

Internationalization and Export of Software Products

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Abstract. Independent software vendors need to grow beyond their domestic markets. Software producing organizations are faced with a great number of options and opportunities on how they choose to conduct internationalization. Interestingly, efforts conducted have a high failure rate and software companies rarely succeed at first. In this paper we present a systematic mapping study and the results of 20 interviews with CEOs in the Dutch software sector. This study highlights the most important decisions made during the process of internationalization: the drivers, the process planning, market selection, and the followed market entry strategy. The choices available to the key decision makers in the right market selection and entry strategy are most strongly influenced and limited by the product architecture, characteristics of the product and company, and the level of internationalization experience located within the independent software company. The findings from this research support decision making in internationalization projects by software firms and policy makers in finding support strategies for export missions.

1 Introduction

No industry has profited more from globalization than the IT industry. IDC [1], a global provider of market intelligence, estimates that for 2015 IT spending in emerging markets will grow in excess of 8.8%, and represents 34% of worldwide IT spending. This growth accounts for 51% of all new growth in the IT marketplace, resulting in a rising number of IT companies seeking opportunities outside of their domestic markets.

The phenomenon of companies expanding to markets outside the domestic market is formulated under a wide array of classifications. Moen et al. [2] described internationalization as: “*Internationalization is the process, strategy and decisions of exporting to foreign countries*”. The profits envisioned from an internationalization initiative are often uncertain [3]. Sheng-yue and Ru [4] find a dramatic failure rate; 50% of all internationalization attempts made by companies fail, resulting in a loss of valuable time and resources. There is no reason to believe that the failure rate for Independent Software Vendors (ISVs) is any lower.

Managers in charge of implementing internationalization are challenged with the daunting task of successfully guiding the internationalization process. These managers are faced with a myriad of options and opportunities on deciding how they choose to implement a successful internationalization. Research by Bell [5] suggests

that software companies generally experience great difficulties with the export of their products and points out that problems experienced by companies selling domestically amplify with a international exposure. Currently there is no clear study linking internationalization theories to evidence found in the field.

In the Netherlands, international IT sales are largely dominated by product software sales, not custom software, services, or consultancy. Research aiding in the process of improving the exports of Dutch software companies could end up lowering the failure rate of internationalization attempts, saving these companies' valuable resources and time. This could, in turn, translate into better-performing companies and a higher GDP. The main research goal is to provide key decision-makers within the Dutch software industry with a better insight concerning factors, company characteristics, market entry strategies, and internationalization theories. This leads to the following research question: *Which market entry strategies and methods exist in the current state-of-the-art literature and how do these theories apply to the experiences of Dutch ISVs?*

When selling physical products, an international company is more or less bound to traditional terms extensively described in the current literature such as agents, logistic operators, distributors, licensee, and foreign subsidiaries. Software is characterized by shorter life cycles and lower distribution costs, meaning it cannot be defined by the traditional terms. Software companies are faced with a great number of options and opportunities on how they choose to implement internationalization. The available market entry form and the market selection is fueled by the emergence of the internet, which allows easy distribution and connection to customers and allows supplier, producer and consumer to interact on an unprecedented level through the evolvement of e-commerce platforms [8].

In this paper we highlight the challenges and export methods available to ISVs. In Section 2, the ISV Internationalization and Export Framework for ISVs is presented, which aims at providing insight for ISVs in different phases of the internationalization process. We continue in Section 3 by highlighting the research method: 20 interviews with representatives of ISVs in different stages of the internationalization process, with a combined experience comprising horror stories, success stories, and supporting evidence. Section 4 embeds the research efforts in the literature and presents a framework outlining the different internationalization methods available to ISVs. In Section 5 the evidence is presented and analyzed. Finally, in section 6 we summarize our conclusions.

2 ISV Internationalization and Export Framework

Current research does not provide a complete overview for ISVs wanting to internationalize and export their software products. After a mapping study of the literature, a research framework has been created, as modeled in figure 1. The research framework contains different process steps, in which a strategy must be chosen. The influencing factors are listed in the boxes next to the process steps. The model should be read starting from the left top after which the process can be repeated multiple times for each specific software product, or more accurate used by the organization for each

individual internationalization attempt. Organizations that follow the process illustrated in figure 1 should ultimately gain in internationalization experience.

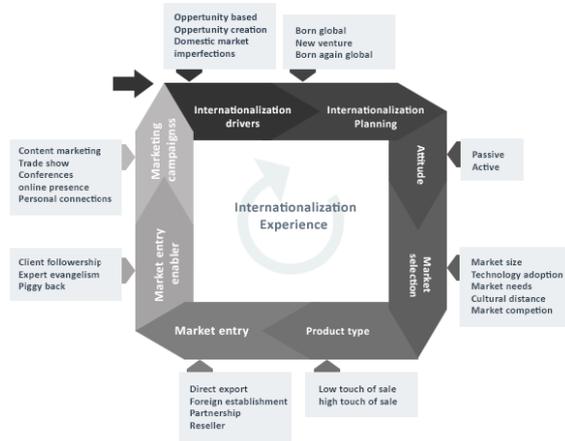


Fig. 1. ISV Product Internationalization and Export Framework

The process steps start in the top right corner, where the ISV can establish that it is time to start internationalizing and exporting software. (1) The organization must assess whether it is time for an internationalization effort and what its drivers are for doing so. (2) Secondly, the organization can start planning its efforts and basis. Is the company planning on doing international business since the first day of founding? Or is internationalization initiated after building a network of domestic customers: is it a born global? A new venture? Or does the company need to internationalize all its effort due to a previous local focus? (3) The organization must determine whether or not it will actively peruse a higher level of internationalization or if the organization will use a more passive approach. The active or passive approach influences the way the organization can determine their markets. Actively perusing internationalization can be done for instance by actively targeting international customers or hiring dedicated managers in charge of internationalization efforts. (4) Market selection focuses on how the organization will determine which markets it will target. (5) The actual strategy used by the organization to enter a market is largely dependent on the type and characteristics of the software product the organization is selling. The product type is divided in to two categories; products with a low- and products with a high touch of sale. Touch of sale describes the amount of personal intervention needed to sell a software product. (6) Market entry describes the strategy used by the organization to enter a company. (7) The market entry is followed by the market enablers, which can aid the process of market entry. Followed by the marketing campaigns or marketing methods that can be used by the organization to increase the amount of income generated from customers abroad.

Companies with a product considered to be **high touch of sale** use a different strategy to enter a foreign market compared to products with a low sales touch of sale. When support is intensive and can only be performed in person by highly trained

professionals, it is less likely that the organization will use strategies with a cost-effective way to deal with support. Products with a high sales touch opt for a reseller, agent or partnership-oriented strategy or choose to open a fully owned domestic branch in the chosen country. Companies that sell low touch of sale products more often tend to select a low labor business model, selling large volumes of low priced products compare to a smaller volume of high products. This limits companies with a low sales touch product in choosing direct export as a market entry strategy, using a centralized sales force operating from within the domestic borders to service and manage international customer and sales operations.

Companies selling products with a **low sales touch** tend to use a shotgun tactic, creating an initial selection of countries based on the number of potential customers, the level of internet adoption and a basic amount of competitor analysis. Companies with a high sales touch product tend to use their personal networks to gain new business, combined with the use of content marketing, trade shows and conferences, in order to come in contact with potential customers. Identifying the level of personal experience of the management team gained in former positions, life experience and education as an important foundation for both high touch and low touch sales products. With high touch sales products, the international personal network of the company management is the primary way of building a reseller or partnership network as well as a main means of contact and creation of international business opportunities.

For companies with low touch sales products, the personal experience is mainly helpful in the creation of the “whole product”, since the management with greater international experience has a better overview of all the necessary steps for building a product that is suitable for international sale. They avoid making mistakes that decrease the chances of the product appealing to an international market. The literature also sees management with a lack of international business experience as a warning sign. The research indicated the management must have traveled or studied extensively outside of the country. International experience can, however, also be gained or hired since not all decision-makers possess extensive management experience [18].

3 Research Method

The approach of this research has been, due to its exploratory nature, to first frame the research by conducting a mapping study into the literature on internationalization. The framework was used to create a structured interview protocol and a context to frame the findings of the research.

A systematic mapping study [6] has been used to identify and provide an overview of a research area. To obtain only the most influential empirical evidence to be used in this research, a filter based on the article impact was created, based on the number of citations combined with the source of the article. A manual check on the title and the abstract ensured the article focuses on the keyword combination was used. A total of 97 articles were studied. The list of articles can be found in the work of Huijs [7].

After completing the systematic mapping study a grounded theory-based method [8] was executed. The grounded theory for this research relies on 20 semi-structured interviews of 1,5 to 2 hours with CEOs of Dutch ISVs. The research identifies the various internationalization attempts undertaken by the ISVs. By performing in-depth interviews, the research aimed to identify (1) the motivation for the company to start with internationalization, (2) the selection criteria leading up to the country's entry, (3) The market entry form, and (4) the activities conducted to improve the expansion. The companies were selected based on the following criteria: (a) the headquarters are located in the Netherlands, (b) the company is active in the field of software, (c) the company sells software produced by the company or developed by a subcontractor, and (d) the company has a maximum of 100 employees worldwide. The small company size limit made sure that the companies could be considered small to medium enterprises. The primary sampling was based on convenience sampling using the Deloitte Technology Fast 500 Awards. Using the Fast 500 winners from the years 2008-2013 as a sampling frame, the list provides access into successful Dutch software companies.

The idea of grounded theory was introduced by Glasser & Strauss (2009). This method is a systematic methodology focused on discovering theory through data analysis. The grounded theory for this research relies on semi-structured interviews of the Dutch ISVs. The selected companies were selected due to the following criteria: headquarters is located in the Netherlands, active in the field of software products, the company sells software produced by the company or developed by a subcontractor, the company has a maximum of 100 employees.

Grounded theory consists of analyzing and re-analyzing the transcripts of the interviews. These interviews are recorded throughout the session and are translated into transcripts. From these transcripts, key points are extracted; these key points are called codes. The codes are grouped with similar codes in order to form categories, which form the basis for the creation of the theory and provide a validation of the theories formed during the systematic mapping study review. During the systematic mapping study, the conclusion forms a set of conceptual ideas. Ideas which provide a better insight in the internationalization theories implemented in practice by Dutch ISVs.

The research is oriented towards commercial product software. While some findings could prove useful, they may not directly address the market specifics of custom, military or embedded software. This research only focuses on ISVs, meaning the findings might not apply for large multinational companies.

Due to the difficulty in reaching companies, the choice was made to switch to a more convenient sampling strategy. However, due to switching to a non-randomized selection, this introduces a bias in the research since not all product software companies in the Netherlands are given an equal chance of being included in this study. During the grounded theory process, the researcher scanned the transcripts of the interviews and coded specific text fragments to identify important trends in the process of internationalization. By increasing the project team and performing the encoding process twice, the validity of the research would increase since the chances of incorrect coding and categorization would decrease.

4 Literature

Before getting a better understanding of internationalization and the export of software products the research started out with performing a systematic mapping study to understand the research area of internationalization. Using a hierarchical tree map, the definitions are shown in Figure 2. The hierarchical tree map illustrates the definitions and their encapsulations. For instance, the internationalization process is part of an internationalization strategy. The categorization of topics provides insight into the number of topics in the research area of internationalization. Current literature focuses on the process and success factors of internationalization.

The main act of internationalization strategy is a term coordinating many sub activities; the actual export of virtual goods is one, the way companies enter a market is an other. After performing the empirical research we found most prominent literature position it self as internationalization theory, research often explanatory in nature with a focus on the process of internationalization and/or factors influencing the process of internationalization.

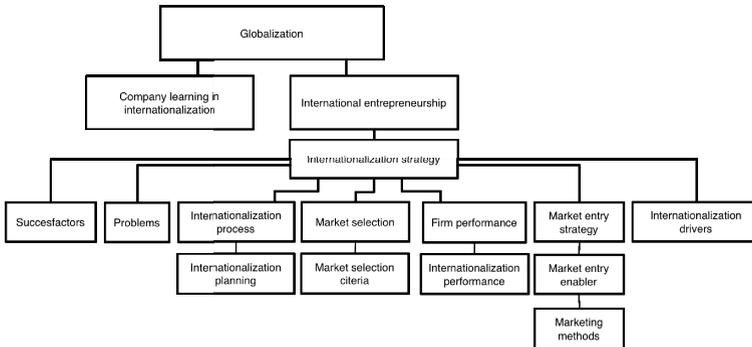


Fig. 2. Research topics breakdown

Since the mid 1900s, there have been many approaches to explain the expansion of businesses through international activities. Different theories focus on various aspects of the phenomena of internationalization. The manner in which companies conduct their business is constantly evolving: they are implementing new business models and strategies, thus changing the way they implement internationalization.

Internationalization Theories Compared. Figure 3 illustrates a collection of internationalization theories discovered by this research after performing the systematic mapping study. Each internationalization theory presents a collection of phases building up to a high degree of internationalization. The theories build up to the next phase implementing the first form of steady international activities. These theories start out with a low level of risk and commitment method using Agents to serve international customers. Three of the seven theories continue with a high-level commitment method of conducting international business.

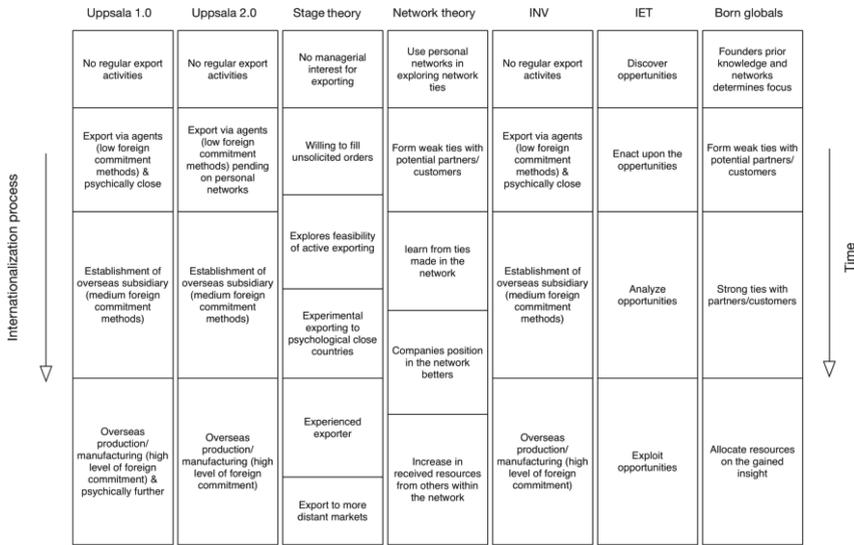


Fig. 3. Internationalization theories framed and compared

The Uppsala model, also known as the U-model or the the Stage model serves as a component of the Uppsala model, proposing an incremental approach defined in multiple stages starting in markets with the lowest uncertainty after careful calculations for the lowest cost and smallest economical and physical distance. The authors of the Uppsala model recognized the critique, since Johanson & Vahlne [9] found clear evidence supporting the importance of networks in the internationalization companies, and the Uppsala model was revised in 2009, naming the module Uppsala 2.0. An alternative coined by Oviatt & McDougall [11] is the INV theory or international new venture theory.

INV mainly ignores the fixed stages suggested by the Uppsala model, indicating the valuable contributions of SMEs to international business. The network model takes a holistic approach, researching companies combined with the influence of the relationships network surrounding the company.

Table 1. The characteristics of internationalization theories evaluated

The Internationalization theory characteristics	Uppsala 1.0	Uppsala 2.0	Network theory	INV theory	Born globals	Resource view
Psychological distance is a part of the theory	+	+	+	+	++	-
The process consist of a set of fixed steps	++	++	+	-	-	-
Includes market selection strategies	-	-	-	+	+	-
Emphasis the importance of relationships/network	-	+	++	+	++	+
Emphasis the importance resource availability	++	++	-	+	-	++

When focusing on the internationalization theories this research identified two types of end goals. The end phase of the internationalization theory either focuses on the allocating of the manufacturing to foreign countries, on the further exploitation of the internationalization and, third the increasing of the amount of countries the company can export to.

Market Orientation, Selection and Orientation. Market orientation consists of all activities aimed towards acquisition, dissemination and application of market information. Cadogan et al. [12] point out domestically focused companies are more likely less developed in a international context compared to companies with a high degree of internationalization. A market selection is the planned process of selecting a market in which a company wants to deliver a product.

Client followership consists of software companies following domestic customers who are commencing international business. Giving the company the advantage of starting out with a launching customer with strong ties. Similar the **piggyback method** first mentioned by Hollensen [14], explores the same tactic, however it chooses larger domestic partners instead of customers. Etemad et al. [15] describe ‘piggy-backing’ as a strategy where smaller companies rely on larger companies for the introduction to foreign markets. Although **unsolicited orders** do not qualify on their own as a market entry, the start of an internationalization process can be initiated by a unsolicited order or inquiry from a country outside the domestic market.

Sectorial focus is a strategy in which a company targets new markets based on a specific niche. Companies that are highly focused on a small niche have to take less notice of the country borders. The industry surveys of Bell [16] indicate that specific vertical sector knowledge is valuable to the degree that there is an independent of the country of origin. **Joint ventures** present a collection of strategies in which two or more parties choose to partner up. This results in a business agreement in which two or more parties agree to come together for a period of time, consisting of a set of new combined assets or resources. The level of control often corresponds to the level of shared revenue, expenses and financial assets.

Table 2. Market entry sorted low to high level of commitment

Focus	Level of commitment	Focus	Level of commitment
Direct export	Low	Client followership	Medium/High
Indirect exports	Low	Piggyback method	Medium
Licensees	Low	Agent/distributor	Medium
Unsolicited orders	Low	Industry trends	High
Export sales staff	Low/Medium	Subsidiary abroad	High
Joint ventures & strategic alliances	Medium/High	Sectorial focus	High

Indirect export is selling through an intermediate party that continues to sell the software products their customers. The intermediary can even be in the same domestic country as the ISV trying to sell the software products abroad. The **Agent/distributor** mean that in order for ISVs to sell their product, they can contract with agents and

distributors to sell their products and services. **Export sales staff** can enable direct sales by directing employees to target a specific region in order to sell services and target potential new customers. **Direct export** provides a method of selling software face-to-face or buying directly via telesales or via online commerce solutions. For instance, the selling of software via the telephone is not accepted in all countries and could be seen offensive in some cultures. **Foreign establishment** researched by Lu et al. [18] tested the effectiveness of internationalization strategies, exports and foreign direct investments on the growth of an SME company. **Hybrid market entry strategies**; In the case study done by Moen [3], a researched case company chose to implement a hybrid solution, indicating that a combination of entry forms is perfectly possible.

5 Interview Results and Analysis

In the following table the companies used in this research as cases are introduced. Due to the sensitive nature of the research, most cases are presented anonymously; the research company names have been replaced by a nickname. Future plans and ideas are not included in the results, focusing on the actual activities only. Table 3 presents an overview of all case companies sorted in descending order based on degree of internationalization. The degree of internationalization of companies is measured using the measurement suggested by Ahn et al. [20], the foreign sales-to-total sales (FSTS) ratio is used resulting in a percentage indicating the dependency on foreign markets, further described as the degree of internationalization (DOI) in table 3.

During the interviews, the decision-makers were questioned on the reasons behind their choices leading up to the country or countries in which they decided to sell their products. After conducting all the interviews, the following top 5 market selection criteria were identified: (1) Sheer size (or the number of potential customers), (2) Speed of market technology adoption, (3) Based on market needs, (4) Cultural distance, and (5) Initial country selection.

One interviewee indicated hiring a market research firm to aid in the market research. The limited research could be explained by the comments of HealthComp, ImageComp and IntraComp. Indicating the fact that you can do all the desk research you want, but the actual situation at hand is too complex to fully comprehend based on desk research. The CEO of HealthComp indicated: *“When selecting the first country in the process of internationalization you can do all the desktop research you want, it will always be limited to statistics. Eventually the actual situation of selling in a foreign country is more complex and can only be discovered in practice.”* The CEO indicated the level of adoption of the prospecting customers is an example of hard to measure statistics before selecting a country.

Horror story. When HealthComp originally began operating in Italy, after finding the first potential customer the company encountered a problem with the implementation of their software. *“We were unprepared for the country specific characteristics in Italy, our online software was unavailable due to the fact that many*

Italian hospitals lacked a internet connection.” HealthComp CEO. This was a situation that was unimaginable when the company began exporting to Italy. The company continued by developing an offline version that could facilitate the offline use of the products in hospitals without Internet connections.

Table 3. Company cases and the degree of internationalization

Company	DOI	# FTE	# FTE int.	Year founded	Foreign customers since	Attitude	Application type	Presence #countries
ResearchComp	95%	12	12	2007	Day one	Active	Install based	50+
HealthComp	81%	12	0	2009	Day one	Active	SAAS	11
BiComp	81%	15	0	2005	Day one	Active	SAAS	12
MediComp	80%	35	2	2006	Day one	Active	On Premise	11
BackupComp	77%	30	0	2005	Day one	Active	SAAS	50+
ImageComp	50%	7	0	2009	Day one	Active	SAAS	16+
AppComp	40%	7	1	2009	Day one	Passive	Install based	7+
IdenComp	30%	32	2	2005	>1-2 years	Active	SAAS	5
MochaDocs	20%	3	0	2012	Day one	Active	SAAS	52
BpmComp	20%	>150	6	2006	>3 years	Active	On Premise	8
PurchaseComp	10%	25	15	2000	>10 years	Passive	SAAS	4
PersoComp	8%	40	0	2007	+/- 1 year	Passive	SAAS	5
IntraComp	4%	150+	5	1996	>10 years	Passive	On Premise	10+
FinanComp	2%	10	1	2008	>4 years	Passive	SAAS	3

To solve the problem ImageComp used a shotgun tactic, where the first step was aimed at making a selection of countries based on the number of potential customers. The product was then translated into ten languages. Combined with a multilingual marketing website with a series of landing pages optimized to entice visitors to the website, the company continues to analyze and measure the outcome, such as the number of new customers. BackupComp applied the same technique combined with a presence at foreign exhibitions: *"Especially SEO and online marketing is shooting with hail; it delivers on quantity, not quality. Therefore, the countries where we wanted to expand our operations, we started to connect with major local customers through exhibitions and conferences."* CEO, BackupComp

IdenComp, BiComp and MediComp all displayed a selection criteria largely based on their product and the networks of partners, since the products of these three companies are implemented as add-ons – components or modules in a larger system – and simply do not function on their own. For these three companies, the customer installation base and the location of partner networks are more important. The product manager of MediComp indicated the importance of the implementation partners *"The implementation partners have a strong local network, providing in-depth knowledge on legislation, implementation, sales processes and culture."*

None of the companies followed a determined incremental approach. The expected research for not choosing a incremental approach could be explained by the following company case decision. For one, the selection and implementation of a market entry strategy can present a sizable investment. The years it takes combined with the required resources prevent a company from quickly exchanging one market entry

strategy for another. Apart from the difficulty in switching from one strategy to another, the fact remains that not all market entry strategies are suitable for every business model. The CEO of IdentComp stated some strategies can actually only function in the country of export and not in the domestic market: *“The company experienced a situation in the Netherlands where physical meetings were always necessary from a customer perspective. The company found physical meetings less required in America due to the large size of the country.”* Current theory makes no real exception for the infrastructure of the products or the nature of the company’s business model.

Drivers of Internationalization. The drivers for initiating internationalization activities and the attitudes towards internationalization are based on 20 interviews with the decision-makers of the 14 case companies. The company drivers behind internationalization are largely opportunity-based. Supporting the state-of-art literature on the fact that most international undertakings start-out with an opportunity at hand and do not necessarily start out of careful planning. The initial opportunity can however provide the key decision makers of a company with the necessary persuasion that internationalization could indeed prove a successful endeavor. The drivers behind the internationalization most mentioned by the case companies are most often based on:

- **Opportunity based;** internationalization is initiated out of an opportunity at hand encountered by the company.
- **Opportunity creation;** a company starts with internationalization activities in order to create new opportunities.
- **Follow the customer;** The current customer companies are undertaking international activities, requiring the company to initiate international activities.
- **Personal motives;** presenting them self in various personal motives by key decision makers that connect to their own heritage or personal connections resulting in a willingness to relocate to a different country.
- **Personal network;** trough personal connections a company is more quickly inclined to experiment with internationalization attempts. Trough a personal network the key decision makers within a company can employ relatives to start a foreign agent or find opportunities trough personal ties with other companies abroad.

During the interview with the CEO of FinanComp the reasons and drivers for undertaking activities in context of the internationalization of their product where discussed. The first planned internationalization steps where largely devoted to personal connections proposing the implementation of a first international initiative, acting on behalf of the company as an agent. *“Very few problems occur only in the Dutch market, so why develop a product that focuses only on the Netherlands?”* CEO, MochaDocs

Barriers Encountered During Internationalization. After conducting the interviews and analyzing the case companies, this research found that surprisingly little challenges came from country-specific changes in the products. The companies

that developed the product software experienced the same functionality demand from customers. The companies did not experience differences in, for instance, the wishes of a US-based marketing firm using the product software and a Dutch-based marketing firm.

After the interviews discussing the initial Internationalization drivers and the timeline of the first internationalization initiatives made by the company combined with the general attitude of the company towards internationalization. After which the interview focused on the way the company chose the initial markets to enter. The interviews indicated the actual market entry was focused on the product and the characteristics of the product that is being sold by the company. Describing the first 4 steps of the introduced ISV export framework (figure 1) explaining the relation between the market entry step and the product type step.

The product characteristics them self can turn out to be a limiting factor for the companies. The product characteristics gain little attention in the current internationalization theories, however trough the interviews they present a recurring cause of limiting or boosting the internationalization process of a company. An example of the limiting characteristics can be presented by the unpredictable circumstances of the international markets targeted by the company related to the characteristics of the company. For instance during the interviews the CEO of HealthComp indicated *“We were unprepared for the country specific characteristics in Italy, our online software was unavailable due to the fact that many Italian hospitals lacked a internet connection.”* HealthComp CEO

Product Characteristics. The research identified three global product architectures: SAAS, installation-based & on-site. The SAAS architecture is a popular and well-published architecture implemented by organizations to build large scale multitenant software products. A single code base implementation is used to service many individual customers. Installation-based software uses a more traditional architecture where users need to install the software product on their device, for instance a mobile devise, tablet or personal computer. In between both architectures is the on-premise architecture; a client-server architecture implemented at each specific customers company allowing all employees to use the implemented product.

During the interviews, the research identified a scale that rated the degree to which the products require human intervention for the customer to use a vendor’s product software. Low sales touch products are characterized by a low level of human intervention required to sell and implement a software product. By correctly recognizing the degree of human intervention required to sell and implement the product types, this research was better able to categorize them. Products with a high sales touch require a different strategy for entering a foreign market compared to products with a low sales touch. When support is intensive, the support can only be performed in-person by highly trained professionals, providing less cost-effective ways to deal with support. The companies included in the research that chose to focus on internationalization from day on as a born global tend develop their products accordingly. Developing products with a low touch of sale with scalability in mind.

In addition to the research performed by Hasai & Almor [21] the born global is not necessarily characterized by its process alone of internationalization but rather the attitude towards the internationalization. As indicate by Madsen & sevais [22] older companies often have years of legacy in the way they do business making internationalization an endeavor that requires them to change their old ways of thinking. Born globals are companies that start with the idea of internationalization from day one. While born-again globals have the advantage of an existing customer base and a extensive personal network. Born globals have the advantage of preparation, all strategies and product characteristics are geared towards international business, often driven by the personal experience of the top managers within the these companies, the people know what decisions to increase the degree of internationalization. The CEO of ResearchComp indicated *“We are a company with no headquarters, we are a company fully distributed company not only our customers but all our employees work from all over the globe. Internationalization is in our DNA.”* Companies with such a mind set and strategy present an advantage compared to companies that explore internationalization in a later stage.

Table 4. Identified product delivery mechanisms

SaaS	Installation-based	On-premise
<ul style="list-style-type: none"> + Easy to update the software solution for all customers. + Easy release management + The infrastructure scales 	<ul style="list-style-type: none"> + Does not require an active internet connection + No data location issues + No geographic distance between vendor and customer 	<ul style="list-style-type: none"> + No data trust issues since all data of the product software resides within the company + Easier to implement customizations
<ul style="list-style-type: none"> - Difficult to implement custom customer-specific modifications - Zero or low implementation cost - Costly architecture is funded and maintained by the vendor or trusted third party - Requires reliable internet. 	<ul style="list-style-type: none"> - Harder to test the software on all the different installation platforms with different language and region settings 	<ul style="list-style-type: none"> - Harder to keep up-to-date by the vendor - Less control of the actual product performance by the vendor - More effort required to implement the software product.

When comparing the current state-of-art literature and our findings based on the interviews performed in the field we find a great number of decisions through the path of internationalization are based on the characteristics of the products of the companies. For this reason we have included the product type characteristics in our main deliverable, the internationalization framework. Current state-of-art literature neglects the characteristics in for instance all of the stage models such as the Upsalla model. *“A B2B company is fundamentally different compared to the easy straightforward customer-oriented apps such as Skype or Whatsapp, since the latter do not require extensive support and training for the end users.”* CEO, PurchaseComp

Based on the interviews we found that companies selling products with a high sales touch opt for reseller, agent or partnership-oriented strategies, or choose to open a fully-owned domestic branch in the selected country. Companies with products with a low sales touch more often tend to choose a low-labor business model, selling large

volumes of low priced fees compare to a smaller volume of high priced fees. “By centralizing the sales force in the same place, we are able to more easily support the personal providing necessary steering and stimulate knowledge sharing.” Product manager, ImageComp

Experience was one of the most import factors influencing the degree of internationalization. The CEO of PurchaseComp indicated public international tenders as a technique for companies without international experience to start gaining international experience: “*Entrepreneurs interested in going abroad should enroll in international tenders. Allowing the entrepreneurs to get a feel for the customer demands in a specific market. Allowing the entrepreneurs to sharpen their proposition and improving their sales messages. After enrolling and doing a few of these tenders, the odds become much higher for companies to actually win a tender.*” Apart from the market entry, which presents the sizeable investment, most of the companies interviewed experienced difficulties in switching from a project-based company to a product-based company. The difficulty of switching from project to product based business models is not limited to the case-companies included in this research, the difficulties are also presented in literature [23] [24]. The ImageComp product manager stated: “*The paradigm switch from project-based software development to standard based product software was a massive overhaul, requiring an entire new set of skills.*”

6 Conclusions and Future Work

While internationalization poses many challenges and pitfalls, internationalization offers great opportunities that should at least be considered by the management of all ISVs. It provides an business development opportunity for all software vendors to increase their revenue and decrease their dependence on the domestic market, whether they are in the start-up phase or have been in business for a considerable period of time. When asking which market entry strategy lead towards a successful internationalization initiative it is important to understand that there is no silver bullet. The market entry is highly dependent on a wide array of factors. Contrasting to the current literature this research advises decision makers to select the market entry strategy based on the product types, the touch of sale, the personal network and the experience located within the company.

This research concludes, based on both the results of grounded theory and the current literature, that there is no single predominant market entry strategy for Dutch ISVs. The market entry strategy depends on product and company characteristics. This research presents the fact that a market entering strategy is a sizable investment, requiring up to four years of operating without a profitable return on investment.

The years it takes combined with the required resources prevent a company from quickly exchanging one market entry strategy for another. Apart from the difficulty of switching from one strategy to another, the fact remains that not all market entry strategies are suitable for each company strategy. The research provides fertile grounds for an international study into internationalization and software export.

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