The internationalization process of SMEs

The case of ImmunoGenes, a Born Global Biotechnology firm

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1. Introduction

As the topic of my thesis, I have chosen the Internationalization process of Small- and Medium Size Enterprises (SMEs). In the last two decades, there has been an increasing tendency of SMEs entering the international market. In Hungary, there are 70 SMEs for every 1000 citizens and 2/3 of the people employed in the entrepreneurial area and 42% of this area’s revenue comes from SMEs. (Közponni Statisztikai Hivatal, 2016)

The Hungarian market is a relatively small and open one. Considering these characteristics of the Hungarian economy, I think that this area is very important for our economy. In my thesis, this topic is analyzed throughout the specific case of ImmunoGenes, a Hungarian Born Global biotechnology firm. My personal motivation in the choice of topic was that I was raised in a family in which the affection towards the science of medicine has been inherited throughout generations. Also, during my studies at the Corvinus University of Budapest and my exchange studies at the Copenhagen Business School I have found the subjects that were related to the internationalization process the most interesting. My professional motivation was that born global concept is a current trend and therefore this research field is not yet saturated.

In my thesis I am researching and elaborating the answers to the following questions:

- How did the company internationalize?
- How can a founder’s already established business network affect the internationalization process of a company?

As I am analyzing the specific case of a Born Global firm, I do not aim to draw conclusion that would stand for SMEs in general, but rather to find answer to the previously mentioned questions in relation with ImmunoGenes.
2. Theoretical chapter

2.1. Motives of internationalization

The internationalization motives of a firm can be categorized based on two different perspectives.

According to one of these perspectives, there are two types of motives of internationalization. The first one is called **Domestic Push**, which is based on the firm’s own interest. This is an internal motive, in case a firm finds itself in the position that its domestic market is not sufficient for its needs and therefore the need to internationalize is realized. The second type is called **International Pull**, which is based on the international market pressure. This is an external motive, caused by a specific unmet demand that has appeared on the international market. (Czakó and Reszegei, 2010)

Secondly, Yip’s globalization framework differentiates four internationalizations drivers that can be motives, which are the followings:

**Government and policy drivers**, which can mean reduction or even elimination of international trade and investment barriers, the liberalization and adoption of free markets and the introduction of standards.

**Market drivers** are for example, the customer needs and taste and their evolution. A firm may follow their existing global customers to international markets. The transferability of the existing marketing strategy of a firm, e.g. technology competence or unique product makes internationalization an appealing plan to pursue. Possession of knowledge of foreign market opportunities and market information and the small and / or saturated nature of the domestic market can also be a market driver of internationalization.

**Cost drivers**, of which the most common examples are economies of scale and scope, favorable logistics, connecting the sales market with the low-cost production sites, country-specific advantages, such us tax benefits.

**Competition drivers**, when a firm follows its rivals to international market or when the competitors are already globalized, which forces the firm to go international to be able to stay in business. (Johnson et.al., 2014)
2.2. Barriers of internationalization

First, and foremost, insufficient knowledge is a significant barrier of internationalization, since if a firm is not aware of foreign market opportunities, it is not likely to seize them. A reason of it can be lack of foreign market connections.

Secondly, the management’s exaggerated emphasis on developing in the domestic market results in lack of export commitment.

Lastly, if the current marketing strategy is not easily transferable, internationalization can result in cost escalation, due to high export manufacturing, distribution and financing expenditures. Also, if a company lacks productive capacity to dedicate to foreign markets, great financial investments are necessary for a foreign market entry. Therefore, the main barrier of internationalization in most of the cases is lack of capital to finance expansion into foreign markets. (Hollensen, 2014)

2.3. Strategic goals of market entry

Based on Czakó and Reszegei, I have analyzed the strategic goals of market entry according to the following categorization:

  Market seeking is when the main goal of the internationalization is to seek a greater number of possible targeted customers for the existing product of the firm. Basically, the firm goes abroad to take advantage of foreign market opportunities, which can be seized by following its suppliers and/ or customers, avoiding costs of transportation of the products.

  Another goal of market entry can be Resource seeking, in case a company enters a foreign market because a business-critical raw material is cheaper or easier accessible from that other market. Examples of this strategic market entry is when natural resources are acquired or when a company enters a country because its low-cost unskilled labor.

  The third of the well-known goals is to take advantage of economies of scale, which is called Efficiency seeking. In this case the company is taking advantage of the fact that the fix cost of the production will be divided among more products, which makes the unit cost lower.
Lastly, **Strategic resource seeking** is when the company decides to acquire a completely new asset bases instead of exploiting and already existing asset. (Czakó and Reszegei, 2010)

### 2.4. Dunning’s eclectic theory/ OLI-paradigm

Based on Dunning’s eclectic theory, also known as OLI-paradigm, in order to make the internationalization decision three aspects are to be examined.

Does the firm have **Ownership**-specific advantages in its current market? Ownership-specific advantages are intangible assets of a firm, such as its size, its founders’ and employees’ multinational experience and the ability to develop and merchandise a differentiated product.

Can the targeted market offer any **Location**-specific advantages? Which can be low cost wages, cheaper or easier access to raw material, closer location to main customers, etc.

Does the company have **Internalizing**- specific advantages in the specific case? Meaning that the firm benefits from the internal use of the previously mentioned ownership specific advantages in the targeted market or would it be more beneficial to rent these out in a form of licensing? (Hermannsdottir, 2008)

### 2.5. The transaction cost analysis (TCA) model

According to the TCA model, if perfect markets existed the following statements would hold true; The same information is freely available for every single player of the market. Everyone’s decision- making is rational. No monopoly or oligopoly exists, meaning that there are always many options to choose from suppliers and buyers, keeping up a lively competition. Specific transactions have no carry-over effects between two parties from one period to the next. In reality, there is no such thing as a perfect market. The opportunistic behavior of the players, such as disguising information, irrational decision-making, misleading, distortion and deliberately confusing others, causes a friction in the markets. Because of this phenomenon there is a cost of information for every transaction. (Hollensen, 2014; Hermannsdottir, 2008)
The TCA model predicts that a company will only carry out those activities that have a lower cost if done internally than they would have if outsourced to an independent outsider. Otherwise the firm is better off taking advantage of the cost advantage offered by the outsider company. The aim of every firm is to minimize this transaction cost, which consists of the following:

\[
\text{Transaction cost} = \text{ex ante costs} (= \text{search + contracting}) + \text{ex post costs}
\]

\[
(= \text{monitoring + enforcement})
\]

(Hollensen, 2014. p. 83.)

The transaction cost can be lowered by externalization, which was previously mentioned or internalization. „If the transaction costs through externalization (e.g. through an importer or agent) are higher than the control cost through an internal hierarchical system, then the firm should seek internalization of activities, i.e. implementing the global marketing strategy in wholly-owned subsidiaries. or more popularly explained: if the friction between buyer and seller is too high then the firm should internalize instead, in the form of its own subsidiaries.” (Hollensen, 2014. p. 85.)

2.6. Analysis of the choice of market

In order to understand the market choice of a firm there are three basic theories to analyze the markets. The first one is the PESTEL framework, which analyzes the Political, Economic, Social, Technological, Environmental and Legal aspects of the targeted foreign market. The second one is the CAGE framework, which instead of analyzing the targeted market, reveals the differences and the similarities of the country of origin and the targeted country. In this theory the four types of distances are examined between the two countries; these are Cultural, Administrative and political (which can be associated with the Legal aspect of the PESTEL framework), Geographical and Economic distances. (Johnson et.al., 2014) The third theory is IRI model, which analyzes the already existing Industry in the foreign market, primarily with the use of Porter’s 5 forces; Bargaining power of supplier and buyers, threat of new entrants and substitutes and industry rivalry, also considering the structure and the growth rate. Then it applies a Resource-based view to the firm itself through which its resources and capabilities are
analyzed. For further analyzing the capabilities, the VRIO framework can be used, which examines whether the company’s capabilities are Valuable, Rare, Inimitable and provide Organizational support. Lastly, the IRI model looks into the Institutional aspects; the written and non-written norms of a market, its formal and informal institutions and whether the behavior of the player of the market is reactive, protective, adaptive or proactive and how great the psychological distance is between the two countries and how that distance can be managed. (Czakó and Reszegei, 2010)

2.7. Modes of international market entry

2.7.1. Influencing factors of the international market entry

There are two main influencing factors of the decision of the international market entry mode. The first one is the breadth of the competitive advantage of the firm; whether the already existing capabilities can be used in other markets as well without making any major alterations or local ones have to be integrated from the targeted foreign market into the company. The second one is the tradability of the product, whether it is easily transportable, or is it worth to transport the goods. The transportation of perishable goods is strictly regulated and expensive. It is also useful to take into consideration the value to weight ratio of the product, since it can occur that it is easily transported, but its value in comparison to its dimension is so little that it is not worth the transportation cost. The legal protection provided by the targeted country is also a very important aspect to keep in mind, especially in case of the merchandising of easily imitable products. (Johnson, 2014)

2.7.2. Entry modes

The four principal entry modes of a foreign market are the following; The first one is Exporting, which can be direct or indirect as well. This basically consists of transporting the ready products to new markets and selling them there or the whole process of transportation and selling can be outsourced to another company in case of indirect export. The second mode is License/franchise, when the company sells the rights to produce its own products to an outsider company in turn of receiving a predetermined percentage of the licensing/franchising company’s revenue, which is called royalty fee. This mode requires more commitment to the targeted market, but international experience
or knowledge of the specific market is not necessary, since the other company who will be selling the product is in possession of these. The third mode is launching a Joint venture. In this case the company is joining another foreign company to market a product or service. The risk of the investment is mitigated as it is divided between at least two parties and this way the company can gain great knowledge from the counterparty which was already operating on the foreign market and therefore already has experience in the market. This kind of market entry requires more commitment than the previous ones and in addition is preferable to have some knowledge of the country and how business can be managed there. The last of the principal market entry modes is establishing a Wholly owned subsidiary in a foreign market, this category can be further divided into two subcategories. Merging with or acquiring an already established facility belongs to the brown field subcategory, whereas building up a completely new facility or business is called green field investment. (Johnson, 2014)

2.8. Internationalization models

2.8.1. Uppsala internationalization process model

One of the main internationalization models is the Uppsala internationalization process model (1977), which is based on the underlying assumptions that all the market players have uncertainties and bounded rationality. The firms, first enter markets that are close to the market in terms of psychic distance. This means that they enter countries that are perceived to be very similar to the country of origin both country-wise and people-wise. In general, these countries are fairly geographically close to each other. The firms gradually penetrate these markets in line with an establishment chain. The chain has four incremental stages, which are the following; in the very first stage, the firm has no regular export activities to the foreign market, only some ad hoc exporting activities can be seen. In the second stage of the establishment chain, the firm already has some knowledge of the foreign market and has seen via the ad hoc exports that there is a demand for its products, therefore it starts exporting via independent representatives. This is a bigger commitment than the previous stage, but the risk is mitigated with the independent sales representative. In the third stage, the firm has experienced in the second stage that it is beneficial for them to have regular export activities in the market and has gained some additional knowledge from its representative, therefore it is time to establish a sales
subsidiary in the foreign market, through which they have more power and insight on how the market structure is. When the establishment of the foreign sales subsidiary starts generating profits and it becomes clear that there is more unmet demand on the market, then follows the next, the last stage, in which the firm launches foreign production/manufacturing units. This last step is a huge commitment, since this unit cannot be easily moved to another market in case of failure. When the firm has gone through these incremental steps in the countries, with small psychic distance then can the penetration of more different countries be started. Throughout these incremental steps the firm struggles with and gradually eliminates the liability of foreignness in the new country and market. To be able to do so, it is necessary to have firm-specific advantages which can offset the lack of knowledge of the local customs. The market-specific knowledge is assumed to be gained through experience in the market. The better the knowledge about the market, the more valuable the resources are and the stronger the commitment to the market is. All in all, the two change mechanisms of the model are the learning from experience and the commitment decisions, which are both done incrementally, therefore it is a slow, time-consuming and iterative process. (Johanson and Vahlne, 1977; Hermannsdottir, 2008; Hollensen, 2014)

2.8.2. The Uppsala internationalization process model revisited

The Uppsala internationalization process model has been revisited by its authors, Jan Johanson and Jan-Erik Vahlne in 2007 – published in 2009 -, since they have felt that due to the changes in business practices and the improvement of theories it was necessary. In the 30 years that have passed since the publication of the original theory, geographical and psychic distance has become less relevant to the internationalization process of firms as the world, due to the globalization process is becoming more and more heterogeneous. The development of the transportation means and network reduced the time and expenses of both the people’s, products’ and raw material’s movement. Deregulation of both the international business and transportation has further eased and has reduced the time of the international transactions. This and the wide-spread usage of internet have made access to information far easier and faster.

It became necessary to take into consideration that the world does not consist of independent markets anymore, but there are many interdependencies between them. The service industry was not included in the original theory as there is no point of opening
manufacturing units abroad for these, etc. The internationalization process became faster as international experience has become well-spread among not only the business people, but even amongst students. The Erasmus and other exchange programs provide financial aid to university students to support their international studies or international internship during university years. Due to this phenomenon, the internationalization starts earlier than thought in the original model. The already possessed international experience of the managers shortens the learning curve of the firm and may bring into light international possibilities, which otherwise would remain unknown to the firm. Due to their international experience, the managers can already have a well-established business network, which can result to be an important source of information. Therefore, in the revisited model it can be established that the liability of foreignness is not so much of a burden, rather the liability of outsidership is what has to be overcome. Thanks to these connections of the individuals inside a firm, information has become more accessible and firms tend not to follow the establishment chain of the original model. They have started leapfrogging these stages and even entering several markets simultaneously. Leapfrogging is made possible by the fact that the two time-consuming variables’ - learning from experience, and commitment decisions- of the process can be gained significantly sooner than earlier, thanks to the previously mentioned factors. (Johansen and Vahlne, 2009)

2.8.3. The network approach

Based on the findings introduced in the previous revisited model of the Uppsala internationalization process model, it is important to examine the Network approach theory as well. First of all, each individual firm is dependent on resources which are produced and thus also controlled by other firms. Thus, a firm is engaged in a business network even when only operating in its domestic market. Although this network is primarily a domestic one, it can also have some international actors as well. Mostly, the companies use this network when deciding to internationalize. Consequently, firms may not be moving primarily to their neighboring countries – in contradiction to the Uppsala internationalization process model -, but rather to the ones where they have connections throughout their business network. This phenomenon is supported by the theory of the liability of outsidership becoming more relevant that the liability of foreignness, brought to like when the original Uppsala model was revisited. (Johansen and Vahlne, 2009) So,
the choice of the market to be penetrated can be determined solely by the network, as it can provide sufficient information to make a well-educated strategic decision and it can help to identify potential market entry opportunities. It is common sense that the bigger the psychic distance, the more difficult the establishment of the partnership / business network is. However, the psychic distance has become more relevant on individual level, rather than on company level. As part of a business network, the individuals contribute to the market knowledge building of the company. „firm’s internationalization is never a solo effort, but that it is a product of network relationships that are both formal and informal” (Mtigwe, 2006 in: Hermannsdottir, 2008, pp. 26.) Nowadays, the meaning of the word ‘market’ can be more understood as a system of relationships. A firm’s position in this relationship system is a strategic value, an intangible asset. (Hermannsdottir, 2008; Szerb et.al., 2014; Hollensen 2014)

2.9. Internationalization of Born Globals

A born global is „…a company that, from its inception, discovers and exploits opportunities in multiple countries” (Melén and Nordman, 2009, pp. 243.) These companies are small and medium enterprises with fewer than 500 employees and are mostly using or selling cutting-edge technologies. They enter the foreign market soon after the launch of the company. This means that they do not give time for the domestic market to react to their offer. Hence, they enter the international market before testing in practice whether their offering has a real potential market value. Parallelly, as they do not spend a long time operating in the domestic market, they do not gain any kind of market experience before entering a foreign market. Consequently, instead of learning in the domestic market, they are “international learner”-s (Hermannsdottir, 2008, pp. 22). In most cases they do not enter foreign markets one by one, but enter more markets in the same time. This also increases the risk of its internationalization as they do not wait for the response of a foreign market before entering another one. As it is crucial in the case of a born global company that its goods or service are easily transportable and no major alteration is needed to be able to sell in a local market, these companies are most often operating in knowledge intensive fields. Due to their young nature and their small sizes they have scarce financial resources. Therefore, the business network of the management is essential so that they can gain financial resources from investors. (Hermannsdottir, 2008)
Born Globals can be categorized into 3 categories based on their internationalization attitude: **Low committers**, who start with low commitment internationalization modes, e.g. exporting and do not commit further in the future. **Incremental committers**, who start with low commitment internationalization modes – as the previous one- but then later on with time they commit incrementally more resources in the foreign market. This type of the born globals is in line with Uppsala internationalization model. The third category is the **High committers**, they enter foreign markets using both low and high commitment internationalization modes simultaneously. (Melén and Nordman, 2009)

2.10. Holding companies

Holding companies are “leading” companies, mostly providing strategic leaderships to their subsidiaries. “They make decisions and action plans regarding finance, strategy and investment, which do not necessarily have to be accepted by the subsidiaries.” The holding type divisional structure is characterized by flat hierarchy, high autonomy of the many small divisions and a few simple leading means.

2.10.1. Reasons of launching a holding company

The reasons for launching management holding companies can be divided into two categories. The first category is the external reasons, which are mostly the result of changed economic conditions. For instance, the changes can cause market and technological insecurities, which are a couple of the principal external reasons. To overcome these insecurities and to mitigate to relating risks, arises the need of fusion and acquiring transaction, consequently the significance of strategic alliances grows. Therefore, launching a management holding company can improve the negotiating position of the launching firm. The internal reasons are due to the disadvantages of the centralized organization structure. After a certain point, if a company and its affiliates grow faster than its management, the synergy between them can result too expensive and the cost of offering a wide and complex portfolio can overweigh its profits. On the other hand, in case the management processes are too complex and slow, which can kill the business. In these cases, there is an internal reason for launching a management holding company, as the internal management is a dead-end.
2.10.2. Characteristics of holding companies

Management holding companies have the following characteristics and advantages; they have a decentralized form of a divisional structure. The holding company itself is not executing any operational business activities. Its functions are group forming, leadership functions – which can be direct or indirect – and if predetermined in the contract, it can be responsible for the losses of its affiliates. Generally, this is not the situation, as the fact that in case of an eventual bankruptcy, the obligations of the partner companies cannot be claimed from the holding company gives protection and makes this structure more appealing.

This structure allows for the separation of the strategic and the operative activities, which helps the result oriented leading of the companies in line with the long-term strategy, since the holding company is concerned with the broader picture. It provides consultation to its affiliates regarding the corporate strategy and the coordination of finance and technologies.

2.10.3. Advantages of holding companies

Lastly, the main advantages of the structure are studied. As a holding group, members have more strength as they can cooperate with each other and they can act as a port of a bigger entity. The members are more willing to cooperate with each other, as a prospective deal of any member can increase the value of the whole holding group, which is beneficial for each and every member. The parent company can set innovation targets for the members of its holding group, since as an external player it can have more realistic view of the market and the companies’ position in it. Additionally, group members belonging to different market segment can cooperate and create a new business model together. As the parent company’s role is to manage the company or at least provide leadership consultation, it is in its own interest to make sure, that the affairs of the members are executed in a transparent way, so that all potential stakeholders can see and understand it. As it has already been mentioned, the holding group as a whole has more strength and more capital, which allows for more perspective financial possibilities, such as greater investments or less cost of debt. Due to the structure of the holding group, financial risk can be mitigated between the member companies. Since
no obligations of a member company can be claimed from another member, they are protected from the losses of each other. But they might have agreements in which they provide financial help to each other or even give in-house loan for a lower price, which significantly decreases the cost of debt. All together these advantages provide the members with the possibility of being more flexible as they have more financial strength and also knowledge. (Bühner et.al., 2002)

3. Introduction of the practical issue

3.1. Introduction of ImmunoGenes

ImmunoGenes is a biotechnology company that is based on the foundation of a methodology which generates transgenic animals that can produce antibodies more quickly efficiently than other animals. This process reduces the antibody creation’s cost by approximately 50-60%. The antibody produced by these animals is now a very efficient therapeutic tool. This tool is used by pharmaceutic companies and scientific institutions. It has a huge market, generating nearly 60-70 million USD annual revenue. The invention of the generation of transgenic animals for the production polyclonal and monoclonal antibodies happened during a collaboration between Imre Kacskovics DVM, PhD, DSc (Head of the Immunology Department of ELTE) and Zsuzsanna Bősze PhD, DSc (Scientific Advisor at the Agricultural Biotechnology Institute). During the collaborations they worked as the employees of the mentioned institutions and the institutions’ laboratories and equipment were used. Consequently, they were the inventors, but legally the owners of the invention were the institutions. As they were not the owners of the inventions, the institutions should have executed this legal procedure, but the two inventors found it important to fasten the process. Recognizing the potential market value of this invention, the two inventors have applied for a patent to the Danubia Patent and Law office in 2006. The two institutions were informed of the process of which they were mostly supportive. The inventors were reimbursed for the already paid fees and the Patent Corporation Treatment phase was sponsored by the institutions, but the rest was paid the inventors. The patent was granted for the EU, Canada, Japan, China, Hong-Kong and Australia. (Kacskovics, 2016) Gaining the patent for the USA is still in progress. The granted patent protected the methodology of the antibody creation, not the
antibody itself. The institutions became the owners of the patent and the invention, but they gave exclusive use right to the later launched spin-off company, ImmunoGenes. Since both institutions are state-owned, co-ownership would not have been feasible, as it would have been too bureaucratic. The slowness would have killed the business. Instead, the institutions receive a royalty fee, a certain percentage after the income of the later created company. The Limited Liability Company (from now on will be mentioned as LTD), called ImmunoGenes was launched in 2007, in Hungary by the inventors. In 2008, the company had an international management team. The board meeting was held 3 times a year and a weekly teleconference meeting was held to discuss the company’s operation. The period between 2008-2010 was very promising, as more companies decided to invest in the company, also big ones, such as Bristol-Myers.

In 2012, another affiliate was started together with the Corvinus Venture Capital Fund Management Plc (CVCFM) (Nowadays called Hiventures), called ImmunoGenes ABS LTD. The new company was majorly owned by ImmunoGenes AG. LTD. The business plan was that CVCFM gives a 5-year loan to the newly established company which in the meantime realizes the expected profit. After a year this affiliate was heading in the direction of failure. To avoid going bankrupt, severe cost constraints were introduced; employees were let go, infrastructure had to be given up, and the whole operation was moved to a smaller and cheaper laboratory. Afterwards, the company became profitable. 2014 was a strong year for ImmunoGenes. Their very first agreement was made with a Japanese R&D-based life sciences company, Kyowa Hakko Kirin Co., Ltd. A one-time starting access fee was paid for the use of the methodology, which was followed by yearly access fees. Unfortunately, there were no following contracts. In June of 2016, the Japanese ltd unexpectedly dissolved the agreement. After the dissolution of the agreement, the maintenance of the Swiss Holding company became too costly, so the decision was made to liquidate it. From November of 2016 the Swiss holding company does not exist. An agreement was made that all the liabilities of the Holding company towards CVCFM became the ImmunoGenes AG’s liability. ImmunoGenes AG ltd became again completely Hungarian.

Nowadays the two owners are Imre Kacskovics (slight majority) and Gábor Komár. ImmunoGenes AG is commercializing the methodology of the antigen creation and ImmunoGenes ABS is producing the antigens for orders. (Kacskovics, 2017)
3.2. Research questions

In my thesis I am analyzing the internationalization process of ImmunoGenes. When researching the company, I have analyzed several interesting phenomena which I think are worth studying.

First of all, the analysis of the internationalization process of a firm should start with the reasons why there was a necessity of the internationalization. When examining the motives, also the barriers should have to be looked at. Of course, ImmunoGenes had barriers that had to be overcome. Therefore, I have analyzed its internationalization motives, barriers and the firm’s strategic decision on how to tackle these barriers. It has practically outsourced the initial part of the internationalization a ValDeal. As this strategy is not that common, I have tried to analyze what was the motive behind it. Hence, my first research question was: \textit{What were the motives and barriers of ImmunoGenes’ internationalization and how did it overcome the barriers?}

Afterward, the management of ImmunoGenes decided to launch a Swiss holding company which owned 100\% of the shares of the Hungarian Ltd. Hence, I studied \textit{why it was more beneficial for the company to operate under the leadership of a Swiss company, rather than staying a purely Hungarian company.}

Then, I have analyzed the market entry mode of the company. \textit{What market entry mode did the company use?} When answering this question I have found important to also have a look at the sub questions; \textit{Why is it beneficial to keep using the same market entry mode and do not further commit?, Would it be beneficial in the future to start using other market entry modes?}

Lastly, I have analyzed the whole internationalization process in line with main internationalization models. When doing so, I have examined \textit{how important the already existing business network of the co-founders were during the internationalization process and to what extent the original and the revisited Uppsala internationalization process model holds true for the case of ImmunoGenes.} (Kacskovics, 2017) Throughout my whole thesis my research aim was to answer the main question:

\textit{How and why did ImmunoGenes internationalize?}
4. Methodology

In my thesis, my aim is to study the internationalization processes of an SME. My intention is not to draw general conclusions that hold true for most of the SMEs, but to examine how ImmunoGenes internationalized. Since I am analyzing a fairly new phenomenon, I have chosen the case study method as my research method. My research purpose is to answer the main questions; “How and why did ImmunoGenes internationalize?” To be able to answer this question, I would like to execute a wide and profound analysis of the internationalization process of the specific firm. I found that the research method that best suits my purpose is the case study.

First of all, it is preferable to use the case study research method when the researcher has little or no control at all over the actions happening in the case, which I do not have. Secondly, I would like to analyze the theories throughout a specific case and not in general.

The case studies can be categorized based on the outcome into three types; explanatory, descriptive and exploratory. The explanatory type aims to create new theories and to support or criticize existing ones. I did not intend to create new theories, but I tested to what extend the existing theories hold true for the company of the case. The descriptive type’s goal is to set an example, illustrate a specific issue. As I was not analyzing the theories in general, but a specific case, setting an example would not be representative at all. Deeper quantitative research would be needed for that case than what suited my purpose. The exploratory case study is to identify the main issues, indicators and key definitions to be researched of a unique case. I have chosen to make a case study that is both explanatory and exploratory. I have conducted interview with the cofounder of the analyzed company and afterwards analyzed whether the already existing internationalization theories are applicable for the case. (Golnhofer, 2001) My qualitative source was an interview with Imre Kacskovics DVM, PhD, DSc, the cofounder of ImmunoGenes on the 15th of September 2017. For the interview I have prepared from; Cégtár, the company’s website and articles that I have found about the company. Additionally, for my thesis, I have used books and articles, that I have met throughout my International Business studies and Materials found in the library and database of the Corvinus University of Budapest and of the Copenhagen Business School.
5. Internationalization of ImmunoGenes

First of all, in the field of biotechnology research, nothing can be truly national as most researchers attend international conferences, where they share their knowledge and cooperate with other researchers. With this being said, I would like to highlight that the internationalization of the company has started even before its launch, due to the international experience of the founders.

5.1. The motives of the internationalization of ImmunoGenes

The owners of the company have been aiming to enter the international market from the beginning because the Hungarian market is too small and they think that producing anything in their field for just the domestic market would not have been profitable at all. Consequently, according to the first perspective of the internationalization motives, this motive can be categorized as a Domestic Push, since it is an internal motive and the company found that the domestic market was not sufficient for its needs. (Kacskovics, 2017)

Based on Yin’s categorization, the Government and Policy drivers of the company’s internationalization are the following: Hungary is part of the European Union (EU), which has a single market, where the movement of people, goods, services and money is free. For the EU-member country, most of the trade barriers have been abolished (Az Európai Unió hivatalos honlapja, 2018) Hungary is also part of the Schengen-Area which provides free movement of people within its borders. (European Commission, 2018a) To sum up, Hungary is part of a market, where international trade and investment barriers have been significantly reduced in the last decades, which is a government driver for internationalization. (Czakó and Reszegei, 2010)

Most biotechnology and pharmaceutical firms are international, therefore entering the international market is crucial in this field, since all the players are there. Furthermore, the small nature of the Hungarian – Domestic – market is a market driver of internationalization as launching the company which operates only within the county’s premises would not be profitable. Another market driver is the transferability of the firm’s unique product. The product can easily be transferred, no alteration is needed to adjust to local taste, especially, since the company is working on a request-basis. Additionally,
being a patent holder there is no increased theft of intellectual property theft due to the internationalization.

In the case of ImmunoGenes cost drivers of internationalization are not significant as it is not going to take advantage of economies of scale and neither going to outsource its production to low-cost production sites.

Biotechnology is a knowledge-based field, as it is a rather narrow segment of the market, its key players are mostly operating on the international market. Therefore, all the new entrants of the segment must internationalize to be able to compete. This motive can be categorized as a Competition driver. (Johnson et.al., 2014)

5.2. Barriers of the internationalization of ImmunoGenes

The barriers of internationalization that the management of the company had to face, were primarily the fact the founders are excellent scientists, but had very little or no experience at marketing. They had a lot of international experience, but that was on the field of science and not international business experience. Therefore, even though they had a well-established international network, they had insufficient knowledge of how to seize the possibilities that they have met. On the other hand, being a newly established firm, they did not have enough capital to be able to finance their entrance to the international market. (Hollensen, 2014)

The founders recognized that these barriers had to be overcome and to be able to do so, a few months after the launch of the firm, they have sent their invention to the company called Valdeal. Its focus is developing and internationally commercializing inventions in the field of biotechnology, engineering and information technology. They collect the ideas, prototype and then analyze the market opportunity. One of their missions is to “bridge the gap between science and business”, which makes Valdeal an extremely useful channel for knowledge-based spin-off companies. (European Commission, 2018b.) ImmunoGenes’ idea was between the best 5 in the biotechnology category. This meant that they could go on a “roadshow” in the USA to demonstrate their invention. This was a fruitful venture, after which a lot of business angels (both domestic and international) decided to invest in the firm. (Kacskovics, 2017)
5.3. Holding company

In 2008, a Holding company was launched in Switzerland, called ImmunoGenes AG, which owned 100% of the shares of the already existing Hungarian LTD. This company was purely a holding company, where no operation occurred at all. According to the co-founder, this strategic decision of launching the holding company had nothing to do with taxation as it was nearly the same in Switzerland as in Hungary. According to Trading economics (2018) the corporate tax in 2008 was 19.2% in Switzerland and 20% in Hungary. Thus, as a matter of fact there was a small difference in the two countries taxation, based on which Switzerland is a slightly more desirable choice than Hungary. One of the motives of the launch of the swiss holding company was that the legal environment of Switzerland provides more reassurance than the Hungarian one. In the Transparency International Corruption Perception Index of 2008, Switzerland ranked fifth, whereas Hungary ranked 47th. On a 1-10 confidence scale Switzerland received 8.7-9.2 points, and Hungary received 4.8-5.4 points. (Transparency International, N/A.) This significant difference definitely supports ImmunoGenes’ preference of the Swiss legal environment, as it is more transparent and trustworthy in the potential stakeholders’ eyes.

Another motive was the recent Hungarian Financial crisis. There had been a trend of taking loans and mortgages in foreign currencies as the Hungarian interest rates were. This trend made the Hungarian economy extremely vulnerable to currency changes. In the global crisis, most investors re-evaluated their investments and found that the Hungarian currency was a rather risky financial asset. Consequently, they tried to sell their Hungarian investments. This led to a weakened Hungarian Forint, which caused enormous losses for all those who had foreign currency debt. The Hungarian market needed to IMF and EU rescue Package to be able to overcome the financial crisis. Needless to state that this current event made any Hungarian investments less pursuable for potential investors. (Horváth, 2009)

All in all, the main reason of the launch of the holding company was that it provided legal transparency for potential business partners and investors, the usage of Swiss currency provided protection from the Hungarian Forint’s insecurity and most importantly, a Swiss company appeared to be more trustworthy in the potential stakeholders’ eyes.

To be able to operate in Switzerland, according to the local law, a Swiss board member was needed. Thanks to the already established business network of ImmunoGenes, they
could easily find a person for the post, namely, Beatrice Tschanz-Kramel. (Kacsikovics, 2017)

5.4. OLI-Paradigm and Transaction Cost Analysis model

In the next paragraph, the specific advantages of the firm are analyzed based on the previously introduced OLI-paradigm. First of all, one of the ownership-specific advantages of ImmunoGenes is that the founders, even before the launch of the company, had international experience as they are both scientific researchers who have published several scientific papers in international journals. (Magyar Tudományos Művek Tára, 2018) Secondly, a patent was granted for the production methodology of the antibody. Therefore, the competitive advantage of the firm, the unique methodology, was protected and could be brought abroad without the need for implementation of further protection actions to avoid the eventual intellectual property theft and copying.

As the management found that Hungary could not provide sufficient location-specific advantage, a strategic decision was taken to launch the Swiss holding company. This way, the company could benefit from the following location-specific advantages of Switzerland; transparent legal environment, strong currency – providing financial security for stakeholders – and trustworthiness.

The reason why the company should execute its operation internally and not outsource it, is primarily the fact that its competitive advantage derives from the unique production methodology. Thus, to be able to ensure the quality of the antibodies, the production should not be outsourced. On the other hand, for entering international markets external help was used. As the management consisted mainly of scientists, not businessmen, it was a wise decision to take advantage of the opportunity provided by ValDeal. The roadshow in which they could take part in, provided wide visibility of the firm to potential investors and business partners as well. Without the roadshow, it would have been way more time and money consuming to convince investors. The company is very proud to have been able to convince big companies as well to invest in ImmunoGenes, such as Bristol-Myers Squibb, a global biopharmaceutical company.

When analyzing it from the TCA perspective, gaining enough visibility amongst the potential stakeholders internally would have been very costly, therefore it has been outsourced to ValDeal. To a company that already had the information and the means necessary to introduce the firm to the international market. On the other hand, finding and
then training scientists to the unique production methodology of the antibody would be highly time-consuming and consequently expensive. Therefore, the cost of keeping it internal is lower than the cost of outsourcing it would be. (Kacskovics, 2017; Hollensen, 2014; Hermannsdottir, 2008)

5.5. ImmunoGenes’ choice of market

The strategic goal of the internationalization is definitely **market seeking**, as during our interview Kacskovics has stated that they have found that the Hungarian market is way too small for the production of the antigens. Based on the interview with the co-founder, it can be established that ImmunoGenes enters foreign markets following its demand. The company works on a request-basis. The potential customers find them via their own business network, publications, and their website. Thus, the firm does not choose its market, but it is rather the other way around. Even though, the firm is not actively choosing its market, it does have a preference of market, which can be analyzed. I found that the most useful theory for this case is the **CAGE** framework. Most of ImmunoGenes’ business partners are from culturally not distant countries as it makes the communication easier. Smooth communication is very important, since in this segment, business relationships are demanding, strictly regulated, and highly communication intensive. Furthermore, ImmunoGenes provides a customized service with customized pricing strategy, which makes communication a crucial element of the company’s business model. Although **cultural** similarity makes business easier, ImmunoGenes did not exclude any potential partner only due to cultural differences. This statement is supported by the fact that they did have a promising agreement with an Asian partner. In that specific case the partner came over to Hungary and analyzed each previous contract of the company, which is an obvious sign of distrust. This made the creation of the agreement very time-consuming and parallelly costly as well. The governments’ high involvement in the biotechnological and pharmaceutical industry makes the analysis of the **administrative and political** distances of the framework necessary. For instance, ImmunoGenes does not have a patent for the USA as its highly regulated nature makes it burdensome. There is still an ongoing progress for the application for a patent for the USA. Whereas the patent was quickly granted for the EU, which has a single market. Being an EU-member country, Hungary belongs to its single market as well. When signing a new contract, ImmunoGenes prefers a to have a neutral legal environment and
to use a non-partial court. In case of a potential deal with big companies, exception is made and they may let them choose the court. Therefore, the legal environment of the potential stakeholders is not that relevant for our case. The geographical distance is not that relevant either. The size and the high value to weight ratio of the antibody makes the transportation easy and worth the cost. The economic distance is only relevant is a way, that only the markets, which have the capital to participate in a knowledge intensive business segment will place a request for the antibody. (Johnson et.al., 2014; Kacsikovics, 2017)

5.6. The firm’s international market entry mode

5.6.1. The influencing factors of the ImmunoGenes’ market entry mode decision

Before analyzing the entry mode, it is important to have a look at the main influencing factors of the strategic decision of market entry mode choice. To be able to be competitive on the international market the already existing capabilities of the firm needed to be improved. Other than the quality improvement of the product and its marketing, no major alterations were needed to enter foreign markets, as the antibody did not need to be modified based on the local market. The company receives specific requests for the creation of unique antibodies, but that is based on the ordering institution’s scientific interest or need and not on local taste. Therefore, the breadth of the competitive advantage of the firm, namely, the unique antibody creation methodology is broad enough to be competitive in the international market. As the biotechnology industry has a lot of players and the technology is developing extremely quickly, the competitive advantage of the unique antibody creation was not expected to be long-lasting. Therefore, time was essential.

Due to its small size, the antibody is easily transportable and since it has a high value, it is worth transporting also when analyzing its tradability based on its value to weight ratio. Thus, after the analysis of these main influencing factors, I proceed with the evaluation of ImmunoGenes’ international market entry. (Johnson, 2014)
5.6.2. The firm’s market entry

As the firm operates on a request-basis, it is entering the international market by exporting its products. The commercializing of the good or service always starts with a direct request receipt from the customer and then a customized quote and project plan is provided. The whole project is structured into phases. The customer has the possibility to re-evaluate the project at the end of each phase and can decide to terminate the cooperation without having to pay the price of the whole project. When agreeing on the details of the cooperation, the customer has the possibility to state that he or she would like to organize the transportation individually or can request the transportation to be executed by a specific shipping company. In all other cases, ImmunoGenes takes a good care in making sure of the safe delivery of its products. The company receives quote requests from all around the world and provides unique services and antibodies. Therefore, mass production is not a feasible option. As the antibodies are generated on-demand, they cannot be generated and shipped to another market before a request is placed. To be able to create a customized quote and project plan, direct and intensive communication is needed. Otherwise, the noises of the communication chain could cause miscommunication and as the firms operate in a scientific field, details are essential and even a small misunderstanding could cause the loss of a potential deal. Furthermore, as most of the clients are scientific research institutions or these institutions’ employees, confidentiality is crucial for the business. Thus, obviously the less participants are involved in the project, the safer the parties feel about the security of the confidential information shared with each other. For the previously mentioned reasons, entering a market with indirect export would not be a beneficial strategy, thus ImmunoGenes is using the direct export entry mode. As the requests come from all around the world and therefore geographical distance is not that relevant, the firm is not planning to change its market entry mode. The marketing strategy built by the firm is based on flexibility. A customized service or good is exported to anywhere in the world.
5.6.3. Analysis of the potential of the other market entry modes

To franchise or license, the company receiving the right would need to have qualified scientists, that have deep knowledge of the scientific area and the ability to learn the unique methodology of the antibody generation. Furthermore, a very strict contract would have to be signed as confidentiality is crucial. Because these features are all time and money consuming, it supports the firm’s decision to stick with the exporting market entry mode.

In my opinion, a joint venture with an overseas company could in the future be beneficial. Closely cooperating with another scientific firm could provide the possibility of discovering an even more efficient methodology of antibody generation or to be able to have new scientific findings. The more publications the firms’ employees have, the bigger visibility the firm itself has. Additionally, if the firm has two laboratories in different locations where the quality of the antibody generation can be guaranteed, the cost of transportation to overseas locations could be reduced. As a joint venture in this field needs a lot of time to launch and then a close cooperation has to be kept, it is crucial to find the right partner. A failed partnership could have enormous costs, therefore it has a high risk.

Establishing a wholly owned subsidiary abroad is not the aim of the company. One reason, which was already mentioned is that geographical distance is not that relevant in the case. Another reason is that the establishment and the maintenance of a scientific laboratory have extremely high costs. Furthermore, laboratories are highly regulated in most countries. Consequently, a long-lasting legal procedure anticipates a laboratory launch.

As a conclusion, ImmunoGenes’ business decision to use only the exporting market entry mode is a rational decision. For the time being, it serves the best interest of the stakeholders. Later on, in the future the launch of a joint venture might result to be a desirable choice, as it could give a wider scientific perspective to the members and it could bring more business opportunities. (Johnson, 2014)
ImmunoGenes’ internationalization process started long before the actual launch of the company, with the co-founders’ international experience. Not only did they attend several international scientific conferences and published papers in international journals, they have also worked in international collaborations. This experience allowed the firm to enter the international right after its launch. As the cofounders already had experienced working in an international environment, with people from different cultural background, there was no need to learn step by step. Hence, in line with the revisited Uppsala internationalization process model, the learning curve of the company was significantly shortened. Throughout these experiences, the co-founders have gained entrance to international scientific world. (Johansen and Vahlne, 2009)

Having met a lot of international researchers and scientists they have built up their own network. Additionally, the published papers provided a wider visibility even among scientists and institutions that they did not have the chance to encounter personally. The invention of the unique methodology on which the whole firm is based, happened during a collaboration between two scientific groups of different institutions. Thus, already from inception, the network of the two scientists have contributed to the firm. (Hermannsdottir, 2008)

From the very beginning, the founders aimed to enter the international market, they never intended to operate solely on the Hungarian, domestic market. To pursue this intention, the company has sent its business plan to ValDeal, a firm which organized a ‘roadshow’ for the top 5 business idea in the USA, where the firms had the chance to introduce their ideas to business angels. ImmunoGenes managed to convince several business angels to invest in the company, therefore already from this point it has become a player of the international market. So, the first internationalization step was made by receiving international foundation. As this happened less than a year after the launch of the company, it can be established, that ImmunoGenes is a born global company. It is also supported by the fact that no research firm can be truly national. All scientific researchers share and gain knowledge through international conferences, papers and collaborations as it is the case of the co-founders. (Melén and Nordman, 2009)

Recognizing that the founders’ expertise was in the scientific field, they have taken in international management board members, which had experience in the scientific
business and marketing. The decision of launching the Swiss holding company was the result of deep market knowledge. The management had enough knowledge of the international scientific market to know that the perception of a Swiss company as way more promising for potential stakeholders than that of a Hungarian one. Nowadays this knowledge is available for almost anyone who is interested on the Internet for basically no cost at all. This phenomenon made leapfrogging possible for the firm. To be able to legally operate in the Swiss market, a Swiss board member was necessary. Thanks to the already established business network of the management, a board member that suited all the interests of the firm was easily found.

The only aspect in which the traditional Uppsala internationalization process model holds true in the case of ImmunoGenes is that it had started its international activity with ad hoc exporting. Therefore, the company has respected the model in a way that it has started with the first step of the gradual penetration of markets.

5.8. ImmunoGenes, a born global company

Based on the previous chapter’s analysis I have found that only a small fragment of the traditional Uppsala Internationalization process model holds true for ImmunoGenes’ case. The more recent theories, the revisited Uppsala model and the network approach model were more appropriate for the case.

The company was aimed to be international from the very beginning. In the very first years it managed to convince both domestic and international business angels to invest in it. In the second year of its existence, the firm already had an international managerial board, including Swiss, German and American members. In the same years a Swiss holding company was launch which then owned 100% of the shares of the Hungarian ImmunoGenes LTD. According to the latest information found on the Hungarian database, Cégtár, the company has 4 employees, and its turnover was 6.756.000 Hungarian Forint at the end of 2016. (Nemzeti Cégtár, 2016) Calculation with the mid-market currency rate at the end of 2016, the turnover was 21.722 EUR. (Magyar Nemzeti bank, (N/A) Due to these facts, ImmunoGenes falls under the micro company category, as its staff headcount is less than 10 and its turnover is less the 2 million euro.
As ImmunoGenes is a micro company, that has internationalized from the very beginning, it is a born global company. It has started its international activity with exporting to the international market and has not yet made any further commitment. Consequently, it is a low committer born global company. (Melén and Nordman, 2009)

6. Conclusions

After having analyzed the motives and barriers of the internationalization of ImmunoGenes, I have come to the conclusion that the company had experienced a domestic push and not an international pull. The founders have recognized that the Hungarian market’s size is too small. Therefore, launching the company to operate exclusively in Hungary would not have been profitable. The other important driver of the internationalization was that most of rival companies operated in the international market. Consequently, to be able to compete with them, ImmunoGenes also had to enter the international market. Based on these findings it can be confirmed that the strategic decision to internationalize was necessary for the survival of the company.

Recognizing that the size of the company is relatively small, compared to the size of the international market, the management wisely decided to send their invention to Valdeal, a company that focuses on developing and internationally commercializing inventions in the field of biotechnology, engineering and information technology. The fact that ImmunoGenes was between the best 5 in its category already gave a reassurance that the invention can be commercialized. Furthermore, the roadshow to which they took the company provided wide visibility among possible investors and customers. A lot of business angels decided to invest in the company, which was a great start.

<table>
<thead>
<tr>
<th>Company category</th>
<th>Staff headcount</th>
<th>Turnover</th>
<th>Balance sheet total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium-sized</td>
<td>&lt; 250</td>
<td>≤ € 50 m</td>
<td>≤ € 43 m</td>
</tr>
<tr>
<td>Small</td>
<td>&lt; 50</td>
<td>≤ € 10 m</td>
<td>≤ € 10 m</td>
</tr>
<tr>
<td>Micro</td>
<td>&lt; 10</td>
<td>≤ € 2 m</td>
<td>≤ € 2 m</td>
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Source: European commission, 2018c
The founders not only thought that the Hungarian market was too small, but they also came to the conclusion that after the recent financial crisis, a company that comes from Hungary does not appear to be promising for potential international stakeholders. They have decided to launch a Swiss company. When I have researched for data about the two countries situation in 2008 I have found several analysis and rankings. When I have compared the data of the two countries I have come to the conclusion that the founders made the right decision. The Swiss currency had a stronger base and the taxation was slightly less in Switzerland than in Hungary. Most importantly, corruption was practically nonexistent in Switzerland. Hence, a Swiss company had better chances of convincing a potential stakeholder of investing in it. The founders have also recognized the need to involve professional businessmen in the firm, therefore already in the second year of its existence the company had an international managerial board, with people who had deep knowledge of the business practices.

As the company works on a request basis, it is not actively choosing the markets that it enters. It would not be beneficial for the business to differentiate between the potential customers based on the country of origin. However, the company does have a preference of dealing with clients that come from a country that has similar culture to Hungary, as it makes communication easier. As the biotechnology research field is highly regulated, and confidentiality if crucial, contract creation and agreement is extremely time consuming. Ergo, the better the communication, the shorter the period of the administrative part of the agreement and as a result the cheaper the contract creation and agreement is for the company. Hence, the preference can be supported, but as the company is a fairly young one, it accepts as many orders as possible.

The competitive advantage of ImmunoGenes is the unique methodology of antibody generation. The field of biotechnology is starting to attract more players. As a consequence, the speed of technology development and changes is elevating quickly. As a result, ImmunoGenes’ competitive advantage is not expected to be a long one. Keeping this in mind, the founders made sure that they are granted a patent and then enter the international market as soon as possible. This is why they have applied for the patent immediately when they have recognized the urgency and only afterwards notified the institutions which were legally the owners of the invention. The nature of the field of biotechnology confirms the urgency of the acts.
The firm has entered the international market with ad-hoc exporting and has not changed its market entry mode ever since. It is providing customized service and goods. One affiliate is commercializing the unique methodology of the antigen generation and the other one is producing the specific antigens for orders. Due to the customized nature of the firm’s market strategy, and to the need of deep knowledge and experience to be able to generate the antigens, neither indirect export, note franchising does not suit ImmunoGenes’ strategy. Launching a wholly owned subsidiary would be time-consuming, expensive and risky. Hence, the only market entry mode that could be a desirable choice for the firm in the future is starting a joint venture. As the previously negative variables associated with the launch of a wholly owned subsidiary would be shared with a partner, the joint venture has less risk. The important issue is to find the suitable partner who has the necessary knowledge and attitude as well. I think in case the appropriate business partner is found, the joint venture could bring a lot of new possibilities to the firm. First of all, different scientists from other institutions most likely have a different was of approaching research. The most perspective is seen, the bigger chance of a new discovery or that they find a way to further improve the current unique methodology. Furthermore, the other scientists already have their own network and already have published scientific papers. This means that more visibility would be granted to the firm as its customers find it via publications, business and scientific network. Additionally, the firm would gain access to another laboratory. If the scientists of the other institution are able to learn how the unique methodology works, then bigger amount of orders could be delivered in the same time. If the other institution is located overseas then even the transportation cost of some orders could be reduced significantly. All in all, I think that for the time being, exporting does serve the best interest of the firm, but with time it could be beneficial for the company to start a joint venture.

To sum up, even though the company had its ups and downs, - cost constraints were necessary once when the second affiliate was heading in the direction of failure and then the swiss holding company had to be shut down after the dissolution of the agreement with the Japanese institutions – ImmunoGenes internationalization decisions can be supported with the internationalization theories. Its success is confirmed by the fact that it has received and Academic Patent Excellence award in 2012. (www.gov.hu)
7. Constraints of the research, suggestions for future research possibilities

7.1. Constraints of the research

As the topic of my thesis is a new phenomenon, I found it hard to find reliable sources for the theoretical chapters. There are a lot of papers about the internationalization process of SMEs and countless papers about the traditional Uppsala internationalization process model, but there are only a very few papers that are studying the born global companies. Furthermore, as I was researching SMEs, it was hard to find up to date data about the companies. Most of the data that could be used as a source was at least 1,5 years old, which counts very outdated if we consider that the industry of the biotechnology firms, especially amongst the SMEs is an extremely quickly developing one. Additionally, as the biotechnology field is a scientific field which requires a deep knowledge it is hard to find a researcher that is expert in both biotechnology and business. Therefore, it is hard to analyze the actual business potential of an invention.

7.2. Suggestions for future research

Firstly, as I have encountered the phenomenon of launching a foreign holding company purely for the purpose of becoming more convincing in the eye of stakeholders I think it could be a very interesting topic to investing. Therefore, one of my research suggestion is analyzing the success rate of internationalization of the Hungarian SMEs compared to other European countries. Secondly, as this phenomenon is worrisome for our economy, based on the previous research suggestion, a paper that studies what possible actions could be taken to improve the perception of the Hungarian companies in the eyes of foreign investors can result to be a very useful and interesting research. Furthermore, as stated in the previous chapter, it is hard to find someone who has experience in both the field biotechnology and business. As in the field of biotechnology the network of the scientists is crucial, it is hard to replace a scientist with a business man. I think that a research about the marketing strategies of the biotechnology SMEs could be interesting. Additionally, the barriers of the strategy creation of the businessmen who do not have experience, nor network in the scientific field could be researched.
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