantages by utilizing multi-national resource and market. The mode included four factors: partly internal transaction, controlling structure such as net and license, location advantage abroad, special resource. According to the mode, they concluded that because of fierce

competition knowledge creative small firms difficult to focus on domestic market and get success. Moreover, small firms generally lack of resources. Hence, at the start, these small firms are internationalizing firms. Furthermore, these internationalizing concentrate on controlling instead of obtaining assets. So these internationalizing take different path compare with conventional firms.

### **Strategic management and network theory in firms' internationalization**

When entering into the 1990s, firms' internationalization face variable international economic environment. Mintaberg and Mchugh indicated that there will be fluctuated curves in firms' growth strategy accompany with emerging opportunities and threats in environment. Thus, internationalization eventually presented intended and unintended results of strategy. Millington and Baylis focused on the function of strategic plans in the process of firms' internationalization. They concluded that in the early stage of internationalization, firms' internationalization may present slow and gradual features. However, with the accumulation of internationalization, with the help of strategic analysis and information searching, strategic planning system will have significant impact. Because experience can transferred among different products and different markets. It is quite possible that internationalization theories can bypass the traditional ones. Gradual internationalization is not so much principle as special case.

### **Summary**

Both UPPSALA mode and export stage division theory hold that firms' internationalization is a gradual process. This opinion had been proved by a lot of experience and empirical studies. Until now these theories are still applied and are viewed as basis of many researches. However, it is hard to explain some firms' internationalization in new environment. International new ventures' mode focus on certain firms which are high-inputted and their products and assets featured in public products. Strategic management and network theory in firms' internationalization provide a new perspective.

I switched the importance of internationalization research from process studying to influent factors studying. Furthermore, it also researched the entry mode strategy, location strategy, entry timing strategy and the relations between internationalizing performance. It provides a framework including many aspects of internationalization. It enhances the degree of internationalization. So it is significant to introduce strategic factors.

## **THE INTERNATIONALIZING SITUATION OF CHINESE PHARMACEUTICAL FIRM**

At present, the pharmaceutical industry of China is growing, but still exists many problems. For example, the import and export structure is not reasonable, foreign investment is lagging behind. The exporting goods are mainly low value-added crude drug and traditional Chinese medicinal materials. A recent data showed that international plant medicine market share has reached more than U.S. \$27 billion, while China's export value of traditional Chinese medicine in the international market share are less than 5%, less than Japan, Korea's change. In addition, low value-added traditional Chinese medicine materials accounts for high percentage, the proportion of high technology products is very low. China mainly imports expensive preparation and pharmaceutical biotechnology products. What's more. Although few Chinese pharmaceutical companies have established joint-ventures in foreign countries, there are little direct investment toward developed countries. Most Chinese pharmaceutical companies can not simultaneously have firm advantage, location advantages and internalization advantages, there still far way on foreign direct investment.

## **ANALYTIC FRAMEWORK OF CHINESE PHARMACEUTICAL FIRMS' INTERNATIONALIZATION**

Strategic management theory provides a wide prospect for the development of firms' internationalization. Strategic factors play an important role in the development of Chinese pharmaceutical firms' internationalization. We introduce strategic factors to study the issue of Chinese pharmaceutical firms' internationalization. In strategic theory, "Environment--Strategy--Performance" framework is a conventional and important one. The main ideas of this framework are as follows. First, categorizing environmental factors which affect firms' internationalization.

This paper sorts out and sum up environmental variables, abstracts internationalizing desirability, internationalizing need and internationalizing ability. Internationalizing desirability is the firm and managers' internationalizing operational orientation. Which means that targeting international market. Internationalizing need include the demand from outside environment and necessity of internationalization. Internationalizing ability is the competitive advantage of marketing, management, brand, technology and so on.

Then, introducing strategic factors.

Strategic factors can enhance the explanation of firms' internationalization theory. In addition, internationalizing strategy is reckoned as critical strategy, it provide more opportunities for firm's growth.

Finally, building analytic framework of internationalization. As Figure 1 showed that.

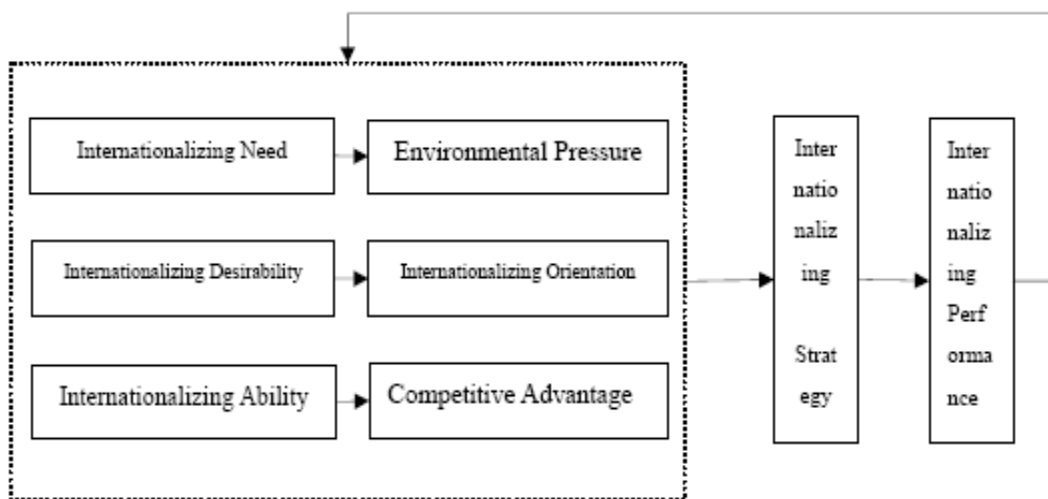


Figure 1 : Analytic Framework of Internationalization

### STRATEGIC ANALYSIS OF INTERNATIONALIZATION IN TIANJIN TASLY PHARMACEUTICAL COMPANY(TASLY)

#### Review of Tasly's Internationalizing Strategic Implementation and Tasly's Internationalizing Process

##### Tasly's Internationalizing Strategic Implementation

Tianjin Tasly pharmaceutical company was founded on May 1994. Through decades of development with Great Health industry as guideline and pharmaceutical industry as its center, Tasly has become a hi-tech group whose scope of business includes modern traditional Chinese medicine (TCM), chemical medicine, biological medicine, healthcare products, functional food, covering the fields of research and development, planting, pharmaceutical and distribution. Tasly was successfully listed as public company (Class A stock) in Shanghai Stock Exchange on August 8th, 2002, which symbolizes the start of capital operation of Tasly. In 2013, its total assets are 26.2 billion CNY, its total

sales amount is 24 billion CNY. It is the pioneer of traditional Chinese medicine modernization and internationalization. It is also the strong performer of Chinese pharmaceutical industry.

1997 was a turning point for Tasly's development. In this year Tasly Danshen Plus Capsule became the first one which is allowed by the U.S. FDA (Food and Drug Administration) IND (Investigation New Drug) application of clinical use as the drug status. And this opened a window to access of American's market. The company has seized the opportunity by exporting Tasly Danshen Plus Capsule to the American market as food supplements. After that, Tasly Danshen Plus Capsule have made Vietnam, Russia, Cuba, South Korea, UAE local drug registration, and set up offices in Vietnam, Russia, the United Arab Emirates and other countries. In 2002, Tasly Danshen Plus Capsule had been registered as drug status in Mongolia, Hong Kong and Singapore. Tasly established offices in South Korea, France and South Africa. Its international network gradually spread. In 2003, Tasly invested €1,815,000 through the acquisition of a 50% stake of the Dutch Divine Medical Centre. Divine Medical Center has its own brand, relying on its perfect market channel, Tasly has been recognized by Netherlands and other European countries. All of these have contributed to Tasly's access to other European countries in the pharmaceutical market. Currently, Tasly has completed the the market distribution of the United States, Europe, Africa, Southeast Asia and other countries, and its' main products have been trademarked in 34 countries and regions. In 2006, Tasly start Tasly Danshen Plus Capsule IND Phase II clinical trials in the United States. In 2010, Tasly Danshen Plus Capsule became the first compound Chinese medicine which complete second FDA clinic trial in the history of America. And FDA Phase III clinical trial is now in progress.

Tasly's internationalization process started at the product internationalization through transform TCM by Western standards. Tasly's internationalization strategy is using a leading product to expand the international market. Then, Tasly made a joint venture with a United States firm after controlling Dutch Divine Medical Centre, and this laid the foundation for the development of the North American market. Tasly expanded its business areas gradually, from the single products to modern medicine, health care product, pharmaceutical extracts and so on. When one product has effect on patients. Then Tasly expand TCM theory. Then, using the TCM theory promotes other products. The whole process forms "snowball" type of internationalizing strategy.

Tasly's internationalizing attempt is innovative. It promotes the integration of TCM modernization go with international standard. For example, in the dosage form, Tasly draws western medicine injection, powder, launches the granules, injections, pills and other new dosage form. In these forms, Tasly makes Chinese medicine more "popular" and more receptive to Western markets. In Tasly's packaging format, it uses the usual instruction format to avoid difficult understanding caused by cultural differences. In the ingredients, Tasly trys to minimize the kinds of raw material, uses the Western medicine quantization technology to make no differences between Chinese and Western medicine.

## Review of Tasly' internationalizing process

- 
- 1994 Tasly founded and its sales volume reached 12 million CNY this year.
- 1996 Tasly Danshen Plus Capsule started for FDA certification.  
Tasly Danshen Plus Capsule obtained FDA IND clinical license. During this time:  
It has established a modern Chinese medicine industry chain. This includes drug source base which meet international standards. Pioneering the important pharmaceutical practices (GEP). All the production systems pass national standards for quality control of pharmaceutical production(GMP) and Australian TGA certification.
- 1997 Marketing system pass the national drug quality management standard (GSP). Tasly's quality management of Modern TCM has been linked with global standard.  
In overseas market, Tasly builds a market which contains Southeast Asia, the Middle East, Far East, North America, Europe, southern Africa and other countries. This establishes its brand awareness. Tasly Danshen Plus Capsule had been registered its own trademark in 28 countries, and joined in Korea, Vietnam, United Arab Emirates, Russia and other countries as drug status. Then it established branch offices in Malaysia, South Africa,
-

---

Netherlands, France. A multi-level marketing system gradually formed.

2006 Tasly Danshen Plus Capsule started for FDA II clinical trials in the United States.

2007 Tasly's sales volume reached at 5.2 billion CNY and its exporting volume reached at U. S. \$ 12 million.

2010 Tasly Danshen Plus Capsule became the first compound Chinese medicine which complete second FDA clinic trial in the history of America. And FDA Phase III clinical trial is now in progress.

---

Reviewing these process, we can see that, Tasly Danshen Plus Capsule started for FDA certification. In the following decades, Tasly's internationalization not only presents its exporting volume, but also builds a series of international standards through its internationalization process.

## **ANALYTIC FRAMEWORK OF TASLY INTERNATIONALIZING**

### **Factors of Internationalizing Strategy**

This paper mainly analyze firms' internationalizing desirability, internationalizing ability and internationalizing need which influence Tasly internationalizing strategy.

#### **First, Internationalizing desirability**

Tasly has a very strong international desire, which reflects in two ways. On one hand, the company has devoted to the modernization of traditional Chinese medicine. Improve Chinese medicine and explain Chinese medicine by Western medicine way. On the other hand, Chairman of the Board Yan Xijun has strong sense of international awareness and a sense of mission. He insists that the future development of Tasly should rely on internationalization. He also advocated to establish "Traditional Chinese Medicine Global Alliance". This organization aim at promoting Chinese medicine internationalization process. Through the modernization of TCM, Tasly has grew quickly and healthily. If the company executives do not have a strong entrepreneurial spirit, do not want to establish Chinese multinational companies, Tasly needn't to promote internalization. So a firm's internationalizing desirability is very important.

#### **Second, Internationalizing ability**

FDA certification is an extremely cost, time-consuming, labor-intensive projects. From the introduction of Tealy's development and course of internationalization, we can find that market share and profitability are growing rapidly. It has made success in strategic cooperation, research and development, personnel training and other aspects. Therefore, Tasly has internationalization supportive ability.

#### **Third, Internationalizing Need**

On one hand, the external environment pushes Tasly's internationalization. Such as TCM is marginalizing and Tasly's single product (Tasly Danshen Plus Capsule) have high percentage of market share and sales volume. On the other hand, Tasly is attracted by overseas markets such as the United States, the EU, Japan, Korea and Southeast Asia.

### **Firms' Internationalizing Strategy and Its Impact on Performance**

We can see that firms' strategic planning plays an important role in firms' internationalization. Tasly's internationalization began with exporting. But it used different ways for different markets. It used acquisitions in the Netherlands and France, and established a strategic alliance in UK. This reflects that Tasly uses different kinds of strategic plans for different situations and different markets at different stages. Tasly's success cannot live without its paying attention on internationalization strategy.

### Influence of performance on Firms' Internationalizing ability and desirability

We can see that internationalizing strategy brings positive impact on firms' performance. Implementation of internationalizing strategy improved the performance of Tasly, and this strengthened international determination. All of this improves the ability of internationalization, promotes further development of firms' internationalization. From neighboring countries to distant countries, from developing to developed countries, Tasly's internationalization is in a virtuous cycle.

**TABLE 1 : Tasly's Internationalization: Analysis and Evidence**

Proposition	Analytic Framework	Evidence
Influence Factors of firms' Internationalizing Strategy	Internationalizing desirability Internationalizing Need Internationalizing ability	1. TCM modernization: Tasly's internationalizing orientation 2. TCM is marginalizing and Testly's Tasly Danshen Plus Capsule account for high percentage of its total market share and sals volume. 3. Tasly is a strong performer of Chinese pharmaceutical industry.
The Influence of Firms' Internationalizing Strategy on Performance.	The planning and implementation of firms' internationalization affect on internationalizing performance.	In 1996, Tasly started for Tasly Danshen Plus Capsule's FDI certification. After that, Tasly proposed its internationalizing target and initiate its internationalizing strategy. In its international process Tasly has design different tactics according to different stages and markets. So its most internationalizing program succeed, which enhanced its performance.
The Influence of Firms' Performance on Internationalizing capacity and desirability.	The level of firms' performance also affects on internationalizing capacity, desirability and need.	The performance of Tasly enhanced Tasly's competitive advantage. Convicting Tasly's firm of "to be a world-class pharmaceutical manufacturer".

### CONCLUSION

Through the analysis and discussion of Tasly internationalization case, we have found that Tasly international cases can be well embedded in the Chinese pharmaceutical firms' internationalization of the proposed analytic framework, and provide evidence to support three propositions. So we believe that there are three points in the internationalization of Chinese pharmaceutical firms. First, firms' and managers' desirability internationalization, internationalization need and international ability, are the three major factors that affect the internationalization strategy. Second, formulation and implementation of firms' internationalization strategy contribute to enterprises' international success. Third, the performance of firms' internationalization affect firms' internationalizing desirability, internationalizing need and internationalizing ability.

### REFERENCES

- [1] J.Johanson, F.Wiedersheim-Paul; The Internationalization of he Firm-Four Swedish Cases. *Journal of Management Studies*, **12(3)**, 5-22 (1975).
- [2] W.J.Billkey, G.Tesar; The Export Behaviour of Smaller-sized Wisconsin pharmaceutical Firms. *Journal of International Business Studies*, **8(3)**, 93-98 (1977).
- [3] S.T.Cavusgil; On the Internationalization of Firms. *European Research*, **8**, 273-281 (1980).
- [4] M.R.Czinkota; *Export Development Strategies: US Promotion Policies*. New York: Praeger, (1982).
- [5] G.S.Vozikis, T.S.Mescon; Small Exporters and Stages of Development: An Empirical Study. *American Journal of Small Business*, **9**, 49-64 (1985).
- [6] B.M.Oviatt, P.P.McDougall; Toward a Theory of International New Ventures. *Journal of International Business Studies*, **25(1)**, 45-64 (1994).
- [7] L.Melin; Internationalization as a Strategy Process. *Harvard Business Review*, **72(21)**, 99-118 (1992).
- [8] H.Mintzberg; The Fall and Rise of Strategic Planning. *Harvard Business Review*, **13(1)**, 107-114 (1994).
- [9] H.Mintaberg, A.Mchugh; Strategy Formati on in an Adhocracy. *Administrative Sicience Quarterly*, **30(7)**, 97-160 (1985).

- [10] A.I.Millington, B.T.Bayliss; The Process of Internationalization: UK Companies in the EC. Management International Review, **30(2)**, 151-161 (**1990**).
- [11] Zhang Qing; Study on the Transforming of TCM Industry from Comparative Advantage to Competitive Advantage[J]. Soft Science, **21(3)**, 98-107 (**2007**).
- [12] Xu Junjun, Zhang Hui, Tang Liying; Analysis on Current Situation of Compound Chinese Materia Medica Patent entered into China[J]. Chinese Traditional and Herbal Drugs, **43(12)**, 2321-2326 (**2012**).
- [13] R.G.Javalgi, R.F.Wright; A international market entry model for pharmaceutical companies: A conceptual framework for strategic decision [J]. Int.J.Med.Market, **3**, 274-286 (**2003**).