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THE VALUE OF IT: EXPLAINING THE STRATEGIC ROLE OF INFORMATION SYSTEMS FOR FAST GROWING SMES

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Abstract

This article investigates fast growing and successful small and medium enterprises (SMEs). We focus particularly on the role and relevance of information systems (IS) skills and knowledge for their success. Although many theories account for the relationship between IS and organizational performance, they target mostly the context of large corporations, thus overlooking the special conditions that fast growing SMEs face. We specifically investigate fast growing SMEs for the following reasons: these companies are subject to constant organizational change due to their continuous growth and thus rely critically on having the right IS setup and strategy, while at the same time they are often too small and specialized for out-of-the-box enterprise IS solutions. Based on an interpretive multiple-case study design, we present three generic, archetypal IS strategies, ranging from full identification with and capitalization on IS to complete cost-based outsourcing of all IS related services. We analyze the inherent chances and risks associated with each of these strategies and present anecdotal evidence from the case companies to illustrate our findings.

Keywords: SMEs, E-skills, Strategic alignment

1 INTRODUCTION

The influence of information systems (IS) on the success and performance of companies has been widely recognized, and is an active field of research (Chan, Huff, Barclay, & Copeland, 1997; Chen, Worth, Preston, & Teubner, 2010; Melville, Kraemer, & Gurbaxani, 2004). The concept of IS alignment has been established in both research and practice and describes the need for a combined approach that integrates both business and IS goals to form an overall strategy (Henderson & Venkatraman, 1993).

In this paper, we present an in-depth analysis of how an organization's understanding and valuation of IS relates to its success. We decided to specifically investigate fast growing SMEs for the following reasons: these companies are subject to constant organizational change due to their continuous growth and thus rely critically on having the right IS setup and strategy. At the same time they are often too small and/or specialized for - or simply cannot afford - out-of-the-box enterprise IS solutions and "have rather limited free time to work on strategic issues, limited IT knowledge, and limited resources to spend" (Bernaert, Poels, Snoeck, & De Backer, 2014) . The European Commission defines SMEs as "enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding

50 million euro, and/or an annual balance sheet total not exceeding 43 million euro" (EU, 2005). SMEs are a very relevant research setting because they are considered to be the "backbone" of the economy, constituting up to 99% of the whole population of firms,, contributing 2/3 of private sector jobs and being responsible for more than 50% of overall value-creation within the EU (Muller, Gagliardi, Caliandro, Bohn, & Klitou, 2014). Nevertheless, researchers found that there is a gap of scientific literature investigating the otherwise well-known concepts of IS strategy and Enterprise Architecture in the context of SMEs (Bernaert et al., 2014; Margi Levy, Powell, & Yetton, 2002). This research project therefore helps to understand the relevance of IS skills and knowledge on the success of fast growing organizations.

Based on an interpretive multiple-case study design, we present and analyze the findings of ten interviews. Using inductive concept construction we are able to abstract three generic, archetypical IS strategies from our case data, ranging from full identification with and capitalization on IS (IT companies) to complete cost-based outsourcing of all IS related services. We analyze the inherent chances and risks associated with each of these strategies and present anecdotal evidence from the case companies to illustrate our findings.

The remainder of this article is structured as follows: We first provide an overview of the concept of IS strategy and the particular challenges of SMEs facing continuous growth. In the next section we describe in detail our research design and methodology, followed by a presentation of the results from the multiple case studies, our empirical observations and a discussion of our findings. Finally, we present concluding remarks that sum up our research and point to implications for practitioners.

2 STATE-OF-THE-ART

Information systems are broadly conceptualized as the combination of multiple factors that encompasses technology, people, processes and networks. They are investigated at different levels, including development, implementation, provision and operation (Davis, 2000). IS research is often embedded in organizational settings and therefore closely connected to organizational issues. A large number of practitioners is aware of the influence that IS has on the success of organizations (Worthen, 2007). Especially in times of difficult economic situations, decision makers are interested in understanding the value that IS can provide for their companies (Luftman & Ben-Zvi, 2010).

In an exhaustive review of the IS strategy literature (Chen et al., 2010, p. 237) define IS strategy as "the organizational perspective on the investment in, deployment, use, and management of information systems". They stress that it is due to this broad conceptualization that IS strategy can be aligned with and provide valuable benefits for an organization's business strategy. Moreover, they find that the scientific literature presents itself using three different understandings of IS strategy: IS strategy to support the business strategy, IS strategy as the master plan for IS activities, and IS strategy as the shared view of IS within the organization (Chen et al., 2010, p. 239). In line with these different conceptualizations, (Melville et al., 2004) employ a resource-based-view (RBV) perspective in order to understand how IT is related to organizational performance. They find that while IT can offer a range of benefits for organizations, "the high degree of complexity leads to a context-contingent set of synergistic combinations of IT and other organizational resources…" (Melville et al., 2004, p. 311). In other words, the trick is to choose the right system or combination of systems for a specific context, instead of falling for hypes and simplified models.

(Henderson & Venkatraman, 1993) presents the concept of strategic alignment, triggering a whole stream of research that investigates the question of how to align an organizations' IS strategy with its business strategy. They state that IS and business strategy have to be linked and aligned on both external (strategic) and internal (operational) levels (Henderson & Venkatraman, 1993, p. 476) and propose 4 different alignment perspectives, depending on the context and the question if business or IS strategy is the driving force for the overall strategy of a company (Henderson & Venkatraman, 1993,

pp. 477–479). Researchers have investigated strategic alignment from various theoretic perspectives and added to the knowledge base in terms of influencing variables, complexities and success factors (Kearns & Lederer, 2003; Kearns & Sabherwal, 2007; Reich & Benbasat, 2000; Tallon, 2008).

While SMEs show considerable differences to large firms, a large part of the literature on IS Strategy and strategy alignment is based on and informed by large firms. These firms tend to have substantially higher levels of internal knowledge and skills regarding IS (Margi Levy & Powell, 2005, p. 8). Thus, researchers argue that theories explaining IS Strategy and governance cannot be simply scaled down to be applicable for SMEs since they show "a completely different economic, cultural and managerial environment" (Devos, Van Landeghem, & Deschoolmeester, 2012, p. 206). Based on the fact that IT is generally understudied and small firms are rarely involved in research discussing IT knowledge, some researchers state that the organizational theories (including practices and behavior) that have been developed for large companies "may not be valid in small ones" (Riemenschneider, Harrison, & Mykytyn, 2003, p. 269).The decision process in SMEs is often dominated by the owner or a member of the management board (e.g. chief financial officer) and can be described as reactive and problem-solving oriented (M. Levy & Powell, 2000). The value that strategic IS planning and valuation can bring for SMEs has not caught much attention until very recently. The value of IS investments is often hard to grasp for SME practitioners, due to their explorative and emerging nature. According to (Symons & Walsham, 1988), in order to efficiently evaluate the benefits and costs associated with an IS, one has to fully understand the underlying processes, which may not be the case in high-growth SMEs that have not yet developed a clear organizational structure.

3 METHODOLOGY

3.1 Empirical Setting

Our empirical work builds upon an interpretive, multiple case study methodology grounded on qualitative data (Eisenhardt, 1989). Our choice for an inductive study is justified by the lack of a viable theory that addresses the IS strategy in fast growing SMEs. IS alignment is regarded as a critical factor for the success of businesses (Melville et al., 2004) and yet, the vast empirical literature on the design of IS strategies overlooks to a great extent the challenges that fast growth processes pose (Margi Levy & Powell, 2005). Using a multiple case study approach, we are able to perform cross-case analysis and generate or extend existing theory (Benbasat, Goldstein, & Mead, 1987).

Our sample is composed of ten fast-growing SMEs that operate in Denmark in various sectors: retail, manufacturing, transportation, ICT and financial services. They were screened for introduction in the study based on the annual Gazelle study conducted by the newspaper Børsen in 2012. This study identifies fast-growing companies – named Gazelles – in the country using the following criteria: (1) minimum of 135.000€ in revenues or 67.000€ in gross profit; (2) positive sum of the operating results and (3) doubled turnover/gross profit over the past four years (Børsen, 2012). Firms were further qualified into the sample on the basis of how many times they were awarded the Gazelle prize (e.g. those who had won it several times were favored) and of data accessibility (e.g. in terms of geographical location and willingness to participate in the study).

We argue that Gazelles are particularly interesting as an object of study, since their high growth rates likely put them in extreme situations that lead them to experience needs ahead of market, thereby making them specially sensitive to strategic decisions. More than other companies, Gazelles are heavily depending on leveraging all resources that could help support their growth. Thus, we assume that the influence of decisions concerning both IS strategy and overall business strategy is faster, more visible and more intensive.

3.2   Data Sources

Data was gathered primarily via interviews and supplemented by observations about the companies recorded during the site visits and by secondary sources of information, i.e. the ORBIS database and the website proff.dk. The Chief Executive Officer (CEO) and Chief Information Officer (CIO) were our target informants, as they were deemed to be most knowledgeable about the technological and strategy-related aspects of their companies.

Interviews were semi-structured. We led the questioning, while maintaining flexibility to embrace issues that emerged during the data collection. The interviewees were asked a variety of questions related to their company's organization and strategic use of IT and management systems. All interviews were conducted between March and November 2014. We analyzed the case data using an inductive approach to derive the characteristics of IS strategies in each surveyed organization. After analyzing the cases separately, we conducted a cross-case analysis to locate common themes and compare the differences that emerged across them. Our inferences were grounded on the empirical data provided by our interview transcripts.

4   FINDINGS

4.1   Archetypes of IS Strategies

Table 1 shows an overview of our results with a characterization of the various dimensions of IS strategies in all case companies. As previously mentioned, our point of departure was a broad understanding of IS strategy as encompassing elements of technology, people, processes and networks. Our research is mainly focusing on the IT-valuation of an organization which is defined within it's IS strategy. The dimensions in Table 1 were thus not defined a priori, but emerged during the process of data analysis. Our key inference, which is supported by considerable evidence summarized in Table 1, is that companies can be broadly divided into three groups (A,B,C), which represent different archetypes of IS strategy in fast growing SMEs.

Group A encompasses four companies – Art Software, Digital House, InSynch Host and Magazine Electro. While the first three belong to the ICT sector, the latter is an online retail company. These companies have in common a high IT valuation, in that they clearly see IT as their core activity. As the informant at Digital House expressed it:

"*IT is very integrated into our way of life*".

They are inherently reliant on IT to a high extent, since their business models are based on and built around IT (in fact three of them sell IT). Interestingly, Magazine Electro, as the only non-ICT company in the group, presents strong identification with IT, which is reflected in the way it manages all its operations. As the COO commented:

"*We try to put as many processes as possible into the IT system (...) One of the areas we can mostly see this is how we deal with our physical chain. We have 45 stores around Denmark that we run from here. It is run by seven people in a small dedicated team. Before we bought it in 2011, it was run by 45 people (...) Because we are focusing on what we can do in the IT way (...) We use the intranet and other IT systems that help and guide the stores around the country in how to run the business. Because we are born e-commerce, IT-driven, this is our way to run a physical chain*".

Characterization of IS Strategies Among Case Companies

Group	Company*	How IT is seen	IT Reliance	IT Sourcing	IT Responsible	Strategic IS Planning	IT Budget	IT Innovation Strategy
A	Art Software	IT as the core of the company	High	Combination of insourcing (primarily) and outsourcing (servers)	CTO	Yes	n.a.	First-mover
A	Digital House	IT as the core of the company	High	Insourcing	CIO	Yes	200.000 €	Fast Follower
A	InSynch Host	IT as the core of the company	High	Insourcing	3 Vice- Presidents	Yes	1.200.000 €	Fast Follower
A	Magazine Electro	IT as the core of the company	High	Insourcing	COO	Yes	497.000 €	First-mover
B	Apolo Sportswear	IT as a support activity	Medium	Outsourcing (combined with the effort to internalize some knowledge)	CEO	Yes	700.000 €	First-Mover
B	SweetHome	Currently redefining itself as an IT company	High	In the process of insourcing, after several years of complete outsourcing of IT	CIO (being hired)	Yes	n.a.	First-mover
B	North Utility	IT is just everywhere in this company	High	Insourcing	CIO	Yes	15.000.000 €	Fast Follower
C	LightHouse	IT as a cost	Medium	Outsourcing	CEO + 1 Accountant	No	60.000 €	Slow Follower
C	Njord Shipping	IT as a cost	Low	Outsourcing	"IT-guy"	No	6.700 €	Slow Follower
C	Logica	IT as a cost	Medium	Outsourcing (combined with the effort to internalize some knowledge)	IT-manager	No	270.000 €	Slow Follower

Table 1.   *Case companies and their characteristics.*

Characterization of IS Strategies Among Case Companies

Group	Company*	E-business Skills Demands	Characteristics of the Workforce	Challenges to Growth
A	Art Software	Combination of commercial and technology skills + knowledge of upcoming technological trends (e.g. cloud computing, big data)	High level of involvement and enthusiasm, invest their free time on learning	Did not verbalize any challenges
A	Digital House	Interpersonal and communication skills	High level of involvement and enthusiasm, invest their free time on learning	Lack of a clear governance model
A	InSynch Host	Combination of commercial and technology skills + knowledge of upcoming technological trends (e.g. cloud computing)	High level of involvement and enthusiasm, invest their free time on learning	Did not verbalize any challenges
A	Magazine Electro	Combination of commercial and technology skills + knowledge of upcoming technological trends (e.g. business intelligence)	High level of involvement and enthusiasm, invest their free time on learning	Did not verbalize any challenges
B	Apolo Sportswear	Combination of commercial skills and technology education	Divided between digital market experts and operative IT experts	Lack of skilled workers
B	SweetHome	Knowledge of upcoming technological trends (e.g. social media, mobile)	Limited IT/IS skills in the process of developing in-house knowledge	Limitations of prior external IT provider
B	North Utility	Knowledge of upcoming technological trends (e.g. enterprise architecture, big data)	Enthusiastic IT professionals (some also externally recognized)	IT coordination and vulnerability of existing IT systems
C	LightHouse	Limited demand for IT knowledge	Limited IT/IS skills	Lack of IT knowledge to establish a dialogue with suppliers
C	Njord Shipping	Limited demand for IT knowledge	Limited IT/IS skills	Lack of IT knowledge to establish a dialogue with suppliers
C	Logica	Knowledge of upcoming technological trends (e.g. social media)	Limited IT/IS skills	Lack of manpower and management support for IT projects

Table 1 (cont.).   *Case companies and their characteristics.*

With regards to governance, group A companies primarily rely on insourcing. That is, they develop in-house most of the IT solutions for own use. For instance, Digital House reported:

"Most of our systems are handcrafted by ourselves. We have fit our IT platforms to our own processes (...) This decision was made because we looked at the way we worked and it didn't actually fit any other software".

This group of companies has a large internal knowledge base that allows them to build and adapt their own structure and IT governance processes, often informed by standardized models found in IS development, e.g. agile development (Highsmith & Cockburn, 2001) or SCRUM (Deemer, Benefield, Larman, & Vodde, 2012). In terms of internal organization, the companies in group A can be characterized by having a clear delegation of decision power in the figure of the responsible manager(s) who is fully dedicated to IS matters. They are also appointed to handle strategic planning of their systems and have discretion to allocate resources to the IT budget. In addition, these companies are at the forefront of technological trends, being characterized as either first-movers or fast-followers in their innovation strategies[1]. As the COO of Magazine Electro indicated:

"Today I don't think that we are very different from our competitors. But every time we are just a little ahead of them in every small area".

In the words of the InSynch Host's respondent:

"We try to be out at the leading conferences and the technicians come home and say: hey, we have heard that the trend in the US is this. So that usually means that in a year or two it will show up here (...) And then we have a pre-sales department that has a structured way of gathering market requests (...) We simply follow up on what are the trends".

Another noticeable characteristic of group A is that the employees of these companies are generally highly involved and enthusiastic about their work, as well as willing to dedicate their free time on learning new technologies. According to the respondent at Art Software:

"A lot of our employees can't stop growing their knowledge because they are loving it. That's what they do and that's what they are living for. And they are doing a lot of it in their spare time as well".

At the same time, group A companies present sophisticated demands for e-business skills[2], which include employees that can combine commercial and technical skills and that are familiar with upcoming technological trends. As Art Software's manager's said,

"The whole time in this history it is has been difficult to find the right guys (...) Instead of only focusing on having people that are skilled in coding or skilled in business, you have to find people that can understand both".

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[1] First-movers are companies that are typically the first to market a new product, process or service, as they rely on technological breakthroughs from internal R&D efforts. Fast followers are those that focus on incremental changes to products and that use a second-mover strategy to keep risk low. In contrast, slow followers present a more reactive strategy, as they copy and acquire licenses from the technological drivers, while relying on cheap labor or captive market (Ali, 1994).

[2] E-Business skills are defined as *"the capabilities needed to exploit opportunities provided by ICT, notably the Internet, to ensure more efficient and effective performance of different types of organizations, to explore possibilities for new ways of conducting business and organizational processes, and to establish new businesses. e-Business skills are strategic and related in particular to innovation management, rather than technology-management, skills - which are part of ICT practitioner skills"* (*E-skills for Europe: Towards 2010 and Beyond*, 2004).

Finally, three of the group A companies did not verbalize any specific challenges to their growth prospects. The companies that did so (i.e. Digital House) mentioned organization-related issues (e.g. lack of clear governance model) that did not directly point to IS issues.

Group B in turn, involves a more heterogeneous group of companies from various non-ICT sectors – Apolo Sportswear, SweetHome and North Utility. They share similar IS-related problems that have placed them in a transition phase – from seeing IT as a support activity to redefining IT as one of the core activities of the company. They have all been in a process of moving into a higher IT valuation, either because of perceived opportunities or because of the need to overcome IT-related challenges. Some of our findings point to a lack in company identity as the reason for a lack in IS strategy and alignment (Voss, Cable, & Voss, 2006). The manager as SweetHome expressed clearly this transition:

"We are kind of an unusual tech-business (…) [We consider ourselves] *more an IT company, but we're actually discussing that at the moment (...) Sometimes if you consider yourself as being only about properties, maybe you [can't see that] your system for managing properties could be used for something else".*

In the case of SweetHome, the transition was prompted by the limitations of the external supplier, to whom the company previously fully outsourced its IT solutions. Yet, due to the high level of growth of SweetHome, the supplier could neither catch up with the company's increasing demand nor maintain a satisfactory level of service. In the case of Apolo Sportswear, the transition was prompted by the opportunity of using more actively social media in marketing, which resulted in a large new digital department. In the case of North Utility, the vulnerability of its IT solutions posed challenges to the design of an efficient enterprise architecture, which led the company to hire expert professionals. As North Utility's CIO reported:

"I need to accept that some things are just beyond my control. So I need to accept the fact that we are doing something that creates code-spaghetti from time to time (...) We also have these big old legacy solutions in excel, and at some point this just does not scalable anymore (...) Sometimes you can say that the foundation is shaking a little bit, we are almost overloading what we have right now".

In terms of reliance on IT, they report medium to high levels. In the words of the interviewee from North Utility:

"IT is just everywhere in this company".

Two of the group B companies were in the process of internalizing IT-related knowledge via insourcing practices as to address these challenges. The hiring of IT professionals and dedicated managers was key in this process. As a result, group B companies were moving from a reactive to a more proactive innovation strategy (either as first-movers or fast followers). The transition phase is also reflected in the workforce of these companies, which ranged from employees with very limited IT/IS skills (SweetHome) to enthusiastic and externally recognized ones (North Utility). Besides, the group B companies verbalized their e-business skills demands, which were targeted primarily at knowledge of upcoming technological trends, and also business-related knowledge. As the interviewee at Apolo Sportswear commented:

"It is easy to find people who know about technology, but it is very hard to find people that know about technology and are commercial as well".

Finally, *Group C* includes companies that operate in various sectors – LightHouse, Njord Shipping and Logica –and that share the same perspective of IT as primarily being a cost factor. They have thus a low valuation of IT. As Logica's IT manager put it very directly:

"*IT in our company is traditionally looked as a cost*".

They also outsource most of their IS-related activities to external vendors with a limited effort to internalize IS related knowledge (such an effort was reported only in the case of Logica). The managing director of LightHouse expressed his valuation of IS as the following:

"I think the basic idea of how we build up this organization was to be agile, very slim and to cut off and outsource everything that was not core business. IT and its support is not a core business for us. So I think we will stay with that, I do not know how big the company would need to be to have to hire a guy".

Nevertheless, they present different degrees of perceived IT reliance. While it is considered high in LightHouse (*"We 100% depend on the digital side or the IT side from morning to dawn")*, it is considered medium in Logica (where integrated ERP system is used for planning, invoicing and resource management), and rather low at Njord Shipping (where standard office solutions e.g. excel are used). None of the three companies reported to have strategic IS planning. Logica's IT manager commented in this matter:

"*We might be even more successful if we were to spend a little more money on clever solutions, but it's hard work in the company here because there is no clear strategy (...) It's not a clear strategy that we would switch from our internal hardware here and going all cloud".*

In this regard, only Logica had a dedicated manager to handle IT matters, while the other two companies did not have a structured delegation of such responsibilities, which were managed ad hoc by the local "IT guy" or the CEO. Group C companies are also characterized by being slow followers with regards to their innovation strategy. This is exemplified by the Logica's marketing activities:

"*Just three years ago we were not doing any commercials pointed out for end users, but it has changed now (...) It started with just e-mailing, now we are on linkedin. Right now the discussion is: are we going to facebook or are we not going to facebook?"*

Furthermore, group C companies possessed limited IT/IS skills in their workforce. As Njord Shipping's CEO testified:

"As a smaller company, although we have been growing, we were without skills in the IT area (...) We were offered solutions from various players in that field and we were not able to evaluate and to choose between them, we thought it was hard to understand".

Two of the group C companies (Njord Shipping and LightHouse) do not verbalize specific demands in terms of e-business skills, signaling that the lack of IT/IS skills is not seen as an issue. This potential misconception can lead to an increased risk and dependency on IT vendors in terms of both service provision and IT-knowledge. Both firms mentioned having difficulties in establishing a dialogue with suppliers as a result of not understanding IT-specific concepts. As LightHouse's informant stated:

"When we speak to our suppliers, they are so technical (...) It is difficult to always, sometimes to understand what they really mean and if we actually should do this."

Logica, in turn, expressed clear demands for more knowledge in upcoming technological trends (e.g. social media marketing) and mentioned the lack of manpower as management support for IT projects as important challenges for growth.

4.2   IS Strategy and Growth

Figure 1 depicts a model of growth patterns based on our findings. We will first describe the dimensions and their meaning, before a detailed discussion on the two growth patterns "high IT valuation" and "low IT valuation" is presented. The model follows the categorization in three groups (A, B, C) that is presented and elaborated on earlier in this section.
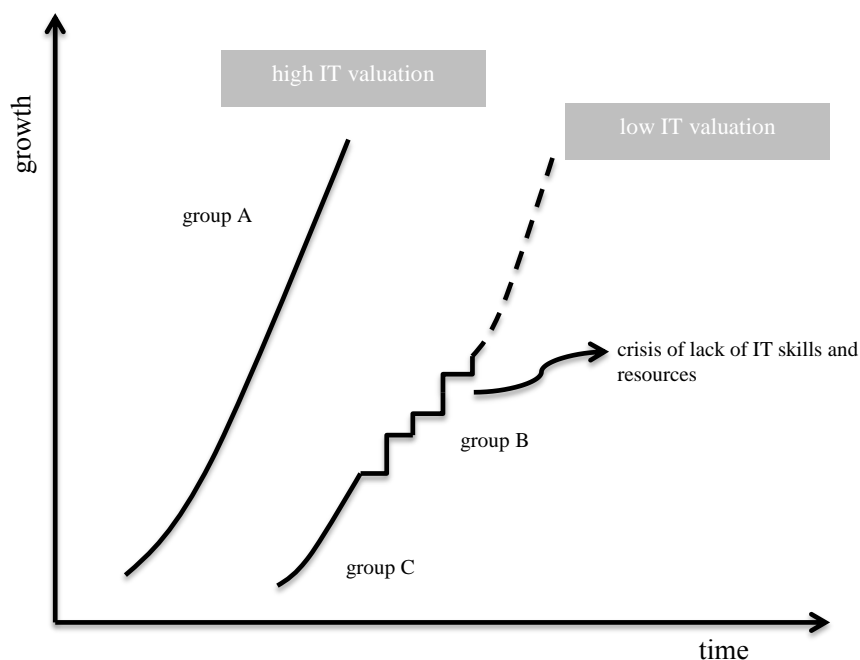
Figure 1.   IT valuation of SMEs and growth patterns.

On the horizontal axis the time dimension is represented, while the growth of the organization is shown on the vertical axis. Both dimensions contribute to the change that an organization faces. We argue that it is especially those companies that face high growth in a short period of time (Gazelles) that are most exposed to weaknesses and challenges in their IS strategy, as "problems of coordination and communication magnify, new functions emerge, levels in the hierarchy multiply, and jobs become more interrelated" (Greiner, 1998) when growing.

Figure 1 shows that companies with a high IT valuation (group A) are not facing any IT-related disruptions to their fast growth. None of the group A companies voiced IT-related challenges to growth, as can be seen in Table 1. On the contrary, in line with literature (Oh & Pinsonneault, 2007) we can see that a high level of IT-valuation and commitment can act both as support as well as a driver for growth. This is not only true for IT-companies, as exemplified by our findings from the Magazine Electro case. These companies do not report an IT-related growth crisis since they invested timely in scalable IS strategies and established an in-house technical knowledge-base.

The growth pattern labeled "low IT valuation" depicts the growth path for both groups C and B. Companies in group B have a history of undervaluation of their IS strategy. They decided to change their IS strategy either due to IT-related problems for continuous growth (e.g. SweetHome) or in order to realize market potentials (e.g. ApoloSportswear). In these cases, the influence of IS strategy on their future growth is unsecure (dotted line) and heavily depending on how much technical debt and lack of knowledge has been accumulated and how this "crisis of lack of IT skills and resources" is managed.

Organizations in group C are characterized by limited IT/IS skills and little IT-valuation. They have not (yet) reached a situation of IT-related growth crisis. There are multiple potential reasons for these companies to either grow successfully without higher IT-valuation or overcome IT-related issues without changing their IS-strategy. First, companies found in group C are in non IT-intensive business areas. Thus, while their lack of IT-valuation is not a cause for growth problems, they are likely to miss out on the opportunities and scalability that come with a sound IS-strategy (e.g. Magazine Electro).

Overall, our model shows that different IS strategies defining the IT-valuation of a company can have substantial positive as well as negative influence on fast growing SMEs. We derived two distinct patterns of growth based on our empirical data that allow us to demonstrate the potential benefits of a sound IS Strategy on organizational growth.

5   CONCLUDING REMARKS

Our study takes a qualitative perspective to analyze the effects of IS strategies on fast growing SMEs. Our key result is the identification of three archetypes of IS strategies which fit different contexts, depending on the challenges of flexibility and scalability faced. The archetypes are tightly connected to the degree of IT reliance of the industry and IT valuation of the company.

The IT companies from Group A were aware of the value that IT delivers for them and present a well thought through IS strategy. These firms are able to fully capitalize on the benefits that IS are offering them. Companies in Group B were in a transition phase and reported benefits in the process of putting more value on IT. In specific, Apolo Sportswear created a large digital department; SweetHome was in the process of insourcing all its development and North Utility was in the process of hiring skilled people. Their motivation was based on either seeing market opportunities (e.g. Apolo Sportswear) or problems experienced with their former IS approach (e.g. SweetHome and North Utility). In contrast, companies of Group C seem to undervalue IT and outsource as much as possible of what they do not consider part of their core business. In doing so they are increasing the risk of creating a knowledge gap that will create considerable higher costs when changing their IS strategy at a later point.

All in all, our findings imply that IS strategy has to be constantly re-evaluated and aligned with business goals (in special growth). The goal should be not to build up a situation where a change or up-scaling becomes expensive because of lack of knowledge or infrastructure. On the contrary, the lack of a depth in IT skills and knowledge can lead to limitations to growth. In contrast to large companies, IS strategies for fast growing SMEs should be less concerned with traditional areas such as Enterprise Application Architecture (EAA) or integration of IS systems, but with creating a flexible IS strategy that supports direct, traceable and immediate capitalization on IS investments.

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