
Lean internationalisation of high-tech firms

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Abstract: This study examines the internationalisation of high-tech start-up firms (HSFs) from small and open economies (SMOPECs). It explores how HSFs may differ in their speed of internationalisation relying on information collected via interviews with the CEOs or founders of 32 HSFs that operate internationally. It uses a comparative cross-national multiple-case study research design to answer the research questions. The findings provide the basis for developing propositions for further comparative analyses of the early and fast internationalisation of HSFs based in emerging and developed markets. The study contributes to the literature on networks, internationalisation and international entrepreneurship.

Keywords: high-tech; start-up; small and open economy; SMOPEC; early internationalisation; fast internationalisation; speed of internationalisation; born global firm; BGF; Uppsala model; lean internationalisation; Paraguay; Switzerland.

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1 Introduction

Early and rapid internationalisation of high-tech start-up firms (HSFs), particularly in the sense of born global firms (BGFs) (Cavusgil and Knight, 2015; Coviello, 2015), is one of the topics that has attracted most attention in international entrepreneurship (e.g., Bailetti, 2012), it is however among the least researched.

One of the most important characteristics of the BGFs is the rapidity and speed of internationalisation soon after their incorporation (Acedo and Jones, 2007) and the development of their products and services (Neubert, 2015). So far, the international entrepreneurship field has placed more interest on the process of internationalisation and in particular, on the distinct characteristics of firms that internationalise rather rapidly (Acedo and Jones, 2007) and not so much on the reasons for early and fast internationalisation (Neubert, 2015).

Early and fast internationalisation of BGFs is considered as entrepreneurial and risk seeking (Oviatt and McDougall, 2005). It is often associated with the ability, experience and willingness of the entrepreneur (Hennart, 2013). Bacq and Coeurderoy (2011) and Verbeke et al. (2014) found evidence that the entrepreneur went through the first phases of the Uppsala internationalisation process model (Johanson and Valhne, 2009) before founding the new HSFs.

BGFs that internationalise early and fast are often HSFs with innovative products and services, which operate in a small global market niche (Andersson et al., 2015). They have a higher probability to be located in from small and open economies (SMOPEC) (Luostarinen and Gabrielsson, 2006) with a limited home market potential (Andersson et al., 2015; Cannone and Ughetto, 2014). Due to their small size, HSFs are often forced to internationalise early and fast to become profitable (Trudgen and Freeman, 2014). Hence, this type of internationalisation is highly significant (Neubert, 2016b), necessary for survival and complex. The BGF has to manage innovation processes parallel to international market development with limited resources (Cavusgil and Knight, 2015; D'Angelo et al., 2013; Lemminger et al., 2014).

In the first phase of internationalisation, most BGFs focus on a limited number of new foreign markets, which might be called regionalisation instead of globalisation. Some BGFs use a structured market entry process (Schwens and Kabst, 2011; Neubert, 2013a), others internationalise in a rather unplanned way (Hagen et al., 2012; Hagen and Zucchella, 2014) following existing clients or random opportunities. BGFs select attractive markets with low market entry barriers (Neubert, 2013b) where they have an existing client network, local distribution and service partners (Coviello, 2015). BGFs prefer a low-risk market entry mode such as, 'export' (Cavusgil and Knight, 2015) in combination with local distribution partners (Andersson et al., 2015), which requires fewer resources and leads to faster results (Neubert, 2013a).

The notion of early and fast internationalisation is still not well understood and requires additional research (Acedo and Jones, 2007). Neubert (2016b) and Ciravegna et al. (2014) called for research about location effects of HSFs based in different economies of Europe and Latin America. In a comparative cross-national multiple case study research design, the results of a previous study about Swiss HSFs (Neubert, 2016a) are compared with a sample of Paraguayan HSFs. Even though both countries are landlocked SMOPECs with almost no natural resources and a similar population size, Paraguay is an emerging economy (EE) and Switzerland is a developed economy (DE).

2 Literature review and theoretical framework

2.1 The Uppsala internationalisation process model

In 1977, Johanson and Vahlne (2009) developed the Uppsala internationalisation process model. Their first finding was that firms enter new foreign markets using a so-called establishment chain (Verbeke et al., 2014). In the first step of this gradual internationalisation process, firms enter geographically and culturally closer markets (Cavusgil and Knight, 2015; Coviello, 2006; De Villa et al., 2015) with low-risk market entry modes, such as 'export', 'licensing' or 'franchising,' in collaboration with a local partner (Neubert, 2016b). With growing international success and market knowledge, they increase their investments establishing for example a wholly owned subsidiary and gradually start to enter more distant foreign markets. Obviously, the level of resources dedicated to a foreign market might also decrease leading for example to a market exit (Neubert, 2011) or a disinvestment, if the market attractiveness is decreasing. Based on this framework, Paraguayan firms are expected to enter foreign markets like Bolivia and Brazil before they export to the European Union. Likewise, Swiss firms predominately export to neighbouring EU member states such as Germany, Austria, France, or Italy.

The second finding is the concept of liability of foreignness. Firms need a firm specific advantage (FSA) in every new foreign market, which compensates at least for the liability of being a new foreign firm without significant client relationships or sufficient market knowledge. The larger the geographical, administrative, economical and cultural distance between the home and the foreign market, the larger is the liability of foreignness (Johanson and Vahlne, 2009) and the bigger the FSA needs to be. Local partners like distributors or resellers help to bridge these differences. The speed of internationalisation depends on the speed of learning (Johanson and Vahlne, 2009) about every new foreign market. This means that the firm must be able to transfer its FSA to a sustainable and relevant competitive advantage in every new foreign market to cover the cost or the liability of foreignness (Johanson and Vahlne, 2009).

In 2009, Johanson and Vahlne (2009) revised the Uppsala internationalisation process model and introduced the concept of liability of outsidership. This concept reflects the increasing importance of networks (Johanson and Vahlne, 2009; Coviello, 2006) and tries to explain the internationalisation of BGFs. As the main market entry barrier for BGFs is the access to client networks and to market opportunities. Thus, the speed of internationalisation depends on their ability to develop these local networks and market opportunities into a new client relationship.

According to Johanson and Vahlne (2009), the Uppsala model can also be applied to firms that start to internationalise soon after their birth like BGFs (Cavusgil and Knight, 2015). A BGF, as defined by Cavusgil and Knight (2015), is a young firm that is active through early export sales (Coviello, 2015). The market entry mode 'export' is also the first step in the establishment chain of the Uppsala model (Johanson and Vahlne, 2009).

2.2 A new type of firm – the BGF

Most empirical research on early and fast internationalisation focus on HSFs in the sense of BGFs (Servantie et al., 2016). A BGF (Cavusgil and Knight, 2015; Knight and Liesch, 2016) is a young firm that is active through early export sales (Coviello, 2015). Thus, the

BGF concept focuses on a market-seeking internationalisation strategy using for example a global-exporter internationalisation model (Neubert, 2013a). This is the link with the establishment chain of the Uppsala internationalisation process model (Johanson and Vahlne, 2009). Both concepts focus on the market-entry mode ‘export’ as a first step to enter a new foreign market. Further, the word ‘global’ in BGFs should not be understood in the sense that BGFs export immediately to all global markets. Often, BGFs start to export to a limited number of the most attractive markets or to a region such as a free-trade area (Coviello, 2015).

BGFs need to be distinguished from international new ventures (INVs). The concept of INVs (Oviatt and McDougall, 2005) analyses all international value chain activities (IVCAs) of a young firm including exporting, but also off-shoring, outsourcing, R&D, production, as well as sourcing. Thus, the terms BGF and INV cannot be used synonymously (Coviello, 2015). Rasmussen and Tanev (2015) and Blank (2013) introduced the ‘lean global start-up’ (LGS) as a new type of firm. An LGS is a BGF in the sense of a HSF, which creates a new international market niche (Neubert, 2017). In this paper, the terms LGS and BGF are used synonymously.

2.3 Early and fast internationalisation

In 2015, Cavusgil and Knight wrote that the internationalisation of BGFs might challenge the traditional Uppsala internationalisation process model. According to Johanson and Vahlne (2009), the Uppsala model can also be applied to firms that start to internationalise soon after their birth like INVs (Oviatt and McDougall, 2005), LGSs (Rasmussen and Tanev, 2015) and BGFs (Cavusgil and Knight, 2015), because the speed of internationalisation depends on the firms’ ability to learn about new foreign markets and to adapt its FSA to the respective market needs. Due to advances in communication and transportation technologies and the emergence of global social networks (Coviello, 2015) even firms from traditional industries might internationalise faster and earlier.

Cavusgil and Knight (2015) developed a list with a number of drivers for fast and early internationalisation. First, there are internal characteristics, which drive internationalisation. Agile and adaptable HSFs with profitable high quality products and services and strong marketing and sales capabilities, internationalise earlier and faster. Further, Cavusgil and Knight (2015) mention the abilities of the entrepreneur like international experience, the existence of a global vision, innovativeness (Casillas and Moreno-Menendez, 2014), or entrepreneurial and market orientation. Romanello and Chiarvesio (2016a, 2016b) point out the entrepreneurial capabilities like networking, opportunity creation (Zucchella et al., 2016) and product promotion play an important role during the early market entry stage (Neubert, 2016b). Thus, the ability to acquire new clients in new foreign markets is a required key attribute for an international entrepreneur (Neubert, 2017). Depending on the personality of the decision-maker and market conditions, the respective processes are well structured or rather unplanned (Nummela et al., 2014).

Second, external market conditions such as the size of the home market, the quality of institutions, the existence of free-trade agreements, new communication technology, more efficient transportation and global social networks also drive early and fast internationalisation (Cavusgil and Knight, 2015).

2.4 Influence of the location on the speed of internationalisation

Multiple authors call for further research about the effect of BGFs; home country on the speed of internationalisation (Knight and Liesch, 2016; Hitt et al., 2016), because findings from studies, which analyze the fast and early internationalisation of high-tech firms from DEs, are not necessarily transferable to EEs (Zander et al., 2015). So far, there is still little research focusing on BGFs from EEs (Gonzalez-Perez et al., 2016). The existing studies of, for example, Musteen et al. (2014) and Ciravegna et al. (2014) emphasise the importance of social networks especially the networking ability of the entrepreneur as the driving force behind the speed of internationalisation. Hitt et al. (2016) and Zucchella et al. (2016) also reveal that the reputation of the home country and the quality of institutions influence early and fast internationalisation.

3 Research design

3.1 Research questions

The statement of the research problem has led to the following three research questions:

- Research question 1. What are the perceptions of SMEs about the significance of early and fast internationalisation for high-tech firms?
- Research question 2. What are the perceptions of SMEs about how high-tech firms may differ in their speed of internationalisation?
- Research question 3. What are the perceptions of SMEs about why high-tech firms may differ in their speed of internationalisation?

3.2 Method

The choice of the research method is based on the purpose of this study. This study uses a comparative cross-national multiple-case study research design with embedded units to answer the explanatory (= how/why) research questions (Yin, 2015). In contrast to an experimental design or a survey, a multiple-case study has more flexibility (Stake, 2010), allows an in-depth analysis of a complex research problem (Yin, 2015) within a highly contextualised environment (Rosenberg and Yates, 2007) and a comparison between different cases and countries (Baxter and Jack, 2008). According to Hennart (2013), this research design helps to answer the research questions because it allows the use of the replication logic in analyzing pattern-matching properties between theories and cases and as a possibility to obtain external and internal validity.

This study used different sources of evidence to obtain robust conclusions and to achieve construct validity. Therefore, the triangulation concept was applied in the data collection phase to guarantee that different sources of evidence were used to collect data from each case. The primary source for data collection is qualitative, semi-structured, in-depth, face-to-face interviews with subject matter experts (SMEs). Other sources of evidence were the corporate website, product and firm brochures, internal documents provided by the SMEs and other secondary data. The data of the Swiss sample was collected in July and August 2015. The data of the Paraguayan sample was collected in

October and November 2016. The reliability criteria were met by using the same questionnaire, the same study protocol and the same data structure in the data-collection phase.

The data analysis followed a logical sequence starting with an individual case analysis, followed by a cross comparison to identify similarities and differences and finally a literal and theoretical replication using a pattern-matching approach. The goal of this approach is to increase the possibility to transfer and to generalise the findings to other contexts.

3.3 *Sample*

The choice of the sampling strategy is based on the purpose of this study. This study uses a purposive case-selection strategy (Seawright and Gerring, 2008), because it produces a representative sample with typical and successful examples of the total population. After a random sample (= probability sampling) is drawn from a database of Swiss and Paraguayan HSFs (Zikmund et al., 2012), the typical cases of the sample are selected (Seawright and Gerring, 2008). According to Eisenhardt (1989) and Yin (2015), this sampling strategy produces a statistically representative sample, if at least six to ten cases are selected. Data saturation was reached after twenty Swiss and twelve Paraguayan SME interviews. This sample size allows for a better triangulation of data and helps to strengthen the results of the whole study (Yin, 2015).

The Swiss SMEs (case study one) have the following socio-demographic data:

- The SMEs hold between 25%–100% of the shares of their HSFs. Other shareholders are mainly individual minority shareholders from Switzerland.
- Corporate function: CXO, shareholder and founder (100%).
- Sex: females (5%), males (95%).
- Age: 37–63 years.
- Education: Doctorate (45%), Master (55%), Bachelor (5%).
- Nationality: Swiss (70%), German (15%), French (10%) and Australian/Japanese (5%).
- Residence: Switzerland (100%).
- Prior professional experience: industry (50%), international management (40%), entrepreneurship (40%), all three (20%), industry and entrepreneurship (10%).

The Swiss HSFs, which the SMEs represent, have the following statistical data:

- shareholders: founders (25–100% of the shares), individual minority shareholders from Switzerland (remaining shares)
- year of incorporation: 2008–2013 (100%)
- active in foreign markets: yes (100%)
- registered office: Switzerland (100%)

The Paraguayan SMEs (case study two) have the following socio-demographic data:

- corporate function: owner/ CXO 100%
- sex: males (100%)
- age groups: >50 years old (17%), 41–50 (42%), 31–40 (33%), 21–30 (8%)
- education: postgraduate (33%), tertiary (50%), secondary (17%)
- nationality: Paraguay (84%), Argentina (8%), Chile (8%)
- residence: Paraguay (100%)
- professional experience (mainly coming from the current assignment): industry (100%, 18 years), international (84%, nine years), entrepreneurship (100%, 14 years).

The Paraguayan HSFs, which the SMEs represent, have the following statistical data:

- number of employees (average 33): <10 (25%), 10–49 (42%), >50 (33%)
- year of incorporation: since 2010 (34%), 2000–2009 (33%), 1990–1999 (33%)
- revenues (average 2.1 MUSD): <1 MUSD (42%), 1–5 MUSD (50%), >5 MUSD (8%)
- active in foreign markets: yes (58%), planned (25%), No (17%)
- registered office: Paraguay (100%)

4 Findings

The results of this comparative cross-national multiple-case study are presented in this chapter to answer the three research questions individually for each case. First, the findings of the survey from Switzerland (case 1) are presented. Second, the findings of the survey from Paraguay (case 2) are presented.

4.1 RQ1: Significance of early and fast internationalisation

The analysis of the data collected from the in-depth, semi-structured, qualitative, face-to-face SME interviews revealed the following themes. These themes individually and together will answer research question one:

- What are the perceptions of SMEs about the significance of early and fast internationalisation for high-tech firms?

4.1.1 Findings from Switzerland

Early and fast internationalisation is considered essential for the survival of HSFs from SMOPECs like Switzerland due to the small size of their home market (Neubert, 2016a; Zander et al., 2015; Hagen and Zucchella, 2014).

Consequently, early and fast internationalisation is part of the business model as well as the strategic and financial plan (Neubert, 2016a; Andersson et al., 2015; Cannone and Ughetto, 2014). Investors use these documents to calculate the corporate value, to invest

and to hold the founders accountable, if they are not reaching the planned and agreed upon goals (Neubert, 2016a).

The study of Neubert (2016a) revealed that Swiss HSFs face significant delays of, on average, two and more years in the execution of their international market development activities in comparison to the time originally planned in their business plans. This comparison is based on the business plan, which the SMEs have used to calculate the valuation of their HSFs for their last external capital increase before internationalisation. The reasons are an often unstructured and unplanned internationalisation process (Neubert, 2016a; Hagen and Zucchella, 2014), unexpected long sales cycles and missing resources (especially market development knowhow).

Another reason for these delays is that HSFs with disruptive new technologies often acquire their first clients in foreign markets outside of Europe due to the excellent international reputation of the country 'Switzerland' for quality and innovative technology and an unexpected openness of EEs to implement new disruptive technologies. Local governments and regulators prefer to have the best available technology and often leapfrog several stages of technological development, because they don't have to be considerate of producers of the 'old' and 'best' available technology and of their own laws and regulators (Neubert, 2016a).

Despite these delays HSFs could not benefit from government programs such as export guarantees and export support due to program restrictions and missing expertise (Neubert, 2016a). This information is highly important because many SMOPECs invest significant resources in the development of a national HSF sector (Trudgen and Freeman, 2014; Almor, 2013). While policy makers have a national perspective and support the local creation of new jobs and economic growth (Gerschewski et al., 2014), SMEs have a global perspective on their HSFs.

4.1.2 Findings from Paraguay

Early and fast internationalisation is considered essential for the survival of HSFs from SMOPECs. Especially younger HSFs with internationally experienced and educated founders and investors, which offer cloud-based applications, consider early and fast internationalisation as essential for the survival of HSFs from SMOPECs like Paraguay.

Immediate internationalisation is part of the business plan of 58% of all SMEs, Due to a less developed professional private equity and venture capital market; Paraguayan HSFs rely on their family, friends and founders to finance their start-ups. Especially friends and business angels are quite conservative, risk averse and lack international experience. Consequently, they don't push hard for early and fast internationalisation. In addition, investments, valuations and business plans per round are more conservative. This also reduces the pressure to internationalise early and fast.

Paraguayan HSFs do not ask for financial support from the government or from government agencies (e.g., export promotion), However, they would appreciate the existence of tailor-made support programs in the sense of better technical training at local institutions and international promotion of Paraguay as a place to do business.

Paraguayan HSFs face significant delays in the execution of their international market development activities in comparison to the time planned in their business plans. Delays in their case are to a large extent explained first by the existing home market potential, which shifts the focus to home market clients at the expense of efforts to internationalise and second by the required time to develop competitive products in the regional market.

SMEs indicate that a lack of capacity and specialised human resources, as well as, higher quality standards, is the main reasons for delays. At the same time the HSFs indicate that internationalisation enables them to develop more innovative quality services and improve competitiveness, as foreign clients demand higher quality at higher prices.

Paraguayan HSFs are starting to internationalise in neighbouring markets like Argentina, Bolivia and Brazil using low risk market entry modes like export, in combination with strong local distribution partners and/ or they are following their existing clients. This research finding confirms the Uppsala internationalisation process model (Johansen and Vahlne, 2009).

Paraguayan HSFs are born regional, because they internationalise within their home continent (Gabrielsson et al., 2014). There are some younger HSFs with internationally experienced founders, which might also be considered as born global (Cavusgil and Knight, 2015).

4.2 RQ2: difference in the speed of internationalisation

The analysis of the data collected from the in-depth, semi-structured, qualitative, face-to-face SME interviews revealed the following themes. These themes individually and together will answer research question two:

- What are the perceptions of SMEs about how high-tech firms may differ in their speed of internationalisation?

4.2.1 Findings from Switzerland

Swiss HSFs differ in their speed of internationalisation due to the timing of the recruitment of international sales managers. The early recruitment of international sales managers increases the speed of internationalisation significantly (Neubert, 2016b), because they bring in a market perspective, experience and a network of potential clients. International sales managers acquire the first clients and distributors and maintain long-term relationships with them (Kumar and Yakhlef, 2015). This is especially important, if the founders have no sales background.

Another driver of the speed of internationalisation is the existence of market opportunities (Neubert, 2016b). These market opportunities (Coviello, 2006; Gabrielsson et al., 2014) are created based on the existing network of the management team, investors, or the sales management team. In a quite unstructured process, the existing networks are leveraged to grab low hanging fruits and to generate quick wins in the sense of showcase projects or lead users (Neubert, 2016b).

The size of their home market (Zander et al., 2015) is the third driver for the speed of internationalisation. A small home market increases the pressure to internationalise early and fast (Neubert, 2016b). Therefore, founders from SMOPECs only use business models with IP protected and innovative products, which are globally scalable, respectively focus on value chain activities with lower market entry barriers (Neubert, 2016b) (fourth reason) and implement structured internationalisation processes soon after incorporation (Hagen et al., 2012; Hagen and Zucchella, 2014; Neubert, 2011, 2013a, 2013b; Zander et al., 2015) (fifth reason).

Based on a first mover/pioneer strategy in a small global market niche (Neubert, 2016b; Schwens and Kabst, 2011) (sixth reason), Swiss HSFs use less resource intensive

market entry modes (seventh reason) like export, licensing and franchising (Neubert, 2016b; Almor, 2013), because they allow for a faster global market penetration and the simultaneous entry in several markets (Neubert, 2015).

4.2.2 Findings from Paraguay

Paraguayan HSFs differ in their speed of internationalisation due to the following reasons. They acknowledge the importance of an international strategy and a well structured market development process before going abroad. However, in practice they often follow their clients, use their network and exploit market opportunities without analyzing the market attractiveness. This unplanned internationalisation often results in a reduced speed of internationalisation.

Paraguayan HSFs, also, prefer to cooperate with local partners like distributors and resellers instead of developing their own network or depending on market opportunities abroad. Thus, the access to competent local partners is a key driver for the speed of internationalisation.

More than 75% of all SMEs are aware that a Paraguayan HSF needs to offer a unique, innovative and high quality niche market product at attractive prices to be competitive abroad. They understand that the FSA must be higher than the liability of outsidership in the foreign market. For example: product quality is considered as more important in foreign markets than in Paraguay. At home, a competitive price and the access to the right network are crucial.

The availability and the access to qualified human resources (here: IT specialists) in the product development (especially project management) and client service department is also crucial. Thus, most SMEs call for government support to increase the quality and quantity of graduates with technical degrees.

The final reason for a difference in speed of internationalisation, are product characteristics and the focus on specific market segments (e.g., agriculture, telecommunications and banking). One example is the IT industry. Paraguayan HSFs, which develop high quality cloud-based applications as a plug-in of an enterprise resource planning system internationalise earlier and faster than developers of fully integrated, stand-alone software products.

4.3 RQ3: reasons for a difference in the speed of internationalisation

The analysis of the data collected from the in-depth, semi-structured, qualitative, face-to-face SME interviews revealed the following themes. These themes individually and together will answer research question three:

- What are the perceptions of SMEs about why high-tech firms may differ in their speed of internationalisation?

4.3.1 Findings from Switzerland

Swiss HSFs differ in their speed of internationalisation. The reason for this difference in speed of internationalisation is, according to the SMEs and besides the aspects mentioned in chapter 4.2.1, mainly based on the entrepreneurs, their abilities and their experiences (Neubert, 2016b; Lin et al., 2016; Andersson et al., 2015).

Oviatt and McDougall (2005) found out that international entrepreneurship includes the discovery and exploitation of global market opportunities by entrepreneurs. This requires abilities like the international learning ability (Neubert, 2016b; Gabriëlsson et al., 2014; Dimitratos et al., 2012), the international networking ability (Neubert, 2016b; Cavusgil and Knight, 2015; Covin and Miller, 2014) and the ability to work in intercultural environments. Especially the ability to develop relevant global networks, in order to create business opportunities and to acquire new clients in foreign markets, influence the speed of internationalisation positively (Neubert, 2016b).

Common sense would argue that prior experience of the entrepreneur might be a reason for the difference in speed of internationalisation, but this survey did not produce any significant evidence that prior international (Amorós et al., 2016; Verbeke's et al., 2014), entrepreneurial and industry experience of the entrepreneur influences the speed of internationalisation (Neubert, 2016b; Amorós et al., 2016). In contrast to that, this multiple-case study research produced evidence that the existence of a strong personal network of the entrepreneur within the industry prior to the foundation of the HSF is considered as an important success factor.

Early and fast internationalisation is often considered as risk seeking (McDougall and Oviatt, 2000), but entrepreneurs are not looking for additional risk abroad. In fact, they try to reduce and manage the risk of internationalisation (Neubert, 2016b).

4.3.2 Findings from Paraguay

The main reason why Paraguayan HSFs differ in their speed of internationalisation is the capabilities of the entrepreneur. Especially, entrepreneurs with international experience due to their education (Amorós et al., 2016) or work abroad have a higher self-confidence and internationalise faster and earlier. Most Paraguayan SMEs indicate that projects in foreign markets were a very positive experience in terms of profitability and prestige for the company.

The second reason is the willingness of the entrepreneur to take risk, which is particularly the case for younger entrepreneurs with international education. Even if, Paraguayan SMEs see a limited risk in entering new foreign markets such as legal payment conditions, quality management and client service, a higher self-confidence due to international experience increases the willingness to take market entry risk.

Paraguayan SMEs specify a wide variety of competences, which are necessary to enter foreign markets successfully. These competences are mainly sales-driven and include the acquisition of local clients, the selection of local partners, the hiring of local specialists and international project management. Especially, the last two competences are considered as crucial.

Paraguayan SMEs consent that networks are key to enter new markets. Networking ability is crucial for entering new foreign markets successfully. Local networks help to reduce risk and market entry cost, to acquire clients and to build up a positive reputation. Especially, the reputational aspect is very important because Paraguay still isn't recognised as a location for high-tech firms and this contributes to a slow speed of internationalisation.

Paraguayan SMEs are aware that they need a well-structured internationalisation strategy and market development process. This strategy is based on the Uppsala internationalisation process model, a niche market strategy, regional, export with local

partners (distributors and resellers). The acquisition of new clients in new markets with the proper sales force is often less successful than the collaboration with local partners.

5 Implications

A cross comparison is conducted in this chapter to identify similarities and differences. This comparison is based on the findings of both countries.

5.1 Similarities

The comparison of the findings revealed the following similarities. These similarities show almost no differences between HSFs from emerging and developed SMOPECs.

The analysis of the similarities revealed that the Uppsala internationalisation process model applies to both the Paraguayan and the Swiss case (Johanson and Vahlne, 2009; Neubert, 2015). The SMEs put the main focus on the existence of FSA. Unique and innovative, high quality niche market products and professional local partners are a precondition for every new foreign market entry because they should compensate for the liability of outsidership and foreignness (Neubert, 2016a).

Table 1 Similarities

<i>Similarities</i>	<i>Paraguay and Switzerland</i>
Significance of early and fast internationalisation	Early and fast internationalisation is considered essential for the survival of innovative HSFs from SMOPECs like Paraguay and Switzerland due to the small size of the home market.
Delays in the internationalisation process	Almost all HSFs face significant delays in the execution of their international market development activities in comparison to the time planned in their business plans due to an unstructured internationalisation behavior.
Importance of internationalisation strategies and process	All SMEs understand the importance of structured market development processes including local market intelligence for international success.
Abilities of the entrepreneur	The main ability of the entrepreneurs (and their teams) is the networking ability in the sense of creating market opportunities to acquire new clients and distribution partners. This is the main driver on the speed of internationalisation.
Choice of market entry modes	All SMEs indicate that new foreign markets should be entered using low risk and low cost market entry modes with local partners.
Importance of FSAs	The existence of firm-specific advantages as a precondition for every new foreign market entry is another similarity. These FSAs should at least compensate for the liability of outsidership.

Another similarity is that all HSFs might be considered as a BGFs (Cavusgil and Knight, 2015; Knight and Liesch, 2016). These are young firms that are active through early export sales (Coviello, 2015) with a strong focus on a market-seeking internationalisation strategy using, for example, a global exporter internationalisation model (Neubert, 2013a).

The networking ability was identified as the key ability of the entrepreneur (Coviello, 2015; Cavusgil and Knight, 2015; Neubert, 2016b; Musteen et al., 2014; Ciravegna et al., 2014) to be one of the main drivers for the speed of internationalisation. This ability is defined in the sense that entrepreneurs should be able to create market opportunities in foreign markets (Amorós et al., 2016), which means that they are able to acquire new clients and distribution partners with local networks.

The existence of a structured international market development process (Neubert, 2011) can be identified as another driver for the speed of internationalisation and also another similarity. All SMEs understand that unstructured internationalisation behaviour leads to delays in the internationalisation process (Nummela et al., 2014; Hagen and Zucchella, 2014).

5.2 Differences

The comparison of the findings revealed the following differences. The main differences are based on the framework conditions of the home market. Paraguay is an EE with a limited reputation in the high-tech industry. This affects the conditions for internationalisation and requires HSFs to make more efforts in terms of networking, proving product and service quality and offering competitive prices. Switzerland is a DE with a reputation for innovative HSFs with high quality products, well-known university spin-offs, start-up coaching programs, grants and a venture capital market, which gives HSFs access to growth capital and exit channels.

Table 2 Differences

<i>Differences</i>	<i>Paraguay</i>	<i>Switzerland</i>
Choice of market entry mode	Establishment chain	Establishment chain and global market penetration
Market selection model	Born regional	Born global
Home market	EE with growing market opportunities for high-tech products and services but of lower quality and price	DE with a more competitive market for innovative high-tech products and services
Investors	Entrepreneur/ founder, family and friends/ business angels	The same as Paraguay plus the government and institutional investors
Risk awareness	Higher risk awareness and more focus on profitability than growth	Lower risk awareness due to a higher pressure from investors to internationalise early and fast
Role and experience of the entrepreneur	Dependence of the entrepreneur	Entrepreneurial team with complementary skills
Level of innovation and IP protection	Innovations are mainly based on existing technologies	Innovation is based on patented-protected technologies, which often create completely new markets

Due to this difference in framework conditions, Paraguayan HSFs could be considered as less self-conscious and more risk-averse. Investors like founders, family and friends push less for internationalisation, because they invest their own money and focus on profitability instead of growth. In contrast to that, Swiss HSFs often acquire investors

based on ambitious business plans, which increases the pressure for early and fast internationalisation. Thus, it can be concluded that the reputation and the framework conditions of the home country and the quality of institutions also influence early and fast internationalisation (Ciravegna et al., 2014; Hitt et al., 2016; Zucchella et al., 2016).

Swiss HSFs are traditional BGFs, which seek market opportunities wherever they occur (Cavusgil and Knight, 2015; Neubert, 2015). In contrast to that, Paraguayan HSFs could be considered as born regionals (Gabrielsson et al., 2014; Cavusgil and Knight, 2015), which focus on neighbouring markets at the beginning of their internationalisation process.

The final difference can be identified in the role of the entrepreneur. Whereas Paraguayan HSFs rely very much on the entrepreneurs and their families, Swiss HSFs are managed by entrepreneurial teams with complementary abilities, which also receive support from advisors and board members. Further, Paraguayan SMEs value the experience of the entrepreneur higher than Swiss HSFs. This difference might be based on the notion that in newly created industries and markets prior experience is not as important as the development of a new technology in an existing industry (Neubert, 2016a; 2016b).

6 Conclusions

This study provides new evidence on the speed of internationalisation of HSFs from emerging and developed SMOPECs. It analyses how and why these BGFs differ in their speed of internationalisation using a comparative cross-national multiple case study research design with 32 qualitative, semi-structured, in-depth, face-to-face SME interviews as primary source for data collection.

Switzerland is a DE. The brand 'Swiss made' has an excellent reputation for high technology products, quality and reliability. The access to capital and the existence of powerful research institutions has led to a diverse start-up ecosystem with HSFs from different industries (e.g., medtech, biotech, IT). The reputation and the framework conditions of a location is an important driver for the speed of internationalisation. HSFs from EEs are mainly from the IT industry focusing on application research based on technologies from developed countries. Chen et al. (2016) call it the liability of their country of origin in comparison to developed markets.

In spite of the differences that distinguish both countries-of-origin, the vast majority of both Swiss and Paraguayan SMEs consider early and fast internationalisation as important for the enduring survival of their HSFs. Both, Paraguayan and Swiss HSFs face significant delays in the execution of their international market development activities in comparison to the time estimated in their business plans. The main reason is an often unstructured and unplanned internationalisation behaviour. HSFs often enter new markets based on their networks; use market opportunities or follow existing clients without analyzing the attractiveness of foreign markets.

Most SMEs understand that this reduces the speed of internationalisation. They acknowledge the importance of a structured market development process starting from a detailed evaluation and selection of foreign markets before they actually enter them. While Paraguayan HSFs start their internationalisation primarily in neighbouring countries, Swiss HSFs use a global approach.

HSFs from both samples apply an establishment chain using low risk and low cost market entry modes like ‘licensing’ or ‘export with local distributors’ to increase the speed of internationalisation. They adapt their products and pricing strategies to local market needs, focus on market niches to speed up internationalisation and to create a FSA, which compensates for the liability of foreignness and outsidership.

All SMEs understand that the role and the capabilities of the entrepreneur are crucial for the international success of their HSFs. The faster the entrepreneur or the management team learns how to do business and to acquire clients in foreign markets, the higher the speed of internationalisation will be. The main precondition is a well-structured market development process based on a realistic international strategy.

The findings of this comparative cross-national multiple-case study contribute to the field of research of international entrepreneurship, because researchers will gain a better understanding of how and why HSFs from SMOPECs differ in their speed of internationalisation. The findings of this comparative cross-national multiple-case study also contribute to managerial practice, because they will help managers to increase the efficiency of international market development. Policy makers might benefit from the findings of this study by developing improved public support programs for HSFs.

This comparative cross-national multiple-case study research design has several limitations in size and scope that offer new ideas for future research. Future cross-national studies could focus on the differences between EEs and DEs or on the differences between industries. Future research might expand the research results in two other directions. First, researchers could be called on to transfer the research results to other SMOPECs to understand whether the results might be generalised. Second, future scholarly work might also include quantitative assessments of SME perceptions combined with qualitative data to provide greater clarification of the statistical significance of the variables of the study. Finally, it would be valuable to include correlational studies to analyze the relationships between two variables such as cultural aspects of risk aversion and the networking ability of the entrepreneur and the speed of internationalisation.

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