#### COPENHAGEN BUSINESS SCHOOL

#### **MASTER'S THESIS**

MSc in Business, Language and Culture - Diversity and Change Management



# An examination of Danish SMEs internationalization in the Chinese market

- A closer look on the performance of clean-tech SMEs

Author:

Sophie Zheng de Lichtenberg

Supervisor:

Stine Haakonsson

Pages: 78.8

Characters (incl. spaces): 179,264

May 15th, 2017



#### **ABSTRACT**

This thesis analyses the relationship between Danish clean-tech SMEs choice of entry strategy, motivation and performance in China. The analysis also covers the relationship between motivation, entry strategy and the actual performance of the Danish clean-tech SME's in the Chinese market. The analysis is based on a sample of 11 Danish clean-tech SMEs within the renewable energy and environmental protection fields and the analysis is carried out using a combined theoretical framework from Kolter (1988), Dunning (1988), Johanson & Mattsson (1988), Nummela (2002), and Khanna et al. (2005). I find that Danish clean-tech SMEs are mainly motivated to internationalize due to the large market potential in China and that all of the SMEs are adapting their entry strategies as they go along with the internationalization into China. I also find that the companies are using more than one entry mode at the same time when entering China and that direct exporting is the most popular entry mode. Additionally, I find that the SMEs who already have begun expansion activities in China are satisfied with their current performance and that SMEs within the wind industry, in general, performs better, which might be a result of the matureness of the industry compared to the other industries. Lastly, I find that the choice of entry strategy has an impact on performance, but it does not paint the full picture. However, companies who are focusing and committing themselves to the Chinese market development perform better than others. Hence the more resources they allocate, the better performance will they experience. This finding might be the answer to why Danish SMEs currently only account for 8% of the total export to China. As the larger companies have more resource to commit to the market development, they will also be more likely to succeed.

## **Abbreviations**

BI Business Idea

CEO Chief Executive Officer

Clean-tech Clean technology

COO Chief Operation Officer
CSO Chief Science Officer
DCH Danish Clean Hub
DI Danish Industry

DPS Danish Power Systems EJV Equity Joint Venture

FDI Foreign Direct Investment

GW GigaWatt

IFU Investeringsfonden For Udviklingslande

IP Intellectual property
IPO Initial Public Offering

JV Joint Venture L&S Lund & Sørensen

MNEs Multi-National Enterprises

OEM Original Equipment Manufacturer

R&D Research & Development
ROI Return of Investment
SA Strategic Alliances

SMEs Small and Medium Enterprises

U.S. United States

USCBC US-China Business Council

WFOE Wholly Owned Foreign Enterprises

## **Table of Contents**

Introduction	1
Research Questions	4
Thesis Outline	4
Literature Review	5
Important Findings From Literature Review	
Theory	13
Framework for studying changes in the internationalizing small company	13
Internationalization motivations	
Institutional voids of an emerging market	17
Market strategy	17
Critique of the theories	23
Methodology & Data	25
Research Approach	
Data	27
Background introduction	31
Danish SMEs within clean-tech	
About China and the Chinese market	33
The Analysis	39
Within Company cases	
Cross company analysis	58
Results from Study	
Discussion, further research and implications	67
Discussion	
Suggestion for Further Research	75
Conclusion	77
Four important findings	
Implications for all Danish SMEs	
Bibliography and Appendices	79
Bibliography	
Appendices	88
Appendix A	
Appendix B	
Annendiy C	90

## Introduction

With the progress of globalization, the competitions among companies are not only happening domestically, but also globally. Companies are actively participating in the global competition and international trading is becoming more and more normal, even for small and medium sized enterprises (SMEs). In the academic world, internationalization is, and has for a long time been, a popular topic. In the beginning, most of the research was based on the bigger multi-national enterprises (MNEs). However, internationalization for SMEs has in recent decades drawn increasingly more attention from the scholars. The acknowledged internationalization theory framework Uppsala model (Johanson and Vahlne, 1977), as well as other stage models are today the foundation of internationalization research. A lot of the initial research as well as the theory frameworks were mainly developed based on large-scale MNEs. However, researchers have later on also expanded the field to include a more specialized focus on SMEs, which here is defined by companies with less than 250 employees or a turnover less than DKK 250 million.

Earlier research in the field of the SMEs' internationalization performance is quite extensive, but research based solely on a sample with Danish SME is not seen very often. In Denmark, 99.36% of all companies are characterized as SMEs and SMEs account for approx. 52% of the total revenue generated by all Danish business in 2013, thus highlighting, that SMEs play a very important role in the Danish economy (CESFO Annual Report, 2015).

In research conducted by Etemad (2004) it shows that many SMEs are forced to compete with both domestic and global companies, and that their constrained resources limit them. This is certainly also true for Danish SMEs, partly because Denmark is a small and open economy (katzenstein, 1985). By being a small and open economy means that it is very important for Danish companies to be competitive in international markets. Since SMEs account for such a large part of Danish companies, it is especially important for Denmark as a nation that SMEs can successfully internationalize and compete abroad.

As of today, the bulk of Denmark's international trade is carried out by the country's largest companies and SMEs' share of the export only amounted to 18% in 2015 (Export statistics, 2015). Looking specifically on Denmark's top export markets, Danish SMEs are more active in the near markets. As showing in figure 1, SMEs' share of the total export is between 19% and 28%, except for two of the largest markets in the world: U.S. and China. For these two countries, SMEs' share of export only constitutes 9% and 8%, respectively.

Country	Total Export, million DKK	SME's share	
1 Tyskland	110.876		20%
2 Sverige	74.103		23%
3 USA	53.472		9%
4 Norge	40.871		28%
5 Storbritannien	39.236		19%
6 Nederlandene	27.208		22%
7 Kina	26.882		8%
8 Frankrig og Monaco	20.622		20%
9 Polen	18.428		24%
10 Finland	16.427		22%

Figure 1. Denmark SMEs' export markets ranking top 10 overview. Source: own preparation base on Denmark Statistic data (2015).

Apparently, two of the largest markets in the world are very difficult for SMEs to reach. Looking specifically at China, a recent research paper released from the Danish National Bank (2017, p.1) stated, "Danish exports to China are playing an ever increasing role. Accounting for just less than 6% of final demand for Danish exports, China is approaching the UK, Denmark's fourth largest export market. By comparison, China's share was less than 1.5% in 2000". Note here that the Danish National Bank is looking at both direct export as well as indirect export, while the figure above is only based on direct export.

Denmark produces high quality and conducts ground-breaking research and development (R&D). Furthermore, the Danish clean-tech industries are also in a forefront position globally. Denmark is well known for its sustainable development, and the country is aiming to have a 100% renewable energy supply by 2050¹. A goal like this is possible because so many Danish companies within the clean-tech industry are driving the development and in the process creating new products and solutions, which not only Denmark can use, but also many other markets in the world.

One of these other markets is the Chinese market. China is the world's fastest growing market for clean technologies. The industry is being heavily supported by the Chinese government, as the country faces a serious of challenges, which the clean technologies can remedy. There are already extensive collaborations going on between China and Denmark within the clean-tech sector. Danish and Chinese cities are signing off numerous bilateral cooperation agreements (Memorandum of Understanding) <sup>2</sup> But Danish SMEs yet have to benefit from this, when looking at their current export figures.

Even though Denmark is in a leading global position within clean technology, yet, most of the Danish enterprises are rather small. Actually, China is on the strategy agenda in many Danish SMEs and a number of the Danish SMEs have already sold products to China, either directly or

<sup>&</sup>lt;sup>1</sup> https://stateofgreen.com/en/profiles/state-of-green/solutions/state-of-green-the-political-framework. "Fossil free by 2050", State of Green.

<sup>&</sup>lt;sup>2</sup> http://cleancluster.dk/en/projects/china-desk/. CLEAN China Desk.

indirectly. According to Invest in Denmark, "Clean-tech has been the fastest-growing sector of Danish exports in recent years, and exports are expected to quadruple in the next four to five years".<sup>3</sup> It seems like, that the export growth within clean-tech sectors will have a significant impact on the overall Danish exports in the future.

Although the Danish SMEs are in possession of advanced technologies and knowledge within the clean-tech fields, their way into China is probably different and maybe more difficult compared to the way that larger companies are able to take. With SMEs' share of total export being below 10% for the Chinese market, while it is above 20% for most other top10 export markets, it seems that there exists a quite large potential for Danish SMEs to grow their export to China. In another word, Danish SMEs internationalization effort into the Chinese market is currently not reaching their full potential.

Some studies have looked more closely on Danish SMEs entry strategies. Among the few research done about Danish SMEs in China, Boyd & Ulrich (2014) conclude that JVs and WFOEs are the most applied entry modes in the Chinese market, while Serveis et al. (2010) find evidence of Danish SMEs' internationalization path is different from Uppsala model, and also that internationalization happens based on network instead of prioritizing markets that are geographical closer.

However, there are little research or few findings about their motivation, performance or the relationship between choice of entry strategy, motivation and performance of the Danish SMEs who are internationalizing in China.

<sup>&</sup>lt;sup>3</sup> http://www.investindk.com/Clusters/Cleantech. Invest in Denmark.

#### **Research Questions**

The purpose of this thesis is to examine why and how the Danish clean-tech SMEs internationalize in the Chinese market, and whether those motivation(s) and their entry strategies have any significant influence on the performance.

In order to be able to investigate the above questions, and in the end to both contribute to the empirical acknowledge and academic findings about the Danish SMEs in the Chinese market, I list out relevant research questions, which will serve as a guide for me throughout this thesis.

**Research Question 1:** Why do Danish clean-tech SMEs choose to internationalize in the Chinese market?

**Research Question 2:** What entry strategies do Danish clean-tech SMEs apply in the Chinese market?

**Research Question 3:** How are the Danish clean-tech SMEs performing in China?

**Research Question 4:** How do motivation and entry strategies affect Danish clean-tech SMEs' performance?

#### **Thesis Outline**

With the guidance of the above research questions, I will look into the academic findings and studies to make reasonable assumptions, which will be the foundation for my analysis.

The analysis is based on a theory framework that is a combination of five theories. I am using 11 Danish clean-tech SMEs' experience in the Chinese market as company case studies, which includes looking into their motivation to enter, the entry strategies, and also the actual performance. The company cases are collected through in-depth semi-structured interviews with CEO's or other relevant high ranking people in the companies, and I then combine it with secondary data and information.

I will also give a brief introduction to the Chinese market, and the challenges and opportunities that Danish clean-tech SMEs face. By doing so, it will give a clear understanding of Danish SMEs as exporters' position as well as the market readiness in the target country, China, to welcome the Danish SMEs.

Then, I will introduce all the interviewed companies' experiences and also do cross-company analysis to look specifically on facts that can confirm or reject my assumptions and in the end answer my research questions. In the end of my thesis, I will discuss the facts together with the contributions that my work can bring both academically and empirically.

## **Literature Review**

## **Important Findings From Literature Review**

#### **SMEs' Internationalization Motivations**

Hollensen (1998) claims that normally there are certain people either from inside or outside of the company who begin the internationalization process. Companies who own unique and superior products, unique resources (for instance, expertise within certain areas, technologies, products, and so forth) and strong commitment within its business will often be driven into international markets (Hollensen 1998; Root, 1994).

Furthermore, besides the internal push, Chen and Messner (2009) stress that the growing opportunities from the international markets together with the limited market and resources within the domestic market also drive SMEs to invest in the international markets. Burca, Fletcher and Brown (2004) make similar statement in their study, where they explain that a declining domestic market or bigger demands from other foreign markets will drive companies to internationalization. Hollensen (1998) states that if the international market grows, a demand for certain products could be created, and then this will pull companies to the international markets.

Study from Karagozoglu and Lindell (1998) indicate that the top two motives for internationalization are opportunities in foreign markets and inquiries from foreign buyers, and companies were pushed by the high R&D cost pressure which was not supported by insufficient domestic sells.

These studies suggest that the opportunities in foreign markets are a big driver for companies to start internationalization. This leads to my first assumption:

**Assumption 1 (A):** The majority of Danish SMEs within the clean-tech sector are actively seeking for market in China.

SMEs are facing internal challenges from lack of capital, solid market information, management resources and organizational competencies. Externally the companies are vulnerable to environmental changes and this constraint SMEs as well (Buckley, 1989)

Many scholars have been stating that SMEs are confronted with limited resources and capabilities (Oviatt & McDougall, 1994; Bell, 1995; Zacharakis, 1997; Beamish, 1999; Lu and Beamish, 2001). All those limitations and shortages are creating more challenges and obstacles

for SMEs' development. Even though there are limitations of being a SME, Lee et al. (2012) argue that R&D intensity may help counter newness and smallness, and internationalization may provide opportunities. Similarly, Lu & Beamish (2001) believe that the internationalization process is a useful option for SMEs to overcome their weaknesses from being small and possessing limited resources, experiences and credibility.

Hamilton and Fox (1998) conclude that most small companies have problems to raise the funding they wish for from banks and other financial institutions to support the business. They also find out that small firms prefer internal funding resources with the cash and retained earnings, so the owner's independence will not be threatened. Limited resources and the fact of being small during its business development process restrict SMEs.

Albaum, Strandskov & Duerr (2002, p.84) argue that initial driving force for a company's internationalization is "to utilize and develop its resources in such a way that it's (company's) short-term and/or long-term economic objectives are served". So, this could drive SMEs to internationalize in a foreign market to search for options to enhance its capability and to have sustainable business. This leads to assumption two:

**Assumption 2 (A):** The majority of Danish SMEs within the clean-tech sector are actively seeking for resources in China.

According to Albaum, Strandskov & Duerr (2002), beside primary motivations such as market seeking, there can be other specific reasons that push companies to internationalize in the foreign markets, which is relevant to the third research question. Ellis & Pecotich (2001) draw a conclusion based on research done on Australian SMEs that decision makers' existing social network plays an important role during the exports activities. Additionally, a finding from Hendry and Brown (2000) shows that technology-based companies' national and international relationships are stronger than local ones.

Freeman et al. (2006) identify several variables that can increase the possibility of internationalization of SMEs. Among those variables, they believe that different forms of relationships and alliances also have an impact on SMEs. Francis and Collins-Dodd (2000) believe that networking for SMEs' internationalization is vital.

Furthermore, SMEs can mitigate those weaknesses by different options during internationalization. Relying on network relationships and already established channels is one option, where SMEs can use others' access to local market knowledge, obtain initial credibility,

lower cost and risk, and so on (Sharma & Johanson, 1987; Johanson & Mattson, 1993; Johanson & Vahlne, 1990). Networks and relationships play an important role for SMEs, therefore, it leads to the assumption three:

**Assumption 3 (A):** The majority of Danish SMEs within the clean-tech sector are expanding into China to follow others within its network.

#### **SMEs market entry strategies**

As stressed by Wild et al. (2010, p.10): "an entry mode is an institutional arrangement by which a company gets its product, technologies, human skills, or other resource into a market." Root (1994) argues that entry strategies will decide company's objective, goals resource, policies, and while it will also support companies to reach sustainable growth in the target foreign market.

There are internationalization strategy theories and patterns, which are generally accepted. The evolutionary pattern of internationalization (Johanson and Weidersheim- Paul, 1975; Johanson and Vahlne, 1977; Juul and Walters, 1987; Welch and Luostarienen, 1988), the gradual processes change from low-resource commitment mode (e.g., export) to a high-resource commitment mode (e.g., JV, WFOE) is quite accepted. The stage model (PavBilkey and Tesar, 1977; Cavusgil, 1984; Johanson and Vahlne, 1977, 1990, 1993; Johanson and Wiedersheim-Paul, 1975) indicates that SMEs' internationalization process is a systematic and take place in a rather sequential manner. Besides the mode of entry, which will change from a low to a high resource commitment, the stage model also suggests that a company's internationalization target market will start from neighbouring countries or the markets where the difference in every matter is minor, and then gradually expand to countries further away.

Pan and Tse (2000) present a hierarchical model for SMEs internationalization, which divides entry modes into multi-level hierarchy. The entry modes are divided into equity and non-equity at the first level of the hierarchy. Non-equity modes can be Export or Contractual Agreements (the second level). Export's options are direct export or indirect export (the third level).

Yet, evolutionary pattern and the hierarchical model of internationalization do not capture the complexity of SMEs' internationalization sectors (Bell, 1995; Calof and Beamish, 1995; Bell and Young, 1998; Keeble et al., 1998; McNaughton, 2003). However, from the internationalization practices, a revolutionary pattern of internationalization, it is also true that many companies will choose a high-commitment mode from the beginning of the foreign market entry (Young, Huang, and McDermott, 1996).

Similarly, Schulz et al. (2009) explain that SMEs' internationalization modes are not path-dependent, or incremental. As commented by Paunovic and Prebezac (2010), there is no universal model that might be applied to any special company, and the degree of uncertainty and unpredictability of the current and future market developments, no such model can be expected or applied either. Kotler (1988, p.392) believes that, "even though a company might have preferences, it needs to optimally adapt to each situation. Most sophisticated multinationals manage several different entry modes simultaneously." Ramón-Jerónimo, Kamakura & Gravel (2011, p.237) argue the same as they say "the fact that one SME may use multiple modes of entry at the same time is a reflection of the fact that most companies operate in multiple markets with multiple products."

In a study carried out by Serveis et al. (2000), they examine the internationalization behaviour of Danish industrial small and medium sized companies during the first three years of operation, including both selling and sourcing activities. Through their use of an extensive data set, they are able to provide both a historical account and a detailed analysis of the internationalization process of Danish SMEs. The authors also explore the difference in internationalization across sectors and region, as well as investigating the evolutionary changes in the internationalization process by Danish SMEs prior to 1982 and up to 2001. In summary of existing empirical evidence suggest that the classical Uppsala model with its gradual development from the home market to new geographically close markets does not explain the internationalization behaviour of the majority of the Danish industrial companies. Instead, evidence suggests that companies develop along networks to countries and customers with which they are familiar, regardless of geographic proximity.

As such there is no path-dependency of SMEs internationalization strategies, but scholars have found some preference of entry modes that are popular for SMEs. Hill, Hwang and Kim (1990) argue that the choice of entry mode depends on different countries, and it cannot be considered isolated.

A study from Boyd and Ulrich (2014), looks at 177 Danish exporting SMEs to see their choice of entry modes. From their survey, it shows that direct sale, agent, JV/SA and subsidiary are all popular for Danish family owned SMEs, when they expand in China. They conclude that Danish family companies choose high control entry modes when entering China. The major reason can be China is a low risk country and Denmark has a long commercial relations history with China. Towards foreign investment, the Chinese market has highly regulated political system.

Boyd and Ulrich's (2014) finding is based on the Danish SMEs entry strategies. When looking specifically on the Chinese market, Luo (2001) suggests that majority of companies prefer JV or

WFOE when they enter the country. Based on a study from Deng (2001), equity joint ventures (EJVs) and wholly foreign-owned enterprises (WFOEs) are the two most popular entry modes in China. In the late 1990s, WFOEs replaced EJVs as the most popular means of entering China. Davies (2013) also writes that, WFOEs became the dominant for of inward FDI in China.

Lindqvist (1997) argues that management team's experience and network can also affect the speed of internationalization progress. Halle'n (1992) states that personal or business networks play an important role during the communication, and can also bring people to a common understanding stage. The good use of networks can speed up the internationalization process and also enhance synergies with other companies within the value chain (Wilson and Mummalaneni, 1990; Dana et al., 1999; Jones, 1999). This could also explain why JV is a popular entry mode choice during internationalization.

A company's entry mode choice depends not only on the characteristics of a company and its (s) products but also on a foreign market's characteristics (Khanna et al., 2005). Goodnow (1985) and Root (1987) count company and product characteristics as internal factors and foreign market's characteristics as external factors. According to Hollensen (1998), the internal factors that could have impact on company's foreign market entry mode are company size, international experience, and product complexity and product differentiation advantage. Merrilees et al. (1998) and Mockaitis et al. (2005) claim that companies' internationalization strategies are not always planned. Instead, it is highly influenced by different matters. For instance, opportunities come forward, events, people, and even "serendipity".

Agndal and Chetty (2007) exam 116 strategy changes in 20 New Zealand and Swedish internationalizing SMEs. They find that existing relationships play an important role in market strategy changes and mode strategy changes. They conclude that business relationships influent more the internationalization strategies than social relationships. Furthermore, most entry mode changes are reactive, and also direct relationships are more influential than indirect third party relationships.

Scholars have different opinions about SMEs' internationalization entry strategies. There are the stage and sequential entry strategies, as well as revolutionary patterns, where it is not sequential. Furthermore, studies show that JV and WFOE are the popular entry modes being applied both in the Chinese market and also in general during foreign market internationalization.

Therefore, it leads to the assumption four, five and six:

Assumption 4 (A): The majority of Danish SMEs within the clean-tech sector are only using one market entry mode when they enter China.

Assumption 5 (A): The majority of Danish SMEs within the clean-tech sector are adapting their market entry strategy in the Chinese market.

Assumption 6 (A): The majority of Danish SMEs within the clean-tech sector are

optimizing their products and internal resources during the market  $% \left( 1\right) =\left( 1\right) \left( 1\right)$ 

entry.

#### SMEs internationalization performance in the emerging markets

SMEs internationalization is different from bigger companies. SMEs are confronted by limited resources and capabilities. Their performances in foreign markets weigh more on the whole company. Scholars have been doing different case studies and data analysis to investigate the performance of SMEs in foreign markets, while also looking at factors that can effect their performance.

Luo (2001) makes another analysis of 168 MNEs in China, and the findings suggests that local responsiveness are heightened by environmental complexity and business culture peculiarity. Structural factors such as competition intensity, demand heterogeneity, and component localization elevate local responsiveness. Also, local responsiveness is affected by the subsidiary's local market orientation and the strength of its established network with the business community and governmental agencies. Luo (2001) concludes that environmental and industrial factors and responsiveness for companies have strong relationship.

In a later study by Luo (2003) based on 196 Multi National Enterprise's (MNE) subsidiaries in China, it is found that parent-subsidiary links can reduce external dependence, mitigate foreign market threats, and also enhance local responsiveness. Luo (2003) identifies four dimensions (resource commitment, information flow, local responsiveness and control flexibility) to parent-subsidiary links. The analysis shows that a parent company's control flexibility, resource commitment and local responsiveness exert strong and positive influences on subsidiary performance. These dimensions will be weakening by high regulatory interference; however, will be stronger with more industrial opportunity.

Lu and Beamish (2001) use a sample of 164 Japanese SMEs and find that companies are challenged by liability of foreignness. When companies first begin FDI activity, profitability declines, but greater levels of FDI are associated with higher performance. Lower levels of

exports and high level of FDI is more profitable than high exporting and high FDI. Furthermore, Lu and Beamish (2001) find that alliances with partners who have local knowledge will be an effective strategy to overcome the liabilities that SMEs face in terms of resources and capabilities in the internationalization process.

Performance in foreign markets is influenced by different factors, the link between parent and subsidiary, the local environment and industrial factors, and also entry strategies. With all the different impact, this leads to the assumption seven:

**Assumption 7 (A):** The Danish SMEs within clean-tech sector are performing well in the

Chinese market.

## **Theory**

## Framework for studying changes in the internationalizing small company

In this part, I will present the theories that will be used as a foundation for my analysis. I will also discuss potential differences and biases of the theory, and what affect this might have on my later findings.

Internationalization is an evolutionary process while a company adapts to the international settings (Calof and Beamish, 1995). During the internationalization, changes on the company level will be reflected both internally and externally. A new foreign market expansion requires time, capital and personnel investment, which mainly happens internally within an organization. To expand in a new market, the company needs to find the right operation mode as well as having the right products that fits in to the external context.

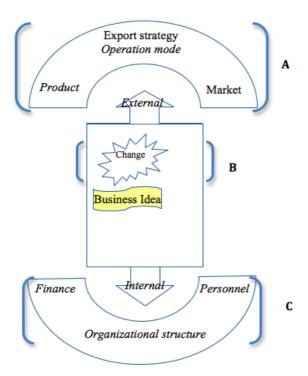


Figure 2. Framework for studying changes in the internationalizing small companies. Source: Nummela (2002).

Nummela's (2002) framework can fulfil the function to study those internal and external changes, which can further help me to study changes motivation (figure 2, section B), entry strategies (figure 2, section A), and the performance (figure 2, section C). The framework was developed by Niina Nummela in 2002 and a year later replicated and refined by Niina Nummela, Sharon Loane and Jim Bell. See figure 2.

According to Nummela et al. (2003, p. 9), "changes in a company [...] are strongly intertwined with the core of the business" and that "a firm's international operations are based on its business idea". The framework assumes that on a company level, the change related to internationalisation is reflected both internally and externally.

Business Idea (section B in figure 2) is the core of the framework, and it is also the driver and core of one company. Van der Heijden (2001, p.18) explores the basic concepts of a business idea (BI) and conclude in one research paper that, "the Business Idea provides a method to consider the future viability of a business proposition in all basic aspects that make for longer-term success". A Business Idea will ensure the company with sustainable growth or development, and also the BI should adapt to the reality and the dynamic needs of the market. A BI is a method for a company to make a profit and thus sustain itself.

With the BI as the guidance, companies will find different forms to make a profit and to sustain themselves. Expanding into a new market is one. When a company is motivated to internationalize in a foreign market, changes will happen to the company. Internally (as section A in figure 2), it will affect company's finance, organisational structure and personnel; and externally, company export strategy will change, which will reflect on products, markets, and operations. Externally (as section C in figure 2), "the change in the company's export strategy as internationalisation proceeds. In the course of time, a small company has to decide whether to adapt the strategy and its key elements: which products/services it will offer, how and to which markets. These decisions are naturally affected by environmental factors, and they may vary according to the market. A small company may have to reassess the company's financial arrangements, reconsider its organisational structure or diversify its personnel in order to acquire the skills and resources needed for internationalisation." (Nummela et al., 2003, p.4-5)

Entering into a new market requires investment, which itself is a challenge for a small and medium-sized company. Internally, SME's finance status and financing channels are important foundation for a company's internationalization activities. Whether this company has the capability to do so. However, to a smaller company, funding is a challenge. They might not be qualified to raise fund; or in order to keep the ownership and dependence of the company, smaller-sized company do not prefer to raise fund externally (Howorth, 2001; Hamilton & Fox, 1998; LeCornu et al., 1996; Barton & Matthews, 1989; Lumpkin & Dess, 1996).

Organizational structure changes are another reflection to internationalization. In order to better support its foreign market expansion, organization re-structure or expansion is necessary: a new sales office or production base in a new market, personnel resources re-

allocation and new employment, or even training to current personnel. Again, all those changes require that the company's financial resources be in place.

The products/services that will be offered in the new market need to be considered and well planned to target the customers in a foreign market, and different institutional governance should not be ignored. The operation mode is market entry strategy, whether the company choose to change the local contexts, or stay away, or adapt strategies (Khanna et al., 2005) to the local market, by means of Joint Venture (JV), direct exporting - Wholly Owned Foreign Enterprises (WFOE), or indirect exporting, or licensing, or direct investment (Kotler, 1988).

Furthermore, measuring a company's financial status via turnover or profit, or export ratio is a mean to see the performance of the company in the international market.

In the framework, developing a company's external relationships vertically or horizontally can possibly assist the business idea's achievement. Vertical co-operation meaning some activities may be assigned to reliable partners to improve efficiency, however core competences will still be well kept within the organization, such as distributor agreement. Horizontal co-operation means to create partnerships and alliances with others on the same level of the value chain to acquire the resources that are needed for the new market expansion, for instance a JV setup. Both vertical and horizontal co-operation are created based on sharing the network, market knowledge and even knowhow knowledge.

Also, the business idea can be explored in different markets. Companies have different reasons to start its internationalization process in the Chinese market. However, once the journey starts, the change will be brought to the organization both internally and externally in different level. By looking at the change of the organization with Nummela's (2002) framework, it serves the purpose of looking into the operation mode (entry strategy), and the performance from financial perspective. Additionally, it reflects on the resource commitment of a company.

#### Internationalization motivations

BI will always be the core of a company. However, for the company to support its BI, internationalization might be an option to exploit. Dunning (1988, p.164-165) has summarized other scholars' identifications of four main types of foreign-based MNE activity:

- 1) Market seeking, or demand oriented; in order to get more share in a specific market;
- 2) Resource seeking, or supply oriented; aiming for resources, such as natural resources, cheaper labour;
- 3) Rationalized or efficiency seeking; with hope to promote a more efficient labour division or specialization of an existing portfolio of foreign and domestic assets;

4) Strategic asset seeking, aiming to protect Ownership advantages of investing companies and reduce competitors.

Johanson and Mattsson (1988) consider internationalization as a help for a company to maintain the current relationships and create bigger networks with counterparts in other countries. Business networks of the relationships a company has are with its customers, distributors, suppliers, competitors and government and other actors in a business network. A company follows its customers into a new market in order to keep the supplier-customer relationship, or a company's distributor brings its products and services into a new country.

Harris and Wheeler (2005), Kingsley & Malecki (2004) as well as Lavie (2006) all, in different ways, shows in their research that inter-personal relationships, informal networks and sharing resources through alliances and networks are the motive for internationalization.

For my further analysis, I combined the essence from Dunning (1988) and Johansen & Mattsson (1988), as shown in figure 3, and will use this framework to look into Danish SMEs' internationalization motivation.

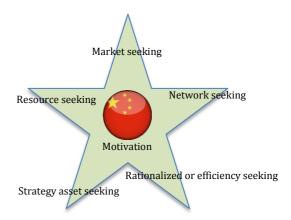


Figure 3. MNE activity motivation paradigm. Source: sorted from Dunning (1988) and Johansen & Mattsson (1988).

## Institutional voids of an emerging market

An internationalization strategy into an emerging market like China needs to be suitable both for the foreign company and for the target market itself. Companies cannot use the same exporting strategies in every market. In order to gain success, companies need to tailor their strategies to each market. Knowing the target market is the pre-condition to do so. Harvard Business School Professors Tarun Khanna and Krishna Palepu (1997) coined a term "institutional voids" to explain the institutional contexts in target countries, a country's product, capital, and labor markets; its regulatory system; and its mechanisms for enforcing contracts. Khanna et al. (2005) provide a framework to identify the institutional voids in emerging markets. Looking into the country's institutional voids from five different segments allows a company to be aware of and have understanding of the target market. As suggested by Khanna et al. (2005), the five different segments are:

- 1) Political and social systems: the country's political and social systems' impact on its product, labour and capital markets; and also the bureaucrats and politicians' rules. Question like "how is power distributed among the central, state, and city governments?" can be asked.
- 2) Openness: a signal to show a country attitude towards global intermediaries. Company can ask: "what restrictions does the government place on foreign investment?" to find out.
- 3) Product markets: transparency of the market and market information. Question like "can you obtain reliable data on consumer preferences?" can be asked.
- 4) Labour markets: the level of local talents. Company may raise question like, "do people do business in English?" to learn more.
- 5) Capital markets: transparency of companies' credit and investment funding possibilities. Questions like: "how reliable is corporate performance information?" can be raised.

## Market strategy

With the knowledge of the target market's institutional voids and the understanding of the company's own capability and resource level, SMEs are able to better tailor their strategies accordingly. Companies have different strategies that they can apply such as adapt their internationalization strategy in terms of which product or service they will export or which operation mode/entry mode the company chooses. When choosing a new strategy or just use the existing one, the company will be affected internally, in terms of financing, organizational

structure and human resource. Khanna et al. (2005) suggest three strategy choices, which separately is explained below (see figure 4):

#### Adapt your strategies

When companies choose to tailor entry strategies in regards to its resource commitment level and the actual market voids, the company have different entry modes to choose from. Kotler (1988) illustrates five market entry modes, as shown in figure 4, (1) indirect exporting, (2) direct exporting, (3) licensing, (4) joint ventures and (5) direct investments.

#### **Indirect exporting**

Indirect exporting is a way for a company to export products through independent middlemen.

This mode requires "the least change in the exporting company's product lines, organization, investments or mission." (Kotler, 1988, p.390) There are four types of

middlemen: (1) domestic-based

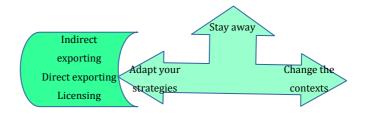


Figure 4. SMEs adapt strategies in emerging markets. Source: sorted from Kotler (1988) and Khanna et al. (2005).

export merchants, (2) domestic-based export agents, (3) cooperative organizations and (4) export-management companies.

As a small-sized company with limited resources and located far away from the target market, it is challenging to obtain the right contacts to create exporting chances to China. In this matter, indirect export has its advantages. The needed investment is relatively small, as the company does not have to develop an export department, an overseas sales force or a set of foreign contacts (Kolter, 1988). Basically it is less capital-intensive.

Secondly, as the "international-marketing middlemen bring know-how and services to the relationship, the seller will normally make fewer mistakes" (Kolter, 1988, p.391) and fewer mistakes mean less risk. The use of middlemen's sales channels, network and customer base can offer a less stress start to a new export venture. The exporter only needs to produce and deliver the products based on orders received from the independent middleman.

SMEs are able to build a market share much faster in the target country via the middlemen's sales channels, and exporter can use middlemen's resources indirectly to explore the market potential and customer requirements of products. By knowing the market potential, exporter

can decide whether the return of investment will be high enough to start investing more capital, human and time resources.

One of its disadvantages is that it offers less control for the exporter in the target country and that the exporters in most cases do not have a direct dialogue with the end-customer. Indirect exporting also results in higher transportation costs and longer lead times, as the product will be produced far away from the target country. The middlemen might become very familiar with the product to a degree; later on at some point the middleman is able to replicate it and thus create a direct competing product.

Indirect exporting is actually a normal entry mode for Danish companies exporting to China. Steen Bocian (2016) has a very important finding that shows that in terms of imports from Denmark, China is actually as big as the UK. 25% of the total exporting value towards China is indirect exporting. According to Denmark's National Bank, those 25% goes via a third country, meaning that Denmark also exports to China via the third country, instead of exporting directly to China. Kotler's definition of indirect exporting is that exports goes through an independent middleman. This middleman can be located in a third country, but can also be located in China or even in Denmark. So we do not know how much of the export to China that goes via a Chinalocated independent middlemen, but we can say that indirect exporting is one exporting mode which Danish companies are applying.

#### Licensing

Licensing is a way that "the licensor enters an agreement with a licensee in the foreign market, offering the right to use a manufacturing process, trademark, patent, trade secret, or other item of value for a fee or royalty." (Kotler, 1988, p.391)

One advantage of licensing is that it does not require capital investments or any significant human resources, which is attractive for many SMEs that lack these financial and human resources. It gives opportunities to licensor to get a faster market share of its products, and brand the name in the new market without its own efforts.

Some of the disadvantages of this entry mode are the lack of control with its final product, and furthermore, if the licensee is very successful, the SME are losing out on profits.

Another disadvantage is the risk of being copied. Licensing means that the licensor has to share manufacturing process, trademark, patent, and even know-how, which is a clear threat. The intellectual property (IP) rights are critical for a high technology company to stay competitive, especially SME's, who are so dependent on their IP rights. (Hill and Kim, 1988)

#### **Direct exporting**

Direct exporting means that companies handle the exports by themselves. There are four ways; "(1) domestic-based export department or division, (2) traveling export sales representatives, (3) foreign-based distributors or agents, and (4) overseas sales branch or subsidiary (WFOE)." (Kotler, 1988, p.391)

The advantage of the applying Domestic-based export department is that the existing employees know their product and technologies very well, thus do not need additional training, and the internal communication can continue smoothly.

A disadvantage on the other hand is that a domestic-based department is far away from the target market and the end customers, why they might react slower upon customers' requirements. Furthermore, the Danish SME might not have the language or cultural competencies within its current sales team, why the sales team needs to rely on translation assistance and cultural guidance from outside people.

Travelling export sales representatives provides more flexibility to exporters on top of a domestic-based department. The sales team has the opportunity to do field study, to meet and talk to customers and to experience the local culture and language. This is indeed strength. However, it is a costlier to travel back and forth to China and the sales representatives may need language training. Additionally, as the employees have to travel a long distance, the employee will waste valuable time, which the employee could have used on more productive things than travel.

Advantage within this mode is that the Danish SME can get closer to the end user and gather new and valuable customer feedback, which was difficult to get if not being present. Sales opportunities will also come naturally. Probably there is no enough resource to send more than one sales at one time for SMEs, hence it is different to control the sales activities in the target country. This can bring threats.

Foreign-based distributors or agents can be used to sell the goods in the foreign market on behalf of the company. They may be given exclusive rights to represent the manufacturer in the specific foreign country or only general rights." (Kotler, 1988, p. 391) By having distributors or agents, exporters can use external resources, and open the new market with existing channels, and can obtain a market share in fast way. However, the export will have to share its profit with distributors or agents, and it may face the risk of losing bargain power after there is a stable market share.

A disadvantage of this mode is distributors or agents may steal away the trademark in China. Also, if the distributor or agent cannot perform as expected and promised, it will slow down the progress of the market entry for exporter SMEs.

Advantage of a WFOE is that the company can save cost due to of cheaper labour and transportation cost savings etc. The company might also develop a deeper relationship with government, customers, local suppliers and distributors, which enables it to adapt its products better to the local marketing environment. It can decrease customers' risk and trouble of handling international trades, and shorten the delivery time; at the same time, it saves company from risks of exchange ratio changes (Kotler, 1988). Furthermore, foreign company can gain a better image in the target country as it supports the local economy by creating jobs, and therefore get more market share. (Deng, 2001)

The main disadvantage is that the company needs to carry out a larger investment, which leaves the company to larger risks such as blocked or devalued currencies, worsening markets, or expropriation. It is also costlier to shut down operations (Kotler, 1988). Moreover, this setup requires much more paper work in China to be completed and it takes much longer time to get started than other entry modes. Company may face threat of being betrayed by local employees. There is still dissemination risk that a key employee with access to the know-how knowledge might leave the company, and then join another competitor company. (Hill, Hwang and Kim, 1990) Even though the Danish company remain the owner of the WFOE, it might become paralyzed if the local managers block the operations of the WFOE. The future local employees can be either threat or opportunity.

#### Joint Venture (JV)

Joint Venture (JV) is that "foreign investors join with local investors to create a local business in which they share joint ownership and control." (Kotler, 1988, p. 392)

One of the advantages of having a JV is that foreign investors can share financial, physical, and/or managerial resources with local investors. Another advantage is that foreign investors are sharing the risk with local investors, who almost always will lower the overall risk of the project, as they know the local laws and regulations, the market, and has an established network. Furthermore, it can lead exporter to a bigger and wider market, and open the doors with local partner's network that exporters can never open, then the exporter can build up its own network in China within the relevant fields.

Disadvantages of JV are risks of having disagreement between foreign and local investors regarding strategy, business development decisions, pricing, knowhow sharing, profit sharing and so forth. The decision-making can be the biggest part of disagreement, which is confirmed

by Deng (2001). Local investors are hoping to get advanced technology, capital, management expertise, and short-term success, while foreign investors are hoping to get access to the Chinese market with a potential for long-term growth. (Deng, 2001)

"Chinese partners often do not live up to their promises to line up customers or financing. In some JVs, they oversell themselves, resulting in rancor on both sides." (Deng, 2001, p.65) There are numbers of cases showing the disappointing performance of JVs.

Another disadvantage of a JV is to lose technology and know-how to Chinese partners and thus losing long-term competitive advantages. (Deng, 2001)

#### **Direct Investment**

Direct investment is defined as "investment in foreign-based assembly or manufacturing facilities." (Kotler, 1988, p. 392) Argued by Kotler (1988), there are four advantages of doing direct investment in the foreign market. Firstly, secure cost economies by involving in cheaper labour or raw materials, freight savings, and so on. Secondly, better image from creating new employment. Thirdly, more opportunities to build profound relationship with local stakeholders, such as government, customers, and suppliers. Fourthly, higher control over the investment by being present. However, by doing direct investment, it will put foreign company's investment into a highly risk position. For instance, uncertain currency rate, uncertain market. Additionally, it will be expensive and troublesome to close down the facilities if the company decides to withdraw the investment from the target market. For example, the company might be required to pay severance to employees when closing down.

#### **Comparison**

According to Kotler (1988, p.392) "even though a company might have preferences, it needs to optimally adapt it to each situation. Most sophisticated multinationals manage several different entry modes simultaneously." Ramón-Jerónimo, Kamakura & Gravel (2011) argue the same. All the above five entry modes have advantages and disadvantages and each of the entry modes can bring different levels of gains and losses to companies. Different entry modes will also result in a different impact to a company internally, see appendix A. Indirect exporting and licensing require the least capital injection, however, the return will also be the lowest as well. Furthermore, there will be no changes to organisational structure, human resources and product localization. Direct exporting will require extra investment in terms of domestic salesmen and travelling cost and a company may need to hire new employees or relocate current employees to cover the new market sales job, and as such this will bring changes to the current personnel and organisational structure. As it will be direct exporting, the production localization will be minimized. Yet, JV and WFOE are requiring capital injection from a small

company, and by having a partner to set up a JV, financial risk will be shared with the partner. At another hand, with the WFOE, the company needs to bear all the financial risk alone, or it need to raise funding via external resources. Both JV and WFOE will bring big changes to the company's organisational structure and personnel. Product wise, there is also a bigger chance that a company will decide to do more localization to adapt its product and service to the local market.

#### Change the contexts

According to Khanna et al., (2005, p. 16), "the products or services these companies offer can force dramatic changes in local markets". Companies can, for example, participate in formulating industry standards; thus can improve the competiveness of the company's products in the market. Companies can also change the contexts in the market voids as well. Another example is when foreign companies do business in China, they might be restricted from the domestic capital markets. But because local banks or borrowers cannot lend money out, while the foreign companies still need funding, some other foreign financial institutions might set up business in the country to service the foreign companies and in this way will the local context have been altered. The talent market might also be affected, as when more foreign investment comes into the target market, there will be more employment opportunities and local talents will receive more, and perhaps better training from the foreign employers and as a result the quality of the entire talents pool becomes better.

#### Stay away

Going into a new market requires investment of capital, time and personnel, and the risk of entering a new market is large. If a company finds out that it is not practical or economical to enter a new market, then it is better for the company to stay away. Staying away from a market is not necessarily meaning that a company will never enter that market again, it could also be that the company chooses to wait and observe and enter the market at a later point in time.

## **Critique of the theories**

Nummela's (2002) framework provides a tool to look into the changes happened during the internationalization process of SMEs. The framework is very comprehensive because it can help me look into the internal and external changes as a result of the market focus change. However, it is not sufficient enough for me to see the relationship between the market focus change motivation, the operational mode and performance. Therefore, I decided to combine the essence from five resources to base the analysis on. Dunning (1988) and Johanson & Mattsson (1988) provide a comprehensive understanding for me to look into the motivation of SMEs'

internationalization. When the entry decision is made within a company, how does the company tackle the target market in terms of planning and approach. Before making any plan, it is important for the companies to know about the target country and the institutional voids theory from Khanna et al. (2005) can serve this purpose. The market strategies to fit in the emerging markets from Khanna et al. (2005) together with entry modes from Kolter (1988) can provide a clear strategy options for companies. With the framework from Nummela (2002), it can help me to look into companies' changes during the internationalization and to evaluate the performance. By combining all the above-mentioned theories, I believe that they will support sufficiently to the analysis and to see the interconnection among the export strategy, change motivation, and the performance. As shown in figure 5.

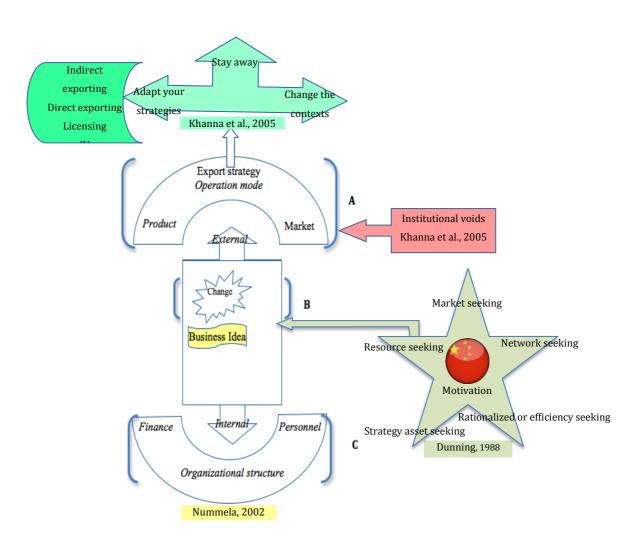


Figure 5. Theoretical framework. Source: sorted and combined from Dunning (1988), Johansen & Mattsson (1988), Kolter (1988), Nummela (2002), and Khanna et al. (2005).

## **Methodology & Data**

## **Research Approach**

The scientifically foundation of this thesis has its roots in the pure social constructionism thinking, which "focuses on the ways that people make sense of the world especially through sharing their experiences with others via the medium of language" (Easterby-Smith et al., 2012, p. 23). Thus the reality is determined by people and not as much by quantitative data. In a social constructionism setting, it is essential to "appreciate the different constructions and meanings that people place upon their experience. [...] Rather than search for external causes and fundamental laws to explain behaviour." (Easterby-Smith et al., 2012, p. 23-24)

Guba (1990) describes the nature of different paradigms. He explains that the constructivists choose to take a subjectivist position to unlock the constructions held by individuals. In order to reach the individuals minds, to identify existing constructions and then to bring those into consensus, constructivists proceed different ways which have two aspects. They are hermeneutics and dialectics. "The hermeneutics aspect consists in depicting individual constructions as accurately as possible, while the dialectic aspect consists of comparing and contrasting these existing individual (including the inquirer's) constructions so that each respondent must confront the constructions of others and come to terms with them." (Guba, 1990, p.26)

To relate the framework to my thesis, I, as author, am fully aware that the findings I present are the reconstructions of the minds of constructors and generations of those constructions on which there is substantial consensus (Guba, 1990). Furthermore, as the reality is a construction of different people, I as an author have gathered data and information from different perspectives and sources in order to triangulate (Easterby-Smith et al., 2012).

In line with the above-described framework, I am applying a deductive approach. Through this approach, I develop and test assumptions derived from theory in order to answer my research questions.

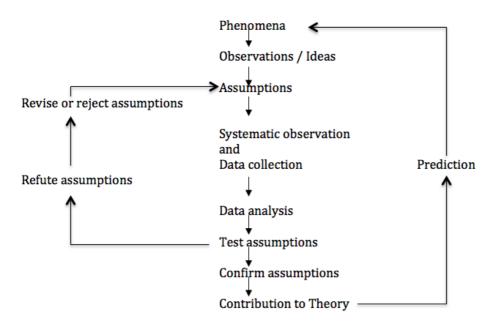


Figure 6. The assumption deductive method. Source: sorted from McNeil and Townley (1986).

The approach is illustrated in figure 6. I begin with the phenomena derived from some findings and observation, which I became aware of from the existing theory base. These observations gave me some ideas that I test through my assumptions. If the assumptions are not confirmed by the findings, I can reject my assumptions and the assumptions can then perhaps be revised by others. If I can prove the assumptions, my findings should be seen as contribution to the existing truths (McNeill and Chapman, 2005).

My analysis will be based on several case studies (Yin, 2009), which have been collected through interviews. Case studies are well suited to gather the data that I need, as the case studies can help to illuminate a decision or set of decisions: why they were taken, how they were implemented and with what result (Schramm, 1971). Therefore, case studies can be a good tool to help me to find out the motivation, the chosen strategies and the performance of Danish clean-tech SMEs' internationalization in the Chinese market.

Additionally, in order to triangulate, I also gathered information about Danish SMEs and the Chinese market from official governmental sources, interviewed people from organization who assists Danish SMEs within the clean-tech industry to expand in China. Lastly, I have personally been working in a Danish clean-tech SME for the past three years, where I collected lots of observations and knowledge about the industry.

The analysis will be divided into three parts. In the first part of the analysis, I will first give a brief introduction of the Chinese market in general and an introduction to each of the relevant clean tech segments.

Secondly, I will introduce each of the interviewed companies and analyse their internationalization in China based on the framework that was shown in figure 5. Here the company's incentives to go into the Chinese market, the market strategies, internal and external changes along the process, and also the outcome and performance are analysed.

Finally, I will do cross company analysis to compare and contrast each company, in order to look into all the companies from different perspectives: industry, market entry incentives and strategies and performance.

#### **Data**

#### **Choice of Companies**

In order to confirm or reject earlier listed assumptions, I interviewed Danish SMEs within the clean-tech sectors, which either have already entered the Chinese market or are on their way.

In this thesis, due to confidentiality reasons, it is not possible to know the turnover of all the companies, why all companies with a headcount below 250 is eligible for the study. So, SMEs are defined as that it has less than 250 employees.

Based on the definition of the target group being Danish SMEs within the clean-tech industry, I began to identify relevant companies. By going through State of Green company data bank, I was able to collect 47 relevant companies. I also found nine relevant companies among The Danish Export Association members, collected eight companies from a Chinese wind exhibition website, and finally, I personally met 10 companies from Danish Industry's Clean Tech Hub program. In total, I collected a gross batch of 74 relevant clean-tech SMEs.

Then, I visited all of the 74 company's websites and read related news. Based on those information, I excluded 40 of the companies due to an obvious lack of China related focus, for instance, there is no mentioning of China within the company anywhere on their website or in any news or articles.

Thus I ended up with a net batch of 34 companies, who are either doing business in China or are actively planning their market strategies to the Chinese market. I sent out interview requests via e-mail to the company's CEOs or high-level managers, with an explanation about the purpose and focus of the interview. In total 11 companies responded positively to my initial e-mail and we arranged the details of the interview. Among the rest 23 companies, one company declined the request, while the remaining 22 companies didn't respond. Reminder e-mails were

sent approx. one week later to the 22 companies, but still no response, why I ended up interviewing 11 companies for this thesis.

The 11 companies are spread within renewable energy (wind and renewable fuel cell power generation), soil, air and water treatment. The company size ranges from 10 to 100 employees. Eight of the companies have already set their feet into the Chinese market, and the other three companies are actively looking into the market and planning for its entry strategy. Five companies were established before 2000, and six companies were founded after 2000.

By interviewing those companies, I could learn about their China experiences and their strategies, further learn about their performance in China. Also, there are different technologies within clean, for wind industry, fuel cell, also for soil, air and water treatment. Therefore, I could also see their incentives to go to China from different industry, and also see whether the market segment have any impact on their performance.

With the purpose to collect sufficient information from the 11 companies, the semi-structured interview method (Kvale & Brinkmann, 2009) was chosen. I followed Kvale's Seven Stages of the semi-structured interview.

- 1), I had my research question ready.
- 2), I learned the basic information regarding company's products, current markets, financial position etc. as well as their Chinese experience, a set of general questions were prepared (see as appendix C), which was to be used as a guideline.

With the purpose to find out the reasons for the Chinese market expansion decision, questions below are asked: for example, why did you decide to go into China? When did you begin? How did you prepare yourself?

In order to learn about the market entry strategy, questions are asked: for instance, what set-up do you have in China? And why was this chosen? Why did you change the operation mode in China? Do you hire new employees in Denmark to support the Chinese market?

In the interest of knowing the performance in China, questions are asked: like, what is your investment budget in China? When do you expect to see any return? Have you received any orders from Chinese customers?

3) I carefully conducted the interviews and all the interviews were taped. During the interview, I guided the conversation based on the prepared question guideline (see appendix C), Along the way, follow-up questions were added to the conversation in order to get more in-depth answers or viewpoints. As shown in figure 7, in total 8 of the interviews were conducted via the phone,

while 3 of the interviews were conducted via face-to-face conversations. Each interview lasted approximately one hour, and all of them were recorded.

4) After the interview, I summarized the interviews into written texts.

Company number	Name	Industry	Founded	Size (Employees)	Interview method	Name of the interviewee	Interviewee role in the company	Interview Duration (min.)
1	Jomitek ApS	Wind	1997	10	Face-face	Peter Johansen	CEO & Founder	65
2	Cotes A/S	Wind	1986	60	Phone call	Jakob Bebe	Sales manager	63
3	Senmatic A/S	Wind	1975	100	Phone call	Mads Sckerl	Adm. Director	62
4	Resolux ApS	Wind	2003	80	Phone call	Ole Teglgaard	CEO & Founder	70
5	Windar Photonics A/S	Wind	2008	30	Phone call	Jørgen Korsgaard Jensen	Interim CEO & Founder	44
9	Infuser ApS	Air	2011	45	Face-face	Lars Nygaard jepsen	COO & Founder	90
7	Ejlskov Consult A/S	Soil treatment	1999	13	Phone call	Bjørn Hjortshøj Andersen	Chief Chemist	72
6	Danish Power Systems ApS	Power generation	1994	28	Phone call	Hans Aage Hjuler	CEO	49
8	Sensatec Danmark ApS	Soil treatment	2006	50	Face-face	Erik Permild	CEO & Founder	72
10	Biokube A/S	Waste water	2005	15	Phone call	Erik Schmidt Taarnhøj	Adm. Director	46
11	Aquaporin A/S	Water	2005	86	Face-face	Tine Jørgensen	Global product manager	36

Figure 7. Overview of the company interviews. Source: own preparation.

- 5) I did the company analysis based on the interview contexts together with secondary data. During the company analysis, follow-up questions were asked to relevant companies via emails.
- 6) After the analysis was done, I sent the report back to each company to confirm the validity.
- 7) The findings were shared with the companies via emails.

Besides the interview, I also collected various observations and obtained deep knowledge from my student job for a Danish wind turbine component supplier, Jomitek ApS, since 2014. During my job, I am working with Chinese market research, recruitment, business development planning, marketing activities as well as communication with Chinese customers and potential suppliers. Marketing activities, such as customer meetings in Denmark and China, and supplier negotiations. I travel to China with company CEO to visit Chinese customers, potential partners, and also attending clean-tech events that are arranged by Danish embassy and Danish Export Association. I also partake different programs that Jomitek joins aiming to develop the market in China, VITUS program from Danish Foreign Ministry, Clean Tech Hub program and Own Man In from Danish Industry, which will be further introduced in Background part. During my work, I also have chances to meet and talk with different Danish companies that are within clean-tech fields, and know about their experiences in China. Besides my work, I am actively following the move and trend of clean-tech industry in Denmark and China.

#### Secondary data

For the interviews with the 11 companies, I have read information and news about those companies via their company websites, and other business related websites, collected their China-related activities, and financial status from proff.dk to understand better about each

company. In order to get a more neutral idea about Danish SMEs within clean-tech, I also interviewed people working from CLEAN China desk and Chinese employees who are working for Danish SMEs.

#### **Drawbacks, Biases and Reliability Check**

With the analysis of Danish clean-tech SMEs internationalization in the Chinese market, I am challenged by the potential bias that is that I am a Chinese native. However, due to my Chinese nationality and the fact that I am also an insider of the clean-tech sector, it also provided me advantages during the interview preparation and under the interview. Due to this fact, I was able to collect data and information not only from the English websites, but also the Danish and Chinese websites. Therefore, I was able to testify and challenge the interviewees during the interviews to get more comprehensive information and feedbacks. Furthermore, the interviews are conducted in English and Danish language, and none of them are my mother language, so there might be drawbacks from doing cross-cultural interview. Due to the analysis is strongly depending on the interviews, I am highly aware off the potential bias and the truth of the interviews, where interviewees might be holding back some information both on purpose or they simply cannot remember all the details.

## **Background introduction**

In this part of the thesis, I will give a brief introduction of the Danish clean-tech industry, the Danish SMEs' domestic environment, organizations and programs that provide exporting consulting services. Also, I will introduce the Chinese market: about the market itself and the clean-tech industries. For the latter, I will specify the entry barriers, which exists based on the institutional voids from Khanna et al. (2005).

#### Danish SMEs within clean-tech

Denmark is well recognized for its advanced development within the clean-tech industry, and Denmark has its strong position in the global market <sup>4</sup>. Clean-tech is defined as "activities which focus on develop (including consultancy and research), produce or implement new or improved processes or products, that contribute to: 1) Produce renewable energy or sustainable materials, 2) Reduce the use of natural resources by utilizing the resources or energy more efficiently, 3) Reduce the harm caused by fossil fuels, 4) Reduce pollution problems through products, processes and / or consultation" (CLEAN Cluster, website).

According to Copenhagen CLEAN Cluster (2011), Denmark has 1073 clean-tech companies, while CESFO's 2015 Annual Report says that 99.36% of all the clean-tech companies are characterized by being small and medium-sized enterprises. Thus I estimate that Denmark has more than 1,000 clean-tech SMEs.

Denmark is a small, open economy, which is highly dependent on its international trade with other countries (Eriksson et al., 2009; Thompson & Kaspersen, 2012). Therefore, Denmark has strong incentives and motivation to engage in international trading with other markets in the world. As a consequence, there are also different organisations have developed programs to help and assist Danish SMEs to expand their foreign markets.

The Trade Council, Danish Industry (DI), State of Green, CLEAN Cluster, IFU, Danish Export Association, and other consultancy companies are launching and promoting their services and programs towards Danish SMEs for the Chinese market.

1. Ministry of foreign affairs of Denmark's Trade Council offers so-called "exporting packages", where companies can buy man-hours to assist its exporting activities. Additionally, it offers a

<sup>&</sup>lt;sup>4</sup> https://stateofgreen.com/en/news/danish-cleantech-companies-hold-a-strong-position-on-the-global-market. "Danish cleantech companies hold a strong position on the global market". State of Green.

VITUS program, which aims to coach Danish SMEs with market planning and market field studies in international markets, including the Chinese market. <sup>5</sup>

- 2. The Confederation of Danish Industry (DI) offer its "Own Man In" package, where companies can use DI's China facilities and hire local employees with their license. Also, accounting and administration services are provided. Another program from DI is the Danish Clean Hub (DCH) program, which aims to provide "the local platform and strong network necessary to bring Danish solutions into play in China in close collaboration with other Public/Private initiatives and partners." (DCH website) DI "offers member companies an effective route to success in China through matchmaking with local partners and a joint promotion of quality solutions and the Danish sustainable model." (DCH website)<sup>6</sup>
- 3. Under the DI, there is State of Green, which is a database of Danish clean-tech companies and institutions to present their profiles, solutions and products. State of Green is also presenting Danish clean-tech in front of delegations from different countries and areas, and also going out to foreign markets to present Danish profiles.
- 4. Danish Export Association has clean tech cluster platform and network in China, where they can provide market information, and also networking with local customers.
- 5. CLEAN Cluster has a China Desk. They assist Danish clean-tech companies to understand the market and also set up a platform with the basis of government collaboration between China and Denmark, furthermore, also help with the communication between Danish companies and Chinese stakeholders. (CleanCluster)<sup>7</sup>
- 6. IFU (Investeringsfonden For Udviklingslande) is a governmental funded organization. IFU provides companies with financing service. <sup>8</sup>
- 7. Besides all the public organizations, there are also numbers of consultancy companies with different sizes and capabilities. Companies who can do market research, strategy consultancy, network building, partner selections and so forth.

In general, as described earlier, SMEs are facing internal challenges from limited capital, solid market information, and management resources, and also general lack of organizational competencies. Externally, Internationalization may provide new opportunities for SMEs. SMEs

<sup>&</sup>lt;sup>5</sup> http://um.dk/en/tradecouncil/services/how-we-work-together/subsidised-programmes/vitus/. "VITUS". Ministry of foreign affairs of Denmark.

<sup>&</sup>lt;sup>6</sup> http://di.dk/English/dch/Shanghai/Pages/About.aspx. DI.

<sup>&</sup>lt;sup>7</sup> http://cleancluster.dk/en/projects/china-desk/. CLEAN China Desk.

<sup>8</sup> https://www.ifu.dk/om-ifu/. IFU

will have to rely on network relationships and already established channels, other's access to local market knowledge, obtaining initial credibility, lowering cost and risk etc. (Sharma & Johanson, 1987; Johanson & Mattson, 1993; Johanson & Vahlne, 1990). In Denmark, as mentioned above, there are a number of different services providers that can help SMEs with network, strategy planning, financing from both public departments and private companies.

To summarize, Denmark is depending on its international trade and Denmark is in the leading position within the clean-tech sector. Looking at the opposite side of the value chain, China is the most popular exporting recipient in the world, and there is huge demand for clean technologies in the market. Yet, the actual exporting figure to the Chinese market from Danish SMEs are relatively low as introduced earlier, which meaning there exists large developing opportunities for Danish SMEs to increase export to China.

## **About China and the Chinese market**

With the current good relationship between Denmark and China, there are already extensive collaborations going on between the two countries, also within the clean tech sector. Danish and Chinese cities are signing off numerous bilateral cooperation agreements (Memorandum of Understanding). <sup>9</sup> Although, Denmark and China in somehow a good match on the value chain, Danish SMEs need to learn China and the Chinese market.

Since the 1980's where China's opening up policies began to change the country for the better, the country's economy has advanced greatly. This fast development has also resulted in some environmental challenges, which China in recent decades has begun to find solutions to mitigate.<sup>10</sup>

In 2005, China published its first Renewable Energy Law. From there on, the government has focused on the renewable energy development, and the sector's progress has been included into each of the countries five-year plans. China invested USD 101.2 billion in clean energy in 2015, which is 2.5 times more than what EU invested. However, China lacks knowledge, experience and good solutions to really progress. Therefore, good technology and knowledge are very welcome, as well as R&D efforts into the matter, which was actually addressed in the thirteenth five-year plan. China has set up a green bond market to support funding of renewable energy and environmental projects, and such projects might raise RMB 1.5 trillion (EUR 210 billion)

<sup>&</sup>lt;sup>9</sup> http://cleancluster.dk/en/projects/china-desk/. CLEAN China Desk.

<sup>&</sup>lt;sup>10</sup> http://www.cfr.org/china/chinas-environmental-crisis/p12608. "China's environmental crisis". Eleanor Albert, Beina Xu. 18 January, 2017

before 2020<sup>11</sup>. Chinese companies and governments are also trying to learn from other countries by sending various delegations out to different countries. The increasing interest in environmental awareness across China presents an opportunity for companies who have the knowledge and the solutions within those areas.

## Wind energy

In the most recent five-year plan covering 2016-2020, the government has set a new ambitious wind power target of 210 GW in accumulative installed capacity before the end of 2020. Till 2016, accumulative installed capacity of both onshore and offshore wind turbines was only 169 GW, meaning the market for wind energy is expected to grow by 25% in four years. Additionally, the Chinese government aims to receive 20% of their total energy need from nonfossil energy resources by 2030, and as a consequence the total accumulated installed wind power capacity is expected to reach 500 GW by that time. Offshore wind energy should account for 100 GW of the 500 GW. China has a potential offshore wind resource of approx. 500-1.000 GW, and currently only 6.5 GW has been explored and planned.

All the above suggest a very large potential for the wind power market in China. On the other hand, China only achieved 20% of the pre-defined target in the latest five-year plan (12<sup>th</sup>), why the large figures might not be as large as the government is hoping for. Although China has some quite developed wind turbine original equipment manufacturers (OEMs), Denmark is a leading nation within this field and this is also the main reason for some of the Chinese OEMs having establish research centers in Denmark (Envision and Mingyang). Thus Denmark is perceived as a good place for research and innovation, when selling the turbine components to the Chinese OEMs.

## **Fuel Cell**

So far, there has been no cheap solution for developing fuel cell or getting the needed raw materials in China. Therefore, the cost to develop fuel cells is high and the efficiency is too low. As a consequence, companies are looking for more profitable fuel cell solutions that can be commercialized. But even if good solutions are found, "the infrastructure needed to support its commercialization is not in place, (In China, and so far) educational institutions are the biggest customers in the market; buying upwards of two thirds of all China's fuel cells for classroom demonstrations and science projects." (GCiS) <sup>12</sup>

<sup>&</sup>lt;sup>11</sup> https://www.bloomberg.com/news/articles/2016-02-04/china-s-230-billion-green-bond-thirst-to-supercharge-market, "China's \$230 Billion Green Bond Thirst to Supercharge Market", Bloomberg, 4 February 2016.

<sup>&</sup>lt;sup>12</sup> http://www.gcis.com.cn/index.php/en/china-insights/industry-articles/143-china-s-fuel-cells-market-is-a-long-way-off. "China's fuel cells market is a long way off". GCiS.

But although the cost of fuel cell is high, China is committed to develop alternative energy solutions and thus there is still a long-term market potential in China.

## **Environmental protection: Water, air and soil**

China is facing enormous water, air and soil pollution as a consequence of the fast development in the last decades. With the aim to solve these problems, the Chinese government has in recent years formulated a series of plans. As an example, in 2013, the Air Pollution Prevention and Treatment Action Plan (the 10-Point Air Treatment Measures) was issued, while the Water Pollution Prevention and Treatment Action Plan (the 10-Point Water Treatment Measures) was formally announced in 2015. In 2016, the central government then released the 10-Point Soil Treatment Measures as well.

The 13th Five-Year Plan (2016-2020) outlines rigorous environmental goals in terms of reducing emission, cleaning the urban and rural drinking water resources, and soil remediation. Although the different plans provide an overview guideline from the central government, the progresses within these clean tech sectors' still moves rather slow. The industries are very fragmented and looking specifically at the soil remediation plan, it doesn't include any clear goals and no correlated laws or monitoring systems set in place, which makes the incentives weak. The needs within those areas, however, are urgent and big. The problem is that the projects to reduce or remove environment pollution involves a numbers of different parties and stakeholders, and without the clear regulation systems, supervision systems and checking systems, it is difficult to bring about real change in China as the benefit for polluting is often enjoyed solely by the polluter, while the cost is shared by the entire society. Currently, air pollution and water pollutions have drawn big awareness from the central government, due to the media focus on the matter, while soil pollution is more hidden, and is currently not a priority.

## **Facts about the Chinese market**

In order to tackle the target market in a proper way and to seize the opportunities in the market, a company need to learn about the foreign market's characteristics (Khanna et al., 2005). Apparently, the complexities and cultural differences of the Chinese market are vital characteristics to be aware of.

The US-China business council (for short, USCBC) (2014) points out that companies have to go through a lengthy and complex system of approvals, permitting and government engagement that consumes a lot of time and resources when a foreign entity wants to establish its presence in China. The report also points out that this procedure can vary from region to region in China

and as a consequence the survey data shows that administrative tasks is their member companies' third most significant concern in the Chinese market.

Hence, it is a good idea to build strong and good relationship with local government officials, especially those who are involved in the licensing and approval process (USCBC, 2014). If a company does not have this good relationship, there are third-party administration's organizations that can help with the establishment and other administrative processes.

Li (2010) points out that in China, a huge gap exists between central political policies and region implementation, and this gap adds additional complexity. Furthermore, Davies (2013) also states the fears that an investment protectionist trend may emerge in China. This might, to some extent adds, emphasize the need to use a local partner as a necessary.

Other aspects of the Chinese business culture are also important to take note of. Irwin (2012) points to both Mianzi and Guanxi that heavily influence the Chinese business culture. Mianzi (face) is related to prestige and hierarchy when maintaining personal and business relationship. Guanxi (personal relationship) is political and personal network, which are important when doing business in China.

The personal relationship plays an important role in the Chinese business setting. Setting up business in any foreign country requires the development of distribution channels to promote the products. A way to achieve this, is to develop a network relationship with a foreign partner, particularly, one with a well-established distribution channels (Coviello & Munro, 1995). Network relationships help companiess to access local market knowledge and obtain business information (Chetty & Patterson, 2002, Coviello & Munro, 1995; Osland & Yaprak, 1995) and establish contacts (Turnbull et al., 1996). In short, network relationships can improve product development and market expansion activities.

From the work of Khanna et al. (2005) (see appendix B), it indicates that China is an open economy that welcomes foreign investments, advanced technologies and products. Setting up a WFOE is supported in China. At another hand, political and social systems are highly controlled by the central government. There are challenges for foreign companies to hire good talents with right skills, for instance, English speaking skill. It is worth to be aware that many senior managers are not fluent in English. Companies need also to be aware of the IPR problems. Zhang (2008) argues that technology transfer is difficult due to the lack of framework in China and inadequacy in laws on technology transfer. She also stresses that, "Chinese law does not allow restriction on licensees carrying out enhancement, and even if a signed contract is subject to foreign law, when it comes to filing lawsuit in China, the Chinese laws and regulations still apply". (Zhang, 2008,p.2)

To summarize, China is a huge market with a large and so far unfulfilled need for clean tech solutions. The country welcomes foreign companies. Due to that Denmark is a leading nation within this sector; Danish SMEs' products and knowledge are likely to be in high demand in China. However, the Chinese market is complex and bureaucratic with a lot of potential risks. The business culture is also very different from the Danish business culture, and this is important to take into account for the Danish SME's when they internationalize into China.

# **The Analysis**

Here I will first go through all of the 11 company cases. Firstly, I will give a general introduction to the company and describe its current status on the Chinese market expansion. Then I will go through the company's current performance in China and the company's expectations to the future development.

In the second part of the analysis, I will perform a cross-company analysis based on different important factors, such as market entry motivations, entry strategies, the China presence, and their performance in China in order to be able to answer the research questions.

## Within Company cases

## **Jomitek**

#### 1. General introduction

Jomitek was founded in 1997. Jomitek is an R&D company with a business idea to develop a product that can detect lightning strike and send alarm signal back to the control center for wind turbines. The product is mainly sold to major wind turbine OEMs. The production has been outsourced within Denmark and the company is focusing on developing and innovating detection products with advanced technology. Jomitek has been exporting its products for years, but primarily only within Europe. Jomitek has eight full time and part time employees.

## 2. The Chinese market expansion

Due to the fact that Jomitek is a supplier to wind turbine OEMs, Jomitek naturally noticed that China has become the world's largest market for wind energy and that the country is expected to continue to be vital for the industry in many years to come. Jomitek did not plan proactively to export to China, but because Jomitek's lightning sensor was a mature product with stable customers in Europe, it one day got an opportunity in China. One of its customers, Siemens Wind Power, had earlier established joint venture cooperation with a Chinese company - Shanghai Electric (Sewind). Through a recommendation from Siemens, Sewind started to import from Jomitek to China via its own importing agent. The import agent of Sewind later proposed to Jomitek that it could be the exclusive distributor in China. After an extensive dialogue with the distributor, Jomitek concluded that the company's ability to boost the order volume for Jomitek was not good enough, so Jomitek rejected the proposal.

From the time when Jomitek received its first order from China, Jomitek gradually began exporting directly to China, but the export volume was limited. At the end of 2014, a Chinese

company X approached Jomitek in order to enter into a partnership (joint venture) in China. The CEO had a field trip together with company X in China, and expanded his knowledge about the enormous market in China. Even though, after more than one year's on and off communication, the partnership with company X did not work out. But, the idea about China had matured. Hence Jomitek decided to make a change and increase its exporting activities further in the Chinese market.

To support the exporting activities, Jomitek tried to find external funding via IFU. After some communication, Jomitek, however, declined IFU's investment offer, because Jomitek could not accept the investment terms from IFU. In the end, Jomitek decided to allocate DKK 1 M from internal funds for the market expansion.

Jomitek's organizational structure and human resource also changed accordingly. Jomitek hired a local Chinese sales engineer in China to explore the Chinese market, identify new sales opportunities and initiate and build dialogues with customers. Jomitek also expanded its Chinese student worker's job responsibility to Chinese market research, customer relationship maintenance, and also translation jobs. On the organizational side of things, Jomitek uses "Own Man In", where its Chinese sales engineer was hired through; VITUS program and the Danish Clean-tech Hub program.

Jomitek is not planning to do direct investment to move its production to China, due to quality control issues, the complexity with overseas production coupled with the fact that Jomitek's niche products are low volume products.

Through Jomitek's many encounters with China, the company learned about the market and the customer's needs. As a result, Jomitek released a new version of its lightning sensor, which more fits the needs to the Chinese customers, and is currently working on new products and features, specifically requested by Chinese customers. What's more, Jomitek has high confidence into its R&D strength, where CEO commented about the products during the interview that, "so far, no one can do the same as we can."

#### 3. Performance in China

Jomitek's first China experiences stems from late 2014, while its proactive expansion in China began in early 2016. Thus Jomitek has actively been trying to develop the Chinese market for about one year, and the investment has so far resulted in a breakeven. The CEO of Jomitek is satisfied with the performance of the local Chinese employee and through the VITUS program; Jomitek has expanded its network in China and is on an ongoing basis being presented with different opportunities.

## 4. Summary

With the motivation of seeking for bigger market, Jomitek started its Chinese expansion with customer relationship, and then later with local Chinese sales employee in Shanghai office and part time Chinese employee in the Danish office after been doing direct exporting- travelling sales. Jomitek is also considering WFOE and JV set up in China. Financially, Jomitek is supported internally. So far, Jomitek has a breakeven performance in the Chinese market, and is expecting higher return in the coming years.

## **Cotes**

#### 1. General introduction

Cotes was founded in 1986 in Slagelse, where it still has its headquarter and part of its production. In addition, Cotes has a factory in Poland and a research centre in Aarhus. The company employs 42 in Denmark and 18 in Poland. The company's business idea is to "apply their expertise, premium engineering and innovative technology to deliver the most effective, energy efficient and reliable absorption dehumidification solutions in the world" (Cotes's website).

Cotes has had a joint venture company in Shanghai, China since 2002. Cotes owns 30%, while the local Chinese partner company owns 70%. The customers are found within manufacturing companies, power stations, breweries, water stations etc. During the company's business development effort, Cotes also realized that its products had a big potential within offshore wind farms. As a result, cotes developed a new series of products, which focused on satisfying the needs from the offshore wind turbines OEM customers. The dehumidifier for the offshore wind turbines is a new technology and also patented by Cotes.

## 2. The Chinese market expansion

From its experience and knowledge accumulation, Cotes identified large needs from OEMs of offshore wind turbines in terms of humidity management. As claimed by the sales manager during the interview: "China is the future market of offshore wind turbines and in order to succeed, one needs a market share in China".

Cotes' Chinese market expansion is fully supported by the owner and the management willingness to allocate enough financial resources. The sales manager in the company is assigned full responsible of the market development in China. With the purpose to learn more about the market, Cotes has attended exhibitions in China, as well as became a member of the Danish Export Association, where Cotes can join different delegation activities to learn about customers and further build networks.

In order to further accelerate the development, Cotes has also looked into entering partnership with other companies in China. At end of 2015, Cotes agreed with Lund & Sørensen (L&S), and L&S acts as their representative in China. As explained during interview, "we know how important it is to know the language especially when dealing with smaller OEMs who do not speak English at all. L&S has Chinese employees, and they have the contacts to the Chinese OEMs." L&S is a Danish company, and they have cooperation's with Cotes before. Due to the existence of Cotes' current JV in China, Cotes is not able to give exclusive distribution rights to L&S in China. Additionally, there is currently no written agreement or contract between Cotes and L&S about the partnership, and as such, it is just adjusted on a project-by-project basis in China. Cotes is using L&S as a door opener to the Chinese OEMs, who has a more international profile, and where the cooperation barriers are lower, while Cotes will involve L&S much more in terms of the more local Chinese OEM's. In the latter case, L&S might act as a distributor, while in the former case; L&S will most likely just be paid a one-time referral fee.

As part of the "gentlemen agreement", Cotes indirectly enhanced its human resources, as the Chinese employees from L&S are dedicated to represent Cotes and its products in China. To increase the likelihood of success, Cotes provided training and knowledge sharing with them from the beginning. In addition to L&S's local Chinese employees', Cotes also often send a travelling sales man to China to join meetings together with the local employees. In the future, Cotes plans to hire a Danish based mandarin speaking engineer to support the Chinese customers.

Cotes is currently planning to keep its production in Poland, due to the complexity of the products. In this way, it is easier to manage the quality control and testing for the Danish headquarters. Furthermore, due to the current market regulation in China, it is not a requirement to have local production.

All of Cotes' products are customized and because of the speciality of its humidifier products, it is critical to have good technical support. The new technical support in Denmark should also be able to support other current customers, because the market in China is still under development. The product has to be involved in the wind turbine design phase, which can be done via emails. With the follow up email with interviewee, Cotes is not confident of hiring local Chinese sales employees, as it will be difficult to control from the Danish headquarters.

#### 3. Performance in China

The management of Cotes are quite happy with the progress that the company is doing in China. With the L&S cooperation, Cotes has freed itself from hiring its own employees in China, while it is also able to leverage L&S's exiting strong network and customer contacts. Cotes learned more

about different customers in China, some of them are open, good at English, and with understanding of humidity problems; while some of them are more traditional, barely speaking English, or even lack knowledge to understand humidification problems. Cotes experienced language barrier with the L&S local Chinese employee, where it was difficult to communicate and understand due to the language.

Cotes claims that their product can solve OEMs' pains of salt problem in China, however it takes time to convince OEMs to believe in the products. With the good reputation and advanced technology within wind industry, Chinese OMEs are willing to start a conversation to learn more.

## 4. Summary

Cotes went to the Chinese market to seek for bigger market, and the company is fully supporting the market expansion internally. Cotes has "gentleman agreement" with L&S, who has local employees in China and they can represent Cotes in China within their built network. Also, Cotes is having travelling salesman to approach the Chinese customers. So far, there is no further market strategy planning. Cotes is satisfied with the performance at the current phase.

## **Senmatic**

## 1. General introduction

Senmatic was founded in 1975 and has since grown to employ 100 people. The company "has for over 40 years been a major producer of electronic products and sensors for measurement of temperature, humidity and gases and also various products for controlling of the climate in green houses in the horticultural business." (Company website)

In 2016, Senmatic was acquired by Indutrade AB from the previous owner Micro Matic. Meanwhile, the company hired a new CEO. He previously was working for Grundfoss, where he had been assigned to China for four years. With the change of ownership, a new four-year strategy of accelerating growth within oil, gas, and marine and wind power industries was also broad along.

## 2. The Chinese market expansion

The Chinese market has had Senmatic's attention long before the change of ownership, and the company previously had a business development employee working in China for a couple of years. However, the performance and outcome was not positive, so the employee was laid off.

Indutrade AB is financially strong and fully supports Senmatic's Chinese market expansion.

During the interview, the CEO of Senmatic said that: "due to the complexity and risk in China,

Senmatic will not consider to set up a joint venture in China." Instead, Senmatic has decided to

establish a WFOE in China with the "Own Man In" service in Danish Industry (DI). The company deems it necessary to be in China, as the customers prefer to have local supports and to receive local currency invoices.

On top of the local establishment, Senmatic also looks for local dealer/distributors options. In term of personnel, the Chinese setup now has three local employees were hired from different time period. The manager of the Chinese team is an old connection of the CEO, and all three are doing sales.

Senmatic's products cover different industries; therefore, Senmatic needs to apply different strategies to approach customers from different areas. In regards of customer within the wind industry, Senmatic has teamed up with another Danish wind turbine components supplier - Resolux. The local Chinese employees of the two companies share customer and market information, and also plan and execute joint customer visits. For the oil and gas sectors, Senmatic has chosen to use its own Chinese employees to open up the market. For both the wind industry and the oil and gas sector, Senmatic is actively working on expanding its dealer/distributor network.

The company's local team consists of a country manager and two sales employees. Senmatic stresses that it is very important that its Chinese employees are trust-worthy, with good track records, as well as possessing relevant experience. The ability to speak English is only mandatory for the country manager, but not for the sales people. The sales team's sole focus is to communicate with local customers, why their network and experience in this regards is more important than the ability to speak English. In order to support the local sales team, Senmatic's CEO is also visiting China and participate in customer meetings from time to time.

Currently, Senmatic is still using a production facility in China, owned by the former parent company Micro Matic. However, Senmatic has to look for a new production solution in China due to the ownership change. Senmatic's products are mostly standardized, but do produce some products upon specific customers' needs.

#### 3. Performance in China

Senmatic is satisfied with the development in China and expects positive results in the coming years. Senmatic is also satisfied with the service from DI, however the DI solution is not scalable, why Senmatic is aware that it will have to find a new office when it grows to certain size in China.

## 4. Summary

Senmatic is driven by the big market potentiality to enter the Chinese market. Senmatic has tried different types of direct exporting, and now it has its WFOE office via DI Shanghai office. Senmatic is also looking into the possibilities of direct investment to start its own production in China. The performance is positive, and the company is happy with the outcome at this stage.

#### Resolux

#### 1. General introduction

Resolux was established in 2003, but currently employs 80 people globally with half of them being in Denmark and 15 in China. Resolux manufactures mechanical and electrical internals for wind turbines, electrical parts and lights for ships and the mining industry. The company used to be owned by several investors, but a couple of years ago, the current CEO completed a management buy-out and now owns 100% of the company. The company's production is located in Denmark with all raw materials being imported from Belgium.

## 2. The Chinese market expansion

In 2004, new regulation in China stipulated that 70% of wind turbines components have to be produced in China. This forced the international wind turbine manufacturers to either find components from local suppliers or invite their current suppliers to come to China and establish production facilities. In 2009, Resolux was asked by Vestas and to establish factory in China. Resolux then decided to follow suit and began a production (direct investment) for Vestas without having sales setup in China.

In order to minimize the investment into China, Resolux teamed up with four other Danish companies. The five companies rented a production facility together with an attractive deal from the local government in Tianjin through the Danish Export Association. All of the companies were suppliers to the wind industry, but not competitors, why the cooperation could work. Resolux is 100% owned by the CEO, and the CEO is the drive behind the whole Chinese market expansion. Therefore, it has 100% financial support from the company.

The Chinese WFOE was at first marked by the factory opening, why the company hired a local factory manager and blue-collar workers. Later, the company added a local sales person, but when he began to copy Resolux's products and sell those products to Resolux's customers on the side, he was laid off quickly after Resolux became aware of the problem. The customers have since turned back to Resolux, and the organisation has expanded to include a sourcing manager, purchasing manager and a technical sales person, who are situated in Beijing, while the production is still in Tianjin. Following the bad experience, Resolux decided not to have a country manager, but instead letting all of the Chinese managers reporting directly back to the

respective department managers in Denmark. Additionally, the company has put a system in place where Resolux Denmark can have clear overview of orders and Chinese office jobs. The CEO says that he himself is highly aware of the cultural differences, and thus he stayed in China for an extended period to learn about the people and the culture. He now uses a different way of communication when talking to his Chinese employees than the Danish ways.

The entire recruiting process, factory set up and Beijing office establishment was outsourced to a foreign agency in China. Although, Resolux has some good Chinese employees, the CEO still says that it is difficult to find well-educated technicians and engineers, who also have the English speaking skill.

In order to improve the employees of the companies, Resolux provides training to the Chinese employees, and is also looking for hiring more talents to serve the Chinese market both in China and in Denmark. Resolux's products are customized to fit each customer's requirements; therefore, all the local productions from each country are also supporting other countries following the customer.

Resolux is very well aware of the drawback of being a small company, why Resolux is actively trying to use its board member's knowledge to make strategies.

#### 3. Performance in China

Resolux is currently satisfied with its Chinese market development, and the company is aiming to grow continuously in China due to the big potential of the market. Resolux is also planning to expand its product range in order to become a one-stop service to its customers. Resolux is happy with the services and benefits it gets from being member of the Danish Exporter Association.

## 4. Summary

Resolux followed its customer foot track to the Chinese market, and started with direct investment where the factory was built. Later on, Resolux set up its WFOE in China to seek for bigger market share, which includes different functions. Currently, Resolux is receiving positive ROI from China.

## **Windar Photonics**

## 1. General introduction

Windar Photonics was established in 2008 and currently employs 30. The company went public on the London Stock Exchange on 30<sup>th</sup> of March 2015 in order to raise more capital to support its market expansion. Windar's production is located in Denmark, while raw materials area sourced from all over the world. Windar Photonics is mainly an R&D company, who has its own

manufacturing. Its business idea is a wind sensor that can obtain accurate and timely knowledge of the wind inflow, and then adjust the wind turbine to optimize the energy production.

## 2. The Chinese market expansion

Windar Photonics was attracted by the Chinese market due to its size the expectations of it continuing to be the largest wind turbine market in the world. The company's efforts to enter China began in 2013. It began by establishing a distribution network led by a local sales employee. Following that, the company recruited two Chinese engineers, which was located in Denmark and assisted with supporting customers both from China and other countries. After some time, the company realized that the distributors network was not sufficient. It had to take another step. Windar deemed it too risky to share its knowledge in a JV structure, so in 2016, Windar decided to register its own WFOE in Shanghai. The back then-sales employee became the general manager for the subsidiary and hired additional two sales people. Windar aims to hire more local sales people in China to cover more regions in the coming future. Windar is also sending travelling sales people from Denmark to China from time to time.

The company is working hard on its product category becoming an industry standard, as this will secure the market going forward. Windar's products are very standardized, but major OEMs wants customized design and the product might vary as a consequence of the specific wind turbine size and capacity. Windar claims that it is the only supplier of its products at an affordable price point in the market. "We do not have competitors," said the CEO in the interview. However, Windar is also aware, that it will take some time for Chinese customers to understand and accept its advanced products.

## 3. Performance in China

The progress in the Chinese market is slow and Windar expects that the return on investment (ROI) will take some time. Windar is currently learning and gaining experience in China by trying different entry modes. The company also acknowledge, that it will take time to build relationship with customers and reach out to different regions. For now, however, Windar still believes in the Chinese market and is satisfied with the current progress and status.

## 4. Summary

Windar was attracted to expand into China due to the vast market. It is only applying direct exporting. Even though return on investment is not that obvious at the moment, Windar is still very positive about the market and is committed to a long-term investment.

## **Ejlskov Consult**

#### 1. General introduction

Ejlskov Consult was founded in 1999 and has since grown to 30 employees. Its business idea is offer comprehensive site analysis and solutions for soil and groundwater contamination problems. Ejlskov provides consultancy services and provides solutions for soil and groundwater contamination, including implementation and supervision.

## 2. The Chinese market expansion

Ejlskov's Chief Science Officer (CSO) had some initial knowledge and contacts to the Chinese market, and through this, Ejlskov became aware of the large potential for their services in the Chinese market, as China struggles with many contaminated soil areas.

In order to lessen the financial burden of entering China, Ejlskov applied various public funding programs and initiated some pilot project in China. In order to fully support its Chinese market expansion, the company hired a Chinese employee in Denmark in 2014, and he began as on part-time. In 2015, Ejlskov China related projects had grown in significance and the Chinese employee was hired full time.

Besides the Chinese employee, Ejlskov is currently actively looking for a local partner in China and Is also considering setting up a WFOE in China. Ejlskov's hope for a partner is that the partner is already active within the soil remediation sector and thus be able to be a technical partner, whom they can share a common understanding of the business and knowledge of their solutions. Ejlskov is willing to share a large proportion of the profit with the local partner, as Ejlskov believes that having good technology and solutions is not enough for success in China. In order to have commercial success within the soil and groundwater remediation area in China, according to Ejlskov's perception at least, it is of utmost importance to have a strong relationship with all the local stakeholders. Also, Ejlskov solutions are patented, which also gives some comfort to Ejlskov, even though the company is aware of the infringement problem in China.

Knowing the market demands and consumption mind-set in China, Ejlskov will only provide contract projects services in China, instead of consulting projects. It is simply because the price of Danish engineers are too expensive for the market. Ejlskov is also lending out its name to some local Chinese companies within the industry. By doing this, Ejlskov aims to brand its name and reputation in China via different channels. In China, Ejlskov is using another Danish water solution company's equipment to do installation for their solutions. Ejlskov is sending engineers and the Chinese employees to do negotiations with customers and stakeholders. However, they realized that it is difficult to find local engineers or officers from government who can

understand their solution. Therefore, it requires a lot of time and effort for Ejlskov to educate the customers.

#### 3. Performance in China

Currently, Ejlskov has been awarded a couple of projects in China, but it will take some time to implement the solutions and run the projects to conclusion. Ejlskov, however, needs to raise more capital to support its expansion in the Chinese market, as it will take a long time to really breakthrough in this market and thus it will require extensive investments. When that is said, Ejlskov fully believe in the large potential that the market has.

## 4. Summary

Ejlskov went to China to get a slice of the large market potential within soil remediation. Ejlskov has a Chinese employee in their Danish office, and are currently also considering opportunities expand its China business further with a WOFE or JV. The company's prospects in China is at the moment positive and it expects an increasing ROI in the coming years.

#### Sensatec

## 1. General introduction

Sensatec founded in year 2016. The current CEO restructured his earlier company and at the same time partnered with a person from his old business network in Poland. They then established cooperation with a German company, where their production and laboratory now are located. The business idea of Sensatec is to sell its biological solution that can treat soil and groundwater. The technical solution is a piece of hardware combined with complex software. The company employ 50 employees in total and the company is currently developing its market in Europe, while also looking into the Middle East and the Chinese market.

## 2. The Chinese market expansion

As just stated, Sensatec is currently looking into the Chinese market, but so far, the company has no setup or revenue coming from China. The CEO is actively attending China related arrangements and networking events and Sensatec uses services from the Foreign Ministry, DI and other consultancy companies. At the moment, it is mainly the CEO who is in charge of the china related sales and market research. Through the aforementioned organizations, Sensatec hope to identify potential partners for the Chinese market as well as new customers.

As the company is still in its early stages of Chinese market expansion, Sensatec does not have a market entry strategy, but they believe that JV could be a good option to open the Chinese market. On one hand, Sensatec is aware of its products large market potential in China, but on

the other hand, Sensatec also believe, that it is currently not fully ready to exploit this opportunity.

From a financial perspective, Sensatec just restructured its organisation and its current performance in the European market is not strong enough to support further expansions into new markets such as China. According to the CEO, the resources available such as time and capital needs to be prioritized, and Sensatec eyes a higher investment return from the European markets.

From a more commercial perspective, the CEO is afraid of what he has learned so far about the way to cooperate with Chinese companies and the countries different culture. He literally said in the interview that what he had learned so far "had scared" him, and he expressed his uncertainty towards the Chinese market. He mentioned specific four challenges that Sensatec is facing in China. 1) the cultural difference between China and Denmark is big. An otherwise positive business meeting with Chinese counterparts can often turn out resulting in nothing. 2) It is not easy to find a partner in China, and all the needed assistance from external organisations and middle men to search for a suitable partner is expensive, especially for a small company. 3) As a small company, the CEO is not sure about the company capability to handle a new market like China, especially in terms of financial and organisational resources. 4) Sensatec does not know how to protect its know-how (intellectual property) in China.

#### 3. Performance in China

Senmatec is still observing the market and will prefer to enter into a partnership with a local company. Firm possesses unique solutions to solve contamination problems with a biological way. Senmatec is currently looking for the right partner to make a win-win partnership in China. At the same time, Senmatec is working actively to collect market information and data about China.

#### 4. Summary

Sensatec believes there is a big market for their company in China. Due to the companies' uncertain perception of the market, the company is still observing the market. Sensatec would prefer a local partner in China, as they know the importance of having right networks. However, currently, Sensatec is focusing on other European markets where it estimates its return on investment will be higher.

## Infuser

#### 1. General introduction

Infuser was founded in 2011. The business idea was to develop a solution for air purification, and then Infuser bought a Swedish company who has a good product for air cleaning technology. Infuser has 17 employees in Denmark, five in Sweden, six in Germany, four in Malaysia. In Denmark, there are its headquarters office, R&D, test facility and also production. In Sweden, there is production facility. One shareholder of Infuser sets up an organization in Malaysia.

## 2. The Chinese market expansion

Infuser started to look into the market by being attracted of Chinese serious problems with air pollution. For China market, Infuser has a clear market entry strategy. Infuser will set up a WFOE in China. With the daughter company in China, Infuser will look for partnerships. The partners can be contract manufacturer, or distributor, or strategic asset partner. Besides a business development function establishment in China, Infuser will also do local production.

Back in 2015, the chief operation officer (COO) of Infuser found an opportunity in the Danish Embassy in Beijing, where they expressed their concern of the air condition. In January 2016, Infuser succeeded to set up a pilot project in the Danish Embassy in Beijing. With return, Infuser is able to show potential customers of the installed products and also the performance tracking records.

To develop the Chinese market, Infuser hired a Chinese as consultant. However, Infuser realized that they were not ready for the market. Both the product development is not ready, and also financially Infuser is not strong enough to support a new market expansion.

Currently, there is no organisational structure or personnel change, as Infuser is still in the market entry preparation phase. But when Infuser decides to come to China, it will be a WFOE, and they will hire local Chinese talents to support the operation. Product wise, Infuser will have standard products in different models, and also provide project-based services for special projects. Production will also be partly moved to China, accordingly the plan.

Right now, Infuser does not have enough resources and time to start the market expansion in China yet. Infuser is focusing on the close market in Europe, where it can see faster return than China.

Financially, Infuser will prefer finance internally for its market expansion in China, but Infuser is also open for funding combination from internal and external parties. For example,

organizations like IFU, or venture capital funding. To the end, which one to choose will be highly depending on the conditions.

## 3. Performance in China

Infuser is very positive with the Chinese market, and it knows that it will require a lot of time and capital and human resources. Currently, Infuser is more focusing on developing its European market, and hope they will be financially stronger in order to develop in China. When the capital is in place, and it is enough to support Infuser's activities in China for one to two years, then Infuser will start its operation in China.

## 4. Summary

Infuser is attracted by the big market in China, and the market strategy is planned (WFOE and direct investment). However, Infuser focuses on the development in the current European markets, where it can gain more capital in order to start the Chinese market expansion. Infuser believes in the market potential in China.

#### **Biokube**

## 1. General introduction

Biokube was established in 2004 and now has 17 employees. Biokube's business idea is to develop and sell a solution for water cleaning. Its products have been sold to 50 countries worldwide. Biokube has production in India (that only supply the Indian market), Malaysia (that supplies the far Eastern markets except for China) and Czech Republic (other markets). Internationally, Biokube is working with a partner model to expand its reach. In this model, Biokube provides product and technology, while the local partners develop the local markets. Biokube believes this to be the easiest way to sell their solutions in many different markets.

## 2. The Chinese market expansion

Biokube is not currently present in the Chinese market yet, but Biokube is actively looking for a right partner to engage with. Biokube has received different proposal from Chinese companies. As explained by the CEO, it is due to the good products Biokube has. Back in 2013, a Chinese company approached Biokube and wanted to acquire the company. However, the deal never came through, as "the deal was not right, and things got weird in various ends", the CEO explained in the interview. Biokube is currently using different consultancy companies to find the right partner in China. The partner should be a strategic partner. Once the partnership is established, Biokube will begin a production line in China, as the company believe that it is not sufficient to provide products from its other production locations.

With a partnership, Biokube will also be able to raise capital to support its market expansion in China. For instance, Biokube will be able to hire more employees and start manufacturing. Biokube will require a big upfront payment from the coming Chinese partner. By having this requirement, Biokube will minimize its risk of having a not strong enough partner in China, risk of market expansion failure, and risk of losing its core knowledge of its products. Furthermore, Biokube can also be more confident into the Chinese market as one company is willing to invest big into the product and solution.

In a JV setup, Biokube will require board seats and also remain in control over production plan, have Danish employees in the JV and also has veto right. By having a local manufacturer, Biokube will be more agile to accommodate local demands, and thus also be able to react faster and produce localized products.

## 3. Performance in China

Currently, Biokube has only sold a few of its cleaning solution in China, as it yet has to find a suitable partner in China. Biokube believes that it is ready for the Chinese market and believes that their business model is the right one for expansion into China. Additionally, Biokube believe in their product and solutions having a big potential in the market.

## 4. Summary

Biokube is attracted by the Chinese market, where the company believe that there is a big market potential for their solutions and products. It believes that it is critical to have a local partner and local production in the Chinese market to have success. Biokube is still looking for a suitable partner to kick-start its market expansion.

## Aquaporin

#### 1. General introduction

Aquaporin was founded in 2005. It currently has 50 employees in Denmark, 13 employees in Singapore, and another 23 in China. According to the company it is "dedicated to revolutionizing water purification through the use of industrial biotechnological techniques and thinking." (Aquaporin company website) The company's product is capable of separating and purifying water from all other compounds. The company's headquarters, production and testing facilities are located in Denmark, while it has a laboratory in Singapore and another production site and sales office in China.

## 2. The Chinese market expansion

Aquaporin is a relative new company and mainly an R&D company. Before Aquaporin looked elsewhere to expand its market, it was approached by two Chinese companies, InterChina

Water and Poten Environment, for partnership and collaboration. The communication and negotiation began in 2013 and the three parties announced an agreement in 2015.

Although Aquaporin did not plan to enter the Chinese market back then, it was still aware of the fact that it would need a strong local partner, if they would expand into the Chinese market. The three companies sat up a JV called Aquapoten in China, where InterChina Water, Poten Environment and Aquaporin had 20%, 45% and 35% shares, respectively. Later on, InterChina Water sold its shares evenly to Poten Environment and Aquaporin. Aquapoten has the exclusive right of Aquaporin's products in China.

From Aquaporin's website introduction of its Chinese partner, it states that "Poten Environment is a leading water environment solutions & services provider in China with 20 years of experience in the environmental service industry." (Aquaporin company website) From the agreement with the two Chinese partners, Aquaporin received a big upfront payment, which was used to fund its product development and production capability. Furthermore, it was agreed that Aquaporin will receive milestone payments and royalty payments up on the progress of the sales. For Aquaporin, selling off the rights to the JV was a "tradeoff", as they have now sold off the rights to the product to the potentially very large Chinese market to the JV, but on the other hand did they receive necessary funding.

Looking on the change in the company's human resources, it, from the beginning of the negotiations, hired a Chinese employee in order to smoothen the communication with the Poten and InterChina. The Chinese employee also had a profile to help out with other relevant tasks. After the deal was closed, the JV expanded in China, while Aquaporin later on also established a new company in Denmark, which will maintain large scale production of its product. Following the JV, a new Chinese VP was also hired and the employee count in China has grown to 23. There is a large market for tap water purification in China, and thus Aquaporin has now developed suitable membrane sizes used for tap water cleaning. The membrane production will be kept in Denmark, which is the core know-how knowledge. They will be shipped to China, and be installed into the end products then sold as a bundle to the end users.

With the JV set-up and the partner's local connections, the JV is involved into formulating and editing industry standards, thus the company is working on changing the local contexts and in the end hopefully benefit from this.

#### 3. Performance in China

Aquaporin is very satisfied with the performance of the current JV setup. The communication between the two companies is going smoothly, according to the company, and its Danish located Chinese employees are very useful in bridging any cultural and business differences. If there is

need to hire more employees to support the Chinese market both in Denmark and China, Aquaporin and Aquapoten will do it.

## 4. Summary

Aquaporin was not planning to enter China, but was approached by two Chinese companies. It entered into a JV partnership with them and received upfront payment to fund its product development. Besides a sales office, it also has assembly and manufacturing in China, and the company is currently very optimistic about the future of the Chinese market.

## **Danish Power Systems**

#### 1. General introduction

Danish Power Systems (DPS) was founded in 1994. DPS, which is engaged with the fuel cell development, currently has 15 employees. In Asia, DPS is represented in China, South Korea and India.

## 2. The Chinese market expansion

Since 1987, DPS's CEO have had on and off contact with Chinese companies through his business engagement as well as through his cooperation with DTU (Danish Technology University). Throughout the years, the CEO has built up a Chinese network within the relevant industrial field with professors and experts. In 2015, DPS was actively looking for more international customers and due to the CEO already established Chinese network, DPS also began to into the Chinese market.

The CEO is very clear about the company being in need for a local partner to develop in the Chinese market with. As a small company, DPS does not have the enough capital and human resources to develop the market alone. Furthermore, DPS is also applying the same operation mode in South Korea and India. To start with, the CEO talked to his contact, and attended an exhibition in China. From there, DPS met a Chinese company, Kunshan Sunlaite New Energy Technology Co., LTD (Sunlaite), who was very interested into their product and advanced technology from Europe. At the same time, there were some other potential customers who also showed some interest into the company, however the interest of further cooperation was quite limited.

After evaluation, in 2016, Sunlaite became the exclusive sales agent for DPS in China.

By having a sales agent in China, DPS is free from investing more capital to develop the market. So, the organisational structure and personnel have not changed due to the new set up in China.

Besides the Sunlaite's efforts, DPS CEO is also travelling to China and doing market research to know more about the market and customers. The CEO is also contacting Chinese universities and co-supervising Chinese PHD students, by having those network, he can get more knowledge about the industry. The CEO is also meeting Chinese government delegation and company delegations, where he had chance to present the company. Furthermore, DPS is also part of the DCH program from DI and also contacting with Danish embassy in China.

The potential customers for its fuel cell in China are universities, energy companies and automotive companies. It is a niche market in China. Only recently couple of years, the Chinese government assigned some funding to develop the fuel cell. The CEO believes that its know-how knowledge is well protected. He stated in the interview that, it is very difficult to copy its products, as the field it self is very difficult.

## 3. Performance in China

So far, the performance in China via the sales agent is not that promising. Even though the CEO has lots of Chinese network and Chinese experience, during the interview, the CEO has also showed his uncertainty about the business culture in China. Due to the market development in Asian countries varies among China, South Korea and India. DPS sees more returns from South Korea and India markets, and also more returns from the European market. As a small company with limited resources of capital, human forces and time, DPS has put the Chinese market expansion into the second priority.

#### 4. Summary

DSP is relying on sales agent in China to develop the market. The outcome is not that positive at the moment. Yet, DSP is not committing many resources into the development, and considering of staying away from China.

## **Sub Summary**

As described in the company cases above, the 11 companies have chosen different paths to reach the Chinese market, and the companies' choice of strategy is marked by their different characteristics. However, it is also clear that some are choosing the same strategies, and these differences and similarities will be highlighted and analysed further in the following part of the analysis.

Figure 8 has been prepared in order to create an overview of the 11 companies' situation and current status and will serve as foundation for the upcoming cross company analysis.

Aquaporin A/S V	Biokube A/S Was	Infuser ApS	Sensatec Danmark Soil t ApS	Ejlskov Consult A/S Soil t	Danish Power Systems ApS	Windar Photonics A/S	Resolux ApS	Senmatic A/S	Cotes A/S	Jomitek ApS	Name In
Water	Waste water	Air	Soil treatment	Soil treatment	Power generation	Wind	Wind	Wind	Wind	Wind	Industry F
2005	2005	2011	2006	1999	1994	2008	2003	1975	1986	1997	Founded Size
86	15	45	50	13	28	30	80	100	60	10	
2013	2013	2015	2016	2014	2015	2013	2009	2014	2015	2016	enter / involve China
00	12	4	10	15	21	5	6	99	29	19	founded and enter China
Market seeking, strategic asset	Market seeking	Market seeking	Market seeking	Market seeking	Market seeking	Market seeking	Customer invitation- relationshi p	Market seeking	Market seeking	Market seeking	Entry motivation
						Direct exporting- distributor, sales branch		Direct exporting - sales branch		Direct exporting - foreign-based distributos or agents, JV	enter/ founded Entry Aready applied involve and enter motivation entry mode, but not China China anymore
JV, Direct investment				Direct exporting - domestic division, travelling sales	Direct exporting - sales agent, travelling sales	Direct exporting- domestic division, WFOE	Direct investment, Direct exporting - domestic division, travelling sales,WFOE	Direct exporting- domestic division, WFOE,traveling sales	Direct exporting - domestic division, travelling sales,	Direct exporting- domestic division, sales branch, travelling sales	Currently applying entry modes
	TBD, but keen on WFOE, and direct investment	TBD, but keen on WFOE, and direct investment	TBD, but keen on JV	Direct exporting- WFOE, JV	Direct exporting- WFOE, JV			Direct investment, Direct exporting- foreign-based distributors or agents		Direct exporting- WFOE, JV	considering applying entry modes
External and internal funding	External and internal funding	Internal funding	External and internal funding	External and internal funding	Internal funding	IPO	Internal funding	Internal funding	Internal funding	Internal funding	Finance
23+4 Chinese employees	No Change	1 Chinese contract consultant	No Change	1 Chinese employee	Chinese sales agent	3 Chinese employees	15 Chinese employees	3 Chinese employees	2 External Chinese employees	Internal 1 Chinese full time, funding 1 Chinese part time	Personnel
Joint Venture org.	No Change	No Change	No Change	No set up in China	Chinese sales agent	Sales office in China	Sales, sourcing, phurchase, manufactuering set up	Sales office in China	No change	Sales office in China	Organisational structure
original products and localized products	original products and customerized products	original products and customerized products	original products and localized products	original products and localized products	original products and localized products	original products and localized products	Product				
Expects return in coming years	Observing the marke, looking for partner	Observing the market	Observing the marke, looking for partner	Expects return in coming years	Expects return in coming years	Expects return in coming years	Positive market return-17% revenue generation	Expects return in coming years	Expects return in coming years	Positive market return- Breakeven	Performance in China
No	Yes	Yes	Yes	Yes	Maybe	No	Yes	Yes	No	No	Move production to China

Figure 8. 11 company cases summary. Source: own preparation.

## **Cross company analysis**

It is clear that the internationalization in the Chinese market brings changes to each company both internally and externally.

Internally, companies are actively looking ways to raise capital to support their market expansion activities, either by performing better in the current markets (try to get more sales in their current European markets (Danish Power Systems, Infuser, Sensatec) or just internally (Jomitek, Cotes, Senmatic, Resolux, Ejlskov Consult) or externally (IFU (Infuser), IPO (Windar Photonics), strategic asset partnership (Sensatec, Biokube and Aquaporin).

Organisational structures are changing gradually to support the market entry strategies; companies expand its structures both in the Danish headquarters and also Chinese local subsidiaries to be responsible for the market expansion. Even companies who do not hire own employees are instead expanding their sales force by having a local distributor (Senmatic) or sales agent (DSP), local JV partners (Aquaporin), via gentlemen agreement partner (Cotes), or via external exporting programs and consultancies. Hiring new Danish and Chinese personnel is a result from expanding its organizational structures.

Externally, all the 11 companies express their readiness to adapt their products and solutions to the local markets, even though some of the companies' products are more standardized. The operation modes of each company are quite similar, as no companies are considering licensing or indirect exporting. Direct exporting (WFOE) and JV are the most popular modes.

After going through the changes in all the 11 SMEs internationalization, we can see all changes stem from the market focus switch to China. The motivations of looking into the Chinese market are almost the same. Yet, all the 11 companies' internationalization progress and performances vary from each other.

## **Entry motivations**

All of the companies have almost the same market focus, that is the Chinese market, which is in accordance with this study's methodology. However, the strengths of their focus vary a great deal. Some of the companies have full focus on their market development, while others split their focus to different markets, thus the Chinese market expansion is not, in all instances, the first priority.

It is fair to assume that due to the vastness of the market in China, the potential all of the companies have is quite large. However, based on the interview, the potential for companies within the wind industry seems like the most apparent. All of the relevant interviewed

companies claimed in the interviews, that China is the future for the wind energy industry and it is currently enjoying the full support from the Chinese government. Jomitek CEO said during the interview, "China is going to be our home market in the future." The Chinese wind turbine market is marked by fierce competitions by domestic companies as well as international players, why some of the major Chinese OEMs, such as Goldwind and Envision, are also competing for market shares internationally. Therefore, if the Danish companies become a supplier to some of those Chinese OEMs, they would also benefit their reach in other parts of the world.

When studying the answers that I received during the interviews, it is clear that nine of the 11 was clearly attracted by China due to the large market, thus their motivations are market seeking. The remaining two companies, where the answer is not that clear are Resolux and Aquaporin, as their initial motivations were more network related.

Resolux went to China due to its relationship with Vestas. Following Vestas to China was a way for Resolux to keep its supplier status at Vestas, but as Vestas wasn't a big player in China at that time, and thus didn't deliver that many orders to Resolux in China, the Resolux developed its sales network and managed to expand its customer base in the new local market.

Back in 2013, Aquaporin was still just a development company that was fighting to get its product to the market. The development was a capital-intensive process, and while the company was not actively seeking a Chinese partner, the company entered into discussion with their current Chinese partner, when they were approach by the Chinese company. According to the interview, Aquaporin accepted the JV agreement as a tradeoff deal, as the company, as part of the agreement, received considerably equity investments in Denmark, which was used to channel into the process of getting the product on the market.

Even though that two of the companies' internationalization process in China was more network-based than market seeking, Resolux later focused on expanding their sales capabilities, while the main reason for Aquaporin's current Chinese partner to invest in the company was that it wanted to expand Aquaporin's market in China. Hence, I can with a high degree of certainty conclude that Danish SME's within the clean-tech sector is internalizing to expand their markets.

**Assumption 1 (A):** The majority of Danish SMEs within clean-tech sector are actively

seeking for market in China. Strongly Supported.

**Assumption 2 (A):** The majority of Danish SMEs within clean-tech sector are actively

seeking for resources in China. Strongly Rejected.

**Assumption 3 (A):** The majority of Danish SMEs within the clean-tech sector are expanding

into China to follow others within its network. Rejected.

## **Entry strategy**

After evaluating the 11 companies statement regarding their choice of entry strategy, a pattern of trial and error is emerging. Many of them have tried different entry modes. Some of the companies are also considering and planning for the next step of the entry strategies.

After they have gotten some initial experience, the 11 companies are, according to the statements in the interviews, all ready to adapt their strategies. However, due to the uncertainty and limited resources, three companies (Sensatec, Biokube, and Danish Power Systems) are also thinking of staying away from the Chinese market for now and instead focus on other markets where the return of investment is estimated to be higher and faster. The CEO from Sensatec stated during the interview "even though there is big market in China, we have to focus on other markets and collect more capital first before we are confident enough to come into China." See figure 9. It is noticeable that none of the three companies that are considering staying away are within the wind industry, suggesting that the wind industry is perhaps an easier or more attractive market to be operating within.

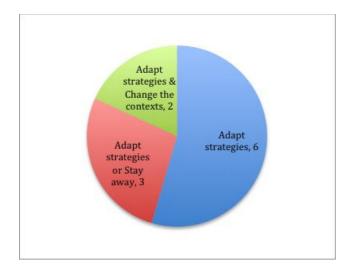


Figure 9. Company market strategy choices in China. Source: own preparation.

Entry Modes	odes Companies		Jomitek	Cotes	Senmatic	Resolux	Windar Photonics	Ejlskov Consult	Sensatec Danmark	Infuser	Biokube	Aquaporin	Danish Power Systems		
		Domestic-based export merchants													
1	Indirect	Domestic-based export agents	None of the companies have choosen indirect exporting												
1	exporting Cooperative organizations		None of the companies have choosen muliect exporting												
		Export-management companies													
		Domestic-based export department or division	<b>✓</b>	✓	✓	✓	<	<b>√</b>							
2	Direct	Overseas sales branch or subsidiary	<b>√</b> ○		✓	√ 🕲	✓	0		0			0		
2	exporting	Traveling export sales representatives	✓	✓	✓	✓	✓	✓					✓		
		Foreign-based distributors or agents	<b>®</b>		0		<b>®</b>						✓		
3	3 Licensing		None of the companies have choosen licensing												
4		Joint Venture (JV)						0	0		0	✓	0		
5	•	Direct investment			0	✓				0	0	<b>✓</b>			

<sup>✓</sup> Currently Applying

○ Considering Applying

③ Already Applied, not anymore

Figure 10. Market entry strategies. Source: own preparation.

Even if the three companies are considering staying away from the market, yet, all the 11 companies have their own preference of market entry strategies. See figure 10. Each company has been through their own trial and error experience. Windar Photonics began with a distributor in China, but later changed and instead focused on their own subsidiary in China. "We did not know how it would go in China, at that time, it seemed right to have a distributor. But now, it has changed", the CEO of Windar Photonics said during the interview. Other companies showed the same pattern, which is that they try and learn about the market, then adapt their strategies accordingly to gradually fit in.

To sum up, as illustrated in figure 11, three companies are applying only one entry mode, and eight companies are applying two entry modes.

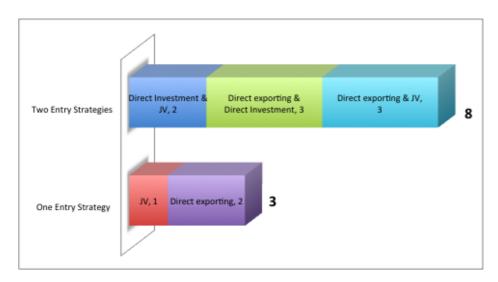


Figure 11. Companies are adapting entry strategies in the Chinese market. Source: own preparation.

As shown in figure 12, obviously, direct exporting is the most popular entry mode; eight of the 11 companies are applying.

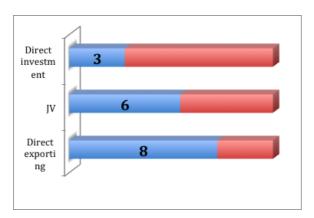


Figure 12. The three chosen entry modes. Source: own preparation.

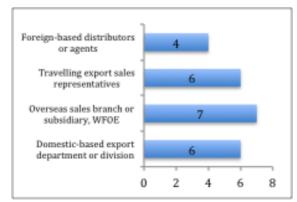


Figure 13. Four modes of direct exporting application details. Source: own preparation.

Among the four different direct exporting modes, as shown in figure 13, WFOE is the most popular one as it is used by 7 of the 8 companies. According to the interviews as well as Khanna et al. (2005), the reason to choose WFOE rather than JV is mainly to lower the risk of IPR theft. CEO from Resolux explained that, "we have a stronger position and footprint in the country if we do on our own. We have seen other Danish companies got very disappointed. They worked together with local partners, and suddenly their products were copied, and the partner started own production. Windar Photonics, Senmatic and Infuser have shared the same concern. This suggests that the high risk of having local partner, where the know-how knowledge may be stolen. Furthermore, the interviews also confirmed that it is rather easy to operate a WFOE in China, as the government, except for a few regulated industries, not restrict foreign companies from establishing subsidiaries. Senmatic confirmed that, "it is very easy to set up an company in China". To the contrary, the Chinese local government often have set out goals to attract foreign companies by offering them tax benefits, attractive lease terms or similar.

**Assumption 4 (A):** The majority of Danish SMEs within the clean-tech sector are only using

one market entry mode when they enter China. Rejected.

**Assumption 5 (A):** The majority of Danish SMEs within the clean-tech sector are adapting

their market entry strategies in the Chinese market. Supported.

## Local network

In order to work with the political and social systems voids in China, no matter which entry strategy companies are applying, all the companies have stated the importance of a good network while doing business in China. Having a good network also means that people have a good understanding of the Chinese culture. Even companies who prefer direct-exporting WFOE or direct export, they all state that they still need a good network and will hire local Chinese employees. Senmatic CEO stressed in the interview that, "it is not critical that the sales employees can speak English, as long as my country manager can. The sales need to connect with our customers, they know better about the language and culture than Danish ones." Windar Photonics, Senmatic and Resolux are currently expanding their Chinese teams by hiring more local talents. The local talents are mostly within sales function, while the technical function is still mainly located in Denmark. This indicates the concern and uncertainty toward IPR theft risk from the Danish side. Furthermore, this also reflects back to their market motivation. Coming to China to expand market not necessarily have to improve product and the local technical position.

It is noticeable that, eight companies are using external services to support their expansion in China. Jomitek, Senmatic, Infuser and Senmatec are involving in DI. Windar, Cotes and Resolux are member of Danish Export Association. Jomitek is also part of VITUS program from the Foreign Ministry. Biokube is hiring consultancy companies. This shows that SMEs are trying actively to build networks with external sources' assistance, and also benefit from those networks.

It is eye-catching that how confident the companies are in terms of their own know-how knowledge, products and solutions. Sensatec said during the interview that, "we are the only one who is providing solutions in a biological way." Windar Photonics said that, "we are the only one in the market with such good solution and a reasonable price." Still, all of the 11 companies express their willingness to localize products and solutions to meet Chinese customers' requirements. Examples of this is that Aquaporin developed a new product solely for the Chinese market, but the company's is now also trying to launch the same product into other global markets. Windar Photonics is selling standardized products to Chinese customers, but they also do customized services for important Chinese customers. Jomitek is adding new features to its current products based on the Chinese market feedback. Resolux has established a sourcing team to optimize their production and products to better serve the Chinese customers.

**Assumption 6 (A):** The Danish SMEs within the clean-tech sector are optimizing their products and internal resources during the market entry. **Strongly supported.** 

## **Performance in China**

Of the 11 companies in my sample, three are not yet present in the Chinese market yet. Biokube and Sensatec are waiting to enter until they have found the right partner, while Infuser is waiting due to lack of internal financial resources.

Of the remaining eight companies, which have already begun to develop the Chinese market, two companies (Resolux and Jomitek) are already receiving positive investment returns, while four of the companies (Cotes, Senmatic, Ejlskov Consult, and Aquaporin) are expecting to see some return in 2017 and in over the coming years. Danish Power Systems is expecting better performance from its distributor, although the company's stance to the Chinese market is quite passive and thus the company only needs very few orders from its distributors before the effort makes sense. During the interview, the CEO from Danish Power Systems explained in the interview why he did not make follow-up phone call to potential Chinese clients, "I have very limited time, so I have to prioritize other things".

In general, all the companies express their high confidence in the Chinese market; even though they all know that the return of investment may take long time in China. During this long time investment process, companies are also losing their confidence and thinking of staying away. The companies who are already started expansion activities in China are satisfied with their current performance. From the return of investment, the companies within wind industry are generally performing better than the companies from environmental projects. This suggests the industrial matureness can affect foreign companies' investment and return in the host country. The wind industry is better established compared to fuel cell and environmental protection areas.

An important requirement of the companies' local partners who prefer JV is that, the local partners need to be within the fields and have the right contact with the stakeholders and customers. Biokube explained their criteria of a JV partner as: "they need to be within the field, and have the right connections with stakeholder and potential customers."

As shown in figure 9, there are two companies (Windar and Aquaporin) are working on changing local contexts in the Chinese market. Windar Photonics has good relationship with one of its customer, who has the power to set the advanced standard within the OEMs. While Aquaporin's Chinese partner has strong connection within the field, where Aquaporin can be included to the industry standard edition progress. This suggests good network is a critical asset for SMEs in the Chinese market. Foreign companies have opportunities to expand its market and its influence power in the market.

Even though the companies intend to hire local employees. However, they explained during the interview that, it is not easy to find suitable people with the right skills. "We were very lucky to be able to hire someone within the field who can also speak English", the CEO of Jomitek said, while Cotes on the other hand has had some problems: "He (the Chinese employee from L&S) can not understand what I mean, I can not understand him. He was transferring wrong information to the customers." Even though Chinese young talents are quite well educated, yet, their English capabilities are weak. Besides the right skills, companies explain their concern of the local talents' credit. As experienced by some companies, for example Resolux, it will harm their business and reputation in China if they hire an employee, who turns out to be not trust worthy.

Sensatec and Biokube are still looking for partners in China, and as a consequence do not have a local presence. Instead, the two companies in question are using external resources to represent them with the expectation to find the right partners. Relying on external resources, this it self adds more uncertainty into the process, and plus with limited resource commitment from

external ones. However, it takes time and commitment for the Danish companies to find the right partners themselves. Those companies can choose either to wait for the external consultant companies or other sources, at the same time, bear the risk of missing the best time to come into the Chinese market; or they should commit more into the market to faster the process, and try other ways to search for its qualified partners.

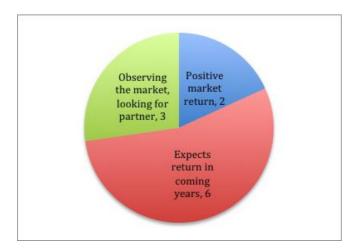


Figure 14. Companies' performance in China. Source: own preparation.

**Assumption 7 (A):** The majority of Danish SMEs within the clean-tech sector are performing well in the Chinese market. **Supported.** 

# **Results from Study**

Assumptions	Analysis results
A1: The majority of Danish SMEs within the clean-tech sector are actively seeking for market in China.	Strongly supported. Nine out of the 11 companies (81.8%) are seeking for bigger market in China. China is the biggest market of clean technologies, the development pace is fast, and the demand of better solutions is high.
<b>A2:</b> The majority of Danish SMEs within the clean-tech sector are actively seeking for resources in China.	<b>Strongly rejected.</b> None of the 11 companies is seeking for resources in China.
A3: The majority of Danish SMEs within the clean-tech sector are expanding into China to follow others within its network.  A4: The majority of Danish SMEs within the	Rejected. Two companies (18.2%) are following their network (customer and partner) to the Chinese market.  Rejected. Three companies prefer using one
clean-tech sector are only using one market entry mode when they enter China.	entry mode (JV or direct exporting) when they enter China.
<b>A5:</b> The majority of Danish SMEs within the clean-tech sector are adapting their market entry strategies in the Chinese market.	<b>Supported.</b> Eight companies (55%) apply two entry modes (combination of JV, direct exporting, or direct investment) when they enter China.
<b>A6:</b> The majority of Danish SMEs within the clean-tech sector are optimizing their products and internal resources during the market entry.	Strongly supported. All the 11 companies show their readiness to optimize their products and resource planning to adapt to the market when it is needed.
<b>A7:</b> The majority of Danish SMEs within the clean-tech sector are performing well in the Chinese market.	Supported. Seven companies (63.6%) perform well in China. Two of the seven (18.2%) are having positive return already, and the other five (45.5%) expect promising return in the year 2017.

Figure 15 Result from study. Source: own preparation.

# Discussion, further research and implications

## **Discussion**

In this section, four main themes will be discussed; 1) The Danish SMEs are seeking for a larger market in China. 2) Direct exporting, JV and direct investment are the only three chosen entry-modes. 3) Resource commitment, entry strategies, and industry impact on the performance. 4) Generalizability of the study.

## 1. The Danish SMEs are driven by market seeking to internationalize in China

From my analysis, the evidence suggests that the Danish SMEs within the clean-tech industries are driven by bigger market to the Chinese market. Clean technology is connected to the global agenda within the environment protection and sustainability of society. There are growing demands of clean technologies globally to solve the severe environmental problems. With the fast growth of the international markets, the demands from those markets grow as well. Hollensen (1998), Chen and Messner (2009), Burca, Fletcher and Brown (2004), and Karagozoglu and Lindell (1998) have found the same about the SME's internationalization motivation.

The case studies show that, SME's internationalization decisions are initiated by certain people, and mostly by CEOs or owners. This aligns with Hollensen (1998). The 11 SME's CEOs, the owners, or the people who are in charge of the Chinese market development, all showed their strong confidence in the Chinese market, as they all claim that the Chinese market is huge, and that having a small share of the market is good enough for their company. As explained by Albaum, Strandskov & Duerr (2002), a bigger market stands for bigger profit. Additionally, like introduced earlier, the Chinese market has huge potential for clean technologies, hence being part of the Chinese market means higher potential and in the end larger profit.

Besides the confidence in the Chinese market, the analysis show that all the companies within clean-tech sector believe that they own unique knowledge, products or solutions, which can benefit their customers in foreign markets. This belief is again aligned with the finding from Hollensen (1998) and Root (1994). "We are the only one in the market", "our product is very competitive in terms of functions and price level", said interviewees from six of the companies during the interviews. This confidence of their products provides strong support of their market-seeking motive. However, it is important to be aware of that, not all of the six companies have success in China so far. Companies like Sensatec and Biokube are even not present in the

market at the moment. It is questionable that is it just because the two companies lack a JV partner, or their solutions and products really fit the market in China.

Two of the companies followed others within its network to China. They are partners (Aquaporin) or customers (Resolux). This phenomenon fits the findings from Ellis & Pecotich (2001) and Freeman et al. (2006), where they conclude that networks play a role to motivate companies' internationalization. After being initially introduced to the market, the two companies are now driven by the bigger market in China than just purely following their network. By following others, Aquaporin and Resolux got the chance to break into the Chinese market. At the same time, it also requires some investment or trade-off, which meaning, higher risk.

However, none of the companies seeks resources in China, for instance seek for raw materials, production labour or knowledge. Three companies (Jomitek, Cotes, and Windar Photonics) even stated clearly that they do not have plans to move production to China. The companies do not believe that they can significantly lower the cost of their production by moving to China, as they also have to add additional management effort to control and keep up the quality of the products, besides the labour cost in China is not that cheap any more. As the finding from Davies (2013) shows, the labour cost in China is getting more expensive, which might be an explanation to this result, although it is not possible to conclude this from my study. It is reasonable to conclude that those three companies are highly afraid of losing its know-how knowledge under the production process in China.

Market seeking is the main driver for the companies to enter the Chinese market, yet, there are also companies who follow their network to the new market, and at the same time, they seek for bigger market as well. With almost the same driver that leads those companies to internationalize, however, each company are committing different scales of resources and going after different entry modes.

## 2. Direct exporting, JV and direct investment are the three chosen entrymodes

The SMEs are confident with the target market and their own business ideas and products. Yet, they are committing different scales of resources into the target market. From the case studies, we can conclude that the companies are developing with different pace and applying different strategies. Six companies are adapting their strategies and two companies are changing the local contexts while adapting their strategies, and finally three companies are considering of staying away from the market.

Even though the companies are planning differently, and have their own experiences and preferences of entry modes. It is clear that direct exporting (8 companies), JV (6 companies) and direct investment (3 companies) are the only three entry modes that are included by Danish SMEs. It is interesting that none of the companies have chosen licencing as a part of their entry strategy. Although this study is solely focusing on SMEs, I guess that not that many large-scale Danish companies are choosing licensing as the primary export strategy in China. Typically, the company would like to be in control with the market development and IP rights, especially for such a potentially big market, as the Chinese. Thus it makes more sense for the companies to either establish a WFOE, where they are in full control or a JV, where they are in partly control.

In general, when the companies choose their resource commitment level for a specific market, this is a reflection of each of the company's total resource capacities. Being a SME naturally limit the resources by internal challenges during the internationalization. Even though all the companies believe that it is also an advantage to be a smaller company, due to the added agility and faster decision process, their smallness is also a liability. They do lack capital, and human resources, and also they have a general shortage of organizational competencies. Buckley (1989), Oviatt & McDougall (1994), Bell (1995), Zacharakis (1997), Beamish (1999), Lu and Beamish (2001) have made same statement from their research. As a consequence, they are not able to allocate enough resources to only one market. In other words, it is a big risk for a company to invest a lot of its resources only into one market. Therefore, some of the companies are half-hearted. Infuser, Sensatec, Biokube and Danish Power Systems are not giving their full commitment to the Chinese market. Due to the limited resource of time, capital or network (partnerships), those companies have to prioritize other markets where they believe that they can somehow benefit more and faster, such as the European markets. Then later on, they can be stronger and be more ready for the Chinese market. But, they are observing the market. This lead some companies to consider of staying away from the Chinese market. Given the complexity and difficulty of entering the Chinese market, I argue that this half-hearted strategy will never result in any long-term success. So far the four above mentioned companies haven't had any substantial luck, although this can change.

According to the companies who are thinking of staying away, they have their own strong arguments. Sensatec and Danish Power Systems lack time or capital for the market expansion, while Sensatec and Biokube both lack a suitable partner. Capital and time are the resources that SMEs lack in general. However, I argue that capital can be raised by different means and time is a matter of priority. This just shows the Chinese market does not receive full commitment from Sensatec and DPS at the moment and that they have doubt about their products viability here.

Both Sensatec and Biokube believe it is critical to have a partner in China to develop with. As two of the 11 companies are struggling to identify a partner, this could be an opening for some of the governmental supporting organizations to extend their services here. On the other hand, other SME's have been able to establish profitable partnerships, why Biokube and Sensatec might down prioritize and thus it is merely an internal problem within these two companies.

Besides adapting their strategies to the local market, companies are also working on changing the local contexts. Aquaporin has a strong local partner, who can bring the advanced knowledge within the field from Aquaporin to the local Chinese market, and involve the JV setup into the industry standard formulation process. Windar Photonics also has a good and promising product, which can bring efficiency of wind turbines. Windar Photonics' product is being accepted by a leading Chinese OEM, where there is a high possibility that this product can be included into the standard configuration. High efficiency is the key development trend of future wind turbines.

The companies who are actively adapting to the market are also investing in building their network via either a JV or WFOE with local employees, where the Danish SMEs involve external organizations with established channels to the market or hire local Chinese employees. As such this is considered to be a viable way to enter the market. Luo (2016), Sharma & Johanson (1987), Johanson & Mattson (1993), and Johanson & Vahlne (1990) all find similar results, that SMEs can mitigate their weaknesses by using other's access to local market knowledge, to obtain initial credibility, and to lower cost and risk.

During the internationalization process, Danish SMEs are also faced with fund raising problems. Hamilton and Fox (1998) mentioned the same challenge for SMEs. Institutions are asking for high interest or other forms of payback from lending out capital, which is not attractive for SMEs. Therefore, SMEs are looking for other ways: Develop in other markets to save up for the Chinese market expansion (Danish Power Systems, Sensatec, Infuser), source internally from company capital (Jomitek, Cotes, Senmatic, Resolux), or strategic partners who can inject capital to support its internationalization activities (Biokube, Aquaporin). This finding is very interesting. Especially for government organisation, which provide funding and other services. They should prioritize to make it more affordable for SMEs to raise capital for their export ventures, instead of providing assistance, for example, a market research services.

Even though only three entry modes are being considered by the 11 companies, I can see there is a pattern of their market entry strategies choices. According to my sample, the companies choose a high-commitment mode from the beginning of the foreign market entry. None of the company considers the mode of indirect exporting, or licensing. There are only three modes are

in the entry strategy, and they are direct exporting, JV and WFOE. The case shows that, the companies do not follow any stage development pattern, from Johanson and Weidersheim- Paul (1975), Johanson and Vahlne (1977), Juul and Walters 1987, Welch and Luostarienen (1988), which otherwise illustrated a pattern from low-commitment mode to high-commitment mode.

So at the same time that the Danish SME's do not follow the traditional stage-model, my findings also shows that the companies have a higher possibility to perform better with higher resource commitment. It looks like that the level of resource commitment and industry matureness impact the performance.

Furthermore, from the geographical perspective, Danish SMEs do not necessarily follow the pattern that internationalization will start from neighbouring countries or the markets where the difference in every matter is minor, which was otherwise a part of the stage model (PavBilkey and Tesar, 1977; Cavusgil, 1984; Johanson and Vahlne, 1977, 1990, 1993; Johanson and Wiedersheim-Paul, 1975). For some Danish SMEs, China is their first country to internationalize. For instance, Resolux and Windar Photonics.

In fact, the companies' internationalization does not follow the stage model, nor develop along their networks to regions and customers where they are familiar. They are more driven by bigger market, even though they do not possess any network advantages. Young, Huang, and McDermott (1996), Schulz et al (2009), Paunovic and Prebezac (2010) and Kotler (1988) all explain that SMEs' internationalization modes are not path-dependent, or incremental, and this fits into my findings, as there is no pattern of the 11 companies' internationalization.

Additionally, the companies use multiple entry modes at the same time, just as mentioned by Ramón-Jerónimo, Kamakura & Gravel (2011). From my study, it shows that companies do not always have well-planned long-term strategies ready, as stated by Serveis et al. (2008), Merrilees et al. (1998) and Mockaitis et al. (2005). They are trying out different possibilities and entry modes, and to see which one will work. This also shows the flexibility of being a small and medium size company from a different perspective.

Companies are in favour of JV and WFOE when they internationalize in China. This is aligned with the findings from Luo (2001) and Deng (2001), in their study that looked at the entry modes choices of foreign companies in the Chinese market from the host country's point of view. This finding also fits the results from Boyd and Ulrich's (2014) study, which was based on looking at the Danish companies' entry modes choices when they tackle the Chinese market. JV brings good network and sales channels, and at the same time, it requires profit and know-how sharing. This naturally aligns the partners in many ways and binds them closer together. WFOE

is a good option for companies who are financially stronger, and are ready to invest more, and at the same time, expecting higher ROI and can bear higher risks.

A JV or a WFOE can provide platforms for the Danish companies to build their network in the market, and it is very evident that the Danish SMEs are fully aware of the network importance in China. They believe that the good use of networks can speed up the internationalization process and also enhance synergies with other companies within the value chain, which fits in the conclusions from Wilson and Mummalaneni (1990), Dana et al. (1999), and Jones (1999). Due to the limitation of resource, they involve external partners into the strategies. A JV mode include a partner that shares risk and provide capital, and also shares other resources, such as networking and sales channels. A WFOE might be funded internally or it might require involving an external funding sponsor, and hiring local employees who can bring local networking and local presence.

Lu and Beamish (2001) find that alliances with partners who have local knowledge will be an effective strategy to overcome the liabilities that SMEs face in terms of resources and capabilities in the internationalization process. Nummela et al. (2003) believe also that companies can benefit from having vertical co-operations or horizontal co-operations, where companies can create synergies with others to reach certain goals. Having a right partner or right local employee will determine a company's internationalization performance in the host country. With a wrong or weak partner or employee, it will put the progress of its internationalization in the foreign market into pause or stop, and also may cause the company of missing its best timing of entering the market. Furthermore, it may weaken company's confidence in the target market. Just like Danish Power Systems.

# 3. Resource commitment, entry strategies and industry impact on the performance

Even though all of the 11 companies are driven by bigger market potential in China, the performance varies among the companies. Resolux is applying direct investment and WFOE and are so far estimated to perform the best among the sample of companies. Jomitek, Windar Photonics and Sematic are applying WFOE and they are also satisfied with the performance. Aquaporin, which is applying a JV mode are also doing good in China, thus I argue that the choice of entry strategies do not determine the Danish SMEs success in China. Different entry strategies, apparently, all have the potential to bring success to a company. However, although the entry strategies do not determine the success in the foreign market; it will impact on the resource investment level, risk level and ROI level. Root (1994) argues similar by stating that entry strategies will decide company's objective, goals resource, and policies.

From the analysis, it did show that companies with direct exporting (WFOE, sales representative, travelling sales) are performing better than others. This could be due to the flexibility and level of control when applying WFOE and direct exporting with own sales representative or travelling sales. By using JV and/or direct exporting with sales agent, companies have to rely on the partners, and thus the control ability is relatively lower.

Additionally, a pattern from my study is also clear; that the companies who are focusing and committing themselves to the Chinese market development perform better than others. For instance, Jomitek, Cotes, Senmatic, Resolux, Windar Photonics, Ejlskov Consult and Aquaporin are all very focused on the Chinese market, and all of the companies are receiving orders from China, and expecting higher return in 2017 and coming years.

On the other hand, Danish Power Systems, Sensatec, Infuser and Biokube are performing relatively poor, but they are also committing very few resources to the Chinese market. Biokube believes in the market potential in China, yet they are pending on a right partner, which is depending on the work from their partner seeking agents. Therefore, the progress of the four companies is relatively slow or even at a pending status. This finding from my study is similar to the findings from Luo (2003), where the resource commitment from the parent company will impact on the foreign market threat control and local responsiveness. This study indicates that resource commitment will further impact on the performance in the target market.

It is clear that companies with own resources to develop the Chinese market perform better. Seven of the companies in my study has hired their own Chinese employees to develop the market, either in the Danish headquarters or in a Chinese office, and they all believe that they will benefit a lot from this. They all claimed the importance of having Chinese staffs, as they can help mitigate the cultural and language barriers, and also expand the company's networks which can further open doors for the Danish companies. Lindqvist (1997) and Halle'n (1992) are arguing the same. They also state that personal and business networks play an important role to affect the speed of internationalization and communication progress and in general bring people to a common understanding and thus solve potential conflicts faster.

An efficient use of networks can also speed up the internationalization process and also enhance synergies with other companies within the value chain, as stressed by Wilson and Mummalaneni (1990), Dana et al. (1999) and Jones (1999. However, almost all of the companies in my sample do not large networks in China, and thus a Chinese employee and the use of different consultancies with an already established network can be beneficial.

Externally, companies are also vulnerable to environmental changes and at the same time constrained by them. My study shows that there is a performance difference between the

renewable energy sector and the environmental protection sectors. Luo (2016) concludes that environmental and industrial factors and responsiveness for companies have strong relationship. Based on the analysis, I can confirm this relationship, as it is clear that different industries have different business environment for the companies to operate in. Five out of six of the companies with the renewable energy sector (83.3%) are performing well, while only two out of the five environmental protection companies (40%) are performing well. We can see there is big industrial difference in China between those two. Some of the reasons can be that the industry regulations are in different development phases. The regulation for renewable energy (mainly wind energy) was released in 2005, while the environmental protection regulation (air, water and soil) were released between 2013 and 2016. The regulation and thus the industry for environmental protection are thus in its early development and not fully ready for foreign players, while the wind (and solar) energy sector has been developing for more than 10 years, and thus the market is more mature and established to include competition from domestic and international players. This is also in line with Khanna et al. (2005) institutional voids.

#### 4. Generalizability of the study

By having delimited myself to only look at the Danish clean-tech SMEs internationalization in one emerging market – China, the study reaches a high degree of relevance for this specific group of companies looking into expanding in China. However, looking beyond the clean-tech industry, my findings can also be used as reference for Danish SMEs in general which are trying to internationalization in the Chinese market and other emerging markets. My findings such as that resource commitment to the internationalization process is more important than the choice of entry mode for the performance might also be true for SMEs within other industries.

However, the findings of this study are heavily influenced by my choice of method. Firstly, as there is no one theory that could serve my analysis to answer my research questions, I combined five different theories together, and made my analysis based on this extended framework. From the analysis of the internal and external changes of each firm, it helped me to get clear understanding of their entry motivation, strategies, and performance in the foreign market.

Secondly, the findings were based on the semi-structured interviews of companies, and I only interviewed one person from each company. This might have leaded me to only able to collect one-sided information.

Thirdly, my analysis was based on the assumptions, which it might only lead me to look at the relationship among motivation and entry strategies and performance. There are also other

factors that can bring significant impact on company's performance in a foreign market, which might be left out in this thesis.

My analysis does not examine all the Danish SMEs within clean-tech industry that are internationalizing in the Chinese market. My sample is limited to 11 companies due to the limited time resources to collect all the data and information, but my sample does cover companies from different industries within clean-tech field.

The finding that the industry's matureness (regulation in place and general development) might be an important factor for the performance of the SMEs could also very well be true for SMEs within other sectors than the clean tech.

#### **Suggestion for Further Research**

Based on the findings, I see some aspects that could be explored and studied further. Further research can be done with a bigger sample size, where more companies within each fields could be interviewed. Then, the representative power will be stronger. Additionally interviews from different people within each company could also be carried out in order to get a more comprehensive picture of the situation. Furthermore, companies from more industries can be studied. Here, similarities among different industries of their internationalization process in China or other emerging markets could be investigated. Lastly, one could explore the relationship between SMEs and the many organizations that provide different services and programs targeted Danish SMEs, and aim to help them with the Chinese market development. From the interviews with the 11 companies, it is obvious that the Danish SMEs are restricted by their limited resources and knowledge about the Chinese market, and thus many of them use different kind of organisations or consultants to help them overcome this lack of knowledge. One could study further to see whether those current programs and services are sufficient, and what kind of services and programs could provide the right assistance to the Danish SMEs base on their resources and knowledge.

## **Conclusion**

In this thesis, I have analysed the relationship between Danish clean-tech SMEs choice of entry strategy as well as the motivation for internationalization in China and their respective performance in the Chinese market.

The study is interesting due to several different factors. While more than 99% of Danish companies are SMEs, the bulk of Denmark's international trade is carried out by the country's largest companies. Especially export to the Chinese market is very dominated by the large Danish companies, as SMEs' share of export only constitutes 8%. Additionally, the Danish cleantech industry is in a forefront position globally and many Danish companies within the cleantech industry creates products and solutions, which can be sold globally. China is the world's fastest growing market for clean technologies and the industry is being heavily supported by the Chinese government, as the country faces a serious of challenges, which the clean technologies can remedy. Thus my study of the Danish clean-tech SMEs performance and the factors that affect the performance in China is very relevant and interesting.

I based my analysis on a sample of 11 Danish clean-tech SMEs within renewable energy and environmental protection fields. I collected information about the 11 companies through interviews and through secondary sources, and used a combined theoretical framework from Kolter (1988), Dunning (1988), Johanson & Mattsson (1988), Nummela (2002), and Khanna et al., (2005) to analyse the collected information.

### Four important findings

Firstly, I find that Danish clean-tech SMEs are mainly motivated to internationalize due to the large market potential in China. All of the interviewed clean-tech SMEs believed that they own unique knowledge, products or solutions, which they believe they can exploit in China.

Secondly, the SMEs are all adapting their entry strategies as they go along with the internationalization into China, thus they are prepared to change the entry modes they choose initially. I also find that the companies are using more than one entry mode at the same time when entering China. Direct exporting is the most popular entry mode among the Danish SMEs and among the four different modes of Direct exporting, WFOE is the most popular as it is used by 7 of the 8 companies that do direct export.

Thirdly, the performance of the Danish SMEs within clean-tech in China is generally promising. I find that the SMEs who already have begun expansion activities in China are satisfied with their current performance. SMEs within the wind industry are generally performing better than the

companies within other fields. This suggests the industrial matureness can affect foreign companies' investment and return in the host country. The wind industry is better established compared to fuel cell and environmental protection areas.

Fourthly, my analysis showed that the choice of entry strategy has an impact on the performance, but that an entry strategy is not enough to have success in China. However, companies that are applying direct exporting tend to perform better though. This could be due to the flexibility and higher level of control than when using other entry strategies. Additionally, I find that the companies who are focusing and committing themselves to the Chinese market development perform better than others. Hence the more resources they allocate, the better performance will they experience. This finding might be the answer to why Danish SMEs only account for 8% of the total export to China. As the larger companies have more resource to commit to the market development, they will also be more likely to succeed. Danish SMEs have limited resources and as such the effort to internationalization sometimes become half-hearted and this will impact the performance.

#### **Implications for all Danish SMEs**

From the findings, I can also shed some lights on the Danish SMEs' internationalization in the emerging market, China. Danish SMEs from other industries than the clean-tech industry may face similar situations, even though there might be small differences in the regulations and some specific industry factors that plays a role, the complexity in the Chinese market will more or less be the same, when looking at other industries. As my results are very clear in terms of why the Danish clean tech SMEs are entering China, it is highly probable that all Danish SMEs are motivated to internationalize in China in order to seek a larger market. Furthermore, the results from my study that showed that companies who are committing larger resources to the China market entry is performing better is also estimated to be true for all SMEs in Denmark, or even other countries. Thus it is important for SMEs to really commit to the market entry or else just don't' do it as it seems like a half-hearted strategy will be sub-optimal.

## **Bibliography and Appendices**

#### **Bibliography**

Agarwal, S., & Ramaswami, S-N. (2014). Choice of Foreign Market Entry Mode:

Impact of Ownership, Location and Internalization. Journal of International Business Studies, Vol. 23, No. 1.

Agndal, Henrik and Chetty, Sylvie. (2007) .The impact of relationships on changes in internationalisation strategies of SMEs. European Journal of Marketing. Vol. 41 No. 11/12. pp. 1449-1474.

Barton, Sidney L. & Matthews, Charles H. (1989). Small firm financing: Implications form a strategic management perspective, Journal of Small Business Management, Vol.27 No.1, 1-7.

Beamish PW. 1999. The role of alliances in inter- national entrepreneurship. In Research in Global Strategic Management, Vol. 7: Wright R (ed). JAI Press: Stanford, CT; 43-61.

Bell, Jim. (1995). The Internationalization of Small Computer Soft ware Companies: A Further Challenge to 'Stage' Theories. European Journal of Marketing, 29 (8), 60-75.

Bell, J. and Young, S. (1998). Toward an integrative framework on the internationalisation of the firm. in Hooley, G., Loveridge, R. and Wilson, D. (Eds), Internationalisation: Process, Context and Markets, Macmillan, London, pp. 5-28.

Bilkey, W. and Tesar, G. (1977). The export behaviour of smaller-sized Wisconsin manufacturing companies. Journal of International Business Studies, Vol. 8, pp. 93-8.

Boyd, B. and Dyhr Ulrich, A.M. (2014). Market entry strategies into the BRIC countries – a comparison of Danish family and non-family businesses. Int. J. Globalisation and Small Business, Vol. 6, No. 1, pp.15–36.

Bocian, Steen. (2016). Kinesisk økonomi vigtig for Danmark – men aktiekrise giver ikke altid økonomisk krise. Retrieved from <

https://www.danskerhverv.dk/publikationer/analyser/oekonomiske-analyser/Documents/notater/Anotat-Kina.pdf.>.

Burca, Seán de; Fletcher, Richard; Brown, Linden (2004). International Marketing: An SME Perspective. London; Pearson Higher Education.

Buckley PJ. 1989. Foreign direct investment by small- and medium-sized enterprises: the theoretical back- ground. Small Business Economics 1: 89-100.

Calof, J.C. and Beamish, P. (1995). Adapting to foreign markets: explaining internationalisation. International Business Review, Vol. 4 No. 2, pp. 115-31.

Cavusgil, S.T. (1984). Organizational characteristics associated with export activities. Journal of Management Studies, Vol. 21 No. 1, pp. 3-22.

CESFO Annual Report. 2015. Retrieved from

<a href="http://www.sdu.dk/om\_sdu/institutter\_centre/cesfo/publikationer/cesfo\_aarsrapporter/aarsrapport+2015">http://www.sdu.dk/om\_sdu/institutter\_centre/cesfo/publikationer/cesfo\_aarsrapporter/aarsrapport+2015</a>.

Chen, C., & Messner, J.I., (2009). Entry Mode Taxonomy for International Construction Markets. Journal of Management in Engineering, Vol. 25, No. 1, pp.3-11.

Chetty, S., and Patterson, A. (2002). Developing internationalisation capability through industry groups: The experience of a telecommunications joint action group. Journal of Strategic Marketing, 10, 69–89.

Ciszewska-Mlinaric, Mariola, and Franjo Mlinariè (2010). Small companies in a small country: managerial factors, internationalization and performance of Slovenian SMEs. *Managing Global Transitions* 8.3 (2010): 239.

Coviello, N. E., and Munro, H. (1995). Growing the entrepreneurial firm: Networking for international market development. European Journal of Marketing, 29(7), 49-61.

Copenhagen CLEAN Cluster (2011). Klima, energy og miljø. Retrieved from <a href="http://www.regionsjaelland.dk/Politik/vaekstforum-sjaelland/dagsordener%20og%20materialer/Documents/Ajour/Ajour%20maj2011.pdf">http://www.regionsjaelland.dk/Politik/vaekstforum-sjaelland/dagsordener%20og%20materialer/Documents/Ajour/Ajour%20maj2011.pdf</a>.

Dana, L-P., Etemad, H. and Wright, R. (1999). The impact of globalisation on SMEs. Global Focus, Vol. 11 No. 4, pp. 93-105.

Danish National bank (2017). China's significance for Danish exports continues to grow. Retrieved from <

 $https://www.nationalbanken.dk/en/publications/Documents/2017/04/News\_Chinas\%20sign if icance.pdf >.$ 

Datta, D-K., Herrmann, P., & Rasheed, A-A. (2002). Choice of foreign market entry modes: critical review and future directions. International Management, Vol. 14 pp. 85-153.

Davies, Ken (2013). China investment policy: an update. OECD Working Papers on International Investment, 2013/01, OECD Publishing. 1-75.

Deng, Ping (2001). WFOEs: the most popular entry mode into China. Business Horizons. 63-72.

Dunning, J. H. (1998). Location and the Multinational Enterprise: A Neglected Factor? Journal of International Business Studies, 29(1), 45-66.

Easterby-Smith, Mark; Thorpe, Richard & Jackson, Paul. (2012). Management Research. London: SAGE. Fourth edition.

Ellis, P. and Pecotich, A. (2001). Social factors influencing export initiation in small and medium-sized enterprises. Journal of Marketing Research, Vol. 38 No. 1, pp. 119-30.

Eriksson, Tor; Smeets, Valérie and Warzynski, Frédéric. (2009). Small Open Economy Companies in International Trade: Evidence from Danish Transactions-Level Data. ISBN 9788778823878.

Etemad Hamid (2004). Internationalization of Small and Medium sized Enterprises: A Grounded Theoretical Framework and an Overview. Canadian Journal of Administrative Sciences, 21(1). 1-21

Export statistics. (2015). Retrieved from < http://www.statistikbanken.dk>

Francis, June & Collins-Dodd, Colleen (2000). The Impact of Companies' Export Orientation on the Export Performance of High-Tech Small and Medium-Sized Enterprises. *Journal of International Marketing*, Vol. 8: 3, pp. 84-103.

Freeman, Susan; Edwards, Ron & Schroder Bill (2006). How Smaller Born-Global Companies Use Networks and Alliances to Overcome Constraints to Rapid Internationalization. *Journal of International Marketing*, Vol. 14: 3, pp. 33–63.

Gerald Albaum, Jesper Strandskov, Edwin Duerr. (2002). International Marketing and Export Management. 4<sup>th</sup> edition. London: Prentice Hall.

Goodnow, James D. (1985). Development in international mode of entry analysis. International Marketing Review, Vol. 2 Issue: 3, pp.17-30.

Guba, Egon G.(1990). The paradigm dialog. California: SAGE.

Halle'n, L. (1992). Infrastructural networks in international business. In Forgsen, M. and Johanson, J. (Eds), Managing Networks in International Business, Gordon and Breach Science Publishers, Reading, MA.

Hamilton, Robert T. and Fox, Mark A. (1998). The financing preferences of small firm owners. International Journal of Entrepreneurial Behavior & Research, Vol. 4 Iss 3 pp. 239 – 248.

Harris, S. and Wheeler, C. (2005). Entrepreneurs' Relationships for Internationalization: Functions, Origins and Strategies, International Business Review 14: 187-207.

Hendry, C & Brown, J. (2000). Creating High-Skill Ecosystems in the UK Biotechnology Industry. London: DfEE Science, Technology and Mathematics Council.

Hill, Charles W.L. & W. Chan Kim. (1988). Searching for a dynamic theory of the multinational enterprise: A transaction cost model. Strategic Management Journal, Special Issue 9: 93-104.

Hill, W.L., Hwang, P., & Kim, W.C. (1990). An electic theory of the choice of international entry mode. Strategic Management Journal, 11(2), 117–128.

Hollensen, S. (1998). Global marketing: a market-responsive approach. Hertfordshire: prentice Hall.

Howorth, Carole A. (2001). Small Companies' Demand for Finance: A Research Note, International Small Business Journal, Vol.19 No.4, 78-86.

Irwin, Judith (2012). Doing business in China: an overview of ethical aspects. Institute of Business Ethics. 4-20.

Johnson, J. & Tellis, G-J. (2008). Drivers of Success for Market Entry into China and India. Journal of Marketing, vol. 75 no. 5 pp. 1-13

Johanson, J. and Weidersheim-Paul, F. (1975). The Internationalization Process of the Firm-4 Swedish Cases. The Journal of Management Studies (October): 305-322.

Johanson, J. and Vahlne, Jan-Erik. (1977). The Internationalization Process of the Firm–A Model of Knowledge Development and Increasing Foreign Market Commitment. Journal of International Business Studies (Spring/Summer): 23-32.

Johanson, J. and Vahlne, J-E. (1993). Management of internationalisation. In Zan, L., Zambon, S. and Pettigrew, A. (Eds), Perspectives on Strategic Change, Kluwer, Boston, MA.

Johanson, J. and Vahlne, J-E. (1990). The mechanism of internationalisation. International Marketing Review, Vol. 7 No. 4, pp. 11-24.

Johanson, J. and L-G Mattsson (1988). Internationalization in Industrial Systems - A Network Approach. In: Buckley P.J and Ghauri, P.N. (Eds) The Internationalization of the Firm: A Reader, 303-21. Academic Press, London.

Johanson, J., & Mattsson, L. G. (1993). The markets-as-networks tradition in Sweden. In: G. Laurent, G. L. Lilien, & B. Pras (Eds.), Research traditions in marketing (pp. 321–342).

Jones, M.V. (1999). The internationalisation of small high technology companies. Journal of International Marketing, Vol. 7 No. 4, pp. 15-41.

Juul, M. and Walters, P. (1987). The Internationalization of Norwegian Companies–A Study of U.K. Experience. Management International Review: 58-66.

Ramón-Jerónimo, María A.; Kamakura, Wagner A. and Gravel, Julio D. Vecino. (2011). A dynamic perspective to the internationalization of small-medium enterprises. Journal of the Academy of Marketing Science, 2012, Vol.40(2), pp.236-251.

Karagozoglu, Necmi & Lindell, Martin (1998). Internationalization of Small And Medium-Sized Technology-Based Companies: An Exploratory Study. *Journal Of Small Business Management*, vol. 36: 1, pp. 44-59.

Katzenstein, Peter J. (1985). States in world markets: Industrial policy in Europe. New York: Cornell University Press.

Keeble, D., Lawson, C., Lawton Smith, H., Moore, B. and Wilkinson, F. (1998). Internationalisation processes, networking and local embeddedness in technology-intensive small companies. Small Business Economics, Vol. 11, pp. 327-42.

Khanna T, Palepu KG. 1997. Why focused strategies may be wrong for emerging markets. Harvard Business Review 75(4): 41–51.

Khanna Tarun, Palepu Krishna G., and Sinha Jayant (2005). Spotting Institutional Voids in Emerging Markets. Harvard Business School Background Note 106-014.

Khanna, Tarun; Palepu, Krishna G. and Sinha, Jayant. (2005). Strategies that fit emerging markets. Harvard Business Review. June 2005. 03-19.

Kingsley, Gordon & Malecki, Edward J. (2004). Networking for Competitiveness. Business Economics August 2004, Volume 23, Issue 1, 71–84.

Kolter, Philp (1988). Marketing management: analysis, planning, implementation, and control. Sixth edition. New Jersey: Prentice-Hall International Editions. P.377-404.

Kvale, Steinar and Brinkman, Svend. (2009). Interview. Hans Reitzel.

Lavie, Dovev. (2006). The Competitive Advantage of Interconnected Companies: An Extension of the Resource-Based View. ACAD MANAGE REV July 1, 2006 vol. 31 no. 3, 638-658.

Lee, Hyunsuk; Kelley, Donna Kelley; Lee, Jangwoo; and Lee, Sunghun. (2012). SME survival: the impact of internationalization, technology resources, and alliances. Journal of Small Business Management 2012 50(1), pp. 1-19.

LeCornu, Mark R.; McMahon, Richard G.P.; Forsaith, David M. & Stanger, Anthony M.J. (1996). The

Small Enterprise Financial Objective Function, Journal of Small Business Management, Vol.34 No.3, 1-14.

Li, Linda Chelan. (2010). Central-local relations in the people's republic of China: trends, processes and impacts for policy implementation. Public Admin. Dev. 30, 177–190 (2010). 177-190.

Lindqvist, M. (1997). Infant multinationals: internationalisation of small technology-based companies. In Jones, D. and Klofsten, M. (Eds), Technology, Innovation and Enterprise: The European Experience, Macmillan, Basingsloke, pp. 303-24.

Lu, Jane W. and Beamish, Paul W. (2001). The internationalization and performance of SMEs. Strategic Management Journal, Vol. 22, No. 6/7, Special Issue: Strategic Entrepreneurship: Entrepreneurial Strategies for Wealth Creation (Jun. - Jul., 2001), pp.565-586

Lumpkin, G.T. & Dess, Gregory G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance, Academy of Management Review, Vol.21 No.1, 135-172.

Luo, Y. (2001). Determinants of entry in an emerging economy: a multilevel approach. Journal of Management Studies, Vol. 38, No. 3, pp.444-472.

Luo, Y. (2003). Market-Seeking MNEs in an Emerging Market: How Parent-Subsidiary Links Shape Overseas Success. Journal of International Business Studies, Vol. 34, No. 3 (May, 2003), pp. 290-309.

Mejri, Kais and Umemoto, Katsuhiro (2010). Small- and medium- sized enterprise internationalization: towards the knowledge-based model. J Int Entrep (2010) 8: 156-167.

Merrilees, B., Miller, D. and Tiessen, J. (1998). Serendipity, leverage and the process of entrepreneurial internationalisation. Small Enterprise Research, Vol. 6 No. 2, pp. 3-11.

McNaughton, R.B. (2003). The number of export markets that a firm serves: process models versus the born-global phenomenon. Journal of International Entrepreneurship, Vol. 1 No. 3, pp. 297-311.

McNeill, P. and Townley, C. (1986) Fundamentals of Sociology. London: Hutchinson.

McNeill, Patrick & Chapman, Steve. (2005). Research Methods. Oxon: Routledge. Third edition.

Mockaitis, A.I., Vaiginiene, E. and Giedraitis, V. (2005). The internationalization efforts of Lithuanian manufacturing companies – strategy or luck? Research in International Business and Finance, Vol. 19 No. 3.

Nummela, Niina. (2002). Change in SME internationalisation: Empirical evidence from Finnish cases. Proceedings of the 3rd Biennial McGill Conference on International Entrepreneurship, Montreal, September 13-16, 2002.

Nummela, Niina; Loane, Sharon and Bell, Jim. (2003). Change in SME internationalisation: An Irish Perspective. Proceedings of the 6th McGill International Entrepreneurship Conference, Londonderry, 19-22 September 2003.

Osland, G. E., and Yaprak, A. (1995). Learning through strategic alliances: Processes and factors that enhance marketing effectiveness. European Journal of Marketing, 29(3), 52–66.

Oviatt BM, McDougall PP. 1994. Toward a theory of international new ventures. Journal of International Business Studies 25(1): 45-61.

Pan, Yigang and Tse, David K. (2000). The Hierarchical Model of Market Entry Modes.

Journal of International Business Studies, Vol. 31, No. 4 (4th Qtr., 2000), pp. 535-554

Pangarkar, Nitin (2007). Internationalization and performance of small- and medium-sized enterprises. Journal of World Business 43 (2008) 475–485.

Pavord, W.C. and Bogart, R.G. (1975). The dynamics of the decision to export. Akron Business & Economic Review, Oct, pp. 6-11.

Paunovic, Zoran & Prebezac. Darko. (2010). Internationalization of Small medium-sized enterprises. UDK 658.017.2/.3:339.5 Vol. XXII (2010), br. 1, str. 57 – 76.

Pehrsson, A. (2008). Strategy antecedents of modes of entry into foreign markets. Journal of Business Research, Vol. 61, pp. 132–140.

Root, F. R. (1994). Entry strategies for international markets. San Francisco, CA: Jossey-Bass.

Root, F.R. (1987), Entry Strategies for International Markets, Lexington Books, Lexington, MA.

Serveis, Per; Rasmussen, Erik S.; Nielsen, Bo B. and Madsen, Tage Koed. (2008) 11 Internationalization of Danish SMEs. Handbook of Research on European Business and Entrepreneurship: Towards a Theory of Internationalization, 171-184.

Schramm, W. 1971. Notes on case studies for instructional media projects. Working paper for Academy of Educational Development, Washington DC.

Schulz, Anja, Borghoff, Thomas, and Kraus, Sascha. (2009). International entrepreneurship: towards a theory of SME internationalization. International Journal of Business and Economics, Volume 9, Number 1, 2009.

Sharma, D. D., & Johanson, J. (1987). Technical consultancy in internationalization. International Marketing Review, 4(4), 20–29.

Thompson, Grahame F. and Kaspersen, Lars Bo. (2012). The globalization of the business sector in a small open economy: the case of Denmark and its wider implications. Socio-Economic Review (2012) 10, 627–653.

Turnbull, P. (1987). A challenge to the stages theory of the internationalisation process. In Rosson, P. and Reid, S. (Eds), Managing Export Entry and Expansion, Praeger, New York, NY.

Turnbull, P., Ford, D., & Cunningham, M. (1996). Interaction, relationships and network in business markets: An evolving perspectives. Journal of Business and Industrial Marketing, 11(3/4), 44–62.

USCBC. (2014). Licensing challenges and best practices in China. Retrieved from < https://www.uschina.org/sites/default/files/Licensing%20Challenges%20and%20Best%20Pr actices%20in%20China-Jan%202014.pdf>.

Van der Heijden, Kees. (2001). Back to basics: exploring the business idea. Strategy & Leadership, 2001, Vol.29(3), p.13-18.

Welch, L.S and Luostarienen, R. (1988). Internationalization: Evolution of a Concept. Journal of General Management 14 34-55.

Wild, J., Wild, L. & Han, C.-Y. (2010). International Business: the challenges of globalization (5th Ed.), New Jersey, Prentice Hall.

Wilson, D. and Mummalaneni, V. (1990). Bonding and commitment in buyer-seller relationships: a preliminary conceptualisation. In Ford, D. (Ed.), Understanding Business Markets: Interaction, Relationships, Networks, Academic Press, London, pp. 408-20.

Yin, Robert K. Yin. (2009). Case study research: Design and methods. California: SAGE. Fourth edition.

Young, S., Huang, C.-H., and McDermott, M. (1996). Internationalization and Competitive Catch-Up Processes: Case Study Evidence on Chinese Multinational Enterprise. Management International Review 36, no. 4: 295-314.

Zacharakis AL. 1997. Entrepreneurial entry into foreign markets: a transaction cost perspective. Entrepreneurship Theory and Practice 21(3): 23-39.

Zhang, Ting. (2008). Technology transfer and IP licensing in China. Retrieved from <a href="http://www.chinabusinesssolutions.com/wpcontent/uploads/2014/01/technology\_transfer\_and\_ip\_licensing\_in\_china.pdf">http://www.chinabusinesssolutions.com/wpcontent/uploads/2014/01/technology\_transfer\_and\_ip\_licensing\_in\_china.pdf</a>.

# **Appendices**

## Appendix A

Changes brought to organisation by different entry modes. Source: own preparation.

	Definination	Internal changes			<b>External changes</b>
Entry mode / Operation mode		Finance	Organisational structure	Personnel	Product
Direct exporting	Companies handle the exports by themselves.(1) domestic-based export department or division, (2) traveling export sales representatives, (3) foreign-based distributors or agents, and (4) overseas sales branch or subsidiary (WFOE).	Different levels of capital investment	export department sales representative distributor or agents overseas branch or subisidiary	export department, sales representative	Direct export, different level of localization
Indirect exporting	A company to export products through independent middlemen. four types of middlemen: (1) domestic-based export merchants, (2) domestic-based export agents, (3) cooperative organizations and (4) export-management companies.	No big investment required, profit sharing is limited	No change	No change	Direct export, no localization
licensing	The licensor enters an agreement with a licensee in the foreign market, offering the right to use a manufacturing process, trademark, patent, trade secret, or other item of value for a fee or royalt.	No big amount of investment, risk and profit is shared	No Change	No Change	Direct export, no localization
Joint Venture (JV)	Foreign investors join with local investors to create a local business in which they share joint ownership and control.	A certain amount of capital injection, risk and profit are shared	A joint venture is established	New employees in JV	Localization
Direct Investment	Investment in foreign-based assembly or manufacturing facilities.	Capital injection, risk and profit is beared alone	A subsidary is established	New employees in subsidary	Localization

## **Appendix B**

Mapping contexts in China. Source: Khanna et al., 2005

Criterion	Sub- criterion	Mapping contexts in China	
Political and social systems	Political structure	The Communist Party maintains a monopoly on political power.  Local governments make economic policy decisions. Officials may abuse power for personal gain.	
	Civil society	The media is muzzled by the government, and there are few independent NGOs. Companies don't have to worry about criticism, but they can't count on civil society to check abuses of power.	
Opennes	Modes of entry	The government permits greenfield investments as well as acquisitions. Acquired companies are likely to have been state owned and may have hidden liabilities. Alliances let companies align interests with all levels of government.	
Product markets	Product development and intellectual property rights (IPR)	Imitation and piracy abound. Punishment for IPR theft varies across provinces and by level of corruption.	
	Supplier base and logistics	Several suppliers have strong manufacturing capabilities, but few vendors have advanced technical abilities. The road network is well developed. Port facilities are excellent.	
	Brand perceptions and management	Consumers prefer to buy products from American, European, and Japanese companies. Multinational ad agencies dominate the business.	
Labor markets	Market for managers	There is a relatively small and static market for managers, especially away from the eastern seaboard. Many senior and middle managers aren't fluent in English. A large number of managers are expatriates. Some members of the Chinese diaspora have returned home to work.	
	Workers market	Workers can join the government-controlled All-China Federation of Trade Unions. Historically, there were no industrial actions, but there have been recent strikes at Hong Kong— and Taiwan-owned manufacturing facilities.	
Capital markets	Debt and equity	The local banking system and equity markets are underdeveloped.  Foreign companies have to raise both debt and equity in home markets.	
	Venture capital (VC)	VC availability is limited.	
	Accounting standards	There is little corporate transparency. China's accounting standards are not strict, although the China Securities Regulatory Commission wants to tighten disclosure rules.	
	Financial distress	Companies can use bankruptcy processes in some cases. Write offs are common.	

#### **Appendix C**

Outline of company interview questions

#### 1. Basic company information

- When did you found the company?
- How big is your company? Employee amount and approx. yearly revenue.
- What is your company's competitiveness? Are those competitiveness well kept within your company? Why do you think so?

#### 2. Chinese market expansion

- When and why did you decide to go into the Chinese market? Is it to seek for bigger market, cheaper production, or capital?
- How did you prepare your company for the Chinese market expansion? Do you think you are well prepared? Why?
- Do you think your company and products are ready for the Chinese market? Why?
- Do you have any budget limitation to invest into the Chinese market?
- Do you have any facilities or/and any employee in China? Are those employees in China Chinese or Danish?
- Which entry mode have you tried or are you trying? FDI, Strategic alliance, Joint Venture? Franchise? Distributor? Why?
- How is the outcome so far?
- Is there purchase order from China? When was the first order?
- What is the end goal for the Chinese market? Move production to China? And maybe even further engagement?
- Are you referring any bigger company as example regarding to the Chinese market expansion?
- Who are the target customers and important stakeholders in China for your company and your products?
- How will you approach to the stakeholders and customers?
- Do you have enough resource for the new market expansion?
- What kind of resource do you lack the most currently? Capital? Human resource?
   Market intelligence? Networking?
- Do you use any external assistance? DI? Embassy? Or from any consultancy?

- What kind of market research you have done? Are they sufficient feedback?
- Are you updating the products to adapt to the Chinese market feedback? Any new product features to fit into China?
- Have you experienced any big culture difference? How do you handle those culture differences? How is the outcome?
- Do you or any employee within the company speak Chinese? How do you think of the language barrier?
- Have your organization structure changed due to the new market expansion? In which way and why?
- Do you see being a small company as an advantage?
- What obstacles are the most difficult so far?
- What are the factors or situations troubles you the most?
- Are you satisfied with the development in China? What can you do better?
- What is your next step planning?
- Will you move production to China? When? Why?
- Do you think you will success in China? Why? When? What is a success for you in China?