Research on Enterprise Internationalization Strategy from the Perspective of Resource Endowment

He Liu*

University College of London, London, United Kingdom

*Corresponding author: 631512345678@mails.cqjtu.edu.cn

Abstract. Resource endowment is a preferable theory to refer when analyzing the development and management of companies. In this era of globalization, international trade accounts more for the socialized division of labor, making significant contributions to the high efficiency of economic functioning. Hence, enterprises tend to value internationalization more when setting long-term development goals, actively participating in the global division of labor. The previous research and paper into this area are mentioned to explain the connection and difference between the findings of this article and previous research. In general, this article focuses on the internationalization of companies by studying Huawei as a case company in the perspective of resource endowment. It gives a brief introduction to the case company Huawei and conducting analysis on internal resource endowment of Huawei as a case study. In addition, analysis of external risks in internationalization of Huawei is carried out by utilizing PEST model. Then, this article makes some suggestions on how enterprises can better allocate internal resource endowment to face or avoid external risks. The aim of this article is to provide experience and reference to companies undertaking the internationalization, aiding more Chinese companies to develop internationally.

Keywords: resource endowment; internationalization strategy; Huawei.

1. Introduction

With gradual systematization of China's manufacturing industry, the country and society attach more importance to the real economy. In addition, the trade war between China and the United States has posed new challenges to China's high-end manufacturing industry. In addition to the lack of innovation, the immature internationalization of Chinese enterprises is also the reason why European and American countries can sanction China more successfully. Therefore, the study of enterprise internationalization is of great significance to the development of Chinese manufacturing industry and the further maturity of market economy.

2. Literature Review

In order to explain Ricardo's Theory of Comparative Advantage, the paper, Interregional and International Trade, has put forward the resource endowment theory to explain why countries have comparative cost advantages in commodities produced and exchanged in international trade [1]. Resource endowment, also known as factor endowment, refers to the abundance of various production factors in a country. When the proportion of supply of a certain factor in factor endowment of one country is larger than that of the same factor in other countries, while it requires comparatively lower price to get than that of the same factor in other countries, the country's factor is correspondingly abundant. This article adopted resource endowment perspective to analyze the internationalization strategy and risks of Huawei, aiming to provide reference for other international enterprises [1]. This article corresponds with the argument presented in a paper that has confirmed the positive correlation relationship between innovation and internationalization [2]. The following sections can give evidence from Huawei research and development to prove this, while another paper having analyzed the case of outward FDI performed by companies in China is an article emphasizing on the significance of international investment in strategic resource for enterprises, which can be a reference for the future market expansion of companies [3]. Market expansion can happen regionally or globally. One paper has explained the regional expansion of Chinese companies, having suggested a development pattern with country-specific advantages (CSAs) in cheaper labor force and natural resources [4]. It has analyzed the future development pattern of Huawei dependent on knowledge-based capabilities, called firm-specific advantages (FSAs) more deeply [4]. Addition to this article taking Huawei as a case, other analysis of Huawei's Global Supply Chain has expanded the prospective of study on Huawei internationalization [5]. This article explains the importance of international supply chain stability for MNEs (multinational enterprises). Besides, the preferential policy is without doubt one of the key factors for the internationalization of enterprises. Previous research has given credit to this point as well [6]. Recent evudence has suggested that the positive interaction between government and enterprises can turn preferable policy into the tecnology strength ofenterprises through cooperation [7]. This article has given the example of interactions between Chinese goverment and Huawei, backing up the conclusion they made. Recently, researchers have also provided a comprehensive review of researches on internalization of Chinese enterprises [8]. International strategy between state-owned companies and private companies has been an emerging research area in this field, which has highlighted the features of internationalization of Huawei in this case study [9]. Other researchers have concentrated on the internationalization of SMEs (small-and medium-sized enterprises) [10].

3. Case Study of Huawei

3.1 Case Company Profile

Huawei is the world's leading ICT (information and communication) infrastructure and smart terminal provider, which also called communication equipment manufacturer. Established in 1987, Huawei originally is a sales agency for a HongKong company that produces user switches (PBX). Before 2010, it rarely stepped in the B2C business, mainly serving corporations or government for network construction and providing ICT devices. Huawei currently has a relatively large market share in the international market of mobile phones, but due to chip technology constraints the stability of production supply chain is being severely challenged, thus product quality and output having fallen sharply. However, with the assistance of the Chinese government's preferential policies for high-end industries, Huawei possesses a relatively stable domestic market demand and preferable business environment. Beside this, its world-leading communication equipment research and development technology, excellent and efficient supply chain coordination are one in a million. The product of Huawei enjoys the reputation of high-performance cost ratio and being in accordance with current consumer trends. In the last decade, B2C (business to customer) business of Huawei has risen substantially. Nevertheless, it initially focused mainly on B2B (business to business) business field before the rise of smartphone business.

3.2 Human Resources Management

Huawei is well-known for its allocation and management on Human Resources, aiming to create a capable and vigorous team by building the consensus of employees. Huawei is a private company 100% owned by its employees. Despite the fierce competition and working overtime in the company, the personal income of its employees is extremely decent. A chunk of Huawei's annual profits returns to its employees in the form of dividends and stock appreciation. It holds the ethos of so-called competition of wolf nature, a type of militarization management that can stimulate employees to strive harder and improve the disciplined working environment. To be specific, the performance appraisal of Huawei has exceedingly strict standard and the result is closely related with the year-end bonus and stock share. This management methodology accounts for the great executive force admired by other companies.

3.3 Research and Development Ability

Huawei is capable of conducting high level research and development. The secret recipe behind this is that they adhere to the "responsibility result-oriented" acquisition and sharing system and have established a differentiated incentive mechanism. In this way can Huawei match employee's performance and contributions with their rank and salary directly, thereby boosting the innovation process. According to the data of the world intellectual property organization, with respect to the ranking of corporate patent applications in 2015, Huawei reached the summit in ranking with 2898 applications for the second consecutive year. Huawei already had a total of 16 global R&D centers and 28 joint innovation centers in 2014. In the same year, Huawei had more than 480 data centers for its customers worldwide, including more than 160 cloud data centers. Huawei official reported in its annual report that they had invested 142.7 billion in research and development, accounting for 22.4 percent of annual revenue of the company.

3.4 Organizational Management

Currently, Huawei forms the global multi-business platform organization, which consists of multiple BG (business group) in business organization of ICT (Information Communication Technology). The board of directors and the standing committee of the board of directors of Huawei are chaired by the rotating chairman, who is the top leader of the company during his or her duty. The term of the rotating chairman is only six months. This frequent rotation is crucial to balancing and constraining senior executive's power while maintaining balanced development. Its decision-making mechanism is flexible, resulted from group decision making that gives more decision-making power to frontline employees and allows for collective leadership under common values.

4. Internal Resource Endowment of Firms

4.1 Advanced Technology Strength and Innovation

According to the conclusion drawn by Costanza Nosi, Tommaso Pucci and Lorenzo Zanni (2017) [2], technological and marketing resources are able to boost business internationalization, while only technological resources make contribution to the business innovativeness. Huawei has diversified industries and subsidiary corporations, including HiSilicon Technologies in charge of the production of high technology semiconductor chips. Huawei also provides its customers with the products such as Wireless networks, core networks, access networks, transport networks, microwave communications, enterprise networks, IT services, semiconductor design service, monitoring devices, set-top boxes, public clouds, inverters, vehicular communications.

Part of its technology mentioned above have been applied for patents, achieving the top level worldwide.

In 2017, Huawei is reported in its annual report to achieve global sales revenue of 603.6 billion yuan, with a year-on-year growth of 15.7%, while net profit reached 47.5 billion yuan, and cash flow from operating activities reached 96.3 billion yuan. In terms of performance, the consumer business only accounts for 39.3 percent of Huawei's total company performance. The gradually increasing awareness of consumer market and timely transition from infrastructure producer to high end technology provider has set the scene for the success of Huawei. According to statistics, Huawei ranked first with 9739 in the number of corporate patent applications in the globe in 2021. Based on PCT international patent applications report published by the World Intellectual Property Organization (WIPO) in 2021, Huawei is also on the top of the list with 6952 corporate applications. To realize the goal of internationalization and development of the company, Huawei is patient with the long-term process of research and development, meanwhile, it is determined to pour the money into the development session. The rise of its 5G technology is a perfect example. Supported by the statistics published by IPlytics in 2021, Huawei had the second highest number of Standards-essential Patents (SEP), which means patent that cannot be alter in the development, in the world with a number of 933. The number of standard technology contribution of Huawei ranked first in 11423. By focus on the field of 5G, Huawei managed to nearly occupy the market share first. The 5G technology development not only optimize the quality of its products but also vigorously exploit the emerging market in the future scope. It requires correct decision making of the board, and associated with the entrepreneurship with strategic foresight. The internationalization progresses swiftly in this period with more technology export and international product sales, whereas the higher publicity is necessary.

4.2 Scientific Management Strategy and Decision-Making Mechanism

Managerial capabilities and strategy are key for deploying the firm overall resource endowment. Mature and systematic management methodology contributes to the internationalization of companies.

4.2.1 Rich Gradient Human Resource

Regarding Human Resources management of Huawei, it aims to cohere team's power to motivate strong collective execution under the guidance of common values, taking advantage of the herd behavior to guarantee the ultimate goals.

One of the main reasons behind this cohesive force is the fat salary and good benefits of employees. Huawei paid 106.851 billion yuan in employee expenses in 2017. Huawei employs about 180,000 people. Through calculation can the conclusion be drawn that the average annual salary of Huawei employees is 593,600 yuan. Huawei's compensation mainly consists of three parts: salary, stock dividends and bonuses. If the employees are sent abroad, there will be subsidies attached. In addition, Huawei implements the rank system. Generally, graduates with bachelor's and master's degrees enter Huawei at the rank of level 13 (also known as "P13"), which is promoted by one level each two years, and the overseas upgrading speed is relatively faster. Employees of Level 17 and 18 are usually grassroots and middle managers. President and Vice President usually rank level 21 and level 22. After raising the base line of wage in 2015, the annual salary difference between each rank is approximately four thousand yuan, the difference becomes bigger with the rise of ranking. The quantity of stock keeping is connected with the time of entry. In 2015, employees of level 17-18, usually have pre-tax dividends of about 600,000 to 700,000 yuan. There are about 2-3 thousand employees above level 20, and this year alone they received 2 to 2.5 million yuan in dividends. For level 21-22, pre-tax dividends plus appreciation reached over 5 million yuan. The year-end bonus is also big.

The second reason is the talents cultivating. The evaluation is extremely rigorous to improve the performance of talents. For individual performance evaluation, generally speaking, 10-15% of the evaluation result will be an A. No more than 45% of the employees gets the evaluation result is a B+. 40-50% of the evaluation will be a B and 5-10% of the evaluation will be a C or D. Whoever received the assessment of C or D, cannot raise their wages for three years, meanwhile, their rationed share and bonus are 0. The Human Resources is fully exploited in this strict evaluation system. Besides, Huawei is expert at fostering their own talents. Huawei preferred its

grass-roots employees who put their back into their basic jobs. The employees, then, are encouraged to attend the training for grass-roots managers at their own expense, thereby building up consciousness of automatic learning. Huawei emphasizes on the selection of talents rather than promotion. Using the method of position rotation in circulation, the talents' coordinate ability is improved while working qualification is becoming more sufficient. The circulation is mostly dependent on the practical needs of business, through reducing interpersonal costs resulted from cluelessness of certain business.

4.2.2 Strategic Management and Wholesome Organizational Management

The internationalization of Huawei is preferable and reachable for its prospective and timely strategic management. The strategic management department of Huawei develops SP (strategic planning) and monitors implementation of SP mainly in three types of meetings: planning and discussion, strategic health index review meeting (held semi-annually), and strategic execution review meeting (held semi-annually). The strategic management department establishes Industry database, competitor database and customer database to carry out marketing insight. BLM (Business Leadership Model) is key for the strategic management of Huawei, originally promoted by IBM. BLM perfectly suits organizational capability and consistency of Huawei for its highly effective execution. It consists of three parts, which are entrepreneurship, values and the process of conducting the strategy. BLM provides the thinking structure of strategy formulation and execution for the enterprise so that the managers at all levels of the enterprise can adopt a unified language in the session of the strategy formulation and implementation. Therefore, the more accurate collective decision making in executive level is no longer imagination. Huawei finds it possible to enhance international competitiveness using this model.

In the light of organizational management, Huawei adopts Process-Oriented Organization. Centering on Integrated Product Development, Lead to Cash and Issue to Resolve sessions, Process-Oriented Organization is designed according to core processes, not section function. Internally, the quality and efficiency of the business can be greatly improved through process consolidation of deterministic, massive and repetitive work. Furthermore, it frees managers and business leaders who can put their energy into uncertain and challenging tasks to motivate working enthusiasm.

4.3 Abundant Foreign Investment Allocation

When the internationalization of Huawei first started before the 21 centuries, it rarely has the experience of customer service. Huawei held the theory of Low-end Disruption prompted by Clayton Christensen, concentrating its foreign marketing resources and human resource on providing the sinking market with high quality telecommunication equipment and service. Huawei then managed to first take up the market in less developed countries and suburbs of Europe. In 2001, Huawei signed a multi-million dollars GSM equipment supply contract with Russia's national telecommunications department. In 2007, Huawei overtook other Western companies to become the market leader in Russia's telecommunications market. To penetrate from low end market to mainstream, Huawei adopted the Pressure Principle that it exceeds the intensity of competitors to allocate resources in existing market segment. Concentrating its manpower and capital on achieving breakthroughs in key areas is the way to success. In 2012, Huawei continued to promote localization globally and increased its investment in Europe, focusing on the UK, building a new R&D center in Finland, and setting up local boards and advisory boards in France and the UK. Huawei can mend its relatively weak modules and pursue larger market share in European and American. In 2019, Huawei invested 3.1 billion dollars in Italy, including $1.2 billion in operational and marketing investments and $1.9 billion in direct supply, with an additional $52 million to be spent on research and development activities. On February 27 of 2020, Huawei announced that it will set up a wireless manufacturing plant in France to produce 4G and 5G wireless communication equipment, mainly providing for the European market. According to Huawei, the factory plans to invest 200 million euros in land, plant construction, equipment procurement and other advanced production equipment from advanced European firms to complete the overall construction.

5. The Risk Study of the Case in Internationalization

5.1 Political Risks

In the fierce competition of 5G technology, Huawei has taken the lead to provide equipment for its customers around the globe and to early achieve key technology breakthrough in this field. Western countries, due to the concern of national security and economic benefits, have banned the exports of several types of semiconductors to China, thereby constraining the production and foreign utilization of 5G chips from Huawei. In this case, the internationalization goal of Huawei conflicts with the government goal of western countries. The exports of Huawei then are badly affected owing to inconsistency of supply chain, making its technology not available in business competition. Besides, The US advocated that the western countries should prohibit the construction of ICT infrastructure provided by Huawei. In the early years of Huawei, Chinese government had not built mature market economy system so that the institutional transaction costs are high for the relatively newly established firms as Huawei. The institutional costs can be found in the time and money inefficiently wasted in obeying the complex market rules and not preferential tax policies.

5.2 Economic Risks

The epidemic has been around since 2020 when the initial online working tended to make working efficiency and cohesion decline. Global high deficit rate gave rise to currency inflation and the prices continued to go up, leading to the descending purchasing power of customers. Regional wars in middle east and between Russia and Ukraine added weight to the inconsistency of supply chain and unstable market demands, resulting in higher cost for the company.

5.3 Social Risks

Western countries have significant difference in work ethic compared with Eastern Asia countries. The tiring overtime working culture clearly do not suit the employees in western countries. Therefore, Huawei has to adapted to the certain traditions of cultures and designed correct strategy to market their products and employ workers. In countries that does not have a solid regime, market demands and manufacturing can be easily affected by political events, bringing unpredictable expectations of company revenue and costs to the company future development. When conducting mergers and acquisitions in foreign countries, enterprises face the negative impact of dealing information. The employees might lack conviction in staying in the company, thereby resulting in the outflow of staff. While in transnational business activities, social convention can be a main obstacle to merchandise sales. Other problems will also emerge such as quality of manufacturing not up to standard.

5.4 Technical Risks

One of the fundamental problems of technological development in Huawei is the lack of innovative talents, which require long cultivating process. It is a direct consequence of less developed patent system and bad development environment, in which scientists can hardly receive expenditure to conduct research and their interpersonal network is sometimes more important than their real research and development ability. Other than the problem of limited talents, high development costs is also a crucial problem. Research and development can last for a long period and has a low rate of return. If the direction of research brings too much difficulties to the development and the development method is not available enough, which means the flaw of technical design cannot be reduced, the investment of employers will be wasted. As a result, strategic planning accounts much for the profits brought by the technology innovation. Correct strategy for allocating research and development investment demands the leaders of a thorough evaluation of current and near future development tendency, which can easily be misjudged. Moreover, the application in reality can reveal flaws and danger of the technology. Without the mature solution and adequate quantity of experiments, the consumers can be threatened by the problems potentially existing in the utilization process, so the credit of enterprises will be damaged.

6. Conclusion

In summary, successful internationalization of a company cannot be accomplished without core technology strengths, sufficient innovation power, high-efficiency management strategy and optimized human resource. Huawei possesses most of the quality mentioned above, but it still faces challenges and risks in the process of internationalization. To solve these problems, there are four suggestions provided for the company. First of all, the company can increase the utilization of FDI (foreign direct investment) to raise more funds to optimize production in terms of efficiency and irreplaceability. Besides, the strategic resources in manufacture are key to the stability of production. Therefore, having more control of strategic resources by ramping up investment abroad and improving the fungibility for strategic resources are useful ways to boost production. In addition, the company can take advantages of current preferential policies on the business and setting up more platforms for international financial cooperation to create a more preferable international business environment. The fourth suggestion is being more independent on natural resources. Innovation is more significant in this Information Age. Core technology strength allows companies move from regional expansion to internationalization.

References

[1] Ohlin B. Interregional and international trade[M]. Harvard University Press, Cambridge, 1935.

[2] Nosi C, Pucci T, Zanni L. No need to choose between innovation and internationalization: when pursuing two strategies at a time leads to firm superior performance[J]. Piccola Impresa/Small Business, 2017 (1): 64-84

[3] Deng P. Investing for strategic resources and its rationale: The case of outward FDI from Chinese companies[J]. Business Horizons, 2007, 50(1): 71-81.

[4] Rugman A M, Li J. Will China's multinationals succeed globally or regionally?[J]. European management journal, 2007, 25(5): 333-343.

[5] Ni Y. Analysis of Huawei's Global Supply Chain[C]//2018 International Conference on Sports, Arts, Education and Management Engineering (SAEME 2018). Atlantis Press, 2018: 266-269.

[6] Rugman A M, Nguyen Q T K, Wei Z. Chinese multinationals and public policy[J]. International Journal of Emerging Markets, 2014: 205-215

[7] Bai-zhou L I, Jing-wei Z. An analysis of the evolution of government and enterprise interaction in the perspective of resource endowment[J]. Operations Research and Management Science, 2021, 30(4): 163.

[8] Alon I, Anderson J, Munim Z H, et al. A review of the internationalization of Chinese enterprises[J]. Asia Pacific Journal of Management, 2018, 35(3): 573-605.

[9] Amighini A A, Rabellotti R, Sanfilippo M. Do Chinese state-owned and private enterprises differ in their internationalization strategies?[J]. China Economic Review, 2013, 27: 312-325.

[10] Sui S, Baum M. Internationalization strategy, firm resources and the survival of SMEs in the export market[J]. Journal of International Business Studies, 2014, 45(7): 821-841.