

Strategic Decision-Making of a Born Global: A Comparative Study From Three Small Open Economies

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Abstract This paper extends current understanding on international growth process of born global firms from the perspective of strategic decision-making. The data were collected from three software companies in Finland, Ireland and Israel both in real-time and retrospectively, and data triangulation was employed to increase the validity of the findings. With a longitudinal approach, we captured the dynamics of the post-entry international growth process and the critical events that act as decision-making triggers. The decision-making of born global firms seems to be characterised by alternating periods of causation- and effectuation-based logics. Triggers for amending the logic include, for example, change of key persons and the search for external funding. Co-existence of the two decision-making logics is possible, due to different degrees of uncertainty in market and technology or multiple decision-makers involved. The contribution of the study is threefold: first, it addresses gaps in international entrepreneurship research by describing how born global firms make strategic decisions and who are involved in the decision-making. Second, it identifies critical incidents which trigger a change in the decision-making process of a born global firm. Third, it provides alternative insights to why decision-making logic may change or why two decision-making logics may co-exist.

Keywords Born global · Decision-making · Effectuation · Causation · Software · Longitudinal study

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1 Introduction

The rapid international growth of a born global firm can be considered a challenge for decision-making. As stated by Chetty and Campbell-Hunt (2004, p. 63), “*the born-global approach emphasizes the role of strategy in internationalization, because both the focus and the pace of internationalization are dictated by competitive imperatives to seize a leading position in niche or emerging markets*”. Furthermore, entrepreneurs and managers in these types of firms are confronted with high levels of unpredictability and ambiguity combined with a considerable time pressure—a really challenging environment for decisions. In this context the findings of earlier studies on decision-making in internationalisation—earliest dating back already to the 1980s—are hardly applicable. Unfortunately, there are only a few previous studies on born-global firms’ decision-making and their exploitation of international niches, and their findings are fragmented (Gabrielsson and Gabrielsson 2013; Dimitratos et al. 2011; Rialp-Criado et al. 2010; Jantunen et al. 2008).

In fact, the great majority of international entrepreneurship studies have focused on the foreign entry strategies and patterns of internationalization, i.e. outcomes of decision-making (Keupp and Gassmann 2009). However, interest in decision-making has been increasing and a number of studies have been published, often focusing on the drivers of decision-making; particularly the entrepreneurial orientation of these companies has been studied extensively (Jones et al. 2011). Thus, we can conclude that less research has been devoted to the decision-making process or the managerial decision-making, although it has been called for (Rialp et al. 2005). To address this gap, this study examines the strategic decision-making of born global firms and answers the following research questions:

- How does the decision-making process evolve and who are involved?
- How are the decisions made; that is, what kind of decision-making logic is applied?
- What are the critical events which trigger a change in the decision-making process?

The born global firms studied here are international new ventures that recognised and exploited international opportunities at or soon after inception. Previous research tends to regard this growth either as a rationally planned process steered by key actors or as a process of unexpected discovery in which opportunities are co-created with other actors (Andersson 2011). Independent of the chosen perspective, critical events emerge over the process that require strategic decisions, which cut across organisational functions and have a substantial long-term impact on company performance (Eisenhardt and Zbaracki 1992). However, the decision-making process, which lies at the core of this study, and resultant decision outcomes can follow different logics due to the fact that decision-makers differ in terms of how they perceive the future, take action, evaluate risks and resources and address uncertainty (cf., Sarasvathy 2001).

Admittedly, strategic decisions are always context-specific and therefore, to enable stronger conclusions to be drawn, it is wise to limit our investigation.

Entrepreneurship in general has been characterised with uncertainty, goal ambiguity and enactment (Sarasvathy 2004) and these characteristics are particularly evident in high-tech industries, which have also been the home of a number of international new ventures (Autio et al. 2011). Consequently, the software industry was considered an appropriate context for this study. High industry growth rates in this setting provide new entrants with opportunities to position themselves favourably in global niche markets. However, the highly volatile markets that often advance rapidly and in unexpected ways also contain a number of challenges such as discontinuous changes in the competitive landscape and customer needs (cf., Bourgeois and Eisenhardt 1988) that require strategic decisions.

Given the inconclusive and contradictory nature of earlier findings, an exploratory approach was chosen and the international growth of three software companies from Finland, Ireland and Israel was examined. The context of a small open economy was chosen due to the significance of knowledge-intensive born global firms for these economies. Data were collected both in real-time and retrospectively, and data triangulation was employed to increase the validity of the findings. With a longitudinal approach, we were able both to capture the dynamics of the post-entry international growth process and critical events that act as triggers for strategic changes and even turnarounds.

The findings of this study broaden our understanding of the born global firm's international growth and strategic decision-making. Based on a rich, longitudinal data set it provides an in-depth description of how born global firms make strategic decisions and who are involved in the decision-making. Focus on the decision-makers is an extension to existing knowledge as earlier studies on internationalization have often concentrated on analysing decision-making on the firm level and disregarded the individual (Schweizer et al. 2010). We found that besides the CEO, also founders, board members and the middle management may have a decisive role in the decision-making. Additionally, the study examines how the decision-making of these companies evolve over time and identifies the critical incidents which trigger a change in the decision-making logic. By applying effectuation theory (Sarasvathy 2001), we find support that born global firms' decision-making is characterised by alternating periods of causation- and effectuation-based logics. This reinforces the findings of some earlier studies (Kalinic et al. 2014; Gabrielsson and Gabrielsson 2013) but also provides additional insights on the co-existence of the two logics. For example, our findings suggest that the parallel use of causation and effectuation logic may be due to different degrees of uncertainty in market and technology or the role of different decision-makers. Furthermore, the study identifies a number of critical events which may trigger a change in the decision-making logic, including, for example, change of key persons and the search for external funding. However, whether causation or effectuation logic is applied in decision-making in these situations is affected by contingency factors, such as international business experience of the decision-maker and environmental conditions.

In sum, this study extends our understanding on born global firms' strategic decision-making and thus contributes to the field of international entrepreneurship. It also responds to the call for investigation of entrepreneurial internationalisation

across countries (Jones et al. 2011) and thus adds to the small but growing number of studies on comparative entrepreneurial internationalisation (Terjesen et al. 2013). Applying a longitudinal research design is also a welcome deviation, as research on born global firms is dominated by cross-sectional studies (e.g., Rialp et al. 2005). In the following, we first lay out and justify our conceptual approach to the decision-making in born global firms. We then discuss our research design and the findings from the three case companies in Finland, Ireland and Israel. Finally, the discussion and conclusions will conclude the paper.

2 Decision-Making in Born Global Firms

Born global firms are not a “random group of firms” but are expected to build on more strategic thinking and decision-making, determined by a particular set of resources and capabilities and, therefore, having more endogenous than exogenous vision (Mudambi and Zahra 2007). Simultaneously, their decision-making is often expected to be based on intuition and limited information as the competitive landscape and windows of opportunity evolve very rapidly and “wait and see” (Bourgeois and Eisenhardt 1988) type of thinking is rarely an option. Combining these two expectations is not easy and, unfortunately, previous research offers very little information on how it is achieved in practice.

We know from earlier research on born global firms that the rapid international growth of these companies is orchestrated by managers responding with actions to changes in the company’s internal and external context (Liesch et al. 2011). In a way, decision-makers act as an anchor between the environment and its effects within the organisation and, therefore, they have greater impact than the environment on decisions (Weick 1979). Nevertheless, their decision-making is likely to suffer from lateral rigidity; that is, decision-makers’ limited understanding on the environment and relevant factors (Luostarinen 1979). In addition, as born global firms in small open economies are pushed quickly into international markets (Gabrielsson and Kirpalani 2004), they often rely on hybrid governance structures to support their growth (Rialp et al. 2005). Thus, their business model is heavily based on co-creation with their partners and we can assume that their decision-making also is not completely independent, but shared with partners (cf., von Hippel 2005). All of these features (i.e., collaboration, uncertainty and centrality of the entrepreneur) of decision-making in born global firms seem to indicate that effectuation theory would be an appropriate framework for its study, as the theory best fits understanding the phenomena characterised by uncertainty, goal ambiguity and enactment (Sarasvathy 2004).

Recently, effectuation theory (Sarasvathy 2001) has been the most popular theory for studying entrepreneurial decision-making, and it has also been applied in the context of international entrepreneurial firms. In Sarasvathy’s terms, rational decision-making logic can be labelled causation, whereas the more emergent approach to decision-making is termed effectuation. The former is characterised by, for example, predetermined goal-setting, intentionality, planning and systematic information gathering (Fisher 2012; Chandler et al. 2011; Sarasvathy 2001).

However, the latter is often connected with high uncertainty and means that decision-makers base their decisions on affordable loss, following feelings and intuition rather than rational calculation (Perry et al. 2012; Sarasvathy 2001). The two logics also differ in terms of how decision-makers perceive the future: whether it is predictable or something that can be created. Decision-makers employing causation-based logic consider prediction of the future useful and base their decisions accordingly, whereas effectuation-based logic considers prediction unnecessary as decision-makers are able to participate in shaping the future (Dew et al. 2009; Sarasvathy 2001). Effectuation also emphasises the importance of effectual networks in which decision-making is shared with participating actors (Sarasvathy 2001).

Studies applying effectuation theory to international entrepreneurial firms are scarce and the key findings of them have been compiled in Table 1 below. Surprisingly, a large proportion of the few extant empirical studies have focused on international new ventures or SMEs from small open economies. On the other hand, given the newness of the topic it could be expected that most of the studies have adopted a qualitative case strategy and only one of them is a quantitative study.

It should be noted that the way the studies apply effectuation theory varies. While some of the studies use effectuation as a tool to interpret their findings (e.g., Thai and Chong 2013), others use it as a starting point and as the theoretical framework of their empirical study (e.g., Kalinic et al. 2014; Gabrielsson and Gabrielsson 2013), thus providing also broader contribution on the role of effectuation in internationalisation.

We can conclude that most of the studies seem to agree that early phases of internationalisation are characterised by effectual decision-making. This finding is in line with earlier studies on SME internationalisation which points out that young firms typically follow their intuition instead of systematic planning with pre-determined goals (Schweizer 2012; Rialp-Criado et al. 2010; Spence and Crick 2006; Cavusgil and Godiwalla 1982). However, in terms of how decision-making develops after the early phases, the findings are partly contradictory. On the one hand, both traditionally and rapidly internationalising firms have been found to favour causal decision-making later during internationalisation (Kalinic et al. 2014; Gabrielsson and Gabrielsson 2013). On the other hand, Harms and Schiele (2012) found in their quantitative study that more experienced SMEs would use effectual decision-making. It is tempting to accept the idea of increasing causal decision-making in time, particularly as it is in line with Sarasvathy (2001) who argued that effectual logic would be typical for the early stages of new venture creation when uncertainty is greatest, but it should be done with caution, as the empirical evidence is yet quite inconclusive and contradictory for any strong conclusions.

The differences in findings may be explained by research context, for example. It seems that effectual decision-making is preferred in markets with high uncertainty such as turbulent transition markets (Mainela and Puhakka 2009) or in situations when the market does not yet exist (Gabrielsson and Gabrielsson 2013). Galkina and Chetty (2012) even argue that environmental conditions, such as a market with high uncertainty, are more decisive in terms of employing effectual logic than the phase

Table 1 Earlier studies on effectuation in internationalisation and international entrepreneurship

References	Focus	Nature of study	Key findings
Andersson (2011)	Born global firm's decision-making in early internationalisation	Qualitative case study (one Swedish born global)	In early development born global firms follow effectual decision-making logic
Chandra et al. (2009)	International entrepreneurial opportunity recognition	Qualitative case study (eight Australian SMEs)	In early phases of internationalisation decision-makers use effectuation, more experienced SMEs apply causation
Evers and O'Gorman (2011)	Foreign market opportunity identification	Qualitative case study (three Irish INVs)	Effectual decision-making was typical for the studied INVs Effectuation explains why these firms are able to internationalise without prior knowledge or experience
Gabrielsson and Gabrielsson (2013)	Growth and survival of high-tech B2B INVs	Qualitative case study (four Finnish INVs)	Effectual decision-making was typical for the early phases of the studied INVs, later causal decision-making was applied to overcome growth-related problems and crises Effectual decision-making was related to opportunity creation, causal decision to opportunity discovery Decision-making logic is related to learning as well as growth/survival of the venture
Galkina and Chetty (2012)	Networking of SMEs during international expansion	Qualitative case study (six Finnish SMEs)	International opportunity recognition occurred through effectual logic Effectual networks determine market selection
Harms and Schiele (2012)	Antecedents and consequences of decision-making in entry mode selection	Quantitative study (65 German rapidly growing SMEs)	Larger psychic distance leads to the use of causal decision-making Experienced entrepreneurs tend to use effectuation instead of causation Causation and effectuation are not necessarily mutually exclusive
Kalinic et al. (2014)	Entrepreneurial decision-making during "unplanned" internationalisation	Qualitative case study (five Italian SMEs)	Decision-making developed from effectual to causal logic in time Entrepreneurial decision-making fluctuated between effectual and causal decision-making logic

References	Focus	Nature of study	Key findings
Mainela and Puhakka (2009)	Entrepreneurial behaviour in organising an IJV	Qualitative case study (one Nordic-Polish JV)	Organising an IJV on a transition market is characteristic by effectual decision-making Cognitive activities are invoked in discovering and effectuating an entrepreneurial opportunity
Sarasvathy et al. (2014)	Intersection of international entrepreneurship and effectuation research	Qualitative case study (an Indian SME)	Early phases of internationalisation are characterised by effectuation, later the behaviour becomes more causation-based
Spence and Crick (2006)	Internationalisation strategies of high-tech SMEs	Qualitative study (24 interviews in Canada & UK)	International decision-making has characteristics of effectuation
Schweizer et al. (2010)	Internationalisation as an entrepreneurial process	Qualitative case study (one Swedish SME)	Internationalisation is an effectual entrepreneurial process
Thai and Chong (2013)	Internationalisation strategies and motives of SMEs from transition countries	Qualitative case study (35 Vietnamese SMEs)	Internationalisation of the studied firms had characteristics of effectuation

of internationalisation. The argument of Galkina and Chetty receives support from earlier research on internationalisation process which points out that rational and intuitive decision-making styles may coexist (Nemkova et al. 2012; Rialp-Criado et al. 2010). The co-existence of the two types of decision-making has been also identified by Sarasvathy (2001). In our opinion, the two presented perspectives are not necessarily mutually exclusive; after all, we know that markets often become more predictable over time and this also impacts decision-making (cf., Mathews and Zander 2007).

Prior studies also point out gaps in our research. Kalinic et al. (2014) suggest that companies fluctuate between the two types of decision-making and that it is not easy to draw a clear line between them. However, none of the studies discuss what would be the critical events that would lead to change in decision-making logic, neither do they discuss the outcomes of the change. Thus, instead of investigating the decision-making process from outside, researchers need to dig deeper into the realm of the decision-making process in order to better understand the events leading to change. All in all, a wider variety of contingency factors need to be taken into account, as recommended by Child and Hsieh (2014).

In sum, prior studies on born globals' decision-making only offer limited understanding and more empirical data are needed to validate their presented arguments. Based on the discussion above, we decided to build our empirical study on the following propositions:

Proposition 1: The early phases of growth of a born global firm are characterised by effectuation decision-making logic, later the decision-making becomes more causation-based.

Proposition 2: In general, the international growth process of a born global firm can be characterised by alternating periods of causation and effectuation decision-making logics.

Proposition 3: The decision-making of a born global firm is influenced by the critical events, which cause a change in the logic.

These three propositions are the building blocks of our prior understanding and they are steering our examination of three born global firms' decision-making during their international growth. The empirical research design of this longitudinal three-country study is described next.

3 Research Design

A longitudinal multiple-case study was chosen as the research approach because it is the most appropriate for theory-building purposes (Tsang 2014) and for studying effectuation (Kalinic et al. 2014; Andersson 2011). This research strategy enables an inductive in-depth investigation on the research topic, analysis of the phenomenon in its natural setting and a more holistic coverage of the selected companies (Ghauri 2004). It also enables the study to be context-sensitive (cf., Tsui 2004).

Furthermore, as a response to the call for more studies on entrepreneurial internationalisation across countries (Terjesen et al. 2013; Jones et al. 2011) a cross-country multiple-case study design was chosen to strengthen our findings and increase their validity (supported by Yin 2009). Collecting data from multiple countries allowed us to make more context-sensitive interpretation of the findings and to check whether the institutional environment (Mainela and Puhakka 2009) or the environmental conditions (Galkina and Chetty 2012) had an impact on the strategic decision-making of the case companies.

However, finding the correct balance between diversity and comparability in multiple-case studies can be challenging. In our study, we chose to focus on three software companies from three small open economies, thus keeping the effects of environmental and situational factors manageable while, simultaneously, retaining the potential for comparison and context-sensitive analysis. The research setting of small open economies (i.e. Finland, Ireland and Israel) was considered interesting as the success of rapidly internationalising high-tech firms is crucial for these countries (Eurofound 2012; Almor 2011). However, we deliberately chose two cases within and one outside the European Union. Israel was chosen because it is one of the world-leading countries within the software industry with a very supportive institutional environment for international new ventures. It is a small, open economy as the two other countries but, typically, the main international markets for Israeli high-tech firms have been outside Europe, whereas the global outlook for European born-global firms has often meant a more European perspective.

The three cases were selected by theoretical sampling (Eisenhardt and Graebner 2007); that is, we chose cases that we considered likely to replicate or extend the emergent theory (Eisenhardt 1989). All companies are software developers and, in addition, they shared the following characteristics:

- They met the commonly agreed definition of a born global firm.
- There was sufficient history in internationalization for systematic analysis of strategic decision-making.
- Key executives were willing to discuss potentially sensitive internal issues associated with decision-making.

In the international entrepreneurship literature, discussion on the appropriate definition of a born global firm has been lively, but also inconclusive. Although most of the scholars include born global firms in the theoretical definition of international entrepreneurship (Oviatt and McDougall 2005), they simultaneously find it difficult to agree on a common operationalisation of the concept.

A recent literature review on definitions (Madsen 2013) recommends employing a definition that includes both speed and scope of a firm's international operations. Others have added more qualitative characteristics to the definition; for example, born global firms are expected to have products with global market potential, global vision at inception and be independent entrepreneurial companies (Gabrielsson et al. 2008). Consequently, in this study, *born global firms are understood as firms that began international operations within the first 3 years of inception which account for more than 25 % of turnover* (cf., Madsen et al. 2000; Hashai and Almor 2004). Based on earlier studies, this operationalisation seems to differentiate born global firms rather well from other internationalising SMEs (see e.g. Kuivalainen et al. 2012). In addition, we chose to focus on *independent* companies with *global vision and globally marketable products*.

All case companies met the criteria set and, thus, they seemed a good fit for the purposes of theory-building on born global firms' decision-making. They are also a representative selection of profitable fast-growing software companies in their respective small open economies. Key information on the case companies is summarised in Table 2.

This longitudinal cross-country project progressed in stages. The data collection process began in 2001 in Finland, although it soon became clear that additional data from another country would be very interesting and, thus, Ireland was chosen. The data set for Finland and Ireland includes both real-time and retrospective data. Next, the need arose to include an additional, non-EU country in the study; Israel was chosen. Being the latest addition to the research design, the data from the Israeli case have a shorter temporal span than the two other cases and are also retrospective.

In line with the recommendations of Huber and Power (1985), we gathered data for the research from the most knowledgeable informants available: the CEOs and directors of the case companies with responsibility for their companies' international growth. After all, if we want to understand how organisations operate, we

Table 2 Summary of key information on the case companies

	Blanco	BriefCam	TextHelp
Product	Data erasure software	Video synopsis technology	Literacy software solutions
Turnover (€M) ^a	9.13	3.5	Undisclosed
Number of employees (2012)	59	30	106
Export intensity (exports/turnover %)	97	95	75
Age at internationalisation	3 years	0 years	2 years

^a The figures are estimates of expected turnover for 2012. In line with many Irish firms, TextHelp does not disclose any financial information

have to understand the executives who ‘mirror’ decision-making. The key decision-makers were interviewed face-to-face and the interviews were transcribed. In addition to the interviews, multiple other sources of evidence were employed in all cases to increase the findings’ validity (cf., Yin 2009). The secondary data, both internal and external to the company, are summarised in Table 3.

We are aware that data for our Israeli case are not as rich as for the two other cases, whilst it would have clearly been preferable for this case also to have had a longer history for the analysis, there are, nonetheless, advantages. For example, it is less constraining for the organisational memory, as the key persons are still involved in the company and clearly remember the events correctly. In addition, a greater amount of secondary sources are available (i.e. nowadays, most secondary data sources are in digital form and not all websites are accessible in the long term). Nevertheless, BriefCam’s shorter history has been taken into account throughout our analysis.

The data obtained were further analysed in several phases (cf., Yin 2009). First, the interview recordings were transcribed and a within-case analysis of each company was conducted (cf., Eisenhardt 1989). Consequently, the information from the interviews was reorganised to form descriptive narratives, which helped us to identify key events and the background of each case. We then augmented the interview data with some additional information available from databases, company websites and other secondary sources. The internationalisation of each case company was described as a critical-event analysis in terms of its internationalisation activities, and evaluated from the perspective of decision-making.

The starting point of our analysis was identification of critical events or incidents that would lead to strategic decisions. Our definition of a critical incident followed that of Flanagan (1954, p. 327):

By an incident is meant any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act. To be critical, an incident must occur in a situation where the purpose or intent of the act seems fairly clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning its effects.

Table 3 Data collected from the case companies

Company	What/who	When	Other
Blancco	Face-to-face interviews with the CEO and Skype interviews with two members of the Board (2012)	2001, 2004, 2006, 2010 (twice), 2012 and 2013	Internal documents from the company archives (e.g. strategies; business plans), external public database (i.e. for financial data), articles from the business press, press releases from the company website, and YouTube interviews with the CEO
BriefCam	Face-to-face interview with the company founder	2012	Company website, press releases of the company and its customers, brochures, YouTube clips and interviews, and articles from the business press
TextHelp	Face-to-face interviews with the CEO and a large number of phone calls	2003, 2007 and 2013	Company website, press releases of the company and its customers, brochures, export promotion agencies' websites, articles from the business press, YouTube interviews & TV programme, and Award PR

The internationalisation of each case company was investigated systematically and the outcomes were summarised in respective tables containing a short description of each critical event, drivers leading to this event and its possible consequences. The events were organised in the tables in terms of reference time (cf., Jones and Coviello 2005). In addition, each table included an assessment on whether the critical event and related decisions resulted in a change in decision-making logic (i.e. to causation or effectuation logics). In terms of characterising decision-making logic, we utilised Dew et al.'s (2009, p. 290) classification to distinguish between effectuation and causation logics.

The first phase of the analysis was conducted by the author responsible for data collection of the particular case, which was considered appropriate as this person was the most knowledgeable on the case in question, was well-informed on the context and was most likely to interpret correctly the respondents' answers and comments (cf., Salmi 2010). Two team members joined forces to analyse case Blancco as the data set had been collected over a longer time period and was considerably larger than in the two other cases. It would have been preferable for the authors to have cross-analysed the data from the cases but, unfortunately, the research team's language skills posed limitations: Finnish and Hebrew prevailed in significant parts of the data respectively for cases Blancco and Briefcam. Next, the summary tables were sent to the co-authors for their comments, questions and review. Subsequent to this round of feedback, the first author began the cross-case analysis of the three case summary tables and compiled them into a single table (Table 4), a meta-matrix (cf., Miles and Huberman 1994) that enabled case comparison. Based on the matrix, the author drafted the first visualisation of the

development of decision-making logic in the three cases. Both the matrix and the visual summary were then sent to the other co-authors for feedback and comments. To ensure objectivity of the findings, revision rounds between the authors continued until each was satisfied with the end result.

4 International Growth and Decision-Making in the Case Companies

This section describes the international growth of the three case companies and points out critical events throughout the process. It pays particular attention to the events' triggers and the resultant decisions. The nature of decision-making in each company and also changes in the decision-making logic are described. To determine whether decision-making was causation- or effectuation-based, we employed the classification of Dew et al. (2009) who, based on Sarasvathy (2001), differentiate between the two logics concerning decision-makers' perspectives on the future, basis for taking action, predisposition to risks and resources, attitudes to outsiders and unexpected contingencies (Dew et al. 2009: 290). In addition, the operationalisation of causation and effectuation by Chandler et al. (2011, p. 379) was employed to distinguish between the two decision-making logics. Some previous studies on effectuation (in particular, Fisher 2012; Perry et al. 2012) provided further examples of which kind of decision-making would be considered causation- or effectuation-based, thus giving support to our interpretation of the narratives.

4.1 Blancco

Blancco Ltd was incorporated in 1997 in Joensuu, Finland. The roots of the company lie in the local university, where both founder members studied in the late 1990s. The idea for the current product came from newspapers: there was lively discussion in the Finnish media in 1998 when hospital computers containing patients' confidential information had been found in a dumping place. A solution had to be found to erase all confidential information and Blancco invented a software program for efficient recycling of computers. The first commercial product was launched in 1999.

Blancco's founders realised that they had a product with global potential and that its markets would be almost infinite. It can be argued that Blancco's international growth went through four phases. First, the company grew rapidly through direct exporting and managed its small number of customer relationships internally. Explosive growth, unsolicited orders and inquiries from international customers and partner candidates gradually led to the second phase: international growth via partner networks. However, the shift to the third phase of internationalisation occurred 2 years later when the firm's financial situation rapidly deteriorated and there was need for radical action to save the company. As a result, a new business model for international operations was introduced, including clear focus on selected markets. The move to the fourth phase, consolidation towards a 'micro-multinational', included the company's gradual increase of control in international

markets. Currently, the Blancco Group is an international company with three offices in Finland and 16 internationally, most fully-owned subsidiaries.

Although, in retrospect, the growth process might seem smooth, well-planned and pre-determined, in practice, it was multifaceted. Five critical events in the process can be identified that made the company re-evaluate its situation, make growth-related decisions and take action accordingly. First, after 2 years of experimentation, the company finally possessed a commercial product that needed to be *launched onto international markets*. Second, this created a considerable financial pressure as the founders needed funding to commercialise the innovation. This was secured through the *first venture capital round*. Third, the company was established by two co-founders who realised quite early that their perspectives differed significantly on running the company and, in particular, its future. Continuing disagreements led to the *withdrawal of one founder* and, thus, the other founder could implement his growth-oriented plans. However, the ambitious plans soon came to a halt as the expense of rapid growth rapidly exceeded the company's assets. The company was forced to restrict its international operations due to the imminent *cash-flow crisis*. Subsequently, Blancco continued on a positive track but, in addition to financial assets, the continuous growth required expertise and knowledge on international business. Having been involved with the company for some years, the head of the German subsidiary, an experienced businessman with a background in large IT multinationals, decided to join Blancco's board. This *new board member* brought his insights and experiences to the company's decision-making.

Blancco's decision-making had been centralised around the founder and the board, the members of which included representatives of the venture capitalists involved with the company and also one external member, an experienced Finnish businessman. Later, the German businessman joined the board. The members of the board acted as a sparring partner for the CEO, particularly during the first 2 years. More recently, as the German member of the board increased his ownership of the company, decision-making seems to have strongly concentrated on him and the CEO.

It can be argued that, when the company began with two founders, decision-making was based on effectuation logic. The company's experimentation with potential products for the first 2 years and the chosen business model can be considered signs of effectuation (cf., Chandler et al. 2011). However, after the launch of the first commercial product, the founders had to steer their decision-making more towards causation as they had to attract *venture capital* to secure international growth. After all, without a proper business plan and visions for the future (i.e. indicators of causation, cf., Chandler et al. 2011), potential investors would not be interested in their venture. Nevertheless, the early business plans were not considered to have much worth, as the following quote from the CEO indicates:

At the outset we just improvised ... We had the idea that we start in as many places as possible at the same time and hope that somewhere we succeed.

Without a proper plan and with limited experience, the next critical event, the cash flow crisis, was not overly surprising. Realignment of international operations

required collecting market information and estimating expected returns from each of the markets to reduce their number, thus again relying on a more causation-based decision-making logic. Streamlining the strategy also became easier in practice as a founder left the company and decision-making was centralized to the current CEO. However, the attitude of the CEO to planning remained suspicious, as the following quote demonstrates:

In Blancco, we do not believe in 5-year-plans, those have been tried before only in the former Soviet Union with the well-known results ... I think they are quite dangerous, if you try that, you need to be a true guru.

From the perspective of decision-making logic, the introduction of a new board member was an important change. The new decision-maker had a different cultural background, both nationally and organizationally, and has made a difference in decision-making. For example, whereas the board previously played a supportive role, currently, the chair of the board is actively involved in both strategic and operational decision-making. Nevertheless, from the perspective of international growth, it is even more significant that the chair has also introduced a more causation-based decision-making logic; something with which he had experience when previously working with other companies. His experiences were also decisive in the change of operation mode. In fact, when interviewed the German board member said:

I have a very bad experience when it comes to dealers and dealer organizations. You can do it if you make a software app or something. But in a specialized market, with a complex product that is difficult to explain and you are addressing really top management of big corporations, then dealers, the dealer model doesn't work at all. And therefore we started to build up our own subsidiaries.

Also, the CEO had noticed the change in decision-making, as the following quote shows:

I have sometimes analysed this, always when the chair of the board changes, then we start to pay attention to different things.

4.2 BriefCam

BriefCam was founded in 2007 in Israel to develop video synopsis technology needed for rapid video review. One of the three founders was a professor who invented the technology at the Hebrew University of Jerusalem. The invention, which was converted to a product responding to the need for increased security and monitoring, was targeted at the multi-billion dollar security market. The market is global and includes institutions, businesses and also private individuals, whose access to surveillance technologies has been facilitated by more advanced solutions and decreasing prices. The intellectual property rights were licenced exclusively to the start-up founded by the professor and two other persons, who all had strong

technological backgrounds and also extensive experience from previous ventures; one was even a serial entrepreneur with five successful start-ups.

The development of well-performing BriefCam did not follow a pre-determined path or the initial plans and goals. Instead, the company flexibly changed its course of actions according to new information and signals received, in particular, from the market. In fact, the founding of the company had characteristics of an effectuation-based creation of a new venture (cf., Sarasvathy 2001) although it already had a product when it was founded, which enabled rapid internationalisation from the outset, and the top team management included members with considerable experience, both also creating a basis for causation-based logic (Dew et al. 2009). Therefore, the decision-making logic in this case can be assessed from two angles: either the product and technology or the business and markets. It can be argued that decisions relating to the product and technology would be causation-based due to existing knowledge and predictability. However, business and, in particular, market development was more blurred, especially in the beginning, and decisions relating to them probably followed a more effectuation-based logic (cf., Gabrielsson and Gabrielsson 2013). In other words, BriefCam probably employed different decision-making logics depending on the type of decision required.

BriefCam's early phases already had indications of causation-based decisions with the later phases of international growth witnessing a change to even more causation-based decision-making logic. Altogether, seven critical events leading to strategic decisions were identified in BriefCam's history. The first was the need to attract venture capital to ensure rapid international growth. Similar to the Blancco case, this required the demonstration of professionalism and lucrative future expectations in the form of business plans and other documentation, which are typically considered indicators of causation (Chandler et al. 2011). In April 2009, BriefCam received an investment of \$2.6 million from an Israeli venture capital fund, professionals from the CCTV surveillance industry and additional investors. This funding secured the early years' operations of the company and also the expansion of sales and marketing efforts.

However, decision-making retained some effectuation-based features as the company was able to act proactively and flexibly. For example, consumers were BriefCam's first target but, in 2011, it changed its *focus to institutional high-end markets*. This change was not a result of long strategic consideration but a reaction to market demand, as the following quotation indicates:

In practice, we were dragged (to the market segment)—customers were at exhibitions: police, the FBI, safe cities, border control, drug police units and so on ... in practice, the customers defined the product.

Initially, BriefCam's decision-making was exceptional as, for the first 2 years, the company operated without a CEO. All key decisions were made by the three founders and the board. However, in 2009, the company *recruited a professional CEO*. Again, in line with the Blancco case, bringing in a professional with large company experience pushed the company towards more causation-based decision-making logic. In addition to the CEO, sales and marketing personnel were hired to support the firm's international growth. The efforts of the newly recruited CEO and

his team convinced investors to give the company its *second round of venture capital* in 2009.

However, BriefCam's founders were still very much involved in the decision-making. For example, in 2009, it was decided to *open an office* in the US, which later became the company's main market, not least because of the strong position of the law enforcement units that were particularly interested in BriefCam's product. The founders of the company played a significant role in making this decision, as the following quote by one of the founders demonstrates:

Distributors would not have been enough. People that are isolated (out there) need to be steered by me and not anyone else; however, this concerns the entire world, not only the US.

BriefCam has a multi-channel approach to international markets. In Europe, Canada and Brazil it operates through partnerships and distributor agreements with system integrators; however, it has sales subsidiaries in the US, its main market, and in the growing Chinese markets, and a joint venture in Japan. In addition, sporadic unsolicited orders are handled by the Israeli headquarters. Gradually, the company management has collected more market information and, as the markets have become more predictable, has shifted its market focus to Asia. This increasing commitment has been demonstrated by *opening a sales office in Shanghai*, China, and later by beginning a *collaboration with a Japanese partner*. The change from the early years is considerable in terms of market and segment selection; that earlier time was described by one of the founders:

There was no methodology, but that there was opportunity. Opportunity is stronger than an ideology, you have those opportunities and an audience, and you go according to that.

4.3 TextHelp

TextHelp was founded in 1996 in Northern Ireland to produce literacy software solutions. It took 2 years for the two founders to develop the concept into an internationally successful product and, today, it is acknowledged as one of the world's leading actors in the area of assistive language learning technology. In line with the other case companies, TextHelp has not followed a predetermined plan from their inception to the present day. Instead, they have reacted in a flexible manner and responded to critical events over time.

The product was not commercially viable at start-up, although a clear concept existed. The search for product and potential markets again indicated effectuation-based decision-making logic at the time of founding (cf., Chandler et al. 2011). However, product development required money and, by the second year, the company faced a *cash crisis*. As a result, the founders needed to search for venture capital and, in line with the two other companies, turned to more causation-based logic. Their efforts were successful and the company obtained *two rounds of venture capital*. This financial injection was desperately needed to enable company growth. Nevertheless, not all key decision-makers agreed with the decision and *one of the*

founders left the company. He was replaced by a professional new CEO, again boosting decision-making towards causation.

The new CEO played a strong role in business and product development. For example, when the company reached the size of 40 employees, he commissioned a communications audit that revealed a missing tier of management and, thus, *a middle management team was created.* The senior managers then began to delegate responsibility, which, in the CEO's opinion was key, as otherwise, he felt that any further company growth would have been impossible. Up to then, he had handled all sales and marketing, but two new employees were recruited, each to respectively look after US and UK sales. Reorganisation of processes can be considered a sign of causation (Chandler et al. 2011).

The sales channels of TextHelp were revised 2 years later. Originally, the international markets were serviced from the headquarters through a dealer network. The obvious US market potential combined with the need for service facilities necessitated a local presence. After visiting the markets several times and collecting data, particularly in and from the US, the decision to have a US office was not subject to much debate; it seemed the clear path to take, as the CEO comments:

Basically we believed in the market and we were thinking forward ... you absorb all the little pieces of information, and then they all fit together and you see what opportunities exist for TextHelp. We tend to try to think beyond the next 12 months, where do we go next?

In addition, three divisions were also formed at this stage: education, speech services and corporate (i.e., education publishers) to reflect different target segments. All these decisions demonstrated planned behaviour and rational decision-making, which is commonly connected with causation-based logic (Chandler et al. 2011).

However, decision-making retained some characteristics that pointed more to effectuation logic. For example, in 2008, when the company outsourced the first version of a new product to India, the outcome of the project seemed uncertain. The decision was based very much on affordable loss, as indicated by the following quotation:

This project was deliberately used, as it was not of sufficient scale to wreck the company if it went very wrong; it was of a sufficient scale to enable us to learn, so we got on with it, a controlled risk really.

Until 2009, TextHelp primarily focused on territories where English was the first language, although latterly the focus widened to include territories where many people are learning English as a second language; in particular, China, Brazil, India and South Korea are important. This was prompted by a number of factors. First, the company was motivated by growth and it also recognised that its primary markets' economies were experiencing difficulty. In addition, for example, continuing feedback from the US revealed that it was not only special-needs English speaking children using the software, it was also Hispanic children. Simultaneously, it became clear that foreign students in the domestic market were increasingly also using the TextHelp software. This convergence of factors required the company to

rethink its focus and target markets. As a result of careful assessment and examination of the markets, the company's marketing efforts were directed to markets with mature education systems (e.g., Brazil) and a growing middle class. This *redefining of the target group and markets* seems to be a rather causation-based decision (cf., Chandler et al. 2011).

5 Cross-Case Analysis

Decision-making in the case companies has evolved over time towards a more causation-based decision-making logic, thus supporting the findings of previous studies (e.g., Kalinic et al. 2014; Gabriëlsson and Gabriëlsson 2013). In addition, the case narratives demonstrate that the investigated born global firms share a number of similar critical events, which have led them to a more causation-based decision-making logic. These include, for example, search for venture capital and recruitment of an experienced member to the top management team.

However, while similarities can be found in the cases, they also portray unique paths of critical events and consequent strategic decisions. To compare these paths, the strategic decisions and their consequences were compiled into a meta-matrix (Table 4), which compares the cases both in terms of chronological and reference time; here, the elapsed time since the company's inception (cf., Jones and Coviello 2005).

Next, based on the meta-matrix, Fig. 1 was sketched to illustrate the patterns of strategic decision-making during the case companies' international growth, over which it shows each of the firms in terms of their underlying decision-making logics. Given the qualitative nature of the data, the figure is highly indicative and attempts to describe the longitudinal change of the decision-making logic.

At the founding of Blancco, the company was still searching for a product and business model. Both BriefCam and TextHelp already had a concept for a product at start-up, although it was not yet commercially viable. However, in BriefCam's case, the product was more developed and the development of technology more predictable. Due to these reasons, Blancco is considered to have employed the most effectuation-based reasoning with BriefCam most often making causation-based decisions.

The curvilinear lines in Fig. 1 indicate that all case companies have gone through alternating periods of causation- and effectuation-based decision-making. Thus, the narratives support Sarasvathy's (2001) point that the two types of logic can coexist in parallel; for example, firms may make the decision *whether* to internationalize in a deliberate, planned, goal-driven, causal way and may still use an effectual approach on determining *how* to internationalize (Sarasvathy et al. 2014). However, the upward trends in the lines indicate that the relative share of effectuation-based decisions is decreasing and decisions are increasingly made based on causation. Also, the organisations are beginning to have more characteristics that are considered typical for a causation-based organisation (Chandler et al. 2011; Dew et al. 2009).

Table 4 Cross-case analysis

Case company	Strategic decision	Chronological time/reference time	Change in decision-making logic
Blanco	Launch of a new product	1999/3	Blanco began with decision-making logic that can be characterised as highly effectuation-based; however, each critical event changed its decision-making to a more causation-based logic
	First VC injection	2000/4	
	Cash flow crisis	2001/5	
	Withdrawal of a founder	2002/6	
	Ownership change & new chair of the board	2006/10	
BriefCam	First VC injection	2009/3	BriefCam began with a decision-making logic that had clear characteristics of both causation and effectuation, and each critical event has changed the logic more towards causation
	CEO and additional employees	2009/3	
	Sales office opened in the US	2009/3	
	Change of the customer segment and focus on Asia	2011/5	
	Sales office opened in Shanghai	2011/5	
	Second VC injection	2011/5	
	Co-operation in Japan	2012/6	
TextHelp	Cash crisis & venture capital injection	1997/2	TextHelp began with an effectuation-based decision-making logic, but each critical event has changed the logic more towards causation
	New CEO and withdrawal of a founder	1998/3	
	New layer of management	2002/6	
	Selling directly began & divisions for product lines	2004/8	
	New target group and target markets	2009/13	

Currently, the case companies seem to follow a rather similar, quite causation-based decision-making logic. Surprisingly, even BriefCam, which has a considerably shorter history, employs rather causation-based logic. This can, at least in part, be explained by the different composition of its top management team. Compared to the two other case companies, the founders of BriefCam had significantly more experience in running a business. As serial entrepreneurs, they had already learnt how to set up a company and run an international business, so they were *able* to begin with more causation-based logic.

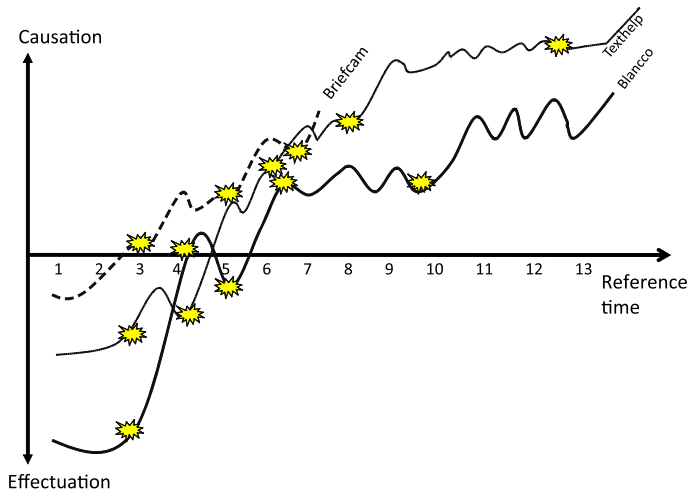


Fig. 1 The interplay of causation and effectuation reasoning logic over the growth process of the case companies

6 Discussion and Conclusions

This study examined the international growth of born global firms from the viewpoint of strategic decision-making. It found support for the three, literature-based propositions but also provided novel insights in line with the research questions. In line with most of earlier research—and our *first proposition*—we found that our case companies changed their decision-making over time towards a more causation-based decision-making. However, our findings highlighted the importance of personalisation of decision-making particularly when applying effectuation theory. Sarasvathy et al. (2014) point out that effectuation is actor-dependent and therefore we should also study the decision-maker. In our case companies the key decision-maker was the CEO, but also other significant decision-makers took part in the process. In the early phases of growth for Blancco and Texthelp the key decision-maker was the CEO, whereas for BriefCam the key decision-makers were the founders. The founders remained important decision-makers for BriefCam even after recruiting the CEO, but they concentrated later to more strategic decisions. In the case of Blancco and Texthelp shared decision-making increased over time, but the stakeholders were different: in Blancco's case it was the Board and for Texthelp the newly appointed middle management. This raises the question whether the number of decision-makers had an impact on the change of decision-making logic—when decision-making becomes less actor-centered, does it lead to more causation-based logic? This is something which would need further research.

Based on our study we would also like to argue that managerial background and characteristics also have an impact on the adoption of the decision-making logic. Interestingly, the speed of change—how fast a company may adopt causation-based

logic—seemed to be related to the decision-makers' earlier business experience. Decision-makers who possessed more business experience seemed to be able to adopt causation-based decision-making faster than inexperienced managers. With our exploratory approach it is impossible to draw any definite conclusions on this observation, but this is certainly an issue which would deserve deeper investigation in the future.

Additionally, our findings were in line with prior research—our *second proposition*—in terms of co-existence of the two decision-making logics. The decision-making of the three case companies was characterised by alternating periods of causation and effectuation-based logics. Our cases pointed also out novel insights of explanations for the parallel use of decision-making logics. For BriefCam the use of decision-making logic depended on whether the decision was related to the product or the business, as in terms of technology the future was more predictable as for the future market which needed yet to be created. This situation is very common in small, rapidly growing high-tech firms and therefore it is suggested that in order to avoid inconsistent and contradictory findings, in future studies on strategic decision-making researchers should investigate technology- and market-related decisions separately.

As an extension to existing knowledge we decided to study the critical events or incidents in the born global firm's growth process, which might cause a change in the decision-making logic. In line with our *third proposition* we found critical incidents which triggered change in the history of all the three case companies. These triggers include, for example, change of key persons and the search for external funding. However, it should be noticed that the similar incidents may lead to different decision outcomes and changes in decision-making logics. This is in line with Weick (1979), who argues that the environment does not directly affect organization. Decision-makers interpret the organization's environments and due to their past experience have developed different cognitive schemas and make diverse interpretations and consequent decisions based on the very same 'incidents'.

Besides decision-makers, also context does matter. Surprisingly, the institutional context of the case companies had very little impact on their decision-making. On the other hand, the situational and temporal context in which decisions are made seemed to be of importance and caused variety in decision-making logic. The parallel use of decision-making logics and shifting between the two logics indicate flexibility in decision-making (cf., Andersson 2011), but it remains unclear whether these moves are deliberate. Do companies really choose decision-making logic, or does the situation drive them to, e.g., effectuation-based logic, even if they would choose otherwise? Born global firms' top management are under considerable time pressure when making decisions and, occasionally, causation-based decision-making is simply not possible due the limited window of opportunity or because the future is unpredictable as the market does not yet exist (cf., Gabrielsson and Gabrielsson 2013). Given the significance of context in decision-making, it is necessary that future studies are context-sensitive or preferably context-embedded (cf., Tsui 2004).

The aspect of voluntariness is also important from the viewpoint of the managerial implications of the study. Based on our findings we would like to argue

that the best outcome is a result of finding an optimal balance between the two types of decision-making logics. The best experts in finding this balance are the internal stakeholders and decision-makers in the company. Yet, sometimes external stakeholders try to intervene, with non-predictable outcomes. Venture capitalists, who are significant enablers of successful born global firms, should allow effectual decision-making, particularly in the early phases of internationalisation, as the flexibility can enable the company to meet better the markets' needs. In addition, if entrepreneurs are forced into causal decision-making without sufficient knowledge on the markets, their business plans and strategies might prove inaccurate and actually be ignored by their managers. The findings also emphasise the instrumental role of key persons and suggest that those involved in changing the top management of a born global should be aware of the impact of resultant changes in decision-making.

Notwithstanding these useful contributions, our study has limitations, many of which advocate areas for future research. Identifying critical events and, in particular, describing the incremental transition from one type of decision-making logic to another is a challenging task. We have endeavoured to make the research process as transparent as possible to increase the validity of our findings. In addition, as a study of three cases, although in three country settings, does not enable extensive generalisations, it can be argued that we have only scratched the surface. Understanding the underlying cognitive micro-processes of decision-making requires a deeper investigation, preferably in the form of an ethnographic study or with participant observation as a data collection method. Our experience also supports the use of longitudinal research design when trying to capture the shifting dynamics of decision-making logics in firms.

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