

Maturing born globals

Long-term, independent survival through the use of
Mergers and Acquisitions

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This master's thesis is carried out as a part of the education at the University of Agder and is therefore approved as a part of this education. However, this does not imply that the University answers for the methods that are used or the conclusions that are drawn.

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Abstract

During the past twenty years an increasing amount of research has been dedicated to the investigation of young, innovative and entrepreneurial companies that are characterized by their early internationalization. While previous studies have concentrated on what enable the existence of these so called 'born globals' and the attributes that describe them, little effort has been devoted towards exploring what happen as they mature. Thus, by investigating technology-based born globals originating from Israel, this thesis aims to broaden the knowledge about maturing born globals, and what strategies these companies can use if the aim is to survive independently over time.

By employing a quantitative approach and longitudinal measures, the study reveals that born globals can benefit from employing mergers and acquisitions strategy. Number of performed acquisitions is positively correlated with probability of survival, and with financial performance in terms of growth in sales, gross profit and shareholders' equity. Furthermore, findings show that acquiring in order to extend or enhance the company's product line is the strategy that leads to the highest percentage of surviving companies. The study also includes an investigation of the effect of mergers and acquisitions on the born global's core activities (i.e. R&D and marketing), where findings indicate a relationship between the strategic reason for acquiring and investment in R&D and marketing.

Based on these findings, technology-based born globals aiming for long-term independent survival are advised to acquire other companies in order to access readily available products, technologies and capabilities. The acquisition strategy should be rather aggressive, as higher numbers of mergers and acquisitions are related to both higher numbers of survival, and better financial performance.

Sammendrag

I løpet av de siste tjue årene har en økende andel forskning blitt dedikert til undersøkelsen av unge, innovative entreprenørbedrifter som kjennetegnes av tidlig internasjonalisering. Mens tidligere studier har fokusert på hva som muliggjør eksistensen til såkalte 'born globals', samt attributtene som beskriver dem, finnes det lite forskning som tar for seg hva som skjer med disse bedriftene etter hvert som de modnes. Ved å studere teknologibaserte born globals med opphav i Israel tar denne studien sikte på å utvide kunnskapen om modne born globals, samt hvilke strategier disse bedriftene kan ta i bruk dersom målet er å overleve på egen hånd over tid.

Ved å benytte en kvantitativ tilnærming og longitudinale målinger avslører dette studiet at born globals kan dra nytte av å gjennomføre fusjoner og oppkjøp. Antall gjennomførte oppkjøp er positivt korrelert med sannsynlighet for overlevelse, samt økonomiske resultater i form av salgsvekst, vekst i bruttofortjeneste og egenkapitalvekst. Videre funn viser at det å kjøpe andre bedrifter med den hensikt å utvide eller forsterke bedriftens produktlinje er den strategien som resulterer i høyest andel overlevende bedrifter. Studiet ser også på hvordan fusjoner og oppkjøp påvirker bedriftens kjerneaktiviteter (FoU og markedsføring), hvor funn indikerer et forhold mellom den strategiske årsaken til oppkjøpet og investering i FoU og markedsføring.

Basert på funn gjort i dette studiet anbefales teknologibaserte born globals som har langsiktig overlevelse som mål å kjøpe opp andre bedrifter for å få tilgang til ferdigutviklede produkter, teknologier og kompetanse. Som følger av at et høyere antall oppkjøp er forbundet med både høyere sannsynlighet for overlevelse, og bedre økonomiske resultater, burde oppkjøpsstrategien være relativt aggressiv.

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1 Introduction

During the last two decades an increasing amount of research has been dedicated to the investigation of young, entrepreneurial and innovative companies that are characterized by their early internationalization (Almor, 2013; Knight & Cavusgil, 2004; Madsen & Servais, 1997; Moen, 2002; Oviatt & McDougall, 1994; Rennie, 1993). The existence of these so called 'born globals' have been proven across both countries and industries, but is more frequently associated with technology intensive industries and small home markets (Gabriellson & Kirpalani, 2004; Hashai & Almor, 2004a; Madsen & Servais, 1997; Moen, 2002; Moen & Servais, 2002; Rasmussen & Madsen, 2002; Zucchella, Palamara & Denicolai, 2007).

While earlier studies have concentrated on what enable the existence of born globals and their characteristics, little effort has been devoted towards exploring what happen to these companies as they mature. As a result, little information exist about how they develop over time, and what strategies they use. We do however know that after experiencing an initial period of success, many born globals face their fate of being acquired by other, often larger companies (Almor, 2014; Weber & Tarba, 2011; Weber, Tarba, Stahl & Rozen-Bachar 2012a, Weber, Tarba, & Rozen-Bachar, 2012b).

This thesis aims to broaden the knowledge about maturing born globals, and what measures these companies can take if the goal is to survive independently over time. Specifically, it is argued that born globals that want to remain independent should acquire other companies in order to grow. In other words they should acquire to avoid being acquired, or ceasing to exist for some other reasons. Using mergers and acquisitions strategy enable small, young and entrepreneurial companies with a limited resource base to extend, enhance and broaden their resources and capabilities. In other words, it serves as a solution to several of the later discussed challenges that born globals are faced with.

The study employs a quantitative approach using longitudinal measures to explore the effects of performing multiple acquisitions on survival and financial performance. Moreover, the strategy underlying the decision to acquire, and the relationship between

mergers and acquisitions and the company's core activities are investigated. It is argued that acquiring is beneficial for born globals opting for long-term independent survival, and that this strategy is used to compensate for internal development of products and capabilities, which born globals lack the resources to sufficiently perform on their own.

The thesis starts out with a literature review that presents the current theory on born globals (i.e. the phenomenon, the characteristics and the challenges), mergers and acquisitions strategy, and the relationship between acquiring and the born global's core activities. The literature review leads up to the proffered hypotheses, and is followed by a method chapter that includes a part about Israel, and why this country specifically constitutes a good case study when examining born global behavior. The thesis then continues with the analysis and presentation of results, before moving into a concluding section where findings, limitations and directions for future research are discussed, and ending with the scientific contribution.

2 Literature Review

The main objective of this study is to investigate how born globals can manage to survive independently in the long run, specifically through the use of mergers and acquisitions, and how this strategy affects the born global's core activities. A theoretical description and discussion of both born globals and mergers and acquisitions are presented below.

The literature review will begin with a presentation of the born global concept. While doing this I will also touch upon different theories that are considered fundamental in the field of International Management, and show how they either help to explain the born global phenomenon, or how born globals in fact challenges or contradicts the existing theories. While there is a solid body of research available explaining the existence and characteristics of born globals, research looking at these companies in their maturing phase is very limited. Consequently, we lack information about what strategies born globals should use if the aim is to survive independently over time. In addressing this issue I will discuss how the use of mergers and acquisitions (M&A) can potentially increase the odds of survival. Additionally, I will present a framework developed by Almor (2013), which conceptualizes paths of growth for the born global firm. Finally, I will also look into the potential relationship between the use of M&A strategy and investment the born global's core activities (i.e. R&D and marketing).

2.1 Born Globals

In this section of the literature review theory related to the born global is presented by looking at the phenomenon, characteristics and challenges tied to this concept. Subsequently, the maturing born global is discussed, and the section ends with the main research question.

2.1.1 The Phenomenon

The born global phenomenon has been researched extensively since its emergence in the academic field about twenty years ago (Oviatt & McDougall, 1994; Knight & Cavusgil, 2004; Rennie, 1993; Madsen & Servais, 1997; Almor, 2013; Moen, 2002).

While previous studies focusing on internationalization have concentrated on larger and more established multinational enterprises (Oviatt & McDougall, 1994), this perspective has been challenged by the frequent emergence of smaller entrepreneurial firms that seem to internationalize from inception, often called “Born Globals” or “International New Ventures” (Oviatt & McDougall, 1994; Knight & Cavusgil, 2004; Rennie, 1993; Madsen & Servais, 1997).

The existence of born globals has been evidenced both across national borders (Gabriellson & Kirpalani, 2004; Moen & Servais, 2002), and across different industries (Madsen & Servais, 1997). Even though some born globals have originated from larger home markets such as the US (Knight & Cavusgil, 1996; Oviatt & McDougall 1994), Italy (Zucchella, Palamara & Denicolai, 2007) and France (Moen, 2002), these companies seem to be emerging more frequently from small, advanced economies (Gabrielsson & Kirpalani, 2004; Moen & Servais 2002). Examples include Israel (Hashai & Almor, 2004a, 2004b), Norway (Moen, 2002), Denmark (Rasmussen & Madsen, 2002), Finland (Laanti, Gabrielsson & Gabrielsson, 2006), and Australia (Mort, Weerawardena & Liesch, 2008).

Commonly recognized factors that contribute to the increasing amount of born globals in various countries and industries include:

- a) Globalization of markets (Rasmussen & Madsen, 2002; Madsen & Servais, 1997)
- b) Technological developments in production, communication technology and transportation (Rasmussen & Madsen, 2002; Madsen & Servais, 1997; Knight & Cavusgil, 1996)
- c) Increased capabilities and international experience of people (Madsen & Servais, 1997; Rasmussen & Madsen, 2002)
- d) Growing number of global niche markets (Knight & Cavusgil, 1996)
- e) Growing number of international networks (Knight & Cavusgil, 1996)

Born globals challenge the explanatory power of the existing models of internationalization, which emphasize the importance of the firm's accumulated market knowledge gained from experience in order to successfully expand beyond national borders. More commonly known as the 'Uppsala model', or 'Stages theory', this process suggests that firms only internationalize when the home market is saturated, and the firm thus has to branch out in order to achieve profits (McDougall & Oviatt, 1994; Johanson & Vahlne, 1977). When the firms do internationalize, they start out with sporadic exports, and market commitment is increased only after initial success is confirmed, and market knowledge has been gained. The internationalization process seen as a whole thus happens in stages, from low commitment exports, through higher commitment modes such as sales subsidiaries, and later to production subsidiaries (Johanson & Vahlne, 1977). Another important aspect of the Uppsala model is that of psychic distance (i.e. geographic and cultural differences). The theory states that firms tend to start by entering psychically closer markets first, and only advance into more distant markets when the risk of doing so is reduced resulting from the knowledge and experience gained through operating in the markets that were entered first (Johanson & Wiedersheim-Paul, 1975).

In other words, it is assumed that firms make choices regarding their internationalization process with the intention of reducing the associated risk. This is done by going abroad only after having achieved success at home, and starting with low commitment entry modes in psychically near markets. Why the current trend of born global firms contradict this theory, will be explained in the following section focusing on born global characteristics.

2.1.2 The Characteristics

In spite of their relatively small size and young age, which result in restraints related to limited resources and lacking experience, born globals still seemingly manage to operate as larger multinational enterprises (MNEs) in the way that they target international markets, and organize their value chain in an international setting (Knight & Cavusgil, 1996, Oviatt & McDougall, 1994; Almor & Hashai, 2004a, 2004b). This is in part made possible by the different unique characteristics of born globals, and how they are complimented by the previously mentioned changes in the business world today.

The terms 'Born Global', and 'International New Ventures' (INVs) have been used, somewhat interchangeably, to describe and denominate this phenomenon. Madsen (2013) points out that a consensus exists between different scholars on the theoretical delineation of the different concepts, but that differences emerge when it comes to the empirical operationalization. In later years, multiple authors have addressed the potential differences, and investigated whether or not born globals and INVs refer to the same phenomenon. While some have argued that this is the case (Svensson, 2006), others claim that born globals and INVs do exhibit different characteristics (Crick, 2009). An example is demonstrated by Crick (2009), who explain how born globals have a global approach, meaning that they need at least a 10 per cent turnover in each of the triad's three regions (i.e. USA, Japan and EU). On the other hand, an INV is characterized simply by an international aim that leads to a 30 per cent turnover in at least three overseas markets. Consequently, the INV could only have a regional focus if the three mentioned markets are located in the same area.

However, today's available research on born globals and international new ventures is based on a set of fundamental works that refer to both INVs (Oviatt & McDougall, 1994), and born globals (Autio, Sapienza & Almedia, 2000; Knight & Cavusgil, 1996; Rennie, 1993), where neither of the directions seems to strictly adhere to Crick's (2009) differentiation. A more thorough investigation of the potential differences falls outside the scope of this research, and I will from hereon after assume that the two terms are interchangeable, and use 'Born Global' when referring to them. I will thus use a definition developed by Knight and Cavusgil (2004) that is based on the mentioned pioneering scholars within the field (Autio et al., 2000; Oviatt & McDougall, 1994; Rennie, 1993), and states that born globals are

"Business organizations that, from or near their founding, seek superior international business performance from the application of knowledge-based resources to the sale of outputs in multiple countries" (Knight & Cavusgil, 2004, p.1)

This definition highlights three important features of the born global: a) the early internationalization, b) the knowledge-based resources, and finally c) the multiple market focus.

a) Early internationalization

Early internationalization is enabled by several factors. Among these are experienced entrepreneurs with access to international networks, and characteristics related to the firm's size and age.

A committed management team consisting of entrepreneurs that employ an international mindset early on is an important enabler of the early internationalization of born globals (Freeman & Cavusgil, 2007). The background, capabilities, and international orientation of the entrepreneurs are proven to have a great impact on the born global's tendency to internationalize early (Knight, 2000; Madsen & Servais, 1997; Oviatt & McDougall, 1994). Founders of born globals often have international experience from living, or working abroad, as well as education in relevant fields. These factors can lead to a lowered perceived risk of entering foreign markets in general, and markets from where the founders have specific experience in particular (Madsen & Servais, 1997). In general, today's younger CEO's have been exposed to internationalization to a larger extent than the previous generations of business founders. This can contribute to explain why current CEOs might be more willing to go abroad, as the risk involved might be perceived as lower (Andersson, Gabrielsson & Wictor, 2004). Either way, this seems to contradict the Uppsala model, which claims that firms initially lack knowledge about foreign markets, and that this knowledge has to be retrieved through experience, as a result of it being impossible to acquire (Johansson & Vahlne, 1977). However, the underlying rationalization is still related to risk reduction, which is in fact in line with the model assumptions.

In addition to the knowledge gained from previous experience, the experienced entrepreneur would also have access to different networks, which could be used to compensate for the limited resources born globals are forced to deal with. In fact, access to international networks is considered crucial for the success of born globals (Freeman, Edwards & Schroder, 2006; Laanti, Gabrielsson & Gabrielsson, 2006; Madsen & Servais,

1997). Gaining access to complimentary social, technical and commercial resources through the readily available networks, substantially reduce the necessity of the accumulated knowledge and experience prescribed by the Uppsala model (Laanti, Gabrielsson & Gabrielsson, 2006).

Additionally, the born global's small size and young age grants them a flexibility and an agility that is helpful in exploiting internationalization opportunities, and thus facilitating an easier process than what would be expected from larger and more established MNEs (Knight & Cavusgil, 2004).

b) Knowledge-based resources

Even though born globals exist in both high and low technology industries (Madsen & Servais, 1997), studies have shown that they are more frequently represented in industries that can be characterized as technology intensive (Aspelund, Madsen & Moen, 2006), and that they often sell innovative, self-developed technology-based products (Almor, 2013). As a result a lot of the performed research on born globals is concentrated on companies originating in such high tech industries (Almor, 2013; Almor & Hashai, 2004a, 2004b; Bell, 1995; Laanti, Gabrielsson & Gabrielsson, 2007; Rennie, 1993).

Among the factors believed to be important for the appearance of born globals in various industries, is the firm's possession of unique intangible assets based on knowledge management, and high value creation through product differentiation, leading-edge technology products, technological innovativeness, and quality leadership (McDougall et al., 2003; Rialp, Rialp & Knight, 2005). These resources are often used to produce a single product that the company market in a unique way (Almor, 2013; Freeman & Cavusgil, 2007). Accordingly, the born global's competitive advantage is often based on exploitation of unique resources and capabilities, enabling the development of leading-edge technology products (Knight & Cavusgil, 2004). The competitive advantage is enforced by opportunistic first-mover advantages (Almor & Hashai, 2004b; Rialp, Rialp & Knight, 2005).

The Resource Based View (RBV) is a helpful framework for understanding the performance of born globals. RBV sees firms as a set of tangible and intangible resources and capabilities, which grants a company sustained competitive advantage if these resources and capabilities are valuable, rare, imperfectly imitable (i.e. other firms cannot easily obtain them), and properly organized (Barney, 1991). Also, RBV claims that companies use their resources and capabilities to exploit opportunities in the environment by using their internal strengths, while at the same time compensating for internal weaknesses, and defusing external threats (Barney, 1991). This gives a theoretical explanation to how born globals manage to succeed. Born globals are, by definition, in lack of resources on the managerial and financial side (Freeman et al., 2006; Knight & Cavusgil, 2004), but by exploiting their unique resources related to technological knowledge and international network access, they manage to use opportunities for internationalization in the environment (i.e. serve specific market niches), without being hindered by their small size and young age.

c) Multiple market focus

Niche strategy, a small domestic market, and lower impact of psychic distance both drive and enable the born global to have a multiple market focus early on.

One of the key enablers of the multiple market focus, as well as the early and rapid internationalization is the born global's frequent choice of niche strategy (Hashai & Almor, 2004a, 2004b; Freeman & Cavusgil, 2007; Madsen & Servais, 1997; Rasmussen & Madsen, 2002; Rennie, 1993; Rialp, Rialp & Knight, 2002). The key to a niche strategy is to find a servable segment of customers that is so specific that it does not attract attention from the larger MNEs, though still being large enough to generate a sufficient profit (Porter, 1980). In the case of born globals these customers tend to be large foreign MNEs who demand the born global's high-tech, knowledge-intensive products (Hashai & Almor, 2004b). The chosen niche might not be big enough to be profitable in the born global's home market, but in an international, or even global perspective, it might be possible to achieve substantial profits.

Companies originating from smaller home markets have a higher probability of being born global (Madsen & Servais, 1997). This is often a result of domestic market size,

meaning that the market niche that the company is dependent on is not of sufficient size in the respective firm's home market. Consequently, the firms are pushed towards internationalization from an early stage (Crick & Jones, 2000; Freeman et al., 2006). This low dependence on the home market constitutes an important contradiction to the Uppsala model, which grants great importance to the domestic market. While Uppsala specifically state the importance of success being achieved at home before venturing abroad, some born globals even sell their very first product in markets outside of their home country, and revenue retrieved from the home market in general is often negligible compared to the amounts raised in foreign markets (Hashai & Almor, 2004a; Oviatt & McDougall, 1994; Rasmussen & Madsen, 2002; Rennie, 1993).

Even though some studies have proven that even born globals tend to select psychically close markets first (Freeman, Hutchings & Chetty, 2012; Hashai & Almor, 2004a), the phenomenon of psychic distance is proven to be of less importance for these firms compared to traditional exporters (Aspelund, Madsen & Moen, 2006; Crick and Jones, 2000). Born globals often choose to enter markets that are advanced, developed, and ready for the technology that the firm offers (Freeman, Hutchings & Chetty, 2012). These markets often tend to be culturally proximate, but even so, born globals show a lower reluctance, compared to other exporters, to enter culturally distant markets if they see the opportunity for building a customer base there (Freeman, Hutchings & Chetty, 2012). Another important factor in the market selection process is based on the previously discussed experience of the involved entrepreneurs. (Aspelund, Madsen & Moen, 2006). Both previously gained market knowledge from specific regions, and access to certain networks that enable an easier entrance to certain markets, influence the market selection process (Crick & Jones, 2000; Karlsen, 2007).

To summarize, this section has given an overview of the characteristics often connected to born globals, and how these can be viewed as either a contradiction to, or be explained by existing theories in the field of International Management. Looking back on the drivers mentioned in the section explaining the born global phenomenon, we can see how these are linked to the different characteristics, and thus understand how these trends contribute to today's increased existence of born globals.

In the following section I will look into how the presented characteristics, though enabling the companies to operate as born globals, also result in several challenges that make survival difficult in the long run.

2.1.3 Challenges

Born globals face multiple challenges when striving for long-term independence. For the company these include short industry life cycles, the previously mentioned limited resources, and the need to maintain growth rates in order to satisfy external investors. Additionally, there is very little research exploring born globals in their maturing phase.

An important issue that constitutes a challenge for all born globals is that of the industry life cycle (Klepper, 1997), and how the technological advantage of born globals is constantly at risk of being neutralized by new and improved solutions. (Almor, 2013; Andersson, Gabrielsson & Wictor, 2004). This contributes to the explanation of why born globals seem to appear with a higher intensity in technological intensive industries, as the shortening of industry life cycles in technological industries (Qian & Li, 2003; Cusumano & Yoffie, 1998) force the companies to internationalize early on, instead of waiting until the experience prescribed by the Uppsala model is gained.

Industry Life Cycle theory builds on Product Life Cycle Theory (Vernon, 1966), and says that an industry goes through the stages of innovation (i.e. a new product or technology is developed), growth (i.e. a growing demand for the new product/technology), maturation (i.e. profit growth declines), and decline (i.e. sales decline) (Klepper, 1997). A problem for high tech industries is that they suffer from a trend of shortening life cycles (Qian & Li, 2003; Cusumano & Yoffie, 1998; Weber & Tarba, 2011), which renders the involved companies under constant pressure to upgrade and update in order to prevent the obsolescence of their offerings. This happens when new innovative technologies enable other products to satisfy the same customer needs with the help of technology that outperforms the currently employed technology. This sends the industry into the stage of decline, where sales decrease and ultimately, the need for the specific product might vanish entirely (Klepper, 1997).

The constant threat of new, emerging technologies to the industry life cycle creates a drive for technology-based born globals to internationalize instantly in order to exploit their competitive advantage before their product lose their competitiveness. With born globals often being dependent on a single product line, this makes them even more vulnerable in the case of industry decline, as they are not able to compensate for declining sales in one product line, with increasing sales in another.

Another challenge is related to the company's resources. Born globals are by definition constrained by their narrow resource base. These resource limitations can be attributed to their small size, young age, and limited experience, which result in financial constraints, managerial limitations, and which leads the company to employ a niche focused strategy to sell their self-developed, high technology product. However, a challenge according to the Resource Based View is that for the resources to lead to competitive advantage they have to be imperfectly imitable (Barney, 1991). This means that these resources cannot be easily developed or acquired by other firms.

Unfortunately, the fulfillment of this criterion results in the resources being difficult to transfer between different applications within the same firm. This means that the technological knowledge that enabled the company to develop their niche product will not necessarily be equally useful when the surrounding conditions change. Thus, when the born global is forced to respond to the industry decline, the resources underlying their previous competitive advantage might not be able to help them develop new and competitive products in other industries. Research and development (R&D) in general is often compromised by the lack of resources to sufficiently innovate. Performing R&D in-house is both expensive and time consuming, and born globals might not be able to invest in both upgrading and updating of current offerings, while at the same time investing in R&D aimed at reaching new products and technologies (Gomes et al., 2011).

Additionally, because of limited financial resources, many born globals are dependent on external capital in order to enable their establishment and initial survival. Options for external financing include floating the company publicly, or by venture capital (Almor, 2013). This results in an even more intensive pressure to search for growth options, as external investors will demand that growth rates are at least sustained.

2.1.4 The Maturing Born Global

The crucial question that can be derived from the discussion of challenges is how a company that delivers one product to one industry can manage to survive in the long run. This issue is further complicated by the presented challenges that explain how the need for the product might cease to exist as a result of short industry life cycles, while at the same time having to maintain growth rates in order to please external investors. In addition, their lack of resources leaves them without the necessary funds to sufficiently invest in R&D and new product development. This discussion leads me to my main research question, which is:

How can born globals survive independently in the long run?

After their initial period of success, many born globals face their fate of being acquired by other, often larger companies (Almor, 2014; Weber & Tarba, 2011; Weber et al., 2012a, 2012b). Another option is to strive for independent survival through further growth. In her research on technology-based born globals, Almor (2014) revealed that the employment of mergers and acquisitions (M&A) strategy increase the probability of independent survival for technology-based born globals. However, if the aim of the company is in fact to sell out, it should refrain from acquiring other companies prior to this event (Almor, 2014). The question of independent survival, thus seem to be a question of acquiring or being acquired. In this study I focus on the use of mergers and acquisitions as a means of remaining independent, and the companies that were acquired or merged into other firms are thus viewed as deceased.

The reason for why mergers and acquisitions strategy is so relevant is that it offers a way of addressing several of the discussed issues that born globals are challenged by. It is often used as a way out of a declining industry (Anand, 2004), and a way to access additional resources (Agarwal & Helfat, 2009; Eisenhardt & Martin, 2000; King, Slotegraaf & Kesner, 2008). Additionally, by acquiring companies that possess readily available products and technologies, or the capabilities needed to develop these, acquiring can also be used as a substitution for internal development. Thus, M&A is suggested as the preferred strategy for growth along the product scope in Almor's (2013) conceptual growth framework for technology-based born globals.

However, the use of mergers and acquisitions does not lead to unconditional success. Research has shown that M&A strategy often fails to improve the performance of acquiring firms (King, Dalton, Daily & Covin, 2004; Tuch & O'Sullivan, 2007). Several issues are related to the acquisition process. Among these is selection of a suitable target firm, and the disruption phase that has been known to follow the integration of one firm into another (Parachuri, Nerkar & Hambrick, 2006). Handling these issues correctly is particularly important for born globals that might be too vulnerable to survive through one or more failed acquisitions. This further complicates the issue of independent survival for born globals. How performing mergers and acquisitions, in spite of its related challenges, can contribute to born global survival will be discussed and investigated throughout this study.

The next section of the literature review will be a presentation of relevant research performed on mergers and acquisitions. In addition to a general presentation of the concept, it explains how born globals can benefit from the use of M&As, but also how the use of this strategy is associated with several challenges.

2.2 Mergers and Acquisitions

In spite of varying findings concerning their contribution to financial performance (King, et al., 2004), mergers and acquisitions (M&A) are widely used in the business world today. One reason for this might be that the main motives for conducting acquisitions are often not of a strict financial character. In their research on high-technology acquisitions, Ranft and Lord (2000) discovered that firms name as the two main reasons for conducting acquisitions 1) obtaining specific product related technology, and 2) accessing product innovations and engineering capabilities (Ranft & Lord, 2000). Mergers and acquisitions enable small, young and entrepreneurial firms, with a narrow resource base to extend, enhance, and broaden their resources and capabilities, and thus serve as means to grow and remain attractive for the company's investors (Agarwal & Helfat, 2009; Chaudhuri & Tabrizi, 1999; Eisenhardt & Martin, 2000; King et al., 2008;). In other words, by acquiring technological skills and capabilities, born globals can gain faster access to the resources they need to develop new products and additional

technologies (Capron, 1999; Graebner, 2004; Graebner & Eisenhardt, 2004; Graebner and Sjölander, 1990; Mowery et al., 1996).

Two important features of mergers and acquisitions which help compensate for the challenges influencing born globals is its ability to a) enable firms to access valuable resources and capabilities and b) help achieve strategic renewal (Agarwal & Helfat, 2009; Eisenhardt & Martin, 2000; Graebner, Eisenhardt & Roundy, 2010; Santos & Eisenhardt, 2009). In this sense, resources and capabilities refer to products and technologies, as well as knowledge (i.e. individual employees and teams of employees), which would otherwise have to be created through internal development. As previously mentioned, this is a both time consuming and resource draining process, which born globals are normally not equipped to perform to a satisfying extent (Gomes et al., 2011). Achieving strategic renewal refers to the reconfiguration and recombination of technologies and knowledge in order to reach new solutions. This contributes to faster introduction of new products, widening of existing product offerings and enhance internal technological capabilities (Graebner & Eisenhardt, 2004; Graebner & Sjolander, 1990). Firms in general and born globals in particular, often rely on a limited set of knowledge and managerial practices. This can lead to a state of rigidity and inertness towards environmental changes (Leonard-Barton 1992). Acquisitions serve as a means for preventing this phenomenon, and are particularly valuable for technology intensive firms, as new technologies often arise from the combination of existing knowledge (Graebner, Eisenhardt & Roundy, 2010; Kogut & Zander, 1992).

However, the use of mergers and acquisitions is associated with several challenges and related research is inconclusive in its determination of success, failure and resulting performance (Gomes et al., 2011; Halebian, Devers, McNamara, Carpenter & Davison, 2009; Papadakis & Thanos, 2010; Schoenberg, 2006; Stahl & Voight, 2008; Thanos & Papadakis, 2012; Weber et al., 2011b) Several researchers have indicated that mergers and acquisitions in fact neither increase shareholder wealth (Tuch & O'Sullivan, 2007), nor lead to superior post-acquisition performance (King et al., 2004). An important issue concerning post-acquisition performance is whether or not to integrate the acquired firm within the buying firm (Ranft & Lord, 2002; Parachuri et al., 2006). One of the main motives of going through with the acquisition in the first place is often the potential

synergy that is possible to achieve with the merger of two different entities, the choice not to integrate is assumed to prevent these synergic effects (Parachuri, et al., 2006). However, integration is not without challenges. As Parachuri, Nerkar and Hambrick (2006) pointed out, integration is highly disruptive for the company's employees, and among these the technical personnel that actually perform the work related to corporate innovation. This disruption leads to severe productivity drops. Reasons for this might include that employees' routines are interrupted, knowledge-based resources are destroyed, cultural clashes occur, or most importantly: the loss of key employees and managers that often tend to follow the acquisitions process (Almor, 2014; Ernst & Vitt, 2000; Puranam, Singh & Zollo, 2003; Puranam & Srikath, 2007; Weber et al., 2012a, 2012b).

Benson and Ziedonis (2009) investigated the importance of handling the acquisition process correctly. They found that mergers and acquisitions enable firms to gain access to technologies and know-how when they acquire startups, as long as the company effectively identifies and monitors the technological activities during the acquiring process (Benson & Ziedonis, 2009). One of the factors believed to affect mergers and acquisitions performance in a beneficial way, is experience gained from previously going through this process (Eisenhardt & Martin, 2009; Haleblan & Finkelstein, 1999; Hayward, 2002). Such experience can also contribute to reducing the previously explained disruption phase (Parunam & Sirkath, 2007), and thus lead to a more efficient integration process (Hitt et al. 1993). However, some researchers have also revealed that inexperienced acquirers might tend to overgeneralize the experienced gained from their first acquisition, and thus fail to see important differences which might demand different actions from the company compared to what the previous acquisition and following integration did (Haleblan & Finkelstein, 1999). Considering the vulnerability of born globals, resulting from their small size and narrow resource base, it is reasonable to assume that they will be severely damaged by a failed acquisition process, and that they might not be able to survive beyond it.

Based on this argumentation it is reasonable to believe that a single acquisition might not lead to valuable acquisition experience, while the ability to survive through multiple acquisitions will strengthen the company in terms of their capability to perform additional acquisitions successfully. The proposed disability of born globals to survive from failed

acquisitions is accompanied by the belief that it is the companies that are able to perform them successfully that are the ones that survive beyond the acquisition process. This leads me to believe that not only will mergers and acquisitions in general increase the born global's probability of survival, but also, that there is a positive relationship between number of M&As and survival. Based on this I hypothesize the following:

Hypothesis 1a – the probability of survival of technology-based born globals increases with the number of performed mergers and acquisitions

As mentioned above, previous research reveals contradictory results concerning whether or not performing acquisitions actually increase financial performance of the acquiring firm. The process itself demands extensive resources in terms of the time and money employed to make it happen. Additionally, the disruption phase following the acquisition also requires a lot of effort to overcome. As the discussed experience achieved from multiple acquisitions reduces the disruption, and enables more efficient integration, it is reasonable to believe that the required resources in this phase of the process will be reduced with an increased number of acquisitions. When fewer resources are used to handle the post-acquisition challenges, more can be devoted to releasing the potential benefits related to acquiring the target firm in question (e.g. exploring new markets, targeting new customers, and developing new products). Hayward (2002) mention that experiential learning from previously performing acquisitions are challenged by the fact that a) different acquisitions are performed for different reasons (i.e. the knowledge gained from previous acquisitions might not apply in the context surrounding the next acquisition), b) there is often variations related to how well the firm handle the acquisition (i.e. bad acquisition performance might not lead to beneficial experience), and c) acquisitions occur irregularly (i.e. if a firm acquires too often it might not be able to sufficiently interpret and employ previously gained experience, and if the time period between acquisitions is too long, the firm might forget what it learned the previous time), (Hayward, 2002). Thus, a company might have to go through the process of M&A several times before learning how to exploit the potential benefits in a way that results in increased financial performance. This argumentation leads me to hypothesize the following:

Hypothesis 1b – a positive relationship exist between number of performed M&As and the growth in sales, gross profit and equity of technology-based born globals

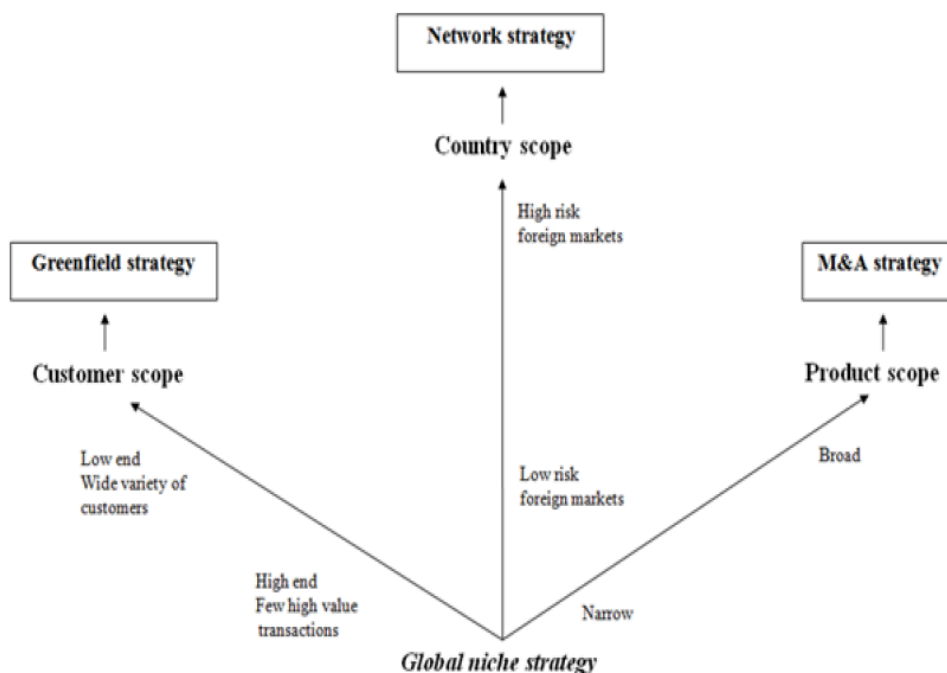
To date, there has been little research trying to explore potential growth opportunities for born globals, and what strategies these companies should choose in order to survive independently over time (Almor, 2013; Benson & Ziedonis, 2009; King et al., 2004). Almor (2013) addressed this issue when she developed a framework aimed at conceptualizing paths of growth for technology-based born globals originating from a small population advanced economy (Almor 2013). In the next section I will give a brief introduction to this framework, which is used as a basis for the second hypothesis of this thesis.

2.3 Conceptualizing Paths of Growth

As previously mentioned, growth is important for born globals, both in order to survive, but also to satisfy external investor that have invested their capital in these companies (Almor, 2013). This leads to an expectation that born globals will explore opportunities for expansion, rather than remaining small niche focused companies in the long run.

Traditionally, growth options have been divided into two axes: a) Product scope, and b) Geographic scope (Ansoff, 1957; Hitt, Hoskisson & Kim, 1997; Parlich, Cardinal & Miller, 2000). Ansoff's (1957) product-market-matrix illustrates how these two axes create numerous growth options for the firm. These can be summarized as 1) growth through expanding the product scope, 2) growth through entering international markets, or 3) growth through both expanding the product scope, and entering international market. A small entrepreneurial firm with a limited set of resources will normally start out with a narrow focus concerning both product and markets, and then select an expansion rout among the possibilities mentioned above (Ansoff, 1957). However, this strategy is insufficient in explaining the opportunities for born globals, as these are, by definition, international from the very beginning. This is the main premise underlying Almor's (2013) conceptual framework, which provides an alternative way of evaluating different paths of growth. The framework is illustrated below.

Figure 1 Almor's (2013) conceptual framework: Paths of growth for technology-based born globals



Customer Scope

As previously explained the typical born global employ a global niche focused strategy where the company aims to cater to relatively few, large customers that create a high value per sale. This initial focus enables the company to grow by expanding their customer segment, through also targeting followers and lower-end customers. However, even though this strategy attracts new clients and result in a larger client base for the company, these customers are likely to be less profitable than the high-end customers. In other words, the added clients do not necessarily translate into equivalent margins. Consequently, this strategy also involves product adaption and possibly restructuring of the value-chain in order to enable simpler and cheaper solutions.

Yet another opportunity to enlarge the customer scope is to target high-end customers in different industries. This removes the need for product adaption and value-chain restructuring, but demands an additional understanding of how the same product can be used to satisfy customers in industries that the company might not be equally familiar with. Almor (2013) suggest that growth along the customer axis will benefit from a Greenfield (i.e. go-it-alone) strategy. This is related to the importance of keeping

marketing activities in-house, which I will return to in the section focused on the born global's core activities

Country Scope

Whether the born global's selection criteria for choosing which markets to enter first is based on psychic proximity, previous experience or degree of development, they still seem to choose markets with the intention of reducing the related risk (Hashai & Almor, 2004a). The risk related to entering foreign markets can be described as economical (i.e. the use of different currencies, and operation in different tax regimes), cultural (i.e. differing languages and different legal systems) and geographical (i.e. distance) (Contractor, 1990; Hirsh, 1976; Kogut & Singh, 1988; Kogut & Zander, 1993). Growth based on country thus refers to the entering of relatively riskier markets, compared to the markets where the company already operates. This implies that the company will be able to continue with providing their existing product to the same target customers, but now in additional markets (Almor, 2013).

When growing through the country scope, Almor (2013) suggest that the company should employ a network strategy. The reason for this is that the risk associated with entering foreign markets can be reduced by establishing a collaborative relationship (i.e. strategic alliance or joint venture), with either a local partner, or with a multinational corporation that is already well established in the country (Gabrielsson & Kirpalani, 2004; Madsen & Servais, 1997).

Product Scope

The need for the born global to develop their product offering has been thoroughly covered in the above text, and is related to the compression of technological products' life cycles, industry decline and the potential obsolescence of the born global's product. First of all, in order to grow by product scope, the company can choose to upgrade its current offering by creating updated versions and supplements. Second, the company can choose to introduce a new product that is in some way related, or completely unrelated, to their existing offering.

Growth along the product axis can be done either through internal development or, as discussed in the previous section, the needed technology or product can be acquired. Internal product development is associated with severe financial risks, and constitutes a very time consuming process. In other words, born globals with limited resources are not necessarily equipped to develop new products and technologies in-house. Almor (2013) thus suggest mergers and acquisitions as an appropriate strategy to implement growth through product scope, because of the attributes discussed in the above section on M&A.

When combined, the axes together create numerous options for born globals to grow. The firm can choose to follow a single growth path, or some kind of combination. Because of the born global's discussed limitations, it is however, more likely that these companies will tend to adhere to a single path of growth. Almor (2014) proved that companies tend to use mergers and acquisitions in order to extend their product lines, which is in line with the expectations of the conceptual framework. What remains to be investigated is then whether or not this strategy does in fact lead to a higher probability of survival.

Hypothesis 2 – technology-based born globals that use M&As first and foremost to expand their product lines survive more frequently than those who use M&As for other purposes

As mentioned above, Almor (2014) proved that born globals use mergers and acquisition first and foremost as part of their product strategy. Knowing that these companies also have limited resources to spend on internal development, the use of M&A strategy is likely to be related to their investment in R&D. Furthermore, after acquiring another company, the born global is likely to be left with a larger customer base, which consequently will affect their marketing expenditure. In the following section I will thus examine if the born global's investment in R&D and marketing (i.e. its core activities) is affected by the use of mergers and acquisitions.

2.4 Relationship between M&A and investment in core activities

Almor and Hashai (2004b) tested the tendency of knowledge-intensive born global firms in Israel to perform marketing and R&D activities in-house. Among the investigated companies, 80 % internalized R&D activities, and 78 % did the same with their marketing activities, whereas only 28 % of the companies internalized the production process. This is in line with the core competency approach, which states that capabilities that underlie the company's competitive advantage should be performed in-house rather than outsourced to external parties (Prahalad & Hamel, 1990; Peteraf, 1993). Why these activities are considered so important for born globals is discussed below.

R&D

Technology-based born globals are expected to perform R&D activities in-house, rather than to outsource it to external parties. The rationale underlying this is the fact that these companies often have a competitive advantage that is grounded in their unique, technological know-how. R&D activities thus make a vital contribution to the final value offered to the company's customer (Almor, 2013). To keep R&D in-house is important in order to secure ownership of this technological knowledge, as well as sustaining the competitive advantage (Tallman, 1991).

Another option for developing new knowledge and potentially new products is to engage in R&D with external partners through strategic alliances. However, technological knowledge is often of a tacit nature, experience-based, and integrated in relationships within each respective firm. This makes this knowledge difficult to exchange and transmit through arms-length relationships (Bertrand, 2000; Esienhardt & Martin, 2000; Graebner, et al., 2010; Ranft & Lord, 2000)

M&A and R&D

The findings related to how mergers and acquisitions affect the company's investment in R&D have been somewhat contradicting. While some authors find that the decision to acquire another company is related to low levels of R&D expenditure (Blonigen & Taylor, 2000; Desyllas & Hughes, 2008; Hitt, Hoskisson, Ireland & Harrison, 1991; Hitt, Hoskisson, Johnson & Moesel, 1996), others reveal results that indicate the opposite (Bertrand & Zuniga, 2006; Geroski, Machin & Reenen, 1993). Blonigen and Taylor

(2000) found a remarkably strong negative correlation between the propensity to acquire, and R&D expenditure. This relationship was significant both between companies and within the same company (i.e. in times of low R&D expenditure the firm acquires, in times of high R&D expenditure it does not). Desyllas and Hughes (2008) came to the same conclusion when they found that a firm's commitment to internal R&D is negatively affected by the decision to acquire, while low R&D productivity increases the likelihood of acquisition.

Based on the above discussion, and the born global's limited resources, I hypothesize that born globals will tend to use M&A as a substitution for their own R&D activities. It is reasonable to believe that this would only be true for companies that acquire as part of their product strategy. This leads to the following hypothesis:

Hypothesis 3a – technology-based born globals that invest relatively less in R&D are more likely to perform M&As first and foremost to expand their product line

Marketing

Born globals with a technology-based competitive advantage tend to interact a lot with their customers. This is partly due to the fact that their high-tech offering often requires demonstration, the provision of training, installation, as well as maintenance and repairs. These activities tend to be related to the proprietary knowledge of the born globals, and are thus closely related to what constitutes their competitive advantage (Hirsch, 1989; Almor & Hirsch, 1995). First of all the likelihood of providing pre- and post-sale services of sufficient quality is expected to be higher if employees that have received extensive training from the company perform it. Additionally, keeping marketing activities in-house ensure the protection of proprietary know-how, and retrieval of customer-related knowledge spillovers (Almor & Hashai, 2004b; Almor, 2013; Simonin, 1999).

M&A and Marketing

Post-acquisition the company is most likely left with a larger customer base that ultimately will demand higher marketing expenses. However, researchers such as Hitt, Hoskinson and Ireland (1990) have shown that this issue might be neglected because

the integration phase following the acquisition turns the managerial focus inwards rather than towards their customers. This might cause customer-related tasks to be neglected, and potentially a decline in service quality (Urban & Pratt, 2000), which might ultimately lead to the risk of losing customers (Bekier and Shelton, 2002). Moreover, the new entity is likely to demand more resources related to managing the business, as it is now larger and perhaps also more bureaucratic than before (Bertrand, 2009). Also, if the acquisition is financed by debt, focus is likely to shift to debt repayments and cost reductions, relative to other business functions (Baysinger & Hoskinson, 1989). However, I expect that born globals that perform M&As as a substitution for internal R&D will be able to allocate resources that otherwise would be needed for internal development towards marketing activities. Over a longer period of time, I thus expect that these companies will increase their marketing expenditure, despite the resources required to manage the business in the post-acquisition phase.

Hypothesis 3b – technology-based born globals that use M&A first and foremost to expand their product line are likely to increase their marketing expenditure over time

3 Design and Method

This section will start by explaining why Israel constitutes a good case study for the investigation of born globals, before it continues with a definition of born globals, and a description of the sample.

3.1 Population: Israeli technology-based born global companies

Israel is a democratic country with a small, open economy. In spite of its small population it holds a rather unique position in the world resulting from the country's dynamic start-up-intensive high technology cluster (Avnimelech & Teubal, 2006; Avnimelech & Schwartz, 2009; Bresnahan, Gambardella & Saxenian, 2001), making it a market leader in high-tech start-ups. Compared to the rest of the world, Israel has the highest percentage of investments in R&D as a percentage of GDP (Senor & Singer, 2009). Additionally, Israel also benefit from a high number of scientists and engineers (i.e. 130 per 10 000 workers) relative to other countries (i.e. 80 in the US and 70 in Japan) (Chorev & Anderson, 2006). These characteristics have led to Israel being recognized for its entrepreneurial culture and strong technological capabilities (Avnimelech & Schwartz, 2009; Bresnahan, et al., 2001). The Israeli government has in part enabled this development by creating a beneficial environment for entrepreneurship. First of all, the government has facilitated incubators, which enable entrepreneurs to begin their business in a protected environment. Second, the government also contributed to the establishment of a venture capital industry, which would be able to financially support the development of start-ups through investments (Almor, 2014).

A high density of knowledge-intensive industries, accompanied by both private and public venture capital, has resulted in an extensive population of born globals originating from Israel (Economist, 2008; Almor, 2014). Because the Israeli market potential for these firms is limited in terms of size, they tend to focus on international markets from inception. This often results in the early listing of companies on foreign stock exchanges. This is evidenced by the high number of Israeli companies represented

on the American stock exchange NASDAQ, which specializes in high-tech companies. Already in 1995 companies originating from Israel constituted the second highest number of foreign companies on NASDAQ, behind Canada, (Almor, 2014; Avnimelech & Teubal, 2006; Senor & Singer, 2009).

In sum, these factors explain why Israel in particular is a good case study when investigating born globals.

3.2 Definition of born globals

Commonly used criteria for defining born globals are demonstrated by some of the previously mentioned researches in the field (Knight & Cavusgil 1996; Madsen & Servais, 2000; Madsen, Rasmussen & Servais, 2000). These include 1) born globals sell their first product in foreign markets within three years of their inception, and 2) born globals derive at least 25 % of their turnover outside their home market. This definition has later been employed several times by authors adding to the born global literature (Almor & Hashai, 2004a). Almor and Hashai (2004a) pointed out that these criteria might lead to the exclusion of a big group of companies that should actually be viewed as born globals – for example companies that fairly close, but more than three years, after inception derive almost all their turnover from foreign markets. This led the researchers to formulate alternative criteria, which I will employ in this particular research: 1) the first international sale took place within three years after incorporation and the firm's foreign sales account for at least 25 % of its turnover; or 2) the first international sale took place no longer than nine years after incorporation and the firm's foreign sales account for at least 75 % of its turnover (Almor & Hashai, 2004a).

3.3 Sample

The data originally consisted of 51 Israeli technology-based born globals, all of which were founded before the year 2000 and publicly traded at NASDAQ or other foreign stock exchanges. All companies belong to one of Israel's three most important high-tech industries: software, telecom, and electronics. This sample was drawn from a study

previously conducted by Almor and Hashai (2004a, 2004b), who investigated born global characteristics among relatively young born globals. Today, these companies are either in their maturing phase, or they have ceased to exist, and can thus be used to examine what happen to born globals as they mature.

Data was collected for the period 2000-2009, and included various financial data and information about mergers and acquisitions. By focusing on publicly traded firms we are able to study the historical development of companies with a confirmed track record of business operations. Furthermore, it gives an easy access to data. Publicly traded companies are required to publish their annual reports, which includes all financial data, and relevant information about performed acquisitions (i.e. name of the acquired firm, acquisition price, reasons for acquiring, product type, and type of integration) Some of the data were already gathered for the purpose of the study performed by Almor and Hashai (2004a, 2004b), and the rest was collected through secondary sources such as annual financial reports and statements, newspaper articles, the company websites, and other online sources such as NASDAQ and TASE (i.e. the Tel Aviv stock exchange).

In order to make the sample more homogeneous companies were excluded if they fulfilled one or more of the following criteria: 1) Extreme outlier values on any of the investigated variables (3 companies were excluded), 2) More than 1000 employees (3 companies were excluded), and 3) did not fulfill the requirements set by the chosen definition (1 company was excluded). Thus, the sample employed in this study ultimately consisted of 44 companies. 31 (70 %) of these companies survived throughout 2009, while 13 (30 %) did not. The born globals that did not survive were often acquired by larger companies, or they ceased to exist for some other reason (e.g. bankruptcy).

For all companies we collected different types of information such as year of establishment, when and where the first product was sold abroad, whether or not different activities (i.e. production, marketing and R&D) were performed in-house or outsourced, as well as the expenditure related to each of these activities. We also collected relevant financial data (e.g. sales, cost of sales, operating income, shareholders' equity, R&D and marketing expenditure, etc.) for the period 2000 – 2009, or as long as

the company remained independent. Table 1 shows descriptive statistics for all the companies in the sample.

Table 1 Descriptive statistics for the year 1999/2000

Variable	Median	Range
Year of Establishment	1990	1974 - 1996
Year of first sale abroad	1993	1982 - 1996
Sales (Thousand USD)	48,463	5,975 - 339,547
Number of Employees	200	33 - 857

All companies are relatively young, and were established between the years 1974 and 1996, with the first foreign sale realized three years later. Also, the companies are relatively small (sales median of a little more than \$ 48 M, and the median number of employees equals 200 people per company in 1999).

Among the 44 companies 34 (77 %) performed a total number of 107 M&As, while 10 companies (23 %) did not employ this strategy. Of the 44 companies that acquired other companies, 27 (79 %) survived, while 7 (21 %) ceased to exist before the year 2009. Both qualitative information such as strategic reason for acquiring (i.e. as part of product, customer or country strategy), type of integration (i.e. horizontal or vertical), and type of product (i.e. competitive or complimentary), and quantitative information (i.e. price of acquisition) were collected for the purpose of this research. Table 2 shows descriptive statistics for all the performed acquisitions.

Table 2 Descriptive statistics of 107 M&As performed during the period 2000-2009

Variable	Percentage	Average	Range
Acquisition price (Thousand USD)	-	43,040	
Number of M&As performed per company	-	2.4	0 - 11
Horizontal (%)	88	-	-
Vertical (%)	12	-	-
Competitive (%)	18	-	-
Complimentary (%)	82	-	-

These numbers reveal that born globals mostly acquire companies with products that are complimentary to their existing product line (82 %). This enables them to extend their existing offering by adding related products to the company's current product portfolio. In addition, most of the integrations seem to be of the horizontal kind (88 %). In the case of horizontal integration the acquirer and the target, or in case of a merger, – the two merging companies, can be found within the same industry. They are normally also in the same stage of production development. During the investigated decade the companies in the sample perform more than 2 acquisitions each (i.e. average of 2.4 acquisitions per company). Considering these are small companies with limited resources this number is relatively high. Additionally, the average acquisition price of approximately \$ 43 M indicates that the acquired companies are relatively small.

In year 1999, 82 % (36) of the 44 investigated companies performed their R&D activities in-house, while 16 % (7) chose a combination of performing R&D in-house and outsourcing this activity. None of the investigated born companies strictly outsourced their R&D activities (one observation was missing). Additionally, 52 % (23) of the companies performed their marketing activities in-house, while 45 % (20) chose a combination of in-house performance and outsourcing. None of the investigated companies chose to exclusively outsource their marketing activities (one observation was missing). The companies also spend a relatively large percent of their sales on R&D and marketing, with a median R&D ratio of 14 %, and a median marketing ratio of 26 %.

Table 3 Descriptive statistics related to R&D and marketing in 2000

Variable	Median	In-house	Combination	Outsourced
R&D		82	52	0
Marketing		52	45	0
R&D investment (% of sales)	14			
Marketing investment (% of sales)	26			

3.4 Data and Measures

Publicly traded companies are required to publish financial reports reflecting their business activities. This requirement refers to both quarterly and annual statements, and means that all strategic actions and motivations underlying decisions that might affect shareholder wealth are revealed to the public. As all companies in the sample are or were traded at NASDAQ, TASE or other stock exchanges, this enabled easy access to both financial data and information concerning mergers and acquisitions. In some cases information was missing, or could not be found due to the fact that the company ceased to exist at a later stage. Then, information was retrieved from the company's website, news articles commenting on the acquisition, press releases or industry websites (e.g. nasdaq.com, finance.yahoo.com, bloomberg.com, wikinvest.com, tase.co.il, etc.). Some of the companies remained independent throughout the investigated decade, while others ceased to exist before 2009. As previously mentioned, the focus of this thesis is acquisitions made by born globals, and thus not the cases where born globals were acquired themselves.

The company was defined as "Independent in 2009" if during the period 2000-2009 the following conditions were met:

- It published its annual report
- Its stock was traded on the stock market
- It existed an official company website which specified the company's activities and business operations

However, the company was defined as "Not independent in 2009" if during the period that was studied, it was either acquired by another company, or ceased to exist for some other reason. This was determined through a range of factors related to the specific company:

- Annual reports could not be found
- Its stock was no longer traded on a stock market
- Its official website could not be found

- Results from internet searches indicated that the company had been either acquired by another company, or ceased to exist for some other reason (e.g. bankruptcy)
- The acquiring company's official website provided information about the acquisition (acquired company, year of acquisition, reasons for acquiring, etc.)
- The original product name still existed but this was acquired by another company

Financial performance is a term with several dimensions, and a single measure reflecting financial performance in general is yet to be found (Almor, 2014). Different accounting measures such as sales, profit, shareholders' equity, and ROE are often used in studies investigating M&A performance (Graebner et al., 2010; King et al., 2004; Benson and Ziedonis, 2009). In this study, it was decided to analyze financial performance based on three financial parameters that all reflect different aspects of financial performance:

- Growth: Measured by growth in sales (i.e. from 2000 to 2009)
- Profitability: Measured by growth in gross profit (i.e. from 2000 to 2009)
- Profitability to shareholders: Measured by Growth in Shareholders' Equity (i.e. from 2000 to 2009).

The previously presented growth framework consists of three different paths: 1) Customer Scope, 2) Country Scope, and 3) Product Scope. The born global can choose to grow by employing a single path focus, or by choosing a path that combines the different scopes. The underlying strategy that led to the performed acquisitions was retrieved through content analysis of the company's financial reports and official website (if available at the point of data collection), or through news articles and press releases related to the acquisition. Additionally the previously mentioned industry websites were also used as sources of information. Keywords such as 'customers' or 'client base' indicated a strategy aimed at expanding the company's customer base, and thus growth along the customer axis. Country, or market scope were indicated by keywords such as 'countries', 'market' or 'global market', which would mean that the company wants to expand geographically, and grow along the country axis. Finally, product scope was indicated by keywords such as 'product', 'services', and 'extend product offering'. This

specifies that the company wants to enhance its product line, and thus grow along the product axis.

Subsequently, M&A strategies were analyzed and three groups emerged: 1) Companies that performed M&As first and foremost in order to expand their product line (i.e. more than 50 % of the acquisitions were performed as part of their product strategy), 2) Companies that performed M&As first and foremost for other reasons (i.e. 50 % or more of the acquisitions were performed as part of a country strategy, a customer strategy, or a mixed strategy), and 3) Companies did not perform M&As at all.

When comparing investment in R&D among different companies it is common to use R&D expenditure relative to Sales (i.e. R&D/Sales). Born globals' levels of investment in R&D were thus defined based on the sample median of R&D/Sales. A company was characterized as investing relatively less (more) in R&D if it invested less (more) than 14 % of its sales. Because the aim was to look at levels of R&D prior to conducting M&As, the R&D/Sales levels used are related to the numbers from year 2000. However, change in marketing investment was investigated using the difference in marketing expenditure between the years 2000 and 2009 rather than the change in marketing to sales. This measure was used in order to exclude effects of change in sales that might follow an acquisition of a target company.

4 Analysis, Findings and Results

In this section I will describe how the analysis was performed, and present the findings resulting from it. SPSS Statistics 21 was used for the purpose of testing the different hypothesis.

Hypothesis 1a is concerned with the potential effect of acquiring on survival, and states that the number of M&As will be positively associated with the probability of survival for born globals. In order to address this issue a SPSS database was created consisting of the following variables. 1) Independent in 2009 (i.e. a categorical variable that stated whether or not the company survived independently throughout the investigated period), and 2) Number of M&As (i.e. a categorical variable that stated if the born global performed no M&As, 1-3 M&As or 4 or more M&As). The analysis of this hypothesis included all 44 companies, and was carried out by conducting a Pearson's Chi-square test, which can be used to determine if there exists a relationship between two categorical variables.

Table 4 shows the frequency distribution of the investigated companies. Among the companies that did not acquire during the period only 40 % (4) were still independent in 2009. However, among the born globals that acquired 1-3 other companies, 77 % (17) companies survived, and among the born globals that acquired 4 or more times during the period 83 % (10) companies survived.

Table 4 Frequency distribution related to hypothesis 1a

		Independent in 2009			
		Not		Total	
		Independent in 2009	Independent in 2009		
Number of M&As	No M&As	Count	6	4	10
		% within number of M&As	60.0 %	40.0 %	100.0 %
		% within independent in 2009	46.2 %	12.9 %	22.7 %
		% of total	13.6 %	9.1 %	22.7 %
	1-3 M&As	Count	5	17	22
		% within number of M&As	22.7 %	77.3 %	100.0 %
		% within independent in 2009	38.5 %	54.8 %	50.0 %
		% of total	11.4 %	38.6 %	50.0 %
	4 or more M&A	Count	2	10	12
		% within number of M&As	16.7 %	83.3 %	100.0 %
		% within independent in 2009	15.4 %	32.2 %	27.3 %
		% of total	4.5 %	22.7 %	27.3 %
Total	Count	13	31	44	
	% within number of M&As	29.5 %	70.5 %	100.0 %	
	% within independent in 2009	100.0 %	100.0 %	100.0 %	
	% of total	29.5 %	70.5 %	100.0 %	

These findings reveal a positive relationship between number of acquisitions and survival throughout the investigated period. This indicates that if born globals wish to survive independently acquiring other companies will increase these odds.

Table 5 presents the result of the Pearson's Chi Square test. The test indicates that there is a (marginally) statistically significant relationship ($p = 0.052$) between the number of acquisitions performed by the born global, and survival throughout the period from 2000 until 2009 ($X^2 (2, N = 44) = 5.903, p = 0.052$). This supports hypothesis 1a that Israeli technology-based born globals' probability of survival will increase together with the number of acquisitions performed.

Table 5 Chi-square results related to hypothesis 1a

	Value	df	Asymp. Sig. (2sided)
Pearson Chi-Square	5.903	2	.052
Likelihood Ratio	5.557	2	.062
Linear-by-Linear Association	4.516	1	.034
N of Valid Cases	44		

Hypothesis 1b addresses the potential impact of M&A frequency on financial performance (sales, gross profit and equity) among surviving companies, and states that there exists a positive relationship between the number of M&As performed and financial performance. To test this hypothesis a SPSS database was created that included continuous variables for three financial measures and a continuous variable for number of performed M&As. The analysis of this hypothesis consisted of the 31 companies that survived throughout the period 2000-2009. The rationale for excluding the companies that did not survive is that financial numbers for these companies does not exist for year 2009. The analysis was conducted using one-way ANOVA (i.e. analysis of variance), which investigate whether or not there exist differences among groups by analyzing the potential differences between group means. Table 6 presents the ANOVA table resulting from the performed analysis.

Table 6 ANOVA table related to hypothesis 1b**ANOVA**

		Sum of Squares	df	Mean Square	F	Sig.
Growth in Sales	Between Groups	1.237E+12	8	1.547E+11	49.428	.000
	Within Groups	6.884E+10	22	3.129E+9		
	Total	1.306E+12	30			
Growth in Equity	Between Groups	1.039E+12	8	1.298E+11	23.473	.000
	Within Groups	1.217E+11	22	5.530E+9		
	Total	1.160E+12	30			
Growth in Gross Profit	Between Groups	6.674E+15	8	8.343E+14	134.500	.000
	Within Groups	1.365E+14	22	6.203E+12		
	Total	6.811E+15	30			

These results reveal that financial performance in terms of sales, gross profit and equity, was significantly different for born globals with different numbers of M&As for all measures used (i.e. growth in sales ($F(8,22)=49.428$), $p < 0.001$), growth in gross profit ($F(8,22)=23.473$), $p < 0.001$), and growth in equity ($F(2,28)=134.500$), $p < 0.001$).

In order to analyze the direction and strength of the relationship between each financial variable and number of acquisitions I also performed linear regression. This is a method used to investigate potential relationships between continuous variables. Below follows a presentation of the regression results for all investigated dependent variables.

1) Mergers and Acquisitions and growth in sales

Table 7 shows the results of the regression analysis, and reveal that the number of mergers and acquisitions explained 72.4 % of the variance in sales growth, and that the model significantly predicted growth in sales ($F(1,29)=76.052$), $p < 0.001$).

Table 7 Regression model 1: Number of M&As and growth in sales

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.851	.724	.714	111508.605

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	9.456E+11	1	9.456E+11	76.052	.000
Residual	3.606E+11	29	1.243E+10		
Total	1.306E+12	30			

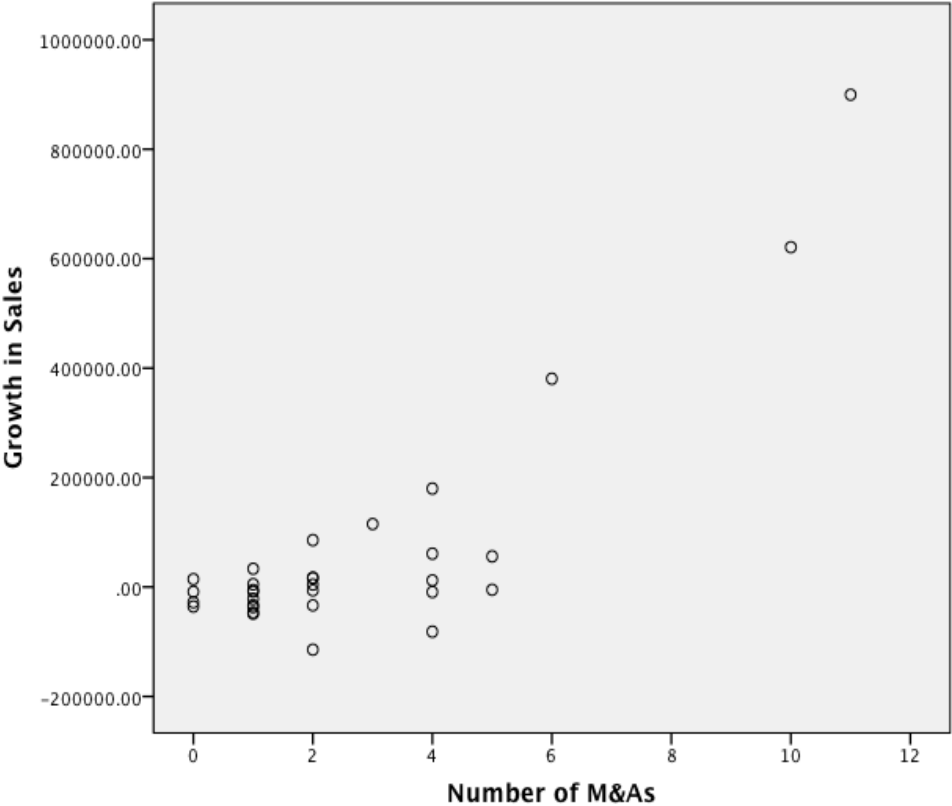
Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-115476.37	28705.345		-4.023	.000
Number of M&As	66981.306	7680.680	.851	8.721	.000

Moreover, the number of M&As was significantly positively related to growth in sales ($t(30) = 8.721, p < 0.001, \beta = 66981, p < 0.001$).

When looking into the value plot (Figure 2) we can see that lower numbers of M&As among surviving companies are related to both negative and positive growth, while higher numbers of M&As are related to high numbers of positive growth in sales.

Figure 2 Value plot: Number of M&As and Growth in Sales



2) Mergers and Acquisitions and growth in gross profit

Table 8 shows the result of the regression analysis, and reveal that the number of mergers and acquisitions explained 54.4 % of the variance in gross profit growth, and that the model significantly predicted growth in gross profit ($F(1,29)=34.645, p < 0.001$).

Table 8 Regression model 2: Number of M&As and growth in gross profit

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.738	.544	.529	103445.944

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	3.707E+11	1	3.707E+11	34.645	.000
Residual	3.103E+11	29	1.070E+10		
Total	6.811E+11	30			

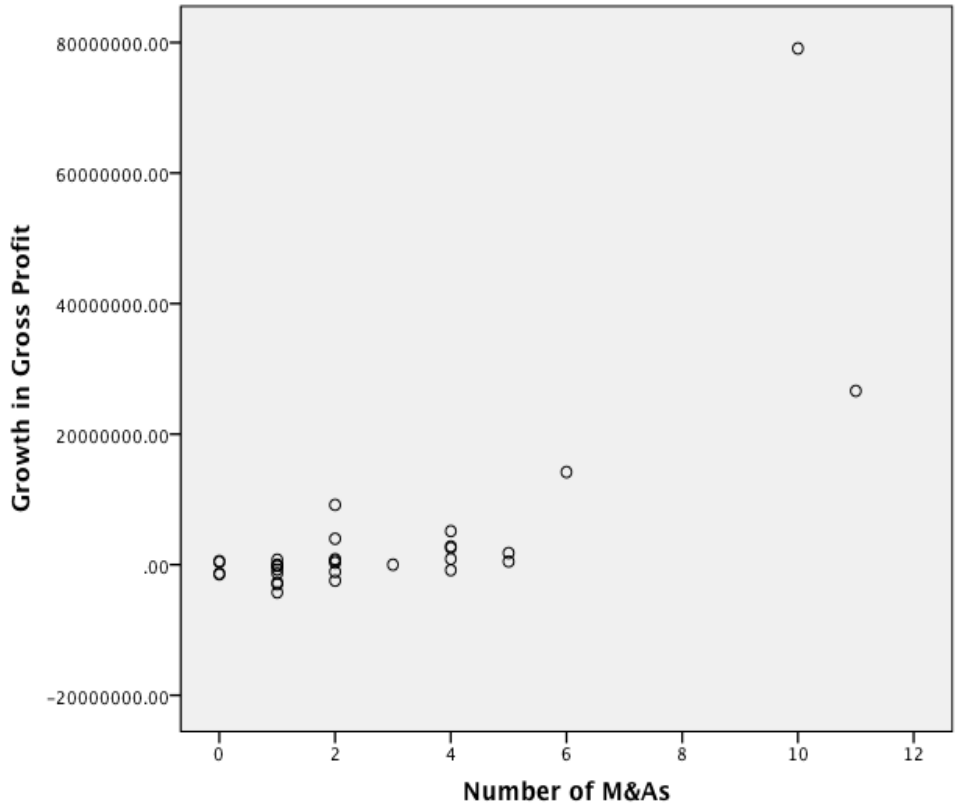
Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-70117.047	26629.797		-2.633	.013
Number of M&As	41939.813	7125.326	.738	5.886	.000

Moreover, number of M&As was significantly positively related to growth in gross profit ($t(30) = 5.886, p = 0.013, \beta = 41940, p < 0.001$).

When looking into the value plot (Figure 3) we can see that lower numbers of M&As among surviving companies are related to both negative and positive growth, but that they are less diverse than what was the case with the sales growth. Higher numbers of M&As are related to high numbers of positive growth in gross profit, but as evidenced by the differing beta values, performing acquisitions have a stronger effect on sales growth, than on growth in gross profit ($\beta(\text{Sales}) = 66981 > \beta(\text{Gross Profit}) = 41940$).

Figure 3 Value plot: Number of M&As and Growth in Gross Profit



3) Mergers and Acquisitions and growth in shareholders' equity

Table 9 shows the result of the regression analysis, and reveal that the number of mergers and acquisitions explained 58.0 % of the variance in equity growth, and that the model significantly predicted growth in equity ($F(1,29)=40.087$), $p < 0.001$).

Table 9 Regression model 3: Number of M&As and growth in shareholders' equity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.762	.580	.566	129590.020

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	6.732E+11	1	6.732E+11	40.087	.000
Residual	4.870E+11	29	1.679E+10		
Total	1.160E+12	30			

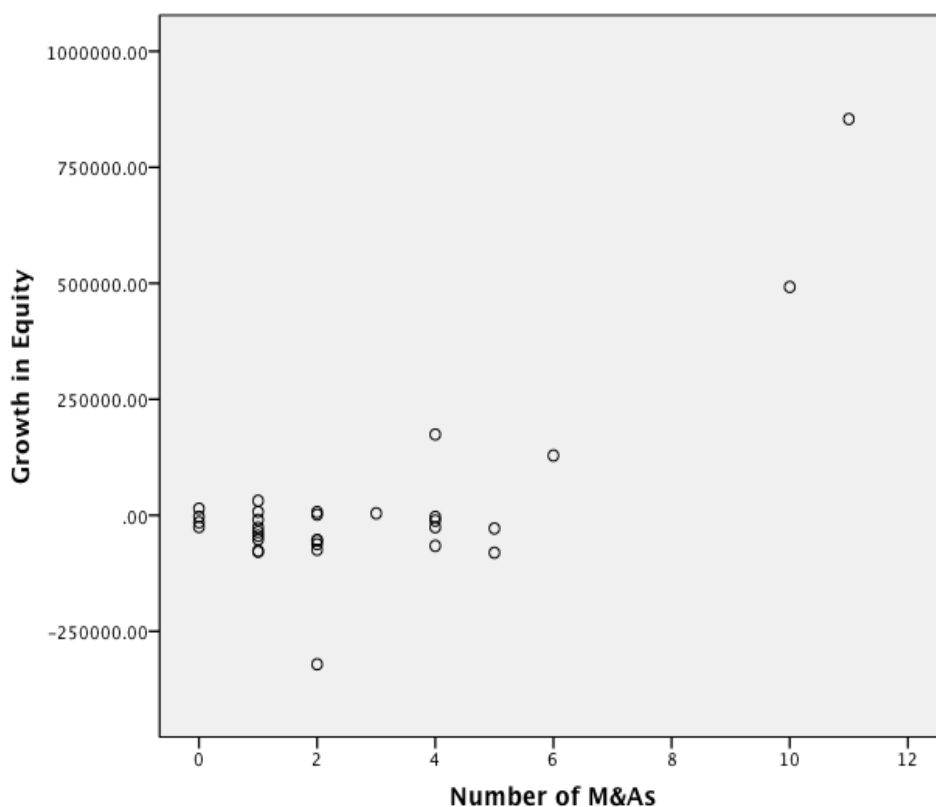
Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-133061.26	33359.992		-3.989	.000
Number of M&As	56515.133	8926.122	.762	6.331	.000

Moreover, number of M&As was significantly positively related to growth in equity ($t(30) = 6.331, p < 0.001, \beta = 56515, p < 0.001$).

When looking into the value plot (Figure 4) we can see that lower numbers of M&As among surviving companies are related to both negative and positive growth. Higher numbers of M&As are related to high numbers of positive growth in equity. Compared to growth in sales and gross profit, mergers and acquisitions have a stronger effect on sales than on equity, but a stronger effect on equity than on gross profit. ($\beta(\text{Sales}) = 66981 > \beta(\text{Equity}) = 56515 > \beta(\text{Gross Profit}) = 41940$).

Figure 4 Value plot: Number of M&As and Growth in Equity



These findings in general support hypothesis 1b, but the nature of the results (i.e. differing financial performance among companies with a lower number of M&As, and few observations of companies with a high number of M&As), is questioned in the discussion and conclusion section.

Hypothesis 2 is derived from Almor's (2013) framework on conceptualized growth paths for born globals. The hypothesis addresses whether or not born globals that acquire with the purpose of expanding their product line will survive more frequently than companies that acquire for other reasons. To test this hypothesis a SPSS database was created with the following variables: 1) Used M&As for the main purpose to expand product line (i.e. a categorical variable that stated whether the company acquired first and foremost to expand their product line, if they acquired for other reasons, or if it did not acquire at all), and 2) Independent in 2009 (i.e. a categorical variable that stated whether or not the company survived independently throughout the investigated period). The analysis of this hypothesis also included all 44 companies, and again I used Pearson's Chi-square test in order to test the relationship between two categorical variables.

Table 10 shows the frequency distribution of the investigated companies. The numbers related to the companies that did not acquire during the period is of course the same as the ones discussed in relation with hypothesis 1a, and will thus not be repeated here. 47.7 % (21) of the companies acquired first and foremost as part of their product strategy, while 29.5 % (13) acquired first and foremost for other reasons. Of the companies that acquired for product reasons 81 % (17) survived, while 19 % ceased to exist. Of the companies that acquired for other reasons 76.9 % (10) survived, while 23.1 % (3) ceased to exist. This tells us that mergers and acquisitions in general are associated with higher survival rates than not acquiring (among the companies that did not acquire only 40 % (4) survived), and that acquiring for the main purpose to expand product line is associated with a higher survival rate compared to companies that acquired for other reasons.

Table 10 Frequency distribution related to hypothesis 2

		Independent in 2009			
		Not		Total	
		Independent in 2009	Independent in 2009		
M&A Strategy		Count	6	4	10
	Did not use M&A	% within M&A Strategy	60.0 %	40.0 %	100.0 %
		% within independent in2009	46.2 %	12.9 %	22.7 %
		% of total	13.6 %	9.1 %	22.7 %
		Count	4	17	21
	Product Strategy	% within M&A Strategy	19.0 %	81.0 %	100.0 %
		% within independent in2009	30.8 %	54.8 %	47.7 %
		% of total	9.1 %	38.6 %	47.7 %
		Count	3	10	13
	Other Strategies	% within M&A Strategy	23.1 %	76.9 %	100.0 %
		% within independent in2009	23.1 %	32.3 %	29.5 %
		% of total	6.8 %	22.7 %	29.5 %
Total	Count	13	31	44	
	% within M&A Strategy	29.5 %	70.5 %	100.0 %	
	% within independent in2009	100.0 %	100.0 %	100.0 %	
	% of total	29.5 %	70.5 %	100.0 %	

Table 11 presents the result of the Pearson's Chi Square test. The test indicates that there is a (marginally) statistically significant ($p = 0.054$) relationship between acquiring first and foremost to expand the technology-based born global's product line, and survival throughout the period from 2000 until 2009 ($X^2 (2, N = 44) = 5.829, p = 0.054$). This supports hypothesis 2 that Israeli technology-based born globals that acquire in order to expand their product line will survive more frequently than companies that acquire for other purposes.

Table 11 Chi-square results related to hypothesis 2

	Value	df	Asymp. Sig. (2sided)
Pearson Chi-Square	5.829	2	.054
Likelihood Ratio	5.457	2	.065
Linear-by-Linear Association	3.111	1	.078
N of Valid Cases	44		

Hypothesis 3a and 3b address how the use of mergers and acquisitions affect measures related to R&D and Marketing (i.e. R&D/Sales and marketing expenditure). Hypothesis 3a state that relatively lower investment in R&D increase the probability of performing M&As for the main purpose of expanding the product line. Additionally, Hypothesis 3b state that born globals that have performed M&As first and foremost in order to expand their product line are likely to increase their investment in marketing. In order to answer these hypothesis a SPSS database was created which consisted of the following variables: 1) Level of R&D/Sales in 2000 (i.e. a categorical variable that stated if the company's investment in R&D was above or below the sample median), 2) Change in marketing expenditure (i.e. a categorical variable that stated if the company's marketing expenditure either decreased or increased between 2000 and 2009, or the last year that the company survived), and 3) Acquired first and foremost to expand product line (i.e. a categorical variable that stated whether the company acquired first and foremost to expand their product line, if they acquired for other reasons, or if it did not acquire at all). Both analyses included all 44 companies, and again I used Pearson's Chi-square test in order to test the relationship between two categorical variables (i.e. first for variables 1) and 3), then for variables 2) and 3)).

Table 12 is related to hypothesis 3a and shows the frequency distribution of the investigated companies. Among the companies that used M&A first and foremost in order to expand their product line, 67 % (14) had R&D investment above the sample median in 2000, while 33 % (7) had R&D investment below the median. Among the companies that did not use M&A as much as 80 % (8) of the companies invested relatively less in R&D, while only 20 % (2) invested more than the sample median. Among the companies that did perform M&As, but for other reasons than expanding the

product line, almost half of the companies invested more than the median, while the other half invested less (i.e. 6 vs. 7 companies).

Table 12 Frequency distribution related to hypothesis 3a

		Levels of R&D in 2000		Total	
		Below the median	Above the median		
M&A Strategy	Did not use M&A	Count	8	2	10
		% within M&A Strategy	80.0 %	20.0 %	100.0 %
		% within independent in 2009	36.4 %	9.1 %	22.7 %
		% of total	18.2 %	4.5 %	22.7 %
	Product Strategy	Count	7	14	21
		% within M&A Strategy	33.3 %	66.7 %	100.0 %
		% within independent in 2009	31.8 %	63.6 %	47.7 %
		% of total	15.9 %	31.8 %	47.7 %
	Other Strategies	Count	7	6	13
		% within M&A Strategy	53.8 %	46.2 %	100.0 %
		% within independent in 2009	31.8 %	27.3 %	29.5 %
		% of total	15.9 %	13.6 %	29.5 %
Total	Count	22	22	44	
	% within M&A Strategy	50.0 %	50.0 %	100.0 %	
	% within independent in 2009	100.0 %	100.0 %	100.0 %	
	% of total	50.0 %	50.0 %	100.0 %	

Table 13 reveals the results of the Pearson Chi-square test. The results indicate that there is a statistically significant ($p = 0.050$) relationship between acquiring first and foremost to expand technology-based born globals' product line, and initial R&D levels ($X^2 (2, N = 44) = 6.010, p = 0.050$). However, the direction of this relationship seems to be opposite of what was expected in the hypothesis, and hypothesis 3a is thus not supported

Table 13 Chi-square results related to hypothesis 3a

	Value	df	Asymp. Sig. (2sided)
Pearson Chi-Square	6.010	2	.050
Likelihood Ratio	6.310	2	.043
Linear-by-Linear Association	1.072	1	.301
N of Valid Cases	44		

Table 14 is related to hypothesis 3b and shows the frequency distribution of the investigated companies. Among the companies that used M&A first and foremost in order to expand their product line, 33 % (7) experienced an increase in marketing expenditure throughout the investigated period, while 67 % experienced a decrease. Among the companies that did not use M&A, 70 % (7) of the companies increased their marketing expenditure, while the remaining 30 % (3) decreased their expenditure. Among the companies that performed M&As, but for other reasons than expanding the product line, 62 % (8) increased, while 38 % (5) decreased their marketing expenditure.

Table 14 Frequency distribution related to hypothesis 3b

		Change in marketing expenditure from 2000-2009		
		Decrease	Increase	Total
M&A Strategy	Count	3	7	10
	Did not use M&A			
	% within M&A Strategy	30.0 %	70.0 %	100.0 %
	% within independent in 2009	13.6 %	31.8 %	22.7 %
	% of total	6.8 %	15.9 %	22.7 %
	Count	14	7	21
	Product Strategy			
	% within M&A Strategy	66.7 %	33.3 %	100.0 %
	% within independent in 2009	63.6 %	31.8 %	47.7 %
	% of total	31.8 %	15.9 %	47.7 %
	Count	5	8	13
	Other Strategies			
% within M&A Strategy	38.5 %	61.5 %	100.0 %	
% within independent in 2009	22.7 %	36.4 %	29.5 %	
% of total	11.4 %	18.2 %	29.5 %	
Total	Count	22	22	44
	% within M&A Strategy	50.0 %	50.0 %	100.0 %
	% within independent in 2009	100.0 %	100.0 %	100.0 %
	% of total	50.0 %	50.0 %	100.0 %

Table 15 reveals the results of the Pearson Chi-square test. The results indicate that there is a marginally significant ($p < 0.10$) relationship between acquiring first and foremost to expand the technology-based born global's product line, and change in marketing expenditure ($X^2 (2, N = 44) = 4.626, p = 0.099$). However, the direction of this relationship seems to be opposite of what was expected in the hypothesis. Thus, technology-based born globals that perform M&As as part of their product strategy are more likely to decrease their marketing expenditure in the long run, and hypothesis 3b is not supported.

Table 15 Chi-square results related to hypothesis 3b

	Value	df	Asymp. Sig. (2sided)
Pearson Chi-Square	4.626	2	.099
Likelihood Ratio	4.723	2	.094
Linear-by-Linear Association	.043	1	.836
N of Valid Cases	44		

5 Discussions and Conclusion

This section starts with a discussion of the results presented in the analysis section, and conclusions based on this. Furthermore, I describe limitations related to the performed study, and present possible directions for future research within the field.

5.1 Discussion and Conclusion

Even though substantial research during the last two decades has led to a rather extensive body of literature concerning the emergence and existence of born globals, there has been little contribution to the understanding of how these companies can manage to survive independently over time. The aim of this thesis has thus been to explore how the use of mergers and acquisitions can potentially serve as a means to increase the probability of independent survival. More specifically I have looked at the effect of performing numerous acquisitions, and the strategies underlying them, and how acquiring affect the born global's core activities.

The literature review includes an explanation of how the current trends in the business world today (i.e. global market conditions, technological development, international experience, niche markets and international networks) facilitate the increasing emergence of born global companies. These are young, entrepreneurial and relatively small companies with rapid international growth based on a single product line (Almor, 2013). In spite of their small size and the narrow resource base this leads to, they tend to behave like large MNEs in the way that they organize their value chain. However, born globals lack the resources needed to continuously innovate in order to cope with the challenges that affect these companies (i.e. threat of new and superior offerings, short product life cycles and declining industries). Mergers and acquisitions are often suggested as a beneficial strategy for coping with several of the mentioned challenges that born globals face. However, mergers and acquisitions is not a problem free approach, and despite a heavy body of literature related to the subject, researchers still fail to determine what causes acquisition success and failure, and how this strategy affect the financial performance of the involved companies.

By focusing on mergers and acquisitions strategy, this study has tried to say something about how Israeli technology-based born globals can aim for long-term, independent survival. This was done by analyzing 1) the effect of number of acquisitions on independent survival and financial performance, 2) the relationship between the strategic reason underlying the acquisition and survival, and 3) how the use of M&A is related to the company's core activities (i.e. R&D and marketing).

The results confirm that maturing born globals can increase their probability of independent survival through employing mergers and acquisition strategy. This is in line with the findings of the previously mentioned study by Almor (2014). Additionally, the results show that the probability of survival also increases with the number of performed acquisitions. The percentage of surviving firms was lowest for the group of companies that did not acquire, higher for the companies that performed 1-3 M&As, but highest for the companies that performed 4 or more M&As. Among the surviving companies, number of acquisitions also had a positive effect on financial growth. This effect was particularly strong for companies that had performed a high number of acquisitions, while the difference was less evident among the companies with only a few acquisitions in the investigated 10-year period. These findings support the previous discussion concerning acquisition experience leading to a reduction of the disruption period and the resources needed to overcome it. Consequently this leads to an increased ability to release the inherent benefits related to acquiring. Moreover, the findings correspond to the result of previous research that has compared the effect of one M&A to the effect of multiple M&As, and found that born globals that had performed multiple M&As experienced higher growth in sales and profit (Almor, 2014). The results of this study thus add to the current literature, by revealing that higher numbers of acquisitions are actually related to a higher growth in financial performance, relative to companies that acquired less in the same period. However, it is important to realize that the benefits of multiple acquisitions are likely to be determined by several factors, and that performing several acquisitions without carefully addressing the related challenges might have a negative effect rather than contributing to survival. Specifically, how the acquisition process is handled, selection of the target company and the time span between the different acquisitions are factors likely to have an effect.

As initially expected, the results also confirm that the use of mergers and acquisition in order to expand the company's product line is related to a higher probability of survival, than acquiring for other reasons (i.e. to enter new geographical markets or access new customers). Acquiring based on product strategy offers a more direct solution to the challenges born global face. By enabling a way to "buy" readily available technology or products, or the competence needed to make these offerings, without having to invest a substantial amount of resources in internal development. Thus, acquiring for product reasons offer both a short-term solution to the lack of resources to spend on internal R&D, and a more long-term answer to the need for innovation and avoidance of product obsolesce. In other words, performing M&As in order to expand the company's product offering seems to be a very suitable strategy born globals aiming for long-term independent survival.

However, the findings related to the born global's core activities actually contradict what we initially assumed. Performing mergers and acquisition in order to expand the company's product line is actually related to higher levels of initial investment in R&D, rather than the opposite. Thus, acquiring does not seem to substitute, but rather complement internal R&D. This is also a contradiction to some existing studies, which claim that the use of mergers and acquisitions is related to low levels of investment in R&D (Blonigen & Taylor, 2000; Desyllas & Hughes, 2008). Several rationales can be assumed to underlie this finding. One can assume that higher levels of investment in R&D indicate a relatively deeper commitment to innovation and development of new products and technologies. Because of the discussed resource limitations and time constrains born globals are forced to deal with, the companies trying to do this process by themselves might also be the first ones to realize that acquiring in order to access already developed technology and products, might be preferable. Also, it might be that these companies realize that not only do they lack the resources; they actually lack the knowledge and capabilities to develop new products. Acquiring companies that includes individuals, or teams of individuals, with the required knowledge, might be preferred compared to the both time and resource consuming process of developing new knowledge and capabilities within the company. It is also interesting to notice that this tendency does not seem to apply for companies acquiring first and foremost for other reasons than to expand their product line. Among these companies, almost half were

associated with high initial levels of R&D, and the other half were associated with low levels. These findings could indicate that it is investment in R&D, and not acquiring that actually increases probability of independent survival, and that the above findings thus constitute a spurious relationship. However, this issue needs a more thorough investigation and could thus be an interesting subject for future research.

Also the expectations concerning how product scope related mergers and acquisition affect marketing expenditure were contradicted in the study. The results show that companies that acquired for the main purpose to expand their product line actually decrease their investment in marketing over time. However, these findings correspond to the results from the investigation of the relationship between R&D and acquisitions. The tendency to reduce marketing expenditure throughout the post-acquisition period supports findings done by several previous studies, which found that going through the M&A process might lead to more resources being used on managing the now larger entity, and thus an allocation of focus from customers to inward managerial issues, as well as an emphasis on debt repayment rather than expenditure (Hitt, Hoskinson & Ireland, 1990; Bertrand, 2008; Baysinger & Hoskinson 1989).

It is also interesting to notice the difference in relation to this tendency, between companies acquiring for product purposes, and companies acquiring for other reasons. Among the companies that acquired to enter new markets or approach new customers, the majority actually increased their marketing expenditure over time. An explanation for this might be that while companies that acquire for product development reasons might focus on their newly acquired product or technology, the companies that acquire for other reasons will focus on their newly acquired customers. In sum, the findings related to R&D and marketing thus indicate a relationship between the level of investment in core activities and the strategy underlying the decision to acquire.

In conclusion, in terms of how they organize their value chain in an international perspective, born globals manage to overcome their small size and limited resources by employing a niche strategy. However, the same limitations challenge born globals ability to continuously innovate in order to prevent that their product becomes obsolete. This is a threat that increases as a result of shortening product life cycles and industry life

cycles, and consequently challenges long-term survival. Mergers and acquisitions has proven to be a strategy that enable born globals to handle their life threatening challenges, and this particular study has also shown that multiple acquisitions might be beneficial in order to secure survival. Moreover, multiple acquisitions also lead to better financial performance for the company. The strategy underlying the decision to acquire has consequences for both probability of survival, and affects the born global's core activities. Acquiring in order to expand the company's product line is the beneficial choice in order to secure long-term survival, and seems to be related to higher levels of investment in R&D, while leading to a decrease in marketing expenditure over time. However, acquiring for other reasons leads to an increase in the company's marketing expenditure.

5.2 Limitation and improvements

Limitations concerning this particular study relates to the chosen sample and the applied definition.

Limitations resulting from the chosen sample first of all stems from the fact that only publicly traded Israeli companies are included. Even though focusing on public companies enable easy access to company data, it reduces the explanatory power of the research, as it does not control for potential effects that stem from the fact that privately held companies are excluded. Also, exclusively looking at Israeli companies might give different findings compared to the results that would be achieved by including companies from different countries with different institutions or different levels of economic development. An improvement would thus be to create a sample with born globals from both the private and public sector, originating from a wider geographical area. Solutions could be to include companies from several countries, or compare born globals from different regions, to determine cross-culture similarities or differences. Additionally, focusing on technology-based companies, instead of companies from various industries, are also likely to affect the results.

As discussed earlier, no single measure exists that captures all aspects of a company's financial performance. In this study growth in sales, gross profit and shareholders' equity were used to determine performance. The choice to use these measures, instead of growth in other variables (e.g. income, operating income, ROE, EPS, etc.), is also likely to affect the findings, and including more variables would thus improve the overall findings. Also, this study investigates the growth from 2000 until 2009, and does not say anything about variations in the financial performance during this period, or directly following an M&A. It might increase the explanatory power of the findings if this was more thoroughly addressed.

The chosen time period also constitutes a limitation. Expanding the time frame might have resulted in different and also more accurate results. Moreover, we do not know whether or not the companies in the sample performed acquisitions prior to the year 2000. If this is the case for some of the companies in the sample, the results might have been different if these were included. Finally, the companies in the sample were established within the range of 1974 and 1996. This might imply that some of the companies are in fact in different stages of maturation. An improvement would thus be to focus on companies that are established within a more narrow time period in order to control for effects related to age. Finally, both years 2000 and 2009 were influenced by economic recession periods. Consequently, it might be informative to compare the economic activity and financial performance over the entire investigated decade in order to reveal whether these two years deviated from the rest of the period.

The final limitation concerning the employed sample is related to the sample size. 44 companies is not a lot when the aim is to say something about the general behavior of the whole investigated population. Additionally, the sample includes very few companies with a high number of acquisitions. Including more companies would thus enable a better examination of the behavior of born global firms in general, and the effects of numbers of mergers and acquisitions in particular.

Exclusively using secondary data limits our ability to reveal what lies beneath our findings. We can only make assumptions about the decisions leading up to the acquisitions, and we do not know if it is declining financial performance, a hostile

takeover or actually the aim of the born global when it ceases to exist as an individual company following an acquisition. Thus, in-depth interviews exploring strategic choices and patterns of action might shed some light over this process.

The operationalization of the born global concept has direct consequences for the selection of which companies to include in the sample, and the choice of operationalization thus affects the findings in general. Since born globals tend to offer products and technologies that result from knowledge-intensive resources, it is reasonable to assume that the first product launched is a result of a longer initial R&D period. Thus, it might be an improvement to base the time frame on first product sold (i.e. either at home or abroad), rather than the incorporation of the company.

5.3 Future Directions

There is still a lot of unfamiliar territory surrounding born global companies and what strategic actions they should take on their road to long-term survival. Building on the findings done and questions raised by this study, conducting in-depth interviews and case studies of born globals and their founders would enable a broader understanding of the strategic choices underlying the investigated actions. Also, an important step towards external validity would first of all be to verify the findings in markets outside of Israel. One could also consider examining companies originating from low-technology industries, in order to determine whether or not the findings applied to born globals in general. Use of different financial variables, or sets of variables, will also give a more complete picture of born global behavior.

Furthermore, there is also still a lot to be learned about the effect of mergers and acquisitions on born global survival and financial performance. This study does not address the timing of or timespan between acquisitions, both issues that might affect the success of the single acquisition, as well as the overall performance of the companies conducting them. Additionally, it would be interesting to do a more thorough investigation of the factors believed to determine acquisition success (i.e. handling of the acquisition process, and selection of the target company). Following a born global

through the company's lifetime, and thus get an overview over all acquisition performed, can also contribute positively to the specific findings and general understanding. Considering the effects of mergers and acquisitions on the company's core activities, investigating the levels of R&D and marketing investment directly presiding and following an acquisition could be informative. Also, a time-series study of how the expenditure vary according to mergers and acquisitions during a certain period, would give more insight into the relationship between M&A and these activities. The indicated relationship between the strategy underlying the decision to acquire and investment in core activities needs further examination. As discussed earlier, the revealed relationship between high levels of R&D and propensity to acquire for product purposes could indicate a spurious relationship between the use of M&A and survival. In other words, it could be the R&D investment, and not the actual acquisition, that increases the probability of independent survival. This subject needs to be elaborated and further tested.

Considering the framework proposed by Almor (2013), this study examined product scope, while customer and country scope were more or less excluded from the investigation. Thus, future research also needs to address the two remaining growth axis, and the strategies employed to implement them. Additionally, in order to investigate external validation, the framework needs to be investigated in relation to other industries and countries.

Future research are recommended to employ the operationalization used in this study, developed by Knight and Cavusgil (2004), with the additional classification by Almor and Hashai (2004a), but instead of the initial year being year of establishment, they should consider year of first product sold in order to take into account the initial R&D period.

6 Scientific Contributions

The ability of some small and medium sized companies to internationalize from inception, and organize their value chain similarly to larger MNEs in spite of their small size and limited resources, to some extent contradict existing theories within international management (i.e. the Uppsala model). Moreover, the increasing emergence of these born globals has demanded a shift in focus within this field of research, which has traditionally concentrated on how MNEs operate. After two decades of research we now have a rather extensive body of literature concerning the drivers and characteristics of born globals. These companies are often young, entrepreneurial, innovative, and offer a single self-developed technology-based product.

In this study, the focus has been on Israeli technology-based born globals, which as a result of Israel's competitive advantage within high-tech startups, and the dense existence of born globals within high-tech industries, constitute an excellent case study for investigating born global behavior. While existing studies have focused on the establishment and attributes of born globals, this study has concentrated on the issue of long-term independent survival. This has proven to be a challenge for these companies, as their limited resources creates difficulties concerning the innovation necessary to hinder their products becoming obsolete.

Mergers and acquisitions seem to be a viable option for born globals, as this strategy is often used to access additional resources, and as a means of reaching new knowledge and innovation capabilities. Also, it has been recognized as a way out of a declining industry, which is often the situation for technology-based companies. However, there are also several difficulties related to acquiring, and research is inconclusive on important issues such as success factors and effects on financial performance, and studies have revealed a high percentage of acquisition failure leading to a negative effect on performance. Despite the varying findings about the consequences of acquiring, the findings reached in this study add to the theoretical knowledge about the importance of mergers and acquisitions as a strategy for maturing born globals. This constitutes a scientific contribution both in relation to the strategy driving the acquisition, and the effect of multiple acquisitions. In addition to supporting Almor's (2013) conceptual

growth framework by investigating the product axis, the findings indicate a relationship between the strategic reason for acquiring and investment in core activities. Also, the results concerning the relationship between investment in R&D and the decision to acquire seem to contradict what we know from the existing literature.

The findings serve as assistance for born global managers and consultant who seeks opportunities for growth in order to survive independently over time. For researchers, this study in general, and the findings in particular, should awake interest around the subject of maturing born globals, and the use of mergers and acquisition as a means of survival.

7 Bibliography

Agarwal, R., & Helfat, C. E. (2009) Strategic renewal of organizations. *Organization Science*, 20(2), 281-293.

Almor, T. (2013). Conceptualizing paths of growth for technology-based, born global firms originating in a small population, advanced economy. *International Studies of Management & Organization*, 43(2), 56–78.

Almor, T., & Hirsch, S. (1995). Outsiders' response to Europe 1992: theoretical considerations and empirical evidence. *Journal of International Business Studies*, 26(2), 223–238.

Almor, T., Tarba, S.Y., & Margalit, A. 2014. Maturing born global firms: An empirical examination of their M&A behavior. *Management International Review* (forthcoming).

Anand, J. (2004). Redeployment of Corporate Resources: A Study of Acquisition Strategies in the US Defense Industries, 1978-1996. *Managerial and Decision Economics*, 25, (6-7), 383-400.

Andersson, S., Gabrielsson, J., & Wictor, I. (2004). International activities in small firms: Examining factors influencing the internationalization and export growth of small firms. *Canadian Journal of Administrative Sciences*, 21(1), 22-34.

Ansoff, H. I. (1957). Strategies for diversification. *Harvard Business Review*, 35(5), 113-124.

Aspelund, A., Madsen, T. K., & Moen, Ø. (2007). A review of the foundation, international marketing strategies, and performance of international new ventures. *European Journal of Marketing*. 41 (11-12), 1423-1448.

- Autio, E., Sapienza, H. J., & J.G. Almedia. (2000). Effects of age at entry, knowledge intensity, and imitability on international growth. *Academy of Management Journal*, 43(5), 9090–9924.
- Avnimelech, G., & Schwartz, D. (2009) Structural changes in mature venture capital industry: Evidence from Israel. *Innovation: Management, Policy & Practice*, 11, 60–73.
- Avnimelech, G., & Teubal, M. (2006). Creating venture capital (VC) industries that co-evolve with high tech clusters: Insights from an extended industry life cycle perspective of the Israeli experience. *Research Policy*, 35, 1477–1498.
- Barney, J.B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Baysinger, B., & Hoskisson, R. E. (1989). Diversification strategy and R&D intensity in multi-product firms. *Academy of Management Journal*, 32, 310-332.
- Bekier, M. M., & Shelton, M. J. (2002). Keeping your sales force after the merger. *The McKinsey Quarterly*, 4, 106-115.
- Bell, J.D. (1995). The internationalization of small computer software firms. *European Journal of Marketing*, 29(8), 60-75.
- Benson, D., & Ziedonis, R. H. (2009). Corporate venture capital as a window on new technologies: Implications for the performance of corporate investors when acquiring startups. *Organization Science*, 20(2), 329–351.
- Bertrand, O. (2009). Effects of foreign acquisitions of R&D activity: Evidence from firm-level data from France. *Research Policy*, 38, 1021-1031.
- Bertrand, O., & Zuniga, M., (2006). R&D and M&A: are cross-border M&A different? An investigation on OECD countries. *International Journal of Industrial Organization*, 24, 401–423.

Blonigen, B. A., & Taylor, C. T. (2000). R&D intensity and acquisitions in high-technology industries: Evidence from the US electronic and electrical equipment industries. *The Journal of Industrial Economics*, 48, 47–70.

Bresnahan, T., Gambardella, A. & Saxenian, A. (2001) Old economy inputs for new economy outputs: Cluster formation in the new Silicon Valleys, *Industrial Corporate Change* 10, 835–860.

Capron, L. (1999). The long-term performance of horizontal acquisitions. *Strategic Management Journal*, 20(11), 987-1018.

Chaudhuri S., & Tabrizi B. (1999). Capturing the real value in high-tech acquisitions. *Harvard Business Review*, 77(5), 123-130.

Chorev, S., & Anderson, A. R. (2006). Success in Israeli high-tech start-ups: Critical factors and process. *Technovation*, 26, 162-174.

Contractor, F. J. (1990). Ownership patterns of U.S. joint ventures abroad and the liberalization of foreign government regulation in the 1980's: Evidence from the benchmark surveys. *Journal of International Business Studies*, 21(1), 55–73.

Crick, D. (2009) The internationalization of born global and international new venture SMEs. *International Marketing Review*, 26(4-5), 453-476

Crick, D., & Jones, M. V. (2000). Small high-technology firms and International high-technology markets. *Journal of International Marketing*. 8(2), 63-86.

Cusumano, M., & Yoffie, D. (1998). *Competing on Internet time: Lessons from Netscape and its battle with Microsoft*. New York: Free Press/Simon & Schuster.

Desyllas, P., & Hughes, A. (2008). Sourcing technological knowledge through corporate acquisition: Evidence from an international sample of high technology firms. *Journal of High Technology Management Research*, 18, 157–172.

Economist. (2008). Land of milk and start-ups. Silicon Wadi v Silicon Valley.
www.economist.com , March 19.

Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10-11), 1105-1121.

Ernst, H., & Vitt, J. (2000). The influence of corporate acquisitions on the behavior of key inventors. *R&D Management* 30(2) 105–119.

Freeman, S., & Cavusgil, T. (2007). Towards a typology of commitment states among managers of born-global firms: A study of accelerated internationalization. *Journal of International Marketing*, 15(4), 1–40.

Freeman, S., Edwards, R., & Schroder, B. (2006). How smaller born-global firms use networks and alliances to overcome constraints to rapid internationalization. *Journal of International Marketing*. 14(3), 33-63.

Freeman, S., Hutchings, K., & Chetty, S. (2012). Born-Globals and culturally proximate markets. *Management International Review*, 52, 425–460

Gabrielsson, M., & Kirpalani, V. H. M. (2004). Born globals: How to reach new business space rapidly. *International Business Review*, 13(5), 555-571.

Geroski, P., Machin, S., & Reenen, J. V. (1993). The profitability of innovating firms. *Journal of Economics*, 24, 198-211.

Gomes, E., Weber, Y., Brown, C., & Tarba, S. Y. (2011). *Mergers, acquisitions and strategic alliances: Understanding the process*. New York: Palgrave MacMillan.

Graebner, M.E. (2004). Momentum and serendipity: How acquired leaders create value in the integration of technology firms. *Strategic Management Journal*, 25, 751-777.

Graebner, M.E., & Eisenhardt, K. M. (2004). The other side of the story: Acquisition as courtship and governance as syndicate in entrepreneurial firms. *Administrative Science Quarterly*, 49, 366-403.

Graebner, M.E., Eisenhardt K. M., & Roundy P.T. (2010). Success and failure in technology acquisitions: Lessons for buyers and sellers. *Academy of Management Perspectives*, 24(3), 73-92.

Graebner, M.E., & Sjolander S. (1990). The acquisition of technology and small firms by large firms. *Journal of Economic Behavior*, 13(4), 72-91.

Haleblian, J., Devers, C. E., McNamara, G., Carpenter, M.E., & Davison, R. B. (2009). Taking stock of what we know about acquisitions and acquisitions: A review and research agenda. *Journal of Management*, 35, 469-502.

Haleblian, J., & Finkelstein, S. (1999). The influence of organizational acquisition experience on acquisition performance: A behavioral learning perspective. *Administrative Science Quarterly*, 44(1), 29-56.

Hashai, N., & Almor, T. (2004a). Gradually internationalization 'born-global' firms: An oxymoron? *International Business Review*, 13, 465-483

Hashai, N., & Almor, T. (2004b). The competitive advantage and strategic configuration of knowledge-intensive, small- and medium-sized multinationals: a modified resource-based view. *Journal of International Management*, 10, 479– 500

Hayward, M. L. A. (2002). When do firms learn from their acquisition experience? Evidence from 1990-1995. *Strategic Management Journal*, 23, 21-39.

Hirsch, S. (1976). An international trade and investment theory of the firm. *Oxford Economic Papers*, 28(2), 258–270.

Hirsch, S. (1989). Services and service intensity in international trade. *Weltwirtsch. Archive*, 125(1), 45– 60.

Hitt, M. A., Hoskisson, R. E., & Ireland, D. R. (1990), "Mergers and acquisitions and managerial commitment to innovation in M-Form firms. *Strategic Management Journal*, 11 (4), 29-48.

Hitt, M. A., Hoskisson, R. E., Ireland, D. R., & Harrison, J. S. (1991). Effects of acquisitions on R&D inputs and outputs. *Academy of Management Journal*, 34, 639–706.

Hitt, M. A., Hoskisson, R. E., Johnson, R. A., & Moesel, D. D. (1996). The market for corporate control and firm innovation. *Academy of Management Journal*, 39, 1084–1119.

Hitt, M. A., Hoskisson, R. E., & Kim, H. (1997). International diversification, effects on innovation and firm performance in product-diversified firms. *Academy of Management Journal* 40 (4), 767–798.

Johanson, J., & Vahlne, J.-E. (1977). The internationalization process of the firm—a model of knowledge development and increasing foreign market commitment. *Journal of International Business Studies*, 8(1), 23–32.

Johanson, J., & Wiedersheim-Paul, F. (1975). The internationalization of the firm—four Swedish cases. *Journal of Management Studies*, 12, 305–322.

Karlsen, S. M. F. (2007). *The born global - redefined. On the determinates of SMEs pace of internationalization (Dissertation)*, Department of marketing, BI Norwegian School of Management, Oslo.

King, D., Dalton, D., Daily, C., & Covin, J. (2004). Meta-analyses of post-acquisition performance: Indications of unidentified moderators. *Strategic Management Journal*, 25(2), 187-200.

King, D., Slotegraaf, R., & Kesner, I. (2008). Performance implications of firm resources interactions in the acquisition of R&D intensive firms. *Organization Science*, 19(2), 327-340.

Klepper, S. (1997). Industry Life Cycles. *Industrial and Corporate Change*, 6(1), 145-182.

Knight, G. (2000). Entrepreneurship and marketing strategy: the SME under globalization. *Journal of International Marketing*, 8(2), 12-33.

Knight, G. A., & Cavusgil, S. T. (1996). The born global firm: A challenge to traditional internationalization theory. In S. T. Cavusgil, & T. K. Madsen, Export internationalizing research—enrichment and challenges. *Advances in International Marketing (Vol. 8)* (pp. 11-26). New York, NY: JAI Press.

Knight, G. A., & Cavusgil, S. T. (2004). Innovation, organizational capabilities, and the born-global firm. *Journal of International Business Studies*, 35(2), 124-141.

Kogut, B., & Singh, H. (1988). The effect of country culture on the choice of entry mode. *Journal of International Business Studies*, 19(3), 411-423.

Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, 3(3), 383-397.

Laanti, R., Gabrielsson, M., & Gabrielsson, P. (2007). The globalization strategies of business-to-business born global firms in the wireless technology industry. *Industrial Marketing Management*, 36(8), 1104-1117.

Leonard-Barton, D. (1992). Core capabilities and core rigidities: A paradox in managing new product development. *Strategic Management Journal*, 13 (S1), 111-125.

Madsen, T. K. (2013). Early and rapidly internationalizing ventures: Similarities and differences between classifications based on the original international new venture and born global literatures. *Journal of International Entrepreneurship*, 11, 65-79.

Madsen, T. K., Rasmussen, E. S., & Servais, P. (2000). Differences and similarities between born global and other types of exporters. *Advances in International Marketing*, 10, 247-265

Madsen, T. K., & Servais, P. (1997). The Internationalization of born globals: An evolutionary process? *International Business Review*, 6(6), 561–583.

Moen, Ø. (2002). The born globals: A new generation of small European exporters. *International Marketing Review*, 19(2), 156–175.

Moen, Ø., & Servais, P. (2002). Born global or gradual global? Examining the export behavior of small and medium-sized enterprises. *Journal of International Marketing*, 10(3), 49–72.

Mort, G. S., Weerawardena, J., & Liesch, P. (2008). Advancing entrepreneurial marketing. Evidence from born global firms. *European Journal of Marketing*, 46 (3-4), 542-561.

Mowery, D.C., Oxley, J. E., & Silverman, B. S. (1996). Strategic alliances and interfere knowledge transfer. *Strategic Management Journal*, 17, 77-91.

Oviatt, B. M., & McDougall, P.P. (1994). Toward a theory of international new ventures. *Journal of International Business Studies*, 25(1), 45-64.

Palich, L. E., Cardinal, L. B., & Miller, C. C. (2000). Curvilinearity in the diversification-performance linkage: An examination of over three decades of research. *Strategic Management Journal*, 21(2), 155–174.

Papadakis, V. M., & Thanos, I. C. (2010). Measuring the performance of acquisitions: An empirical investigation using multiple criteria. *British Journal of Management*, 21, 859-873.

Paruchuri, S., Nerkar, A., & Hambrick, D. C. (2006). Acquisition integration and productivity losses in the technical core: Disruption of inventors in acquired companies. *Organization Science*, 17(5), 545-562.

Peteraf, M. (1993). The cornerstones of competitive advantage: a resource-based view. *Strategic Management Journal*, 14(3), 179– 191.

Porter, M. E. (1980). Industry structure and competitive strategy: Keys to profitability. *Financial Analyst Journal*. 30-41

Prahalad, C. K., & Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*. 68(3), 79– 91.

Puranam, P., Singh, H., & Zollo, M. (2003). A bird in the hand or two in the bush? Integration trade-offs in technology-grafting acquisitions. *European Management Journal*, 21(2) 179–184.

Puranam, P., & Srikanth, K. (2007). What they know vs. what they do: how acquirers leverage technology acquisitions. *Strategic Management Journal*, 28, 805-825.

Qian, G., & Li, L. (2003). Profitability of small and medium sized enterprises in high-tech industries: the case of the biotechnology industry. *Strategic Management Journal*, 24(9), 881-887.

Ranft, A. L., & Lord, M. D. (2000). Acquiring new knowledge: The role of retaining human capital in acquisitions of high-tech firms. *Journal of High Technology Management Research*, 11, 295–319.

Rasmussen, E. S., & Madsen, T. K. (2002). The born-global concept. Paper presented at *28th EIBA conference, Athens, Greece*.

Rennie, M. (1993). Born global. *McKinsey Quarterly*, 4, 45-52.

Rialp, A., Rialp, J., & Knight, G. A. (2005). The phenomenon of early internationalizing firms: what do we know after a decade (1993 -2003) of scientific inquiry? *International Business Review*, 14, 147-166.

Santos, F. M., & Eisenhardt, K. M. (2009). Constructing markets and shaping boundaries: entrepreneurial power in nascent fields. *Academy of Management Journal*, 52(4), 643–671.

Schoenberg, R. (2006). Measuring the performance of corporate acquisitions: An empirical comparison of alternative metrics. *British Journal of Management*, 17, 361-370.

Senor, D., & Singer, S. (2009). Start-up Nation. The story of Israel's economic miracle. *A Council on Foreign Relations Book*, 240-241.

Simonin, B. L. (1999). Transfer of marketing know-how in international strategic alliances: an empirical investigation of the role and antecedents of knowledge ambiguity. *Journal of International Business Studies*, 30, 463– 490.

Stahl, G. K., & Voigt, A. (2008). Do cultural differences matter in mergers and acquisitions? A tentative model and examination. *Organization Science*, 19, 160-176.

Svensson, G. (2006). A quest for a common terminology: the concept of born globals. *Management Decision*, 44, 1311–1317.

Tallman, S. B. (1991). Strategic management models and resource-based strategies among MNEs in a host market. *Strategic Management Journal*, 12, 69–82. (Summer Special).

Thanos, I. C., & Papadakis, V. M. (2012). The use of accounting-based measures for measuring M&A performance: A review of five decades of research. *Advances In Mergers and Acquisitions*, 10, 103-120.

Tuch, C., & O'Sullivan, N. (2007). The impact of acquisitions on firm performance: A review of evidence. *International Journal of Management Reviews*, 9(2), 141-170.

Urban, D. J., & Pratt, M. D. (2000). Perceptions of banking services in the wake of bank merger: An empirical study. *Journal of Services Marketing*, 14 (2-3), 118-31.

Vernon, R. (1966). International investment and international trade in the product cycle. *Quarterly Journal of Economics*, 80, 190-207.

Weber, Y., & Tarba, S. Y., (2011). Exploring integration approach in related mergers: Post-merger integration in the high-tech industry. *International Journal of Organizational Analysis*, 19(3), 202–221.

Weber, Y., Tarba, S. Y., Stahl, G. K., & Rozen-Bachar, Z. (2012a). Ingenuity in international mergers and acquisitions: A test of new integration approach paradigm. In Y. Weber (Ed.). *Handbook of Research on Mergers and Acquisitions*. UK: Edward Elgar.

Weber, Y., Tarba, S. Y., & Rozen-Bachar, Z. (2012b). The effects of culture clash on international mergers in the high tech industry. *World Review of Entrepreneurship, Management and Sustainable Development*, 8, 103–118.

Zucchella, A., Palamara, G., & Denicolai, S. (2007). The drivers of the early internationalization of the firm. *Journal of World Business*, 42, 268-280.