

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/228646096>

Entry Modes For International Markets: Case Study Of Huawei, A Chinese Technology Enterprise

Article · April 2007

CITATIONS

19

READS

11,791

2 authors, including:



Fang Zhao

Edith Cowan University

55 PUBLICATIONS 819 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Logistic and supply chain [View project](#)

Entry Modes For International Markets: Case Study Of Huawei, A Chinese Technology Enterprise

Donglin Wu* and Fang Zhao**

This case study analyses and discusses the internationalization process of Huawei, a leading telecommunication equipment manufacturer in China. Our research aims to explore the special features of the internationalization of Chinese hi-tech firms through a case study and to identify the factors that affect Chinese hi-tech firms' international entry mode decision. In this paper, several foreign market entry modes were discussed. Issues of why and how to take into account the factors of industrial characteristics, environmental factors, firm factors, and moderators for internationalization and how to employ different entry modes in different host markets are discussed and illustrated based on this case study. It is found that industrial characteristics and home country's technological reputation affect to a great extent the internationalization path of the hi-tech firm studied. The research also shows that in terms of hi-tech enterprises' internationalization, the factors such as international experience and firm size are not as important to traditional manufacturers as to hi-tech enterprises.

Field of Research: Management

1. Introduction

After two decades' development, many Chinese technology enterprises stride their first step in internationalization. Among them, the Huawei Technologies P/L is a typical representative. Huawei is a private hi-technology company. It is a leading telecommunication equipment manufacturer in China. In 2005, the contract sales of Huawei are USD8.2 billion, of which, nearly 58% (USD4.8 billion) comes from foreign markets. Compared with 1999, only less than 4% of the total sales of Huawei came from foreign markets. Indeed, Huawei has achieved great success in internationalization in the past few years. According to the Uppsala

* Mr. Donglin Wu, School of Management, Royal Melbourne Institute of Technology University, Australia. E Mail: donglin.wu@rmit.edu.au

** Dr Fang Zhao, School of Management, Royal Melbourne Institute of Technology University, Australia. E Mail: fang.zhao@rmit.edu.au

Internationalization Model, there are four different modes of entering an international market: (i) No regular export activities → (ii) Export via independent representatives (agents) → (iii) Establishment of overseas sales subsidiary → (iv) Overseas production/manufacturing units. These four modes follow a sequence from low to higher degrees of internationalization (Andersen 1993). Bradley (1995) also believes that foreign market entry strategies usually accord with the sequential stages of Exporting, Competitive alliances, Acquisition /foreign direct investment. However, after analyzing the foreign market entry strategies of Huawei, we can find these stages are not followed strictly. The case of internationalization of Huawei shows that a hi-tech enterprise in the new economy may apply different modes in different host markets at one stage of internationalization.

Driscoll (1995) identified three modes to enter a foreign market: Export entry modes, Contractual entry modes, Investments modes. To achieve the objective of internationalization, a company should take three factors into account and then choose appropriate entry modes. These three factors are firm factors, environmental factors and moderators. The case of Huawei provided the evidences that the desired entry mode was actually decided by host market environment condition and firm factors, while the industry characteristics play an important role in foreign market entry mode choice.

Based on the above-mentioned international marketing entry modes, this case study will analyze the entry modes taken by Huawei and the factors that influence Huawei's entry mode choice in its internationalization process. In this paper, the results of literature review are first presented, followed by introducing the process of Huawei's internationalization. Analysis of the foreign market entry modes taken by Huawei is made against Uppsala Internationalization Model and Driscoll's entry mode choice framework. Finally the paper introduces a modified framework of entry mode choice for hi-tech enterprises.

2. Literature Review

2.1 The Concept of Internationalization

The concept of internationalization has evolved in the past three decades. Johanson & Vahlne (1977) defined Internationalization as a process in which the firms gradually increase their international involvement. They claimed that internationalization is the product of a series of incremental decisions.

Welch & Luostarinen (1988) discussed the "internationalization" as a dynamic concept: the process increasing involvement in international operations, both sides of inward and outward should be involved in a broader concept of internationalization. Beamish (1990) provides another comprehensive definition: "the process by which firms both increase their awareness of the direct and indirect influences of international transactions on their future, and establish and conduct transactions with other

countries” (Beamish 1990, pp. 77-92; Coviello & Munro 1997). These definitions describe the concept of internationalization from a variety of dimensions. Up till now, the consensual concept of internationalization includes: (1) Internationalization is a process that includes many incremental decisions and strategies. (2) It involves various outward and inward products, service or resource transferring across national boundaries. (3) Internationalization influenced by a series of factors that come from the firms and environments. In this paper, we adopt the definition from Andersen (1997): Internationalization is the process of adapting exchange transaction modality to international markets. This definition includes both entry mode strategy and international market selection.

2.2 The Entry Mode

In this paper, we use the Uppsala model (Johanson & Wiedersheim-Paul 1975) and Driscoll’s (1995) foreign market entry modes choice framework as research framework for our case study.

Based on the assumption that the internationalization is the consequence of a series of incremental decisions and the most important obstacles to internationalization are lack of knowledge and recourse, Johanson & Wiedersheim-Paul (1975) introduce the internationalization model: the Uppsala model. The model identified four sequential stages of the internationalization process:

Stage 1: no regular export activities;

Stage 2: export via independent representation (agent);

Stage 3: sales subsidiary; and

Stage 4: production/ manufacturing

Johanson & Vahlne (Johanson & Vahlne 1977; 1990) modified this model and suggested a dynamic international model-The Basic Mechanism of Internationalization. The latter model assumes that the market knowledge and Market commitment affect both commitment decision and the current activities, which in turn influence market knowledge and market commitment. The dynamic model indicated that the firm would first target the international market with similar market environment. Both models emphasize that internationalization is a process and follows a ‘stage’ approach. Although these two internationalization theories have been supported by much empirical and theoretical research, many scholars stand on the opposite side. Turnbull (1987) claimed that the ‘stage’ internationalization model cannot explain the internationalization in many firms; Andersen (1993) criticized that the discrepancies between the theoretical and operational level exist in these two models based on the principle of theory evaluation; Bell (1995) argued that the relevance of “stage” theories must be questioned, especially in relation to the internationalization of high technology and service firms. Gureea (2002) provided the evidence to question the ‘stage’ theory through the cases of UK Biopharmaceutical SMEs (small and medium sized enterprises).

Different from the above dynamic models which just mentioned the factors of market knowledge and market commitment, Driscoll (1995) introduced a comprehensive

foreign market entry decision framework, which identifies export, contractual and investment as the main foreign market entry modes. It defines that the contractual entry modes include a variety of arrangements such as licensing, franchising, management contracts, turnkey contracts, non-equity joint ventures, and technical know-how or co-production arrangements. The investment entry mode includes acquisitions (purchasing stock in an existing company in an amount sufficient to acquire control), joint venture and start-up investment.

Driscoll (1995) also analyzed the characteristics of export, contractual and investment entry modes from five aspects of control; dissemination risk; resource commitment; flexibility and ownership (shows in the following table 1). Control refers to that the extent of a firm in governs the production process, co-ordinate activities, logistical and marketing and so on. Dissemination risk refers to the extent to which a firm's know-how will be expropriated by a contractual partner. Resource commitment refers to the financial, physical and human resources that firms commit to a host market. Flexibility assesses that whether a firm can change the entry modes quickly and with low cost in the face of evolving circumstances. Ownership refers to the extent of a firm's equity participation in an entry mode.

Table 1 the characteristic of the foreign entry modes

Entry method	Control	Dissemination Risk	Resource commitment	Flexibility	Ownership
Investments	High	Low	High	Low	High
Contracts	Medium	Med-high	Med-High	Medium	Med-High
Exports	Low	Low	Low	High	Low

Source: Driscoll (1995)

2.3 The Factors That Influence Entry Mode Choice

In Erramilli & Rao (1993), it is suggested that to conceptualize a firm's desired level of different mode characteristics without considering its actual entry mode used, the efficacy of mode choice models would be improved. Based on this advice, Driscoll (1995) believe that "a diverse range of situational influences that could bear on a firm's desire for certain characteristic of mode choice". Some factors would influence a firm to choose a desired entry mode. He took the later factors as moderating variables. These factors were summarized in table 2.

Table 2 the factors that influence entry mode choice

Situational influences	Firm factor	Firm-specific advantages
		Experience
		Strategic considerations
	Environmental factors	Demand and competitive conditions
		Political and economic conditions
		Socio-cultural conditions
Moderating variables	Government policies and regulations	
	Corporate policies	
	Firm size	

Source: Driscoll (1995)

Different from previous conceptualization of mode choice which just depict a series of situational influence directly affecting mode choice, Driscoll (1995) introduced a dynamic mode choice framework. (as show in figure 1). This model considers the gap between desired model and actual one and takes alternative mode characteristics into account when a firm chooses foreign market entry mode. Driscoll’s study emphasizes that there is no optimal foreign market entry modes under all conditions. Therefore, a firm cannot just consider an institutionalizing mode; it needs to consider the characteristics of modes, the firm factors, environmental factors and other factors when it chooses entry mode. However, the factors that influence the entry mode choice in Driscoll’s framework need to be tested by more empirical research.

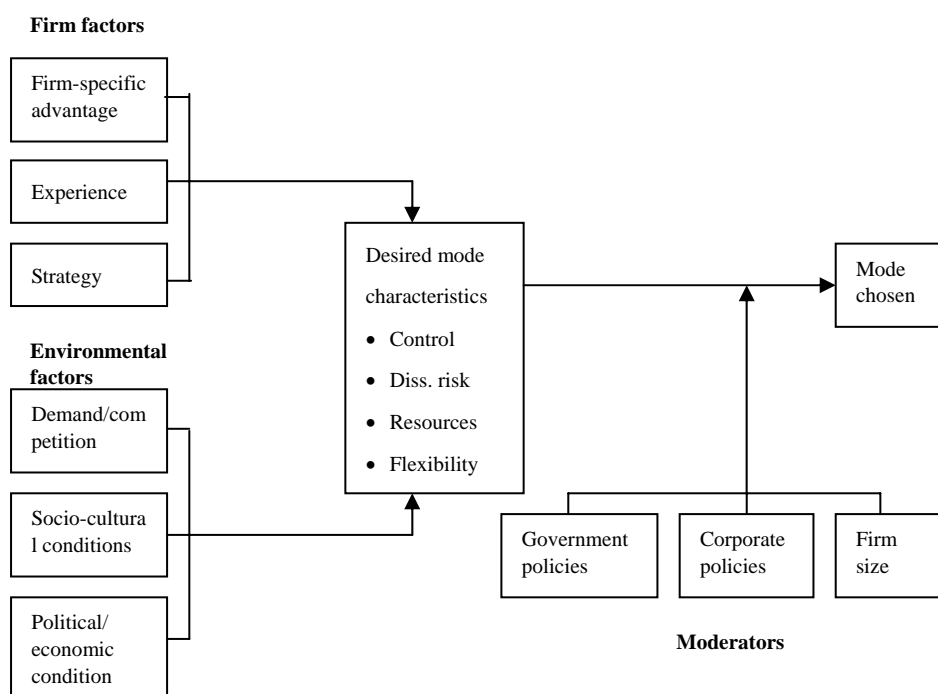


Figure 1 entry mode choice framework

Source: Driscoll (1995)

3. Research Methods

The aim of this research is to analyze the internationalization process in Chinese Hi-technology enterprises. It is through studying the successful case in internationalization of Huawei that we discuss experiences and related theories for Chinese hi-technology enterprises. In this research, Driscoll (1995)'s foreign market entry mode decision framework was taken as a research framework. Six in-depth interviews were conducted with managers in Huawei. One of the authors worked for Huawei for many years and understands Huawei's internationalization strategies and policies. The research also draws on reviewing existing literature, documentary research of statistic database and publications in the Internet, newspapers, and magazines. Like all the case study, the present study has its limitations in terms of methodology but the case study provides readers with an in-depth insight into how a Chinese hi-tech decides on its foreign market entry mode.

4. The Profile of Huawei and Its Growth in the International Market

Huawei Technologies P/L was founded in 1988. It is a high technology private company that provides customized network solutions for telecom carriers around the world, specializing in the research and technology development. It invests at least 10% of annual sale volume in new product research and development. Huawei's contracted sales in 2005 reached USD 8.2 billion, of which 58% came from international markets. Overseas sales have been doubling each year for the past five consecutive years. At the end of 2006, Huawei has over 61,000 employees, of whom 48% are dedicated to R&D. Huawei has provided products and service for over 300 telecom carriers around the world. It has achieved outstanding growth over 17 years since its foundation. Huawei has won the leading position in the global market in the areas of 3G, next generation network (NGN), switching, xDSL, optical network, and data communications. Table 3 shows the market position of Huawei in the global market.

Table 3 The position of Huawei in the global market

	Global rank in 2003	Shares in Global market
Optical network	4 (up to position 3 in 2004)	9.1%
DSL	2	17.7%
NGN	2 (up to position 1 in 2004)	13%
Switching Network	1	35%

Source: (Dittberner 2005; Gartner 2003; Huawei 2003, 2005b, 2005a)

The first step of internationalization in Huawei is providing customized design of 'number portability service' for Hutchison Telecoms, Hong Kong in 1996. Huawei spent only 3 months on helping Hutchison to realize the service instead of quotation of at

least 6 months set by European telecommunication manufacturers. Furthermore, the price is only half of that from the other competitors (Li, C. & Cui 2004)

After that, Huawei made a decision to enter international market. Russia and Southern America market are first selected. Huawei entered Russian market in 1996. It set up a joint venture of Beto-Huawei with Russian Beto Konzern and Russia Telecom to develop Russian market in 1997. However, Huawei did not get any order within four years. After getting the first order in Russia in 2000, the business of Huawei in Russian market grows up quickly. In 2003, Huawei got the sale volumn of more than USD 0.3 billion in Russian and the surrounding markets. In the market of broadband products, Huawei occupied more than 50% of the market. Up till now, Huawei has become the Chinese company with the biggest investment in Russia. However, the performance in Southern America is not ideal, the sales in this area were less than USD 0.1 billion up till 2003 (Wu 2004)

After 2000, Huawei extended its target markets to other countries, including Southern Asia (Thailand, Singapore, and Malaysia), Middle East and Africa. Since 2001, the products of Huawei have been sold in West Europe market through the local famous agents. These countries include German, France, Spain and UK.

Figure 2 and figure 3 below show Huawei's annual overseas sales volume and its overseas sales percentage from 1999 to 2005.

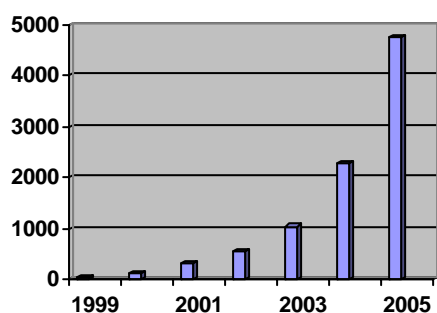


Figure 2 Huawei's annual overseas sales volume (USD mil.)

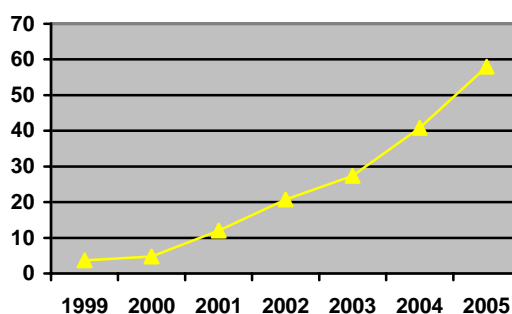


Figure 3 Huawei's overseas sales percentage (%)

Source: website of Huawei, (www.huawei.com)

5. The Foreign Entry Modes Used by Huawei

It is obvious that the internationalization process of Huawei is successful up till now. This success depends on the appropriate market entry mode choice and market strategies employed. Huawei applied different market entry mode in different markets (different geographical markets and different products markets).

5.1 Joint Venture in Russian Market

In 1996, as a breakthrough, Huawei began its international business at Russia. It set up a joint venture of Beto-Huawei with Russian Beto Konzern and Russia Telecom to develop Russian market in 1997. As a new player in international market, Huawei's development in Russian market is very hard at the first stage. Huawei spent four years on waiting and studying before they got the first order. At the initial stage of internationalization, Huawei's market selection strategy is targeting the markets that have weak telecommunication infrastructure but have great developing potentiality. Based on the features of telecommunication products, the host market's social and cultural conditions were considered. First, because of the network effect (Katz & Shapiro 1994) and telecommunication products related to information security, Huawei first chose those host markets which have good relationship with home country. Then, based on its own advantages of technological research and development (R&D), Huawei chose the joint venture as the first foreign market modes.

5.2 Export Entry Mode in South America, Asia and Africa

In the first stage of Huawei's internationalization, South America is also selected as a target market. However, Huawei employs export method as the entry mode. The influence factors are the issues of geographical distance and local market conditions. From 2000 onwards, Huawei started to enter Asia, Mid-east and North Africa market, in this area, where Huawei also use export method to entry this market. Huawei sent out many of sales and service engineers from home country to setup branches and service centers in these countries. The selection is based upon the characteristic of export entry mode: High flexibility, low resource commitment and low dissemination risk.

5.3 Contractual Entry Modes in North America, West Europe and Other Countries

After 2001, Huawei's products start to be sold in West Europe and North America. In these developed countries, Huawei applied a variety of contractual modes to entry these market. These methods include franchising, co-research, co-production (OEM) and Co-sales (help each other to sale products in each own markets). For example, in European market, Huawei co-operate with Marconi in product development and marketing. Marconi helps Huawei to sell products in Europe using their channels. At the same time, Huawei helps selling Marconi's product in China and Asia markets. Early to 2002, Huawei has cooperated with Motorola in Mobile network infrastructure area using the OEM method. To develop the market of data communication in North American and other international markets, Huawei set up joint venture: Huawei-3Com with 3com, the main player in data communication market. In this method, Huawei takes the advantage of R&D ability and the 3Com's international market resource. Table 4 shows Huawei's alliances in the telecommunication industry

Table 4 Huawei's alliances in the telecommunication industry

Alignment partners	Cooperation methods	Cooperation areas or vision	Commencement
Marconi	To cooperate on development and marketing.	Collaborating in strategic markets. Marconi provides Huawei's carrier-class data products to key customers in Europe. Huawei helps Marconi to sell its products in China.	January, 2005
Siemens	joint venture: TD Tech Ltd	To develop products based on China's home-grown 3G wireless standard TD-SCDM, including development, manufacture, marketing and services.	February, 2004
3Com	Joint vnture:Huawei-3Com	International markets of Data Communication	March, 2003
Matsushita (Panasonic), NEC	Joint-venture: COSMOBIC Technology Co., Ltd	To expand 3G mobile handset businesses.	June, 2002
Motorola	OEM mode	Mobile network infrastructure.	2002

Source: (Li, C. & Cui 2004)

5.4 Different Entry Modes for Different Products

Huawei also employs different entry modes flexibly to different products. For example, in traditional advantaged products, such as switching network, telecommunication power, Huawei often uses join-venture and export methods. In the products without advantages, for instance in 2G mobile networks, Huawei cooperates with Giants of this area. For the products with technological advantage and without market resource, it uses the modes of joint venture, franchising or co-research.

6. Uppsala Stages Model and Huawei's Internationalization Process

We see that Huawei's internationalization process did not follow the Uppsala stages mode. Indeed, it can be identified that the hi-technology enterprises' internationalization is in some aspect different from that of the traditional enterprises because of the features of hi-tech industries and the changes in modern market environment. First, service and intangible products are the main products that are supplied by hi-tech enterprise to its customers. On the other hand, the tangible products account for just a small part of the products. Therefore, the process of product transfer is relatively simpler. Second, the hi-tech area is a rapid growth market; the traditional stage model cannot meet the internationalization needs in the strong competitive environments. Third, because of the development of modern international market, experience is not critical for hi-tech enterprises to enter foreign markets, even though the internationalization experience is still very important. For example,

although Huawei's WCDMA 3G solutions has not been applied in domestic market, up till 2005, Huawei has got 11 WCDMA commercial contracts from overseas; the countries include Holland, United Arab Emirates, Malaysia and so on (Li, W. 2005). The development of modern international market is reflected in the following ways:

- Deploying a great deal of agents in the host market that to help foreign enterprises overcome the shortness of marketing experience.
- Promoting technological cooperation and alliance in the international market to help enterprises speed up the process of internationalization.
- Enhancing global communication to stimulate the fast growth of international human resource, which helps enterprises enter international market without worrying about shortness of international professionals.

7. The Factors That Influence the Internationalization Process of

Huawei

According to Driscall's mode choice framework, firm factors and environmental factors are the situational influences that affect the international entry mode choice. The firm factors include firm-specific advantage, experience and strategy. The environment factors include Demand/competition, Socio-cultural conditions and Political/economic conditions. Then variables moderators, such as host/home government policies, corporate policies and firm size, will affect the actual mode choice.

The above analysis shows that the internationalization process of Huawei is to some extent consistent with the Driscall's mode choice framework. On the other hand, Huawei's internationalization also presents some special characteristics of hi-tech firms.

First, industry feature is a key factor that affects Huawei's internationalization path. This is attributed to the special characteristics of information and communication technology (ICT) products. ICT products follow the network effects (Katz & Shapiro 1994), which means that the products have no or little value in isolation, but generate value when it is combined with other products. The more users use them, the more value the products have. The network effect responding to the market competition is that there are many balance points (the zero point and others balanced point). Therefore, the ICT firms first need to break the zero balanced point when they enter foreign markets. Huawei had taken a high commission policy to encourage the first sales in new markets. Analyzing Huawei's internationalization process, we can find that the industry feature is the most important factor that affects Huawei's entry mode decision. The opinion of influence from industry structure & characteristics is also supported by DuBois, Toyne & Oliff 's (1993) research into international strategies in four technology industries. Huawei's foreign market entry mode is based on the host market environment and industry features. The best mode is the one that can help a company to break the first market-balanced point. Therefore, Huawei uses different entry method in different market and for different products. As shown in the previous examples, Huawei uses the join-venture method to enter Russian market; uses export

method to enter Southern American, Africa and uses contractual method and joint venture to enter Europe and North American. From this point of view, Huawei's entry mode selection is not primarily based on the firm factors. By contrast, it depends more on the industry factors/ products and the host market environmental factors.

Second, our interviews conducted for this study show that the second influential factor in Huawei's internationalization comes from the fact that China, the home country of Huawei, is a developing country and the developing countries' hi-technology products will face extra barriers when they enter international market. Kim, Kim & Lee (2002) view the GNP gap of home country's and host country's into account as an influential factor when they study the Korean system integration (SI) firms' internationalization. However, they did not provide any significant evidence that proves the GNP gap would influence the technology companies' internationalization. They infer that "for companies from advancing countries, economic and technological condition in host countries would be more important than the cultural distance alone when deciding the resource commitment for market entry". The case of Huawei indicates that a developing country's hi-tech enterprises face additional problems and the enterprises need to demonstrate the total technological level of home country time and time. Through the case study of Huawei's internationalization, we believe that the following entry mode choice framework (figure 4), based on Deriscoll's (1995) international entry mode choice framework, would be more suitable for hi-tech enterprises:

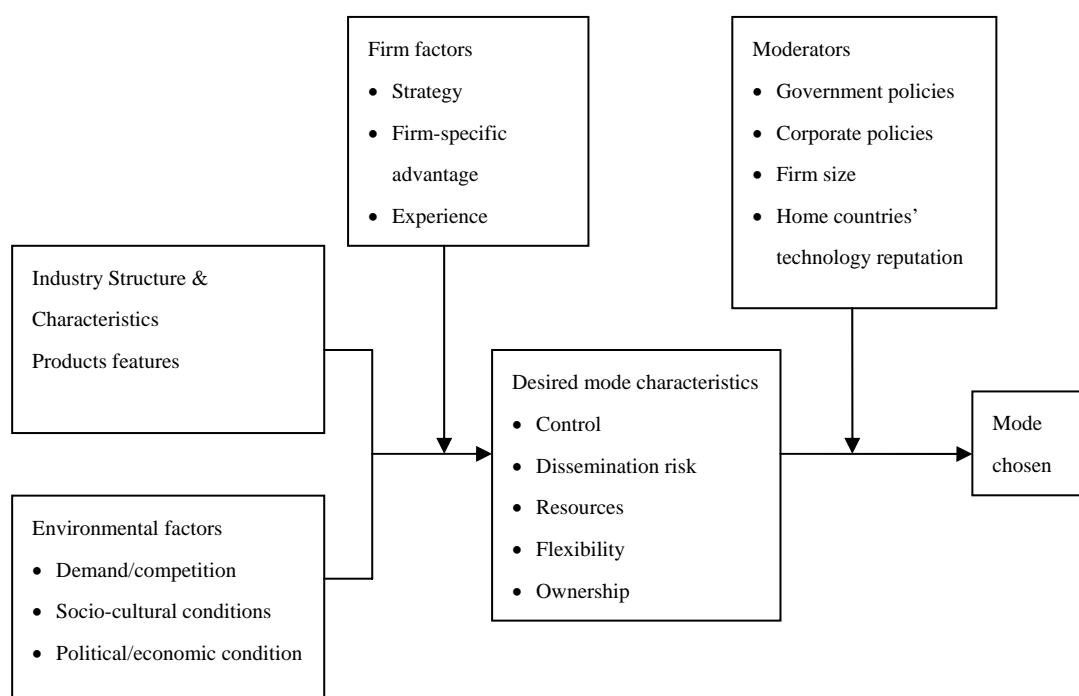


Figure 4: Foreign markets entry mode framework for hi-tech firms

Compared with Driscoll's foreign market entry mode choice framework, the above proposed framework for hi-tech enterprises emphasizes the factors of industry structure and characteristics. Firm factors might play a less important role for hi-tech

enterprises to decide on foreign market entry mode than that in traditional manufactures.

8. Conclusions

The case study of internationalization of Huawei shows that the Uppsala internationalization model cannot adequately reflect the features of the internationalization in hi-technology firms. The hi-tech firms usually do not strictly follow the “stage” theory. They often straightly employ the modes of joint ventures, FDI or contractual entry modes to enter a new international market. This case study provides more evidence to support the argument of Turnbull (1987), Bell (1995) and Gurau (2002) that the “establishment chain” theories cannot fit to the hi-tech and service areas.

The analysis of this paper shows that industry structure/characteristics play an important role in hi-tech firms' foreign market entry mode decision. Compared with traditional manufacture enterprises, Hi-tech enterprises tend to take firm factors as less important in choosing their entry mode. As shown in this paper, the internationalization of hi-tech firms from developing countries is harder than those companies from developed countries. For technological firms in developing countries, home countries' technological level and reputation influence the firms' internationalization significantly. To avoid this negative influence, Huawei had to enter the developing countries' market first before it enters developed countries' market. As a strategy, many hi-tech firms choose to set up the R&D department or register subsidiary companies in developed countries to develop an international market share.

References

Andersen, O 1993 'On the internationalization process of firms: A critical analysis', *Journal of International Business Studies*, vol. 24, no. 2, p. 209.

---- 1997 'Internationalization and market entry mode: A review of theories and conceptual frameworks', *Management International Review*, vol. 37, no. 2, p. 27.

Anderson, E & Gatignon, H (1986) 'Modes of Foreign Entry: A Transaction Cost Analysis and Propositions', *Journal of International Business Studies*, vol. 17, no. 3, p. 1.

Anderson, E & Coughlan, AT 1987 'International Market Entry and Expansion via Independent or Integrated Channels of Distribution', *Journal of Marketing*, vol. 51, no. 1, p. 71.

Beamish, PW 1990 The internationalization process for smaller Ontario firms: a research agenda, *Research in Global Strategic Management-International Business Research for the Twentry -First Century: Canada's New Research Agenda*, JAI Press, Greenwich.

Bell, J 1995 'The internationalization of small computer software firms, a further challenge to "stage theories"', *European Journal of Marketing*, vol. 29, no. 8, pp. 60-75.

Bradley, F 1995 *International marketing strategy*, 2nd ed. edn, Prentice Hall, Lomdon ; New York.

Coviello, N & Munro, H 1997 'Network Relationships and th Internationalization Process of Small Software Firms', *International Business Review*, vol. 6 (4), pp. 361-86.

Dittberner 2005 'Dittberner: Huawei Leads VOIP Market', [www document] http://www.lightreading.com/document.asp?doc_id=70738 (accessed 23 March 2005)

Driscoll, A 1995 'Foreign market entry metods: a mode choice framework', in SJ Paliwoda & JK Ryans (eds), *International marketing reader*, Routledge, London ; New York.

DuBois, FL, Toyne, B & Oliff, MD 1993 'International manufacturing strategies of U.S. multinationals: A conceptual framework based on a four-industry study', *Journal of International Business Studies*, vol. 24, no. 2, p. 307.

Erramilli, MK & Rao, CP 1993 'Service firms' international entry-mode choice: A modified', *Journal of Marketing*, vol. 57, no. 3, p. 19.

Gartner 2003 '2003 press releases', [www document] http://www.gartner.com/press_releases/pr21nov2003a.html (accessed 30 October 2005)

Gurau, C 2002 'The internationalisation process of UK biopharmaceutical SMEs', *Journal of American Academy of Business*, Cambridge, vol. 2, no. 1, p. 241.

Huawei 2003 'Huawei Global Sales Reached US\$3.83 Billion in 2003', [www document] <http://www.huawei.com/about/News-Events/News-Center/910.shtml> (accessed 30 October 2005)

---- 2005a 'Optical products', [www document] [http://www.huawei.com/products/optical/.](http://www.huawei.com/products/optical/) (accessed 30 October 2005)

---- 2005b, C&C08 EV, [www document] viewed 30,October. 2005, <http://www.huawei.com/products/swn/products/view.do?id=101> (accessed 30 October 2005)

Johanson, J & Wiedersheim-Paul, F 1975 'The Internationalization of the Firm: Four Swedish Cases', *Journal of Management Studies*, vol. 12, pp. 305-22.

Johanson, J & Vahlne, J-E 1977 'The internationalization process of the firm--A model of knowledge development and increasing foreign market commitments', *Journal of International Business Studies* (pre-1986), vol. 8, no. 000001, p. 23.

---- 1990 'The Mechanism of Internationalisation', *International Marketing Review*, vol. 7, no. 4, p. 11.

Katz, ML & Shapiro, C 1994 'Systems Competition and Network Effects', *The Journal of Economic Perspectives* (1986-1998), vol. 8, no. 2, p. 93.

Kim, B, Kim, H & Lee, Y 2002 'Modes of foreign market entry by Korean SI firms', *Asia Pacific Journal of Marketing and Logistics*, vol. 14, no. 4, p. 13.

Li, C & Cui, H 2004 'The report of Huawei internationalization', *IT Time*, vol. 15, no. 64.

Li, W 2005 'Huawei's WCDMA in overseas markets', *telecommunication industry news*, 28/09/2005.

Turnbull, PW 1987 'A challenge to the stages theory of the internationalization process', in PJ Rosson & SD Reid (eds), *Managing Export Entry and Expansion*, Praeger, New York, pp. 21-40.

Website of Huawei, (www.huawei.com)

Welch, LS & Luostarinen, R 1988 'Internationalization: Evolution of a Concept', *Journal of general Management*, vol. 14, no. 2, pp. 36-64.

Wu, j 2004 'The hard road to internationalization', *The World of IT Managers*, [www document]
<http://www.ceocio.com.cn/store/detail/article.asp?articleId=1371&Columnid=211&adId=10&view=> (accessed 1 July 2005)