

What's the way?

The foreign entry mode selection process of innovative and manufacturing-based start-ups

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Introduction

One manifestation of our globalizing world is the emergence of start-ups that have an international focus from inception. The international activities of these firms, which are called 'born globals' (Knight & Cavusgil, 1996), 'infant multinationals' (Lindqvist, 1991) or 'international new ventures' (Oviatt & McDougall, 1994), have received an increasing amount of attention from researchers over the past years. These studies examine the characteristics of start-ups that have decided to internationalize almost directly after their creation, their motives for international expansion, the differences between international start-ups and non-international start-ups, and the entry modes they have used (Brouthers & Nakos, 2004).

This study is focusing on the foreign entry mode choice of start-ups. International entry mode choice is considered as a critical strategic decision in the internationalization process of dynamic firms (Anderson & Gatignon, 1986; Root, 1994; Hill et al., 1990; Lu, 2002). The foreign entry mode describes the way an overseas' market is entered, whereby the possible entry modes differ from each other on the degree of control, risk, return on investment and resource commitment. Should a firm for example enter the foreign target country by using foreign agents or subsidiaries, licensing partners, joint ventures, acquisitions, or set up a greenfield production site? The entry mode decision is critical because it determines largely the success of a company abroad and once a particular entry mode has been chosen it is often expensive and time-consuming to change it. The traditional studies of entry mode selection are mostly focused on established firms, either large multinational companies or mature small- and medium-sized firms. The specific reasons of international start-ups to select a particular entry mode have not been studied in great detail (Brouthers & Nakos, 2004).

The specific focus in this study is on innovative start-ups. These innovative firms produce products which are “new to the world” (Tidd, Bessant & Pavitt, 2001). Innovative start-ups face a lot of uncertainty compared to firms with traditional products and established organizations. The innovative product is unknown to the marketplace and so is the effect of the product for the customer. This uncertainty makes innovative start-ups an interesting group for entry mode choice research. Few researchers have examined the entry mode choice of innovative start-ups or small firms, and if so, the software or ICT industry is very prominent among them. Studies by Jolly, Alahuhta & Jeannet (1992), Bell (1995), Brouthers, Brouthers & Werner (1996) and Coviello and Munro (1997) have examined the entry mode choice in relation to small software and ICT-related firms. The software industry, however, is not easily comparable with traditional manufacturing industries, because the additional service-intensity of the industry and the ease with which software can be distributed electronically have a very specific effect on the mode of entry decisions (Coviello & Munro, 1997). This study focuses on innovative start-ups that produce novel tangible products and seek additional investments in manufacturing and distribution facilities and warehousing. This study seeks to obtain insight in the entry mode selection process of innovative start-ups which act in a manufacturing-based environment. The primary research question guiding this study is:

How do innovative and manufacturing-based start-ups make their first foreign entry mode choices and what are the most important factors shaping them ?

Since most studies have looked into the entry modes of established companies, our early internationalising firms chosen for the empirical case studies had to meet certain selection criteria: besides a presence in their home market (i.e. the Netherlands), they should also be active in foreign countries or in the process of their first foreign market introduction. Another criterion these international new ventures had to meet, was that they were manufacturing-based, i.e. developing and producing an innovative and tangible product. Software developers were excluded from this research, because of the ease with which software can be globally distributed via electronic means. Furthermore the firms selected for the case studies should be independent, i.e. not part of a parent company at the time of their first foreign market introduction, and should have had their first foreign entry less than five years ago. The firms that met these criteria and which were selected for our case studies were Ergodynamics, VPIstruments and Sunshower. In-depth interviews with the founders of those firms who were involved from the initiation to the early growth stage were held in order to understand the rationale behind the entry mode selection process.

Innovative start-ups and their internationalisation strategies

There are many definitions of internationalization. Mathews (2002) defines internationalization as “the process of the firm’s becoming integrated in

international economic activities". This definition includes the total operations (strategy, structure, resource etc.) of firms and whereby the term "integration" can mean that the process is pull or push orientated. Generally, growth of a company is responsible for internationalization. Dunning (1993) distinguish four main motives for a firm to internationalize: (i) the resource seekers are prompted to invest abroad to acquire specific resources at a lower real cost than can be obtained in their home country; (ii) the market seekers invest in a particular country or region to supply goods or services to markets in these countries (especially countries with a small home markets are able to achieve economies of scale by internationalization); (iii) the motive for efficiency seekers to go international is to rationalize the structure of established resource-based or market-seeking investment in such a way that the investing company can gain from the common governance of geographically dispersed activities (e.g. through economies of scale and risk diversification); (iv) the strategic asset seekers go abroad to acquire the assets of foreign corporations, to promote their long-term strategic objectives, especially that of sustaining or advancing their international competitiveness.

The stage theories of internationalization can be described as an incremental process in which a firm passes through several stages. It states that the internationalization process of a company is a gradual process. Andersen (1993) distinguishes two different theories: The Uppsala internationalization model (U-Model) and the Innovative-Related internationalization model (I-Model). Johanson & Vahlne (1977) introduced the Uppsala model of internationalization. The model states that internationalization is a long gradual process of learning about foreign markets and subsequently committing resources to increase the level of international involvement. The Uppsala model describes the process as the interaction of a company, on the one hand, incrementally developing its knowledge about foreign markets and its operations and, on the other hand, committing increasing amounts of resources to these markets, hereby continuously increasing the degree of internationalization of the firm. Through commitment of foreign business activities the commitment to this market increases because it gains experiential knowledge of this market (Johanson & Vahlne, 1977). An important theme in this process is "psychic distance". Johanson and Vahlne (1990) define psychic distance: "...as the sum of factors preventing the flow of information from and to a market. Examples are differences in language, education, business practices, culture and industrial development." Psychic distance has an effect on the flow of information between the company and the market. The Uppsala model expects companies to start their internationalization from countries that are psychically close to them. Here they perceive the best opportunities and a minimal level of uncertainty.

Like the U-Model, the I-Model describes a company's internationalization process in stages. The I-Model considers internationalization as an organizational innovation (Räsänen, 2003). The focus is mainly on the export activity, which is considered the first step to internationalization. The differences of the two models lie in their way of explaining the rationale

behind a firm's internationalization. In the U-model, the focus is on acquiring, integrating and using experience and foreign market knowledge, and on the increasing commitment and resource allocation to the foreign markets. The logic is that the firm's behavior is reactive, driven by changes in internal and external conditions, not by a controlled development of strategy. In the I-model, the internationalization represents an innovation of the firm. The main reason for the slowness of the internationalization process is that the management of a firm operating in domestic markets is considered to be risk averse and lacks sufficient knowledge about foreign markets. The similarity in U- and I-models lies in the fact that they both assume the process to be a gradual, risk averse and reluctant process of adaptation to changes in a firm or its environment. They also assume barriers to internationalization, such as language and cultural differences as well as slow speeds of international communication and transportation, which have hindered the acquisition of information about foreign markets and increased the risks of internationalization.

The stage theories, as described above, see internationalization as a long gradual process, whereby firms are gradually getting commitment with foreign markets. The network perspective on internationalisation describes and analyses markets as networks of relationships amongst a number of players, e.g. suppliers, competitors, customers etc. (Johanson & Mattson, 1988). The basic underlying rationale is that enterprises require extensive knowledge of one another in order to do business. Uzzi (1996; 1997) considered networks as one of the most powerful assets that any individual can possess. The right network provides access to information, opportunities, power and to other networks. The effort required for creating such networked relationships and the competition between companies means that industrial networks are both stable and changing at the same time. According to the network model, a firm is directly and indirectly dependent on other firms: directly on those with which the firm has exchange relationships, and indirectly on those with which its direct counterparts have exchange relationships. The degree of internationalization of a production network is dependent on the number and strength of relationships between different national sections of the production network. Internationalization can take place in three ways: i) through international extension of new national networks, ii) through penetration of national networks abroad; iii) by integrating positions in different national networks, i.e. international integration. The network perspective claims that internationalization of markets means, that a production network can be considered international and that there are many strong relationships between national sections of the global production network.

The study of Coviello & Munro (1997) shows that the internationalization process of firms is influenced by the network made up of other firms (e.g. business partners, customers, distributors). They suggest that a firm's success in entering foreign markets is more dependent on its position in a network and relationships in current markets, than on market and cultural

characteristics. They state that the international market development is driven, facilitated and inhibited by a set of formal and informal network relationships. These relationships are important for recognizing threats and opportunities. These relationships will so influence the foreign market and entry mode selection, as well as product development and market diversification activities. The network model of internationalization states the value of different relationships for the success of international businesses. These relationships are important for the internationalization process of established firms.

Since the late eighties, the international business has been influenced by this new phenomenon called 'globalization'. This new development created a new kind of firm, which internationalizes at a very early stage, sometimes at inception. In the literature these firms are referred to as 'born globals (Knight & Cavusgil, 1996)', 'infant multinationals (Lindqvist, 1991)' or 'international new ventures (Oviatt & McDougall, 1994; McDougall et al., 1994). Established firms do not automatically have a competitive advantage over new firms. Since for example the easier communication by the internet, new firms can skip some stages of international business. This way they can create unique assets and competitive advantages over established firms. Also the homogenization of the distant markets is important. This helps everyone, including newcomers, to understand the conduct of international business easier (Oviatt & McDougall, 1994). These factors have changed the traditional 'internationalization route'; 'born globals' instead enter all markets at the same time. When an organization does not do this simultaneously, its competitors will do so, which will endanger the competitive position and growth possibilities.

Oviatt & McDougall (1994) have developed the theory of 'international new ventures (INV)' and defined an international new venture as: 'a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources from and the sale of outputs in multiple countries'. The INV theory describes the existence of firms that from inception derive competitive advantages from serving the international marketplace. Four elements distinguish the subset of sustainable international new ventures from the set of all economic transactions. Internationalization of some transactions distinguishes transactions that take place within organizations from those that are governed by markets, alternative governance structure separates the subset of transactions constituting new ventures from those in established firms, foreign location advantage distinguishes the INV's from the domestic new ventures and unique resources differentiate the subset of sustainable INV's from those likely to be short-lived. The four basic elements explain the existence of the sustainable INV's.

Based on the number of countries the INV enters and on the number of value chain activities it coordinates, different types of INV's can be discerned (Oviatt & McDougall, 1994). The export/import start-up and the multinational market makers form the group of the 'new international market makers'. They

represents a traditional type of firm, where they make their profit by transporting goods from their countries of origin to countries where demand exist. The export/import start-ups focus on serving a few countries with which the entrepreneur is familiar. Multinational traders serve several countries and are constantly scanning for trading opportunities. Geographically focused start-ups concentrate on specific needs found in a particular region, using foreign resources. They do more than just the coordination of the inbound and outbound logistics. They concentrate more on value chain activities like, technological development, human resources and production. The coordination of these activities is difficult to imitate, because it is socially complex or involves tacit knowledge. The advantage may be further protected by a close and exclusive network of alliances in the geographical area served. The global start-up is the most radical type of the INV, because it derives significant competitive advantages from extensive coordination among multiple organizational activities and from countries all over the world. They proactively act on opportunities to acquire resources and sell outputs wherever in the world they have the greatest value. As a reward they typically enjoy the most sustainable competitive advantages.

	Theory characteristics	Relevance for Innovative and manufacturing-based start-ups
<u>Stage theory</u> Johanson & Vahlne (1977)	<ul style="list-style-type: none"> • Gradual process • Learning / committing resources • Psychic distance 	<ul style="list-style-type: none"> • Internationalization process faster through technological developments • Psychic distance still exist, but learning- and resource committing processes are improved
<u>Network theory</u> Johanson & Mattson (1988)	<ul style="list-style-type: none"> • Relationships are important • Sharing knowledge 	<ul style="list-style-type: none"> • Networking is important for start-ups to discover new opportunities, to secure resources and to gain legitimacy
<u>Theory of INV's</u> Oviatt & McDougall (1994)	International New Ventures <ul style="list-style-type: none"> • Alternative governance structure • Foreign location advantage • Unique resources 	<ul style="list-style-type: none"> • Theory of INV's describes the reasons and conditions under which the innovative start-ups go international

It is not easy to give a good definition of innovative start-ups either. Innovative start-ups are a subgroup of all start-up firms. An innovative start-up distinguishes itself by the newness of the product it delivers or the process by which the product is created and delivered (Tidd, Bessant & Pavitt, 2001). Several degrees of novelty exist in this, running from minor, incremental improvements right to radical changes which transform traditional routines. Sometimes the innovation is new for a particular firm or sector, but sometimes it is so radical that it is 'new' to the world. This study considers something as innovative when the product or process is "new" to the world. Innovative start-ups normally have a longer early development phase than normal starters, because they need time to develop a new product and/or process before they have their first market introduction.

The innovative entrepreneur mostly tries to market the new technology for a specific product-market combination. The direct demand from the market is mostly ignored in the first place. Roberts (1991) shows that the majority of business plans of innovative start-ups are primarily focused on the new innovative product, while there is little attention for strategy and marketing. For innovative start-ups the protection of the new technology is very important. A lot of capital is invested to develop this technology and the value of the firms is mainly based on it. There are two ways to protect this knowledge. The first way is to use legal protection instruments, like patents and trademarks. By patenting the exploitation of the technology by third parties can be forbidden or the firm can ask a fee for it. A patent for a new technology is very expensive and time-consuming, and the possible infringement costs are mostly high. The second option to protect the technology is to organize the operations in such a way that the secret knowledge stays in the company. The use of confidentiality agreements and the creation of tacit knowledge are examples of it.

Due to a lack of resources, knowledge and competencies in the field of purchase, production, logistics, marketing and sales, innovative start-ups often cooperate with other firms. Besides an idea and knowledge, capital is an essential factor for starting and building a new firm. For innovative start-ups the costs of developing a new technology/product are considerable. Banks are mostly not interested to invest in a new technology; for them it is very risky and the return on investment is insecure. Therefore in order to obtain capital, innovative start-ups have to utilize the investments of venture capitalists and business angels. The idea and screening phase is mostly financed by the founder(s)' own capital. The capital provided by venture capitalists or business angels is mostly used for the development of the new product. Financing this development phase offers most problems, since there is no cashflow and the uncertainty is high. Also the market introduction is mostly financed by venture capital. When the risky development phase is completed successfully, the bank sometimes may play a role in this more predictable stage, or the now almost mature firm is able to finance further growth by its own cashflow.

This study focuses on innovative start-ups, that are manufacturing-based. These manufacturing-based firms face other problems with the entry of foreign markets compared with service-based firms. Previous research suggests that service firms tend to require substantially lower levels of financial investment than manufacturing firms (Brouthers & Brouthers, 2003). Services tend to be produced and delivered simultaneously and are more people-intensive than manufacturing firms. Manufacturing firms are more capital-intensive. Entry into a new country requires greater investment in production equipment, distribution facilities, warehouses with relatively low investment in people. In the few studies about entry mode selection of small firms there was a dominant position of software firms. These firms offer more intangible than traditional manufactured goods, and requires significant support and service to add value. The ease with which software can be

Differences between innovative service-based and manufacturing-based start-ups	
Manufacturing-based start-ups	Service-based start-ups
<ul style="list-style-type: none"> • Tangible products • Often patented • Production and delivery separate • Capital intensive 	<ul style="list-style-type: none"> • Intangible services • Less patented • Production and delivery simultaneously • People intensive

distributed electronically effects the entry mode selection process. Software can be downloaded from the internet and is exchangeable around the world in seconds, without using expensive distribution facilities. This is compounded by the fact that development and marketing agreements between hardware vendors and software developers is an industry norm, so the industry is characterized by interfirm cooperation (Coviello and Munro,1997). Instead of the software dominated firms in the previous studies, this study is focusing on innovative start-ups which produce tangible products who have invested a lot of time and money in research and development and where a substantial growth of the company is needed to earn back these investments. Because these innovative start-ups are mostly focusing on a niche market, the home market may not be big enough to earn back these investments rapidly (Lindqvist, 1991; Jolly, Alahuhta & Jeannet, 1992).

Because the entry mode selection is a important strategic decision for innovative and manufacturing-based start-ups, the general strategic decision-making processes of small firms will be examined. With the use of a strategic decision-making framework the entry mode selection will be studied. Eisenhardt & Zbaracki (1992) define strategic decisions as infrequent decisions made by the top leader of an organization that critically affect organizational health and survival. Most theories concerning the decision-making process make use of a framework, which comprises three components: the environment, the specific characteristics of the decision to be taken and the entrepreneur itself (Ivanova & Gibcus, 2003). These three independent variables are in constant interaction while following the path of the decision process. Ivanova & Gibcus (2003) have designed a framework in which the major elements constructing the decision-making process are interlinked. Here a change in any of the elements reflects on a change in the others. The entrepreneur will influence the parameters of the strategic decision process by the approach he is going to adopt (rational, emotional or intuitive). The strategic decision process will also affect the entrepreneur by bringing profit or loss to the business and will thus reshape the entrepreneurial knowledge and experience. The entrepreneur also influences the environment because of the creation and growth of the venture. In the opposite direction, the environment is constantly forwarding impulses for entrepreneurial actions (opportunities, threats, etc.) These environmental stimuli act as driving forces for the entrepreneur to make strategic decisions. The strategic decision process influences the environment by introducing innovative processes and products and so creates economic growth and market diversification. The environment, which is very turbulent, brings uncertainty and so shapes the decision process of firms. Firms therefore often make workable instead of optimal decisions (Ivanova & Gibcus, 2003).

Entry modes

There are different ways for a firm to enter a foreign market. The different ways for entering foreign markets are called "international entry modes". Root (1994) sees a foreign entry mode as an international arrangement that makes the entry of a company's products, technology, human skills, management, or other resources into a foreign country possible. Root (1994) recognises three different forms of entry modes: export entry modes, contractual entry modes and investment entry modes.

In the case of export entry modes a company's final or intermediate product is manufactured outside the target country and is afterwards transferred to this country. Indirect exporting uses middlemen, who are located in the company's own country and who actually do the exporting. A special form of indirect exporting is piggybacking. Here the company sells its goods abroad through the overseas distribution facilities of another producer. The two firms would normally have complementary, non-competitive products. Indirect exporting may be a good way for a firm to enter foreign markets for the first time. Indirect exporting demands little foreign market knowledge on the part of the firm, but for the same reason, it insulates the firm from foreign markets. A company that wants active penetration of international markets will look for direct export channels. In case of direct exporting the firm undertakes the export tasks itself and has to handle tasks like building contracts, handle documentation and organizing marketing. Root (1994) distinguishes two forms. Direct agent/distributor depends on target country middlemen to market the product of the exporter. Direct branch/subsidiary exporting depends on the company's own operating units in the target country. This form of direct exporting requires an equity investment in marketing institutions located in the target country.

Contractual entry modes are long-term non-equity associations between a company and an entity in a foreign country that involves the transfer of technology or human skills from the former to the latter. These entry modes are primarily vehicles for the transfer of knowledge and skills and they may also create export opportunities (Root, 1994). The main difficulty with these kinds of entry modes is the protection and enforcement of intellectual property rights in the technology industry. Licensing is an appropriate entry mode if the firm has some type of proprietary asset, such as a patented product or process technology, trade mark or brand name, from which it wishes to benefit on an international scale without committing resources to international operations. In a license agreement a firm gives a licensee the right to utilize, for a defined period of time, the patented technology, trademark or brand name in return for payment or royalty fees. These fees are normally a percentage of sales covered by the agreement (Douglas & Graig, 1995). Root (1994) gives several reasons for a firm to use license agreements. One reason is simply to get incremental income on technology that has already been written off against domestic sales. Licensing may also be used to acquire the research output of a foreign company in return for that

of the domestic company. This is also known as 'cross licensing'. Some companies have negotiated licensing contracts to protect their patents and trademarks in a foreign country against loss of non-use or against possible infringement.

International franchising is particularly attractive to a company, when it has a product that cannot be exported to a foreign target market, when the company does not want to invest in that country as a producer and when the production process of the company easily can be transferred to an independent party in the target country. Thus physical products whose manufacture requires substantial capital investment and/or high levels of managerial or technical competence are poor candidates for franchising. The same is true of service products that involve sophisticated skills, such as advertising, accounting, banking, insurance and management consulting. For those reasons international franchising is most popular in consumer service products that can be created with comparatively low levels of capital and skills (Root, 1994). The other contractual entry modes involve the transfer of services directly to foreign companies in return for monetary compensation (technical agreement, service contracts, management contract and turnkey contracts) or in return for products manufactured with those services (manufacture contracts and co-production agreements).

Investment entry modes involve ownership by an international company of manufacturing plants or other production units in the target country. In terms of the production stage, these subsidiaries may range from simple assembly plants, that depend entirely on imports of intermediate products from the parent companies, all the way to plants that undertake the full manufacturing of a product (Root, 1994). In terms of ownership and management control, foreign production affiliates may be classified as sole ventures with full ownership and control by the parent company or as a joint venture with ownership and control shared between the parent company and one or more local partners, who usually represent a local company. An international company may start a sole venture from scratch (new establishment) or by acquiring a local company (acquisition). New establishment (greenfield operation) involves the transfer of an entire enterprise to a target country. Local production may lower the costs of supplying foreign target markets in comparison with export entry, due to savings in transportation and custom duties and/or lower manufacturing costs resulting from less expensive local inputs of labor, raw material, energy etc. Local productions may also increase the availability of supply if quotas limit imports (Root, 1994). The success of an acquisition depends critically on the selection of the acquired company. A poor selection can have dramatic consequences. A joint venture entry takes place when an international firm shares the ownership of a company in a target country with local private or public interests. Most commonly an international firm agrees to share capital and other resources with a single local company. Depending on the equity share of the international company, joint ventures may be classified as majority, minority or 50-50 ventures.

According to the literature the impact of entry modes on the success of foreign operations is great (Anderson and Gatignon, 1986; Root, 1994; Hill et al., 1990; Lu, 2002). Young et al. (1989) found out five strategic dimensions on which the entry modes differ. These dimensions must be taken in consideration when making long-term strategic plans. The dimensions, which distinguish the entry modes, are: (i) Locus of control. This involves the extent to which a firm is willing to trade risk for obtaining more control over the entry mode. (ii) Resource commitment. This issue is strongly linked with the amount of control a firm wants to have. Substantial financial and management commitment will increase control, but will also increase risk. (iii) Resources transferred. Which resources need to be transferred to the entry mode? Is it just financial resources or does this entry mode ask for a substantial amount of management time and knowledge too? (iv) Motivation. The entry mode is a means to an end, therefore the choice of the entry mode should fit with the motive a firm has for entering a market. (v) Time, space and payment. Time limitations are specifically for those entry modes that are limited to the time of an arrangement, for example licensing is an agreement over time, while a sales office is often not time limited. Space limitation is the geographical area in which the agreement is valid, licensing and patent laws are for example limited to a specific country, while a distributor might sell in more than one country. Payment method involves the risk of how and when a

	Degree of control	Degree of risk	Possible ROI	Resources commitment
Export entry mode:				
Direct	+	+	+	+ / -
Indirect	-	--	-	-
Contractual entry mode:				
Licensing	-	--	-	--
Franchising	+ / -	-	-	+ / -
Investment entry mode:				
New establishment	++	++	++	++
Acquisition	+	++	++	++
Joint-Venture	+ / -	+	+ / -	+

-- = very low - = low +/- = average + = high ++ = very high

firm will be able to get its money from an intermediary in a foreign country. When a firm has chosen a foreign entry mode, it is very difficult to switch. The costs for changing an entry mode are commonly very high and time-consuming.

Many entry modes exist, but which entry mode is most optimal in which situation? For explaining the choice among exporting, licensing, joint venture, and sole venture modes, Dunning (1988, 1993) developed a framework (OLI-model). This framework includes firm-specific and market-specific factors and discusses the international organization should choose their most optimal entry mode on the basis of: superior 'ownership advantages', 'location

advantages' and 'internalization advantages. Hill, Hwang and Kim (1990) developed an entry mode decision framework for multinational corporations. In this framework they discuss the importance of entry mode decisions as a part of the whole global strategy of a company. The three distinct modes of entry (license, joint venture and greenfield operations) they use for their study are consistent with a different level of control, resource commitment and 'dissemination' risk. These determinants are important for the selection. In the framework of Hill, Hwang & Kim (1990) three variables influence the choice of the entry mode. Strategic variables influence the entry mode decision on the field of control that is needed to internationalize. Environmental variables influence the entry mode decision on the basis of resources, and, inally, transaction variables influence the entry mode decision through their influence on dissemination risks and on the level of control. It is essential to know which factors must be taken into account when choosing the right entry mode. Root (1994) gives a model containing these factors. He distinguishes external factors and internal factors, which are important for the right choice. The target country factors can be distinguished in market, environmental and production factors. The size of the target country is an important market factor. The size of the market must be large enough to earn back the entry mode investments. The competitive structure also has influence on the entry mode choice.

The quality, quantity and cost of raw materials, labor and energy in the target country as well as the quality and cost of the economic infrastructure have an important effect on the entry mode choice. These production factors determine the production cost of a product in the target country. When the production cost are lower in the home country exporting is more favorable. The political, economical and socio-cultural characteristics of a target country can influence the entry mode choice as well. Important factors are for example government policies and regulations, geographical distance, economical stability and the cultural distance. The market, production and environmental factors in the home country also influence a companies entry mode choice. For example high production costs in the home country relative to the target country encourage entry modes involving local production, such as licensing, contract manufacturing and investments.

The company factors can be distinguished in product and resource/commitment factors. The kind of product the firm wants to sell abroad has a great influence on the entry mode choice. Does the firm deliver a manufacturing-based product or a service? Also the degree of differentiation, adaptability and technological intensity is important. A very complicated product needs for example more control. The more abundant a companies resources in management, capital, technology, production and marketing skills, the more numerous are its entry mode options. Conversely, a company with limited resources is constrained to use entry modes that call for

Entry mode	Control	Resource commitment	Dissemination risk
Licensing	Low	Low	High
Joint Venturing	Medium	Medium	Medium 12

only a small resource commitment. A company with little capital will for example not be able to use an investment entry mode. The studies in the previous section have analyzed the internal and external factors, which influence the entry mode decision. It can be concluded that choosing the most appropriate entry mode will involve trade-offs between different conflicting objectives. Young et al. (1989) examined different ways of the entry mode selection. They came up with three different selection approaches, namely the economic approach, the stage-of-development approach and the business-strategy approach.

The economic approach emphasizes rational behavior, with the costs and benefits of different entry modes being compared. The aim of it is to identify those options which maximize long-term profits. The degree of control available in different entry strategies is central to the economic approach since this determines both risk and the rate of return available. High control modes increase return, but also risk. Low control modes reduce resource commitment and thereby risk, but at the expense of return. According to this approach choosing the most efficient entry mode involves rational trade-offs between control, resource commitment, risk and return. The stage-of-development approach relates the entry mode selection decision to the internationalization process. A shift towards entry strategies requiring greater resource commitment occurs over time with increasing internationalization of the firm. A firm will start with an entry mode which requires less resources and will change it during the international growth process. The business-strategy approach emphasizes the pragmatic nature of decision-making in most organizations. Due to external uncertainty and the political nature of decision-making, organizations may adopt a 'satisfying' rather than a 'rational-analytical' approach to decision-making. Firms will have multiple objectives in expanding abroad and there will be conflicts between such objectives. Because of uncertainty and the need to combine conflicting objectives, it is extremely difficult to adopt a 'rational-analytical' approach and so firms often choose for a workable instead of an optimal solution.

The foreign entry mode selection of firms is researched by several studies. The focus here was on large established firms, which were already for a long time active in their own home market. Two empirical studies that investigate entry modes of small innovative firms in more detail stand out. Lindqvist (1991) reports that the preferred entry modes of the Swedish firms in her sample were direct exporting by own representatives or direct exporting by local representatives such as agents and distributors. These entry modes require less investments. However, she does not investigate the determinants that influence the choice of entry modes. Instead, she explores the propensity to use foreign subsidiaries. Here she finds no or weak relationships between entry mode choices and internal firm characteristics and industry structure. Bell (1995) finds out in his study about the international operations of small Irish, Finnish and Norwegian software firms, that these firms prefer also the use of direct exporting. He reports that firms selling highly customized products mostly relied on own subsidiaries, whereas firms with standard

products were more likely to use sales intermediaries. Young et al. (1989)

Main findings current entry mode selection studies
<ul style="list-style-type: none">• There are a lot of conflicting factors which can influence the entry mode decision of firms• Firms choose first their target country, after which they select the entry mode for that country• Small and young firms are focusing on entry modes, which are less capital intensive• Small and young firms make their entry mode decision pragmatic
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analyze the process of entry mode decision-making for small and young firms. They report that it is problematic for small and young firms to apply the rational-analytical approaches. Due to a lack of resources and information they are often forced to use the business-strategy approach and to choose for a workable instead of an optimal entry mode. These studies represent important first steps in explaining the entry mode decisions of innovative and manufacturing-based start-ups. However they also leave questions about the determinants of the choice of a particular entry mode largely undressed. They for example do not show exactly the factors which influence the entry mode selection of innovative and manufacturing-based start-ups most.

Research design

This research project is of an exploratory nature. The goal is to discover how the entry mode choices are made in reality and to explore which factors have a decisive influence on the entry mode selection. Explaining the different relations is important. In order to say something useful about the effect of the characteristics, a deeper insight is required into the relation between the influencing factors and the foreign entry mode choice. How is the selection made in practice and why this way? Case studies are conducted to find this out. According to Yin (2003) case study research has several advantages in answering these kind of how and why questions. The most important application of case study research is to explore and explain the causal links in real life interventions, which are too complex for other research methods. To answer the research questions, in-depth information was needed to describe and understand the rationales behind the entry mode selection of innovative start-ups. Case study research is an appropriate method, since it combines multiple data sources and allows researchers to study the different cases in-depth. Although the case study is the most optimal methodology to discover relations that would have been missed by using other forms of research methods, this contains also some disadvantages according to some research investigators. The most important objection on case studies, is the lack of rigor, which implies that this method allows ambiguous evidence and a biased view and that the outcomes are exposed to subjectivity from the researcher. Another concern about case study research is that they provide little basis for scientific generalization, since only a couple of cases are investigated. These

two objections can be avoided by paying proper attention to these aspects in the design of the case study (Yin, 2003).

In this study is chosen for a multiple case study, implying that the information for this study is gathered from more than one case firm. There are two main reasons for this. First, the goal of this research is to explore how Dutch innovative and manufacturing-based start-ups make their first entry mode decision. The evidence of multiple cases is therefore more suitable, since the influences of several firms can be compared with each other. In the second place, the overall study is regarded as being more robust, when a multiple case study approach is used (Yin, 2003). For gathering the information multiple data collection methods were used. By using different sources of information the power of the evidence increased (Yin, 2003). For getting a good profile of the company and its activities several sources were analyzed, like the website of the company, promotion materials, magazines and business plans. This information was used to make a description of the companies internationalization process, including the entry modes used. However, this data was not sufficient since it was sometimes incomplete and the rationales behind the internationalization decisions were underexposed. More in-depth information is needed to understand the rationales behind the entry mode selection decisions. To collect this information semi-structured interviews are conducted. According to Yin (2003) interviews have the advantage that they are targeted, since the focus is directly on the research topic. In this way you can gather direct the information you need. Another advantage of interviews is there insightfulness. The in-depth information provides perceived causal interferences. This is helpful to understand the rationales behind decisions. These interviews are held with those people in the company that are from inception familiar with the entry mode selection decision. Mostly they are the founders of the company, who also took the final decision. A semi-structured questionnaire was composed to guide the interview and then the founders were asked to give a short description of the company after which the specific research items were treated. These items are shown in the next section.

The research items which had to be collected during the interviews can be distinguished in the information which describes the entry mode selection process and the specific factors which influence this particular entry mode decision. The entry mode selection process is described with the use of the elements Ivanova & Gibcus (2003) apply in their strategic decision-making framework; it describes how the entry mode decision is made. The topics analyzed are: the entrepreneur, the environment, and the strategic decision process. For analyzing the influencing factors on the entry mode decision the factors of Root (1994) are used. The model of Root is chosen because it gave a wide range of influencing factors. With analyzing the influences of these factors an insight is given why decisions are made in a certain way. The factors analyzed are: internal company factors and external market factors. The foreign entry mode decision of innovative and manufacturing-based start-ups are influenced by the external market factors and the internal company

factors. In this strategic decision process there is an interaction between the entrepreneur's personality, the environmental factors and the specific characteristics of the entry mode decision which had to be taken. Interaction between these items will lead to a final entry mode selection.

For this case study research three case study firms are selected. The selected firms had to comply to a set of criteria. For this reason the firms look a little bit similar, which make it more easy to control environmental and firm specific variations. This is important for drawing cross-case conclusions, as concluded earlier. The three firms were selected because of some criteria they met. First, the firms have the Netherlands as their home market. Second, the firms were all start-ups at the time of their first foreign market introduction. They went abroad within three years after their first market introduction and can be seen as international new ventures. Third, the firms have developed an innovative product, which means that the product is new to the world. Fourth, the firms are manufacturing-based. This means that they have developed and produced tangible products. Software-based and service-based firms were excluded in this research. Fifth, before their first foreign entry mode selection the firms are independent and not part of a bigger parent company. Last, the firms had their first foreign market introduction between 2000 and 2004, so macro economic influences are somewhat equal in the cases.

For the selection of the case firms the pocketbook *Gestart in Delft/started in Delft* (Loos & de Kort-Holgreve, 2002) was used. This pocketbook is a publication of the Business Service Centre of the Technical University of Delft and contains descriptions of innovative starters coming from this university. The start-ups in this pocketbook are founded in the region of Delft, so environmental characteristics are comparable. The firms used for this study and which are suitable according these criteria above are Ergodynamics BV, VPInstruments BV and Sunshower BV. The founders of these firms were willing to cooperate in this case study research. The founders interviewed were Mr. Dirk van Deursen from Ergodynamics, Mr. Pascal van Putten from VPInstruments and Mr. Oscar Meijer from Sunshower. The firms which meet the criteria discussed above and which are selected for this case study are

List of the interviews

	Interviewee	Function	Date of interview
Ergodynamics	Mr. Dirk van Deursen	Founder / Managing director	11-04-05
VPInstruments	Mr. Pascal van Putten	Founder / Managing director	04-04-05
Sunshower	Mr. Oscar Meijer	Founder / Commercial director	21-03-05

Ergodynamics, VPInstruments and Sunshower. In-depth interviews with founders of these innovative start-ups were used to answer the primary research question. The founders are interviewed, because they were involved

from inception and can explain the complete entry mode selection process. A list of the interviews is shown in the table depicted above. With the use of different analysis the similarities and differences between the cases will be examined. The choice for case studies as research methodology will be discussed in further detail in chapter six together with the selection of the specific case study firms.

Case studies

The purpose of the empirical research is to investigate how innovative and manufacturing-based start-ups deal with the choices in their foreign market entry in real life. The firms used for the case study, namely Ergodynamics, VPIstruments and Sunshower, are active in complete different industries and sell different products. These differences are important for increasing the external validity. Besides this, there are also a lot of similarities. The firms are all start-ups which develop and manufacture innovative products and are established in the Netherlands. This conformity leads to similarities in decision-making among these firms and make it more easy to draw cross-case conclusions. The information for these descriptions were mainly gathered during in-depth interviews with the founders of the selected innovative and manufacturing-based start-ups. These descriptions provide an overview of the firm's characteristics, growth and internationalization process and the chosen entry mode. Quotes of interviewees are used to clarify the case descriptions. Before giving the complete descriptions, in the table below some general information of the case firms is summarized.

General information about the case firms			
	Ergodynamics BV	VPIstruments BV	Sunshower BV
• Year of foundation	• 1997	• 1998	• 2001
• Product	• Ergonomic chairseat	• Silicon-based flowmeter	• Solarium in shower
• First market introduction	• 2000	• 2002	• 2004
• First foreign market introduction	• 2000	• 2002	• 2004
• Number of employees	• 5	• 2	• 6
• Revenue (last year)	• € 400.000 - € 600.000	• € 200.000 - € 300.000	• € 700.000 - € 800.000
• % of the revenue from abroad	• 25 %	• 80 %	• 25 %
• Entry modes	• Licensing partners / Distributors	• Direct export / Distributors	• Agents / Distributors
• Internet site	• www.ergodynamics.com	• www.vpinstruments.com	• www.sunshowereurope.com

Ergodynamics BV

Ergodynamics is founded in 1997 by Mr. Leo van Deursen and his son Mr. Dirk van Deursen. Ergodynamics has extensive expertise on the field of orthopedic science, ergonomics and biomechanics. Mr. Leo van Deursen is a doctor and orthopedic specialist and has developed with his son a new

technology to reduce backpain. This RCPM-technology (Rotary Continuous Passive Motion) is a patented invention which make it for Ergodynamics possible to make sitting more healthy. With the use of a barely noticeable rotation of a chairseat the backpain during sitting can be reduced. This technology can be implemented in for example office chairs, luxury fauteuil's, car chairs and specific ergonomic chairs. Further has Ergodynamics developed the Torzio pillow which can be used in every chair separately. Ergodynamics is focusing on the specialized chair branch, which is a niche market. For the end consumer the use of this RCPM-based products is not service intensive. With a simple instruction the product can be installed and used. Unless it was a very new concept of sitting, the market acceptance was quite good. The people with backpain were willing to use the products since it was really helping reducing their pain. The firm is daily managed by Mr. Dirk van Deursen and another general manager. Further they have four other employees. These people are organizing sales, administrative and logistic processes. For incidental work they sometimes hire freelance personnel. The firm is for a part financed by some venture capitalists. For investing in Ergodynamics these venture capitalists own a percentage of the shares. The venture capitalists have an advisable role in strategic decision-making processes, but the final decisions are made by the two managing directors.

After the founding in 1997 the products are developed and a financing structure is arranged. For the market introduction of the RCPM-technology, Ergodynamics wanted to use licensing as their market entry mode, as well for the Netherlands as for foreign markets. A foreign introduction was needed, since the Dutch market was too small to earn back the investments. They had a very strong patent and they expected to grow very fast by the use of big and experienced licensing partners. They have developed the technology, but also the technical parts which have to be used during the manufacturing of RCPM-based chairs. For the office market they closed a license agreement with Grabert GmbH from Germany, which is a big manufacturer of office chairs. This firm has an international distribution channel, so the RCPM-technology was sold international from the first market introduction in 2000. For the consumer market Ergodynamics contracted Leolux. Leolux is a large manufacturer of furniture and has developed a fauteuil with the RCPM-technology. Also Leolux has a broad distribution channel in Europe and North-America. They use agents and dealers to sell their furniture. For the ergonomic market Ergodynamics closed a license agreement with Fitform. This firm is a specialist on the field of ergonomic chairs and has a distribution channel in western Europe. Also the automotive industry was contracted. They close a license agreement with Isringhausen GmbH & Co, which is the market leader in the truck chair industry. Since the use of these licensing partners, Ergodynamics immediately had a very wide distribution channel. These partners have picked-up the products of Ergodynamics in their assortments.

Unless the wide and experienced distribution channels of the licensees, high sales quantities of RCPM-based products stayed out. The products were sold,

but not the quantities Ergodynamics expected. The products of the licensees are still for sale, but the focus of Ergodynamics changed. In reaction to the disappointed sales of the licensees, Ergodynamics developed the Torzio. This is an ergonomic pillow implemented with the RCPM-technology on which people with backpain can sit. This pillow is very compact and can be used on every chair. The Torzio is manufactured in Asia under supervision of Ergodynamics and the distribution and marketing of the Torzio is now also coordinated by Ergodynamics. The Torzio had its first market introduction in 2004 and is sold by three different distribution channels. The first focus is on the medical channel; *Van Deursen: 'The licensees were manufacturers in the regular office and home furniture and were not able to convince people with backpain to buy a curing chair. Medical specialists, like physiotherapists and doctors are more able to do this, so for the Torzio we use specialized distributors in the medical sector.'* Physiotherapists and doctors have a lot of patients with backpain and so they can recommend the Torzio. Another channel is the specialized office supply channel. Here people with backpain can, on recommendation of a medical officer of the firm they work, get the Torzio. The last channel which is directly focusing on the consumer market is direct selling by the internet. Ergodynamics has developed its own internet site on which the Torzio can be ordered. Because Ergodynamics can not sell the Torzio all by themselves they make use of specialized distribution partners. The Torzio is now exported to Belgium, Scandinavia, Malaysia and Singapore where Ergodynamics has specialized distribution partners. For the future export to Germany, Great-Britain, Japan and North-America is expected.

Ergodynamics first used license agreements to enter foreign market and to sell the RCPM-technology. The licensees were all large firms with a relative broad range of products. Ergodynamics closed license agreements with these firms, because they thought it was a cheap and fast way to sell a lot of RCPM-based products all over the world. Ergodynamics only had to develop the technical parts for the RCPM-technology. The implementation and design of the complete RCPM-based chairs was done by the licensees. Unless these good conditions the cooperation's between Ergodynamics and the licensees were insufficient. The main reason for this was the lack of priority the licensees had to sell the products. The RCPM-based products were only a little part of the complete assortment the licensees sell. So there was not a real drive to sell the new product; *Van Deursen: 'In relation to the large multinational licensees we had very little power and control. For the sales of the Torzio we want to cooperate with smaller distributors and create a more equal relation in which our vote counts.'* Unfortunately this drive is needed to sell a product which uses a new technology. The customers are unfamiliar with the new technology and are therefore a little bit skeptic. To overcome this, it is important to explain the advantages of the product carefully. Another reason for the insufficient sales was that the licensees were not specialized in selling ergonomic and curing products and so they did not have the right contacts with the target group.

For the distribution of the Torzio Ergodynamics, used another entry mode. They wanted to have more control and sell directly to the customers with backpain. They focused on the medical channels, ergonomic office suppliers and the direct sales of the internet. They first entered the Dutch market with the Torzio. Shortly after that they also entered Belgium, Scandinavia, Malaysia and Singapore; Van Deursen: "We first wanted to enter European countries, but we could not ignore the demand from Asia." For arranging this export Ergodynamics used distributors. The main reasons for entering foreign countries by distributors is the high speed of entering, the relative low cost and the specific marketing infrastructure of the medical channel. This medical branch is organized differently in every country. The physiotherapists, hospitals and pharmacists have in each country a different organizational structure. Therefore it was important to cooperate with local distributors which know the market well. Ergodynamics did not develop a special entry mode strategy. The meetings with the current distributors were mainly accidental. The contacts with the distributors in Belgium and Scandinavia were made on trade fairs. The contacts with the distributors in Malaysia and Singapore were made during coincidental meetings in Asia. The current distributors have a good network in the foreign countries, but the main reason for Ergodynamics to cooperate with these distribution partners was their enthusiasm and believe in the product.

VPIstruments BV

VPIstruments is founded in 1998 by Mr. Pascal van Putten together with his father and brother. VPIstruments develops and produces mass flowmeters for compressed air and gasses, based on silicon sensors technology. These silicon sensors are patented and make it possible to measure the consumption of gasses within pipelines very accurately. These measurements can for example be used for optimizing the energy consumption of machines. VPIstruments sells its products to industrial suppliers of compressors, which use the flowmeters in their products and services, and to distributors of measuring equipment. Incidentally flowmeters are directly sold to industrial companies. The market of specialized gas flowmeters is a niche market. Worldwide there are about five small competitors which produce comparable flowmeters. The flowmeters are delivered including instruction manual. For very specialized measurements extra support from VPIstruments is sometimes needed. Further it is needed to calibrate the flowmeters once a time. The flowmeters are sent to VPIstruments where they are calibrated on the unique and expensive calibration machine. This machine is too expensive for small distributors. After some adjustments the flowmeters are returned.

The firm is managed by Mr. Pascal van Putten. His father and brother are not daily involved in the company, but they are still one of the main investors. Further there are cooperation's with the Technical University of Delft and Shell. They support some researches, but they are not shareholders. VPIstruments have two employees. They are mainly involved in technical

developments and calibration activities. They also organize the outsourcing activities. Some technical developments are outsourced to freelance engineers. Also some marketing activities are outsourced. The main strategic decisions are made by Mr. Pascal van Putten in consult with his father and brother.

The real start of VPIstruments was in 1998. They first focused on R&D activities and developed the silicon-based flowmeters. This basic development project was finished in 2002 and the flowmeters were good enough to sell. Because VPIstruments did not have financial means to build an own manufacturing plant, they outsourced the production of the flowmeter parts. They only organize some assembling activities and the whole calibration of the flowmeters. The first market introduction was in 2002. In this year VPIstruments sold its flowmeters to a large manufacturer of compressors. This multinational firm implemented the flowmeters in their products and used them for their services. Because this firm operates worldwide, the flowmeters of VPIstruments are now used in more than 50 countries. VPIstruments has to sell its products abroad, because the Dutch market is too small to earn back the development costs. The firm became an international venture from inception.

After this large contract VPIstruments kept going on with R&D activities to optimize the flowmeters and to develop new measurement possibilities. Since 2002 VPIstruments is trying to sell its products by using foreign distributors of measuring equipment. There are some contacts with distributors in the Netherlands and Germany. The distributors take up the flowmeters of VPIstruments in their assortments and sell them to their industrial customers. These distributorship agreements are not exclusive so VPIstruments has the right to sell directly to end users in the region where the local distributor is active. Since the sales of the current distributors is not sufficient and because VPIstruments wants to grow, they are looking for distributors worldwide. A freelance export manager is appointed to search for new distributors and to enlarge the distribution network. VPIstruments is primarily focusing on neighboring countries, but if distributors from more distant countries are enthusiastic and have the right requirements they can also become a distributor. VPIstruments also started its own promotion campaign; Van Putten: "Once, the sales of the distributors we had was insufficient and so we decided to sell directly to some end consumers. We started an European promotion campaign and contacted some end consumers ourselves. We think that good distributors can do it better, but at that moment we did not had the time to search for good partners. It was an emergency scenario to generate cash quickly." They are for example active on tradeshows and are advertising in European magazines, which are specialized on the measurement sector. The purpose of this promotion campaign is to contact new distributors and to meet new consumers. Sales requests from end consumer to VPIstruments are replied so they are now also selling directly to end consumers abroad.

The first entry mode used was direct exporting. Here the flowmeters were exported directly to the large foreign compressor supplier. The first contact with this supplier was arranged during the R&D-phase between 1998 and 2001. This firm was looking for specialized flowmeters which could measure more accurate. This first customer was very important to generate cash in the start-up phase. For further growth VPIstruments wanted to build a distribution network with foreign distributors. VPIstruments has chosen for this entry mode, because the use of distributors is most common in comparable sectors and with comparable products; Van Putten: 'In our sector the use of foreign distributors is the most common way for small firms to distribute their products. Why should we do it differently?' Further it is fast and relative cheap to work with distributors. A distributor had to fulfill some requirements. They must have a distribution network and enough technical skills to sell the flowmeters. Further it is very important that they are enthusiastic and that they are willing to invest in local marketing activities; Van Putten: 'The enthusiasm of the distributor is the most important selection criteria. When the distributor believes in the product he put effort in it to make it a success'. VPIstruments worked with different distributors. The cooperation's were not all very successful. Sometimes the effort of a distributor to sell the flowmeters was minimal and did not meet the expectations of VPIstruments.

Because the sales of the current distributors not come up to the expectations, VPIstruments also tries to sell directly to end consumers. By starting the promotion campaign they created their own market demand. With direct exporting they now also serve end consumers worldwide. They sell flowmeters directly to European countries but for example also to China, Iran, India and the United States. In contradiction to the use of distributors VPIstruments has more control, but direct exporting without using distributors although required more effort. This direct sales generates financial means in a short period of time, whereas the benefits of new distributors take a longer period of time. Because of the financial situation it was needed to generate sales immediately. On the long term the distributors become more important. VPIstruments does not have a very specific strategic plan in which the entry strategies are explained. The most decisions are made on an ad-hoc basis.

Sunshower

Sunshower is founded in 2001 by Mr. Merijn Wegdam and Mr. Oscar Meijer. Before starting the firm they were both students at the Technical University of Delft. They have developed the Sunshower, which is a solarium integrated in a shower cabin. With the use of the Sunshower, people can combine tanning and showering and so save time. Sunshower has a patent on the installation technique of the solarium. With this technique it is possible to implement a solarium in a shower cabin according European safety regulations. Electricity and ventilation are separated from the bathroom and therefore the Sunshower is a completely safe product. The Sunshower can be implemented

in new or renovated bathrooms. The installation of the solarium is done by certified installers and the lamps have to be checked every year by a certified service team.

Sunshower is focusing on people who like trendy and fashionable products and who find quality time and their appearance important. Sunshower delivers to the consumer market, but they also deliver their products to other firms. Here you have to think about hotels, beauty centers, fitness clubs etc. They serve the business-to-consumer as well the business-to-business market. Before entering the market they cooperated with a marketing and communication agency to develop a marketing plan. This was important to get an own style. The product acceptance was quite well, since the communication to the consumer was well prepared and because the target group consists of people who like new things.

The firm is daily managed by the two founders. Mr. Merijn Wegdam is general manager and Mr. Oscar Meijer is commercial manager. The firm is financed by a British Business Angel, who invested in the firm for 50% of the shares. The Business Angel also appoints for two days a week an experienced interim manager who guides the management team; *Meijer: 'For the continuation and growth of the firm it is now important to make a professional step and to formalize our decision-making process. The interim manager is guiding us through this growth phase.'* Strategic decisions are made in accordance with all the shareholders. Six employees are working for Sunshower. They are involved in activities like R&D, marketing, logistics and administration. They have a R&D department, because they want to become a large player on the field of designed sanitary. Therefore this department develops innovative and trendy sanitary products. The production of the Sunshower is outsourced to a social workshop in the Netherlands. They were involved in the R&D phase and are now producing and assembling the product.

After the establishment Sunshower first developed the complete product. The main development process was finished in 2003. In 2004 they had their first market introduction in the Netherlands. A contract was closed with the Bad and Body chain stores and so directly 90 sanitary stores in the Netherlands were selling the Sunshower. In 2004 Sunshower also had their first foreign market introduction. In England Sunshower contracted a sales agent which they met on a trade faire. This agent represents Sunshower and is active in the sanitary branch. He also approaches new dealers in England and organizes marketing activities. Further he is responsible for building a service network in England; *Meijer: 'We needed local partners to arrange and coordinate the installation and safety checks of the Sunshower. It is impossible for us to coordinate this kind of services out of the Netherlands.'* In the same year Sunshower also contracted an agent in Ireland, which organizes the same activities as his English colleague. Working with agents, the invoice and distribution of the product is arranged by Sunshower in the Netherlands.

In Germany, Belgium and France Sunshower is working with distributors. These distributors have several large sanitary stores in which they sell the Sunshower. Sunshower delivers promotion materials, sales trainings and technical support. Sales, distribution, installation, service and invoice are tasks of the distributors. Sunshower now also arrange some activities in Russia, Poland, Switzerland and Turkey. In these countries potential agents and distributors are trying to build a distribution and service network. If they are able to fulfill the requirements of Sunshower agreements are closed. For the future Sunshower is trying to establish a joint venture in the United States. First contacts with potential partners are already organized. Sunshower wanted to go international immediately, because it was important to grow fast and to build a solid dealer network. The Dutch market was not large enough to fulfill the desire to be a big player in the luxury sanitary branch. Before entering the first market Sunshower did not had an extensive strategic plan. They had a business plan, but it changed very often because of changing market demands and different partner possibilities; Meijer: "Because of the different partner possibilities and the changing market demand, the strategic plan was not usable anymore. The first entry decisions were made on intuition. We had a good feeling about the agent in England and so we closed an agreement." Now the structure of Sunshower is formed, strategic planning become more important.

England was the first foreign market Sunshower entered. They entered this country because it is a large market and because it was the home market of the financier. The British Business Angel already had good contacts in England and therefore this country was more accessible. Sunshower entered this first foreign market by an agent. Sunshower used an agent in England because it is a relative cheap and fast way to build up a dealer network. It also fits with the way the English sanitary branch is organized. The sanitary branch is build up with relative small and independent sanitary stores, so an active agent has to contact the stores separately. An agent is more suitable for this than a distributor. Because the newness of the product Sunshower wanted to have control and therefore they organized the distribution and invoice itself. There were no language barriers and the British Business Angel knew the market well so this could be organized out of the Netherlands. The results of the cooperation with the English agent were good and so Sunshower contracted an Irish agent to represent the firm in Ireland too.

The luxury sanitary branch in Belgium, France and Germany is organized differently. Here the market is build-up with large stores which provide a whole area. Direct contact with these distributors is more successful. They know the market and have already a network. These large stores are also able to deliver the desired service. The distribution and invoice is done by these distributors and they have their own installation and service department. This in contradiction to the relative small stores in Great-Britain; Meijer: *'The composition of the luxury sanitary branch is different in every country. In for example France you have just a couple of big players per region. We can contact these distributors directly and do not need an agent.'*

In England the market is build up with small and independent players and therefore we need a local representative to contact the stores separately.' The use of distributors is a fast and cheap way for entering these markets. Because of some language barriers it is better that the distribution and invoice is handled by a local party. Sunshower has selected these countries because of the short geographical distance, but the partnerships were often determined by coincidental meetings.

Sunshower also tries to build up a network in Russia, Poland, Switzerland and Turkey: Meijer: 'It is not efficient to go to one target country and to focus only on that country. You miss a lot of fantastic opportunities if you do so.' They have contacts with agents and distributors in these countries. These people try to organize a dealer network. Sunshower did not select these countries itself. The accidental meetings with these potential partners largely determined the geographical expansion. These potential partners were selected on some criteria. They had to have contacts in the luxury sanitary branch and must have the technical and commercial skills to buildup a good

	Ergodynamics	VPInstruments	Sunshower
Motive for internationalization	Too small home market	Too small home market	Too small home market / To build a large dealer network specialized on luxury sanitary
Entry modes used	Licensing partners / Distributors	Direct export / Distributors	Agents / Distributors
Countries entered	Worldwide by licensees / Belgium, Scandinavia, Malaysia and Singapore by distributors	Worldwide by direct export / Germany by distributors	England, Ireland by agents / France, Belgium, Germany by distributors / Other European countries by agents and distributors
Service intensity product	With simple instruction product can be installed and used	With instruction product can be installed and used / Calibration needed every year	Product installed by certified installers / Security check needed every year
Experienced problems	Little priority of licensees / Not optimal sales channel of licensees / Lack of capital	Little priority of distributors / Lack of capital, personnel and international experience	Lack of capital and information / Legal barriers in USA

dealer network. Besides these criteria the most important thing is that they are enthusiastic and believe in the new product. According to Sunshower this enthusiasm is needed for successful market introductions.

Also the United States is a potential market Sunshower wants to serve. Because of the product responsibility-system Sunshower do not want to service this country by exporting from the Netherlands. European assurance companies do not assure possible claims arising after product failures. To overcome this problem Sunshower wants to establish an independent joint venture in the future. Due to the financial situation of Sunshower it is not possible to establish a joint venture at the moment, but contacts with potential partners are already made. An investment entry mode in the United States might be possible in a couple of years. Sunshower also considered the

use of license agreements for going international, but due to the lack of control with this entry mode they preferred to use agents and distributors.

In the table above a summary is given of the main choices and characteristics of the firms concerning their entry mode selection, their motives for going abroad, and the countries entered. Additionally, the service intensity of the products and the problems the firms experienced during the internationalization process is highlighted as well.

Cross-case analysis

The founders of the case firms are all engineers who had their education at the Technical University of Delft. They were real entrepreneurs and saw an opportunity to build up their own company. Mostly they were also active in little businesses during their study. The entrepreneurs see an opportunity and are willing to take risks. They are willing to make the first investments and expect that the new product has enough potential to make profit on the long-term. Other conditions which are needed to build-up a firm successfully, like capital, market information and trained personnel, are filled in later on. The start of the firm, but also other strategic-decisions like the entry mode decisions are mainly based on intuitive and pro-active behavior. Because of the technical education the founders were from inception more focused on the technology instead of the market demand. The first years after the establishment of the firms, the technical development of the new technology was the main issue. Marketing and sales had relative little attention at that time. The firms all developed a simple business plan during the start-up phase, but due to other priorities, adjustments to these plans were not made. The value of it so decreased, since the plans were not up-to-date. Since the firms are growing now, strategic planning become more important. The British business angel of Sunshower appointed an interim manager to guide the founders of the firm in the strategic internationalization process. Also Ergodynamics appointed a general manager after the first market introductions. This manager is installed on advice of the venture capitalist and is focusing on overall strategic planning.

Environmental market forces also influence the entry mode selection process of the innovative and manufacturing-based start-ups. The case study firms are all focusing on niche markets with their own market channels. Ergodynamics is focusing on the specialized ergonomic market, VPInstruments wants to serve the market of specialized gas measurement equipment and Sunshower is aiming on luxury sanitary branches. The entry mode selection process of the case firms was initiated, because of the need for international expansion. All entrepreneurs had from inception the believe that the firms could only survive when there was international expansion. The Dutch market was just too small to earn back the development costs. For Sunshower there was also a strategic motive to grow fast, since they wanted to become a large player on the designed and luxury sanitary market. Fast

growth is needed to prevent that competitors fill in this market gap. After international expansion had been put on the agenda, the firms looked which entry modes were possible to use. The firms did not investigate the possibilities very accurate. They primarily searched for common entry modes which were already been used in the market sector. A thorough analysis of other possibilities was not made and none of the case firms developed a real entry strategy. Selection of the final entry mode out of the possible ones, was not a real rational process too. There were no clear selection criteria, so the final decision was made very pragmatic. The availability of potential partners plays an important role in this process. Other factors which affect this decision are internal company factors and factors which are related to the entry mode decision itself, like partner and country selection.

According to the theory the case firms have limited resources to internationalise. They invested a lot of time and money in their product development and neglected the other resources, like management, production and marketing. Root (1994) argues that the more abundant the resources in capital, management, technology, production and marketing the more numerous its entry mode options. Young firms with limited resources have less entry mode options. The innovative and manufacturing-based start-ups are confronted with limited resources and so their entry mode options were also limited. The lack of capital is the most important influencing factor. This factor, however is influenced by the other resource factors. A lack of management, marketing and production experience leads to a lack of financial means. Due to their limited financial resources all case study firms were forced to use entry modes with less financial commitment needs. Using investment modes or establishing own foreign export subsidiaries were no realistic possibilities. The firms had to choose for indirect exporting, exporting by foreign agents/distributors, direct sales to end consumers or contractual entry modes.

The lack of resources does not only influence the entry mode possibilities as described above, they also affect the final selection. Relative little attention is paid to this process, not only since the founders are technology driven but also because there is not enough capital and in-house knowledge to make a thorough analysis of the alternatives. Lack of information results in the fact that the firms imitate the practices of similar firms in their line of business. The investment of the case firms in R&D was normally higher as estimated and so financial means by sales and cash flow were needed to survive. The need for a financial injection is for the firms an important reason to make the final entry mode choice quickly. The choice is therefore mainly based on coincidental entry possibilities. Service intensity of the product is also a factor which affects the entry mode choice. The higher the service degree, the higher the importance of a good organization. Sunshower could not organize the service by their own, so they had to cooperate with a local partner. The choice for using agents and distributors was mainly based on this. VPIstruments also has a product which needs a yearly service. The difference with Sunshower is that this calibration process has to take place in

the Netherlands. Local partners are not yet able to organize this service. The customer sends the flowmeter to the Netherlands and after the calibration it is returned. The service aspect just influences the entry mode choice if the service takes place in the target country.

Innovative and manufacturing-based start-ups deliver an innovative product, which is new to the market and risky from the viewpoint of the buyer. In the beginning it is needed to put effort in the sales activities and to convince the new customers. To overcome this problem the case firms want to have control over the sales process. Due to the limited entry mode possibilities a starting firm has, the partner selection is very important in this. Ergodynamics has developed a patented technology, which is easily to produce. This makes it possible to cooperate with a licensing partner. Ergodynamics made use of licensing partners and so the existence of a patent influenced the entry mode choice of this firm. It gives an extra entry mode possibility, which is relative cheap. For the other two firms the patent did not play a role in the entry mode selection process.

The most influencing factors on the entry mode selection of innovative and manufacturing-based start-ups are the internal company factors. From the target market factors, the foreign marketing infrastructure is most important. The organisation of the target market is important since the case firms often imitate similar firms, which serve the same branch. A reason for Sunshower to use an agent in England was the dispersed structure of the luxury sanitary branch. They think that an agent is more able to build a dealer network in this country. For Ergodynamics a different target group approach was the reason to switch the focus from licensees in the chair sector to distributors in the medical sector. The market structure so influences the entry mode choice. The size of the target market did not play a role in the entry mode decision. Equity modes are preferred in markets with a high sales potential, but since it is not possible for innovative and manufacturing-based firms to invest in these modes, they do not take it in consideration. The size still influences the country selection.

Production factors in the target country are not important for the case firms, since the first target countries are situated in Europe as well. Production costs are approximately the same in these neighbouring countries, so reduction of these costs is not really possible here. The cultural distance between the home market and target market did not play an important role in the entry mode decision. When there is a small cultural distance, the use of equity modes are preferred. These modes are not achievable for innovative and manufacturing-based start-ups and so they are forced to use entry modes, which are also suitable for entering countries with a great cultural distance. Since innovative and manufacturing-based start-ups often cooperate with foreign intermediaries, which know the target market well, the cultural differences are not an issue. For Sunshower the legal barriers in the United States might influence the entry mode choice in the future. An independent firm establishment, like for example a joint venture, is needed because of the

product responsibility in that country (e.g. high claims for compensation arising from product failures). Sunshower does not have the financial means at the moment to establish an independent firm, and these legal barriers are for Sunshower a reason not to enter the United States at the moment.

Besides the composition of the market structure in the target market, the other factors do not play a large role in the entry mode selection. Because of the internal company effects, the target market factors are not very relevant any more. These target market factors mostly determine the choice between equity and non-equity modes. The equity modes are not achievable for the start-ups, so the affects of the target market factors are marginal in the start-up phase. The factors still play a role in the country selection. The home market factors do not play an important role in the entry mode selection. The small size of the Dutch market is a reason for international expansion, but does not directly influence the entry mode choice of the innovative and manufacturing-based start-ups. The case firms also make use of export subsidies, but this does not really influence the entry mode choice.

Also the selection of the possible partner influences the final entry mode choice. The case firms apply a business-strategy approach and do not develop an entry strategy. Since there was not an entry strategy, the requirements the partners had to meet were not clear either. The case firms make short lists with soft criteria, which prospective partners have to meet. After the development phase a fast growth is needed to generate capital. The need for this was sometimes so high, that a coincidental partner possibility determined the entry mode selection. Sunshower for example is trying the build a dealer network in Turkey and Switzerland. These countries might be more suitable for entering by the use of foreign distributors. Sunshower decides to make use of agents instead of distributors, because of the coincidental meetings with potential partners in these countries. The agents Sunshower met were enthusiastic and wanted immediately invest in a promotion campaign. The agents did not fulfill the requirements exactly, but because of their enthusiasm and willingness to invest, they convinced Sunshower to do business with them.

Due to the lack of time and money, the partner choice is often made on feelings instead of good assumptions. This leads often to partnerships which are not optimal. The main problem which occurs is that the distributor or agent is not able to obtain sustainable advantages out of the product sales. The fact that these intermediaries often have several products in their portfolio and that the innovative products are relatively expensive and require an intensive selling process, leads to hardly motivated intermediaries. When advantages of intermediaries decrease the partnerships will never been a success. The first choice of Ergodynamics to use licensing partners was not optimal. The partners did not put enough effort in the sales of the product and were not able to contact the right target group. The results were not satisfying. Also VPIstruments has a bad experience with a distribution partner. This distributor sold many different products and did not put

substantial effort in the sales of the flowmeters of VPIstruments. Therefore they decided to stop the relationship. The partner choice is very dependent on the personal network of the firm. Exhibition of the product on trade fairs is for innovative and manufacturing-based firms an important way for meeting potential partners. Here first contacts are made with people in the sector. A vast professional network will increase the partner possibilities.

At the time of the first market introduction, the case firms had defined their target market very globally. Ergodynamics is aiming on people with backpain who sits a lot, whereas VPIstruments wants to sell their product to industrial companies which use gas flowmeters to optimize their machines. Sunshower is focusing on trendy and fashionable people to introduce their new way of douching and tanning. The target groups of the case firms are all forming niche markets, which in every developed country exist. The start-up firms are not able to serve the entire world immediately and that is why they first have to make a country selection. Cultural and geographical factors mostly determine that these firms first focus on neighboring countries. The sequence in which the countries are entered is mostly not very important, since the countries are all potential markets.

Besides some firm specific preferences, the coincidental partner possibility is decisive in the determination of the country choice. For the international expansion of innovative and manufacturing-based firms cooperation with good foreign partners is often the key to success and so the choice for a partner plays an important role in the country selection. Sunshower preferred to enter England first, since the business angel already had good contacts there. The choice for entering Russia, Poland, Switzerland and Turkey is mainly determined by coincidental partner possibilities. These agents / distributors were very enthusiastic thus Sunshower gave them the chance to prove themselves. The market entry of for example Singapore and Malaysia by Ergodynamics is also a result of an accidental partner meeting. Ergodynamics sources the manufacturing of the Torzio out in Asia. During a business trip to that region Mr. Van Deursen coincidentally contacted potential distributors. Distribution relationships with these people so determine the entry of Singapore and Malaysia. A main reason for the fact that innovative and manufacturing-based start-ups do not focus on one specific country, and realize that they have to be successful in several countries to survive.

Conclusions

Innovative and manufacturing-based start-ups have invested a lot of time and money in the development of new products and in order to recover these investments they have to grow fast. The main motive for innovative and manufacturing-based start-ups to go abroad is the small size of the home market. The high development cost and the focus on a niche market make it necessary to enter foreign countries from inception. Innovative and manufacturing-based start-ups choose for entry modes which are less capital

intensive. Our case firms are using direct sales channels, foreign subsidiaries or licensing partners; equity modes like, joint ventures, green field investments or acquisitions are not used. This study conforms the literature that it is problematic for innovative and manufacturing-based start-ups to apply rational-analytical approaches to their entry mode selection decision; instead this decision is often made more pragmatically. However, an accurate description of what this entry mode selection process looks like for innovative and manufacturing-based start-ups, is not given by the current theories on international entrepreneurship.

The general entry mode selection theories state that a firm first chooses the specific target country and that they subsequently select the best entry mode. After this decision the firm searches for a partner to cooperate with if necessary. The findings of this study do not support the process description given by general entry mode selection theories. The entry mode selection process of innovative and manufacturing-based start-ups is better described by the interaction between the country selection, the entry mode choice and the selected partner. These different decisions influence each other simultaneously and determine the foreign market introductions. The founders of innovative and manufacturing-based firms are mostly engineers. They are driven by opportunities instead of available resources and are primarily focused on the technology development. The strategic and marketing issues are generally underestimated. After the development phase a fast foreign market introduction is often appropriate and therefore this leads to intuitive, opportunistic and proactive behaviour. The lack of resources is another factor which influences the process. Not only the lack of international experience and strategic priority of the founder determines the process. Also the lack of financial means and information has its influence on the process. Because of these shortcomings a thorough internationalisation analysis is not possible. During the development phase the firms have less income, which often leads to critical situations. Sometimes the need for a financial injection is so high, that the first entry mode possibility is utilized to gain capital as soon as possible. The choice is made on the basis of pressing circumstances or emergency factors instead of good opportunities. The possibility to cooperate with a partner is thereby often decisive. The potential partners are often met on trade fairs or by accidental meetings, which are elicited because of the firm's network. Because of the restrictions caused by internal company factors, like the lack of resources and the uncertainty of the product, target and home market factors are less relevant. Overall it can be concluded that the entry mode choices of innovative and manufacturing-based start-ups are mainly determined by restrictions instead of opportunities.

The choice of an entry mode for innovative and manufacturing-based start-ups can be improved with the findings of this paper. An important process in the foreign entry of innovative and manufacturing-based start-ups is the foreign partner selection. This selection is underestimated by these firms, which often leads to unsatisfied partnerships. The firms have to put more effort in the partner selection. It is important to have a clear characterization

of a potential partner in an early stage. Clear criteria are important to filter the potential partners and to focus on the interesting ones. To contact new potential partners the network of the firm is important. Active networking must become a point of interest in the entire organization. If it is not possible to purchase own stands during trade fairs due to lack of financial means, visiting them is still valuable to create new contacts.

This paper also has some limitations. The first limitation is the limited generalisability of the findings. This is caused by the relative low number of case study firms which are investigated. In order to find significant results more case firms should have to be researched. This study only focuses on innovative and manufacturing-based start-ups so generalizing the findings to other kind of industries is not directly possible. Other starting firms in for example the service industry can not make use of the findings, without making some adjustments. For the future, researching the entry mode selection process of innovative service firms could be useful in order to provide insights in the similarities and differences between the manufacturing-based and the servicing-based industry.

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