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Abstract

This research studies a new business model in the IT industry, the customization of standard software as the sole foundation for a software company's earnings. Based on a theoretical background which combines the concepts of inter-organizational networks and open innovation we provide an interpretive case study of a small software company which customizes a standard product. We investigate the company's interactions with a large global software company which is the producer of the original software product and with other companies which are involved in the software customization process. We find that the customizing company and software customizations depend not only on initiatives which are set off internally in the company, but on how the customizing organization's inter-organizational network and interaction with other organizations is built up. The case company has built its network primarily on complex, formal partnerships, in which also opportunistic behavior occurs and where informal relations are invaluable sources of knowledge. In addition, the original software producer's view and treatment of these companies has a vital impact on the customizing company's practice which is influenced by the open innovation initiatives which the producer of the original software instigates.

Keywords: IT business models, software customization, inter-organizational networks, open innovation

1 INTRODUCTION

Standard software exists since the early 1960s (Sawyer 2000). Software customization has in the literature primarily been described as taking place within organizations rather than a business concept which constitutes a company's earnings and which implies interaction across organizations (Pollock et al. 2003). We thus explore the question "How does inter-organizational interaction impact software companies which base their business model on customizing standard software?" We study a small Danish software company Alpha which customizes a standard product and investigate its interactions with a large global company Zeta which is the producer of the original software product and with other companies which are involved in the customization process.

The remainder of this article is structured as follows: in section 2 we present the theoretical background. We then introduce our case study research approach and the case description. This is followed by our case analysis and the presentation and discussion of our findings. We finish with some conclusions.

2 THEORETICAL BACKGROUND

Light (2003) argues that customization is meant to describe changes or additions to the functionality available in the standard software. It does not refer to the switching on and off of functionality that is

part of the software and distinguishes between the creation of reports, amendment of existing reports and/or displays, automation of existing processes, addition of functionality, and change of existing functionality. This categorization allows for a fine-grained analysis of actual customization practice.

Kuitanen et al. (2005) categorize business models of software companies which base their business on customization of standard software according to: (1) are a software company's products and services tailored or standardized and (2) are the company's earnings primarily based on the sales of products or performance of services. This categorization allows us to analyze the case company's business model. We also have to consider the role of the original software producer, the customers and other interested parties. Therefore the concept of inter-organizational networks is relevant for our study (Pollock et al. 2003).

2. 1 Inter-organizational Networks

The concept of inter-organizational networks describes a relation which binds organizations closely together (Harland, 1996) and comprises their interaction and cooperation (Håkansson and Snehota, 1995). It provides the organizations with competitive advantages they could not have achieved on their own (Dyer and Singh, 1998). A network reduces transaction costs for the exchange of information, minimizes uncertainty and limits opportunistic behavior (Williamson, 1991). Inter-organizational relations depend on the degree of cooperation between organizations.   Formal relationships range from having no shared objectives, dealing with each other on the market and communicating through purchase orders to merging and acquiring organizations (Harland, 1996). In between lie joint ventures, strategic alliances, minority shareholding, shared destiny and product life relationships (Harland, 1996). Formal contracts do not play the most important role in close inter-organizational relationships (Håkansson and Snehota, 1995). They are often inhibiting when problems arise. Then informal approaches are more usable, but as a prerequisite the organizations have mutual trust in each other.

Social capital contributes to organizations' competitive capacities (Coleman, 1988). The concept helps to understand how inter-organizational relations are shaped by the social relations of employees across the different organizations. It consists of three elements: (1) commitments, expectations and trust which relate to the performance of favors and services without payment, (2) information channels which provide access to less accessible information through personal relations, (3) norms and sanctions, unwritten rules which exist between people and which govern how they act and behave.

Formal and informal relations can take a form labeled coopetition (Ganguli, 2007) where organizations cooperate while they simultaneously compete. Such relationships are difficult to manage and invite opportunistic behavior (von Hippel, 1987). Limiting opportunistic behavior is important and can be achieved through close integration and cooperation of the partners. One way to pursue close integration is to open the innovation process and let the cooperation partners in to contribute to the process.

2.2 Open Innovation

The composition of inter-organizational networks is related to working with open innovation (Vanhaverbeke, 2006). Close inter-organizational relations facilitate organizations' capability and willingness to open their innovation process and let innovation happen across organizational boundaries [13]. Organizations always had relations with other organizations, but these relations did not go beyond using others as suppliers or as sales channels and did not break with the paradigm of closed innovation (Vanhaverbeke, 2006). Exchange of ideas and easy access to products is a prerequisite of open innovation in an inter-organizational network and organizations dependent on other organizations' support or deliverables do their best to open their innovation processes for their cooperation partners (Vanhaverbeke and Cloodt, 2006). Nursing and steering an open innovation network are significant to develop or use innovations (Vanhaverbeke and Cloodt, 2006). It is important to build a network which consists of many broad relationships to utilize innovative opportunities better as the generation of ideas becomes much more unpredictable [13] and flexible product architectures are vital to allow external organizations to contribute to an open innovation process (Chesbrough, 2003).

In contrast to closed innovation, open innovation emphasizes that (1) not all the smart people work for us; we need to work with smart people inside and outside our company (2) external R&D can create significant value; internal R&D is needed to claim some portion of that value (3) we don't have to originate the research to profit from it (4) building a better business model is better than getting to market first (5) if we make the best use of internal and external ideas, we will win (6) we should profit from others' use of our intellectual properties, and we should buy others' intellectual properties whenever it advances our own business model.

Chesbourgh (Chesbrough, 2003) distinguishes innovative processes in research and development. In the research processes analysis and design tasks are performed, while the construction of the product takes place in the development phase. This allows for a distinction of the processes, but leads to coordination and communication problems when creating new products as it does not consider their mutual dependencies. This problem is solved through continuous mutual adjustment which is a complex task when performed across organizational boundaries. The advantages of letting other organizations contribute to the development of new products often outweigh the difficulties of coordinating inter-organizational processes. There are different ways how external organizations can contribute to the open innovation process. They can participate in the research and development of the product, resell the product, promote the product, or build upon the existing product (Chesbrough, 2006), (Christensen, 2006). This is what companies which customize standard software products do.

3 RESEARCH APPROACH

Our research follows the approach of engaged scholarship (Van de Ven, 2007) which is a form of research seeking advice and perspectives of key stakeholders to understand and theorize about a complex problem. Given the limited literature concerning our research topic, our investigation is based on an exploratory, qualitative, single case study (Creswell, 2003) of a small Danish development company called Alpha which customizes a standard product originally developed by a large global software producer called Zeta. Our research approach is inspired by Walsham (Walsham, 1995) who stresses that in all types of research, including case study research, theory is important as an initial guide to data collection, during the iterative process of data analysis, and as a final product of the research.

While it is often stated that it is not possible to generalize and certainly not to theorize from a single case study, Walsham (Walsham, 1995) suggests that it is possible to generalize case study findings among others in the form of a contribution of rich insight. We have used the theoretical background concerning software customization, inter-organizational networks and open innovation to guide our data collection and analysis, in order to contribute to the existing body of knowledge with rich insight about the customization of standard software as a business model in the IT industry.

The empirical data for the case study was collected in semi-structured, open-ended interviews conducted by a team of two researchers. The team performed 6 interviews with the founders of Alpha and key personnel in the organization which covers more than half of the organization's staff and with their partner Account manager at Zeta. The interview data was supplemented with publically available and internal company documents, especially about Zeta's partnership program. The interviews were tape-recorded and transcribed. Subsequently the data was coded independently by two researchers. The few differences in the researchers' conceptions were discussed and resolved. To move from surface observations towards theory building and from description to explanation a detailed narrative of the case organization was written. In a narrative theory the story builds a conceptual model where the story provides a progress or sequence of events (Van de Ven, 2007) which serves as an additional frame of reference for the further analysis and interpretation of the data (Fincham, 2002). In this process the third researcher acted as a facilitator. The combination of interpretation and collaboration between three researchers with different levels of involvement brought interpretive rigor to the project. Figure 1 summarizes our research approach.
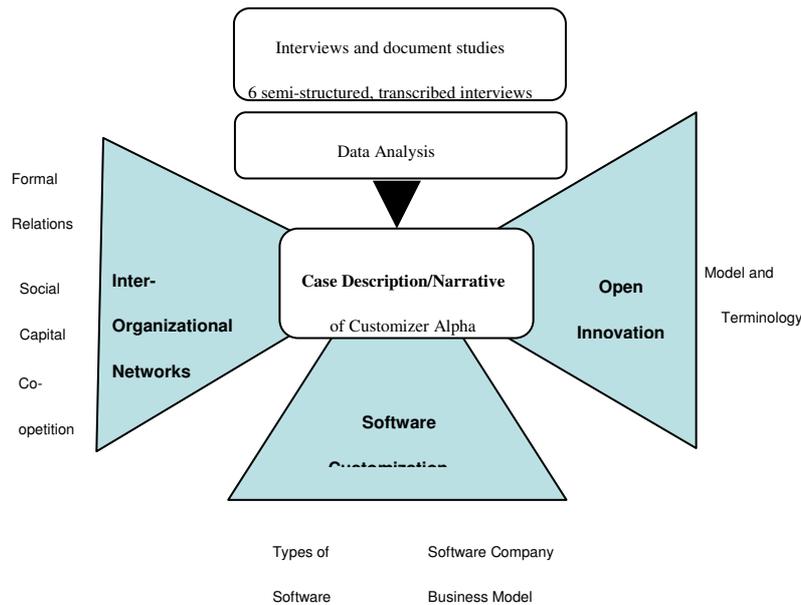
Figure 1: The Research Approach

4 THE CASE

Alpha's relations were formed and developed in seven different phases.

Freelance work at Omega. The company Omega was established in 2005 as a consultancy company with a focus on a CRM (Customer Relationship Management) product. The CRM product was developed by the large global software producer Zeta and is used by many companies. The two Omega founders were former Zeta employees. Omega focuses on reselling Zeta's CRM product, but experiences that its business domain is not sustainable without technical competencies for implementing the product. Thus Omega asks a freelance IT professional to support the technical domain and the configuration of the product. As business develops fast another freelancer joins. The cooperation between Omega and the freelancers is characterized as a friendly turn without any direct payment.

Launch of Alpha. The two freelancers recognize that their work consists of repetitive tasks, see a possibility for a business and create Alpha in fall 2005. Their assignments are adjustments of the CRM for customers whom they get through Omega. The need for more flexibility to import customer data is the main focus of Alpha and provides the ground for their first standard product. As the assignments from different customers become more similar, Alpha decides to develop the standardized solution DataImporter which Omega resells.

Partnership with Zeta – New Contacts. The DataImporter becomes a successful product which satisfies the certification requirements in Zeta's partnership program. In early 2006 Alpha becomes a certified partner: they can officially offer Zeta-based IT-services, products and know-how. Beyond more general attention, Alpha receives support, licenses and knowledge from Zeta. They can much earlier test the beta versions of the product which Zeta continuously releases. Through the partnership program, Zeta dictates its demands to their partners. A partnership is accompanied by a Partner Account Manager. As Alpha does not feel that the formal communication channels are sufficient, they look for new possibilities to get information about the product. The Omega founders create some informal relations between Alpha and Zeta developers. These relations quickly show to be advantageous for Alpha. In June 2006 Alpha appears at an annual conference in the USA to present their product. Subsequently Alpha presents at many international conferences and its network grows.. Many interested parties among them representatives from Zeta and actual CRM product developers find the DataImporter appealing and discuss it with Alpha. The conferences also create relations to

other Zeta partners who want to sell the product to their customers. The new partnerships consist primarily of distribution contracts with existing vendors who see an advantage in including Alpha's solutions in their portfolio. In fall 2006 Alpha succeeds in interesting local Danish CRM vendors which take over the contact to potential customers and chooses to change focus from customers to distribution partners who thus become links in Alpha's network.

From consultancy work to product development. The focus on partners opens opportunities, as Alpha can sell their products to a larger customer range. They decrease consultancy services and focus on dedicated product development and standardize their own solutions. This results in the development of new off-the-shelf products of which two achieve Zeta certification. During 2007 the company develops a further three products which meet the demands of a broad user group and fill gaps in the original product. There is an alignment of Zeta's and Alpha's interests as Zeta's solutions hit a broader customer group which gives Alpha the opportunity to develop solutions outside Zeta's interest to be included in new versions of the CRM product. But Alpha experiences that Zeta updates include functionality which correspond to their solutions. Lacking legal protection forces Alpha to continuously develop new products.

Organizational growth. Being conscious of the limited life time of most their products Alpha in January 2007 starts to develop more products. This leads to an need for resources and the founders hire an employee to develop user documentation to enable their partners to support the products and to solve problems for their customers. Alpha also hires a person to develop promotion material and a developer to look after their home page. Although Alpha has chosen not to focus on their customers, their home page becomes an important distribution channel. In the same period the Alpha founders hire another developer who is assigned to the development of the DataImporter. In September 2007 the two founders decide to headhunt their Zeta Partner Account Manager. He is employed as a sales manager and brings knowledge about the industry sector and more contacts to Zeta and Zeta partners.

Outsourcing to Asia. In fall 2007 some international companies start to show interest in the DataImporter and Alpha chooses to cooperate with the largest CRM vendor in the USA, Delta, and launches the product Delta DataImporter. Delta insists on using its own two testers in India. The positive experience with these IT professionals results in the decision to use the Indian testers. Alpha starts to define their own development processes to let parts of their development be performed abroad. Therefore they contact the company Gamma which specializes in outsourcing of IT tasks. Gamma offers a solution where 3 Pakistanis developers are assigned to Alpha. Despite some challenges related to different time zones, culture and communication, the decision to outsource is favorable. The Pakistani developers are very proficient in setting themselves in the Alpha products and take responsibility for their assignments. Alpha however experiences that the existing products have been developed without any technical documentation. The lacking descriptions of Alpha's technical knowledge leads to an intensified effort to help the foreign developers understand and adopt the way Alpha customizes Zeta's CRM. All code is reviewed to secure that the developers in Pakistan follow Alpha's guidelines. The Danish developers get the task to specify assignments and to explain and document their code. To perform analysis and design in Denmark and the programming in Pakistan, is a decision which puts an increased focus on governance.

Merger with Omega. Over time Alpha's alliance with Omega has resulted in a fruitful cooperation. The organizations have never been in a competitive relation, but have taken care of each other's interests on a professional and business level as well as on a social level. On this background in March 2008 Alpha and Omega opt to merge. Alpha sees an advantage in the merger as they want to increase their market share and extend their network. The merger provides them with access to more than 100 new partners worldwide. But the new company finds a dilemma as Alpha's partners might change their perception of the company as the two merged organizations now appear as a possible competitor on the market.

5 CASE ANALYSIS AND DISCUSSION

The case narrative provides evidence of Alpha's successful standard software customization business model. Alpha closes gaps in the original product. Alpha does not have the right to change the product functionality, they add extra functionality. Their primary product represents a classical functional extension of the original product. The other products either fall in this category or are process automations like the search system or amendments of existing reports [3]. Looking at Alpha's business model we see a clear trend towards standardized, customized products; thus Alpha has moved from tailoring individual solutions for customers to product development [4].

5.1 Inter-organizational Network

The case demonstrates how dependant Alpha is on other companies. We thus analyze its inter-organizational network.

Formal relations. Applying (Harland, 1996) we find that Alpha has entered a number of partnerships and close alliances with Omega from the start a strategic ally. Their shared aims and their strategic cooperation have been decisive for both partners' success on the market. The first links between Alpha and Zeta are created with the the DataImporter launch. Alpha becomes registered partner which makes it easier for them to customize Zeta's product. This is beneficial for Zeta which gets its product promoted through an increase of its business value. The partnership with Zeta is advantageous for Alpha, but there is no other formal binding between them. There is a dependency as the Zeta's rise or fall will have n impact on Alpha's existence, but Zeta's reputation is also bound to Alpha's products. We can speak of a shared destiny based on both companies' mutual dependency (Harland, 1996). Alpha's product development also leads to partnerships with other vendors. Alpha has entered these relationships to secure an increased sale of their products which are distributed through these partners. The partnerships are primarily a sales channel for Alpha. Alpha has a relationship to the US distributor Delta which is limited to their DataImporter. Their mutual interest in the further development results in a contract where Alpha develops a specific product for Delta which then owns and supports this solution. In addition to the partnerships with distributors Alpha forms a partnership with Gamma to satisfy the company's need for competent staff. The cooperation between the two organizations is beneficial for both parts where Gamma administers relations between the local, Danish company and global suppliers and Alpha's need for resources is covered by the Pakistani developers. The partnership forms a reciprocal dependency and can be considered as shared destiny where both partners have an interest in a mutual progress. The closest relationship for Alpha is formed through the merger with Omega. This step strengthens both parts' position in their individual network and is an important strategic reason for a merger (Harland, 1996). In summary, Alpha's inter-organizational network is mostly made up by partners and less by customers. This is a consequence of their decision to engage in product development of standardized, customized products based on Zeta's original CRM product.

Informal relations. Alpha's social structures with other organizations are strongly marked by the personal bonds to employees at Omega. Both organizations' staff regularly participates in social arrangements. While Omega free of charge has provided Alpha advice Alpha about their customers' needs, Alpha has helped Omega to overcome technical problems with the product. Through these friendly terms Alpha and Omega have strengthened their mutual trust which has been beneficial when there was a lack of resources, knowledge or competence. This trust has increased the social capital between the organizations and decreased the need for formal rules and regulations in their cooperation. Alpha has with Omega's initial support created strong personal links to Zeta employees. Especially the company's sales manager as a former Zeta employee contributed and created a number of informal commitments between these two organizations which Alpha carefully nurses; they are committed to provide technical help in situations where Zeta employees are not able to solve some tasks themselves. An important advantage of social relations in inter-organizational networks is that there often is easier access to different kinds of information (Coleman, 1988). For Alpha their personal links to Zeta employees mean that they no longer need to go through bureaucratic channels, but can contact the relevant people, when they need knowledge. To know the right people gave Alpha access to technical

product information early in the development process. They could build and maintain competences about the product which now are their core competence. As social structures are primarily characterized by informal agreements, it is difficult to identify the unwritten laws which define cooperation (Coleman, 1988). Alpha's founders felt that they had to earn the trust of their personal Zeta relations by rendering themselves visible at the various conferences. They felt that they had to constantly meet Zeta's employees' expectations. By satisfying these they believe they have a stronger position than other Zeta partners with no bureaucratic channels to receive information. These activities represent a social norm (Coleman, 1988) where a partner profits from the unwritten rule that its activity is rewarded in form of easy access to product information.

Coopetition and opportunistic behavior. Alpha is placed under certain rules which determine which parts of the software they are allowed to customize in the original product. This limits their actions, but secures that their solutions are functional and compatible also after larger changes in the standard software. Such rules delimit the implications of coopetive relationships as they state the boundaries between competition and cooperation; but these boundaries sometimes are hard to keep (Ganguli, 2007). Zeta has defined these boundaries in a formal contract. However, no formal agreement exists which describes what Alpha can customize to avoid that Zeta copies their customized solution; there exists only an informal agreement that Zeta tries to avoid to update their software with an identical solution which Alpha has developed. This is however not always the case and has consequences for the life span of Alpha's products. Based on their experience with Zeta's development of identical solutions the company founders estimate that most of their products have a life time of 18-24 months. Alpha is therefore forced to constantly develop new customized versions to survive on the market. Zeta's attempt to not immediately develop matching solutions is essential for Alpha's survival and creates the kind of trust which characterizes informal contracts (Ganguli, 2007). Simultaneously, Zeta expects that Alpha promotes their products and contributes to their good reputation as a brand. Opportunistic behavior and the right balance are a challenge for Alpha and Zeta's relationship. We have identified a number of situations where these rules are broken. Alpha's experience is that Zeta not always stays within the limits of their announced changes when they update the original product and they have to put an extra effort into their customized solutions. Alpha does not feel particular negative about the situation, they accept it as they are conscious of the power balance when they customize a larger software producer's product. Alpha also has a dilemma: deficiencies in the CRM product are opportunities for new customized solutions which are the basis for their business. Thus, at times they delay and limit their feedback about the CRM product. However on the long term, mutual opportunistic behavior will have more serious consequences for Alpha. Thus, cooperation which is beneficial for all involved parties prevails.

5.2 The open innovation Model

Since the 1990s Zeta has had a focus on the opportunities related to opening up their innovation processes. We focus here on the knowledge and product flow between Alpha and Zeta on a dyadic level (Vanhaverbeke and Cloodt, 2006). The launch of Alpha is a direct consequence of Zeta's CRM product and Alpha can be considered a spin-off company. From its start Alpha focused on this product. Through Omega's customer network they got ideas for customizations and adjustments which were lacking in the original product. Omega's close relationship to Zeta contributed to that development knowledge from Zeta was shared with Alpha across Zeta's boundaries. This knowledge contributed to Alpha's idea of building the DataImporter which could import data from different sources into the CRM product. The DataImporter then had decisive influence on Alpha's partner certification. This gave Alpha access to knowledge which is produced in Zeta's research process. We illustrate how ideas go in and out of Zeta in figure 2. As Alpha has detailed knowledge about the CRM product, they contribute with development ideas which they believe are important to get implemented in the original product. Alpha has e.g. promoted the idea that the CRM product can interact with other vendors' data base systems. Zeta is interested in ideas for extending their products and collects this kind of ideas through dedicated interviews with their partners who thus have the opportunity to put their stamp on the future product already in the research phase. Beyond providing ideas the customized solutions are also a source of inspiration for Zeta.

We have discussed the dilemma that the software producer creates solutions which the customizing company has developed as a problem in open innovation environments (Graham and Mowery, 2006). As ideas enter Zeta's open innovation environment, Zeta also provides inspiration to Alpha's product development. Alpha has been accepted as a member of Zeta's early-adopter-program which provides front edge information about new CRM product features. Thus Alpha gets ideas both from Zeta's research and development stages. That Alpha gets early access and insight into the new versions of Zeta's CRM is important, as the original product is a source of inspiration itself. As Alpha also participates in the early beta tests of the CRM product they get insight into those areas where they can develop new customized solutions for their customers. These solutions aim at closing the gaps which are in the original product and which will secure their customers a better utilization of the product. Beyond improving the original product, Alpha's solutions contribute to the further sales of the product to new markets. A focus on open innovation emerges often when companies such as Zeta try to promote and sell their products on new markets (Vanhaverbeke and Cloodt, 2006). Zeta is relying and dependant on other companies' contributions to their product as they themselves cannot cover all markets; this is in particular valid for niche markets with special needs. In Zeta's model for open innovation ideas, inspiration and knowledge go in and out of the organization. This characterizes Zeta's innovation environment, they try to continuously provide new versions of the original product which their partners can customize and further develop.

Open innovation includes searching for new partners, providing opportunities for innovators to effectively share their knowledge and their ideas as mutual inspiration to support the creation of innovations (Vanhaverbeke and Cloodt, 2006), providing appropriate development environments, as well as providing incentives in the form of new markets and additional business value (Chesbrough, 2003). Zeta works actively to identify companies which are interested in customizing their software. Beyond their partnership program with a minimal participation fee, Zeta helps minor non-certified companies by providing free support and technical advice to develop solutions which allow them to achieve partner certification. Alpha uses this program to build up a strong inter-organizational network where they draw from Omega's and Zeta's knowledge.

Zeta has created forums where people who customize their products can ask technical questions and extent their knowledge. Zeta has an online forum for developers who customize their software. Even if this forum only plays a small role in Alpha's work, it provides evidence for Zeta's attempts to create an effective information flow between its own and external developers.
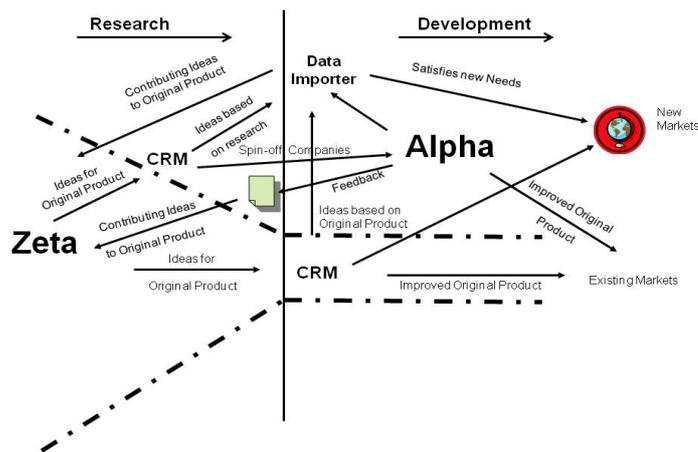

Figure 2: Zeta's open Innovation Model

In Alpha's case the Zeta conferences played an important role for building competences and relations. According to Alpha Zeta provides appropriate interfaces and tools as well as a suitable product architecture as a basis for customizing the CRM product. To attract new markets Zeta supports the

promotion of their partners' customized products. Through the certification process and approved testing personnel Alpha secured that their products satisfy Zeta's criteria for promotion. With Zeta's permission Alpha thus promotes their product directly on Zeta's home page where Zeta's customers seek new products. Alpha has also been allowed to present their products on various conferences. This has been decisive for their inter-organizational network as they found new partners and customers.

6 CONCLUSIONS

This research presents a new trend in the IT industry: basing a software business on standard product customization. We contribute to the open innovation literature and analyze a case of open innovation in the IT industry. Open innovation as enacted by the original standard software producer, who focuses on a broad network with many partners and different relations, is the backbone of the customizer's existence. Inter-organizational networks link software customization and open innovation. Extending the investigation of the formal relations in inter-organizational networks with the analysis of the informal relations is also a contribution of our work. In our theoretical framework has brought about an understanding that the conditions of life for the customizing company and the development and standardization of software customization solutions depend not only on internal initiatives, but on how the customizing organization's inter-organizational network and interaction with other organizations are built up. The original software producer's open innovation initiatives have a vital impact on the customizing company's practice.

References

Chesbrough, H. (2003), Open Innovation: The new imperative for creating and profiting from technology. Harvard Business School Publishing, Boston, USA.

Chesbrough, H. (2006), Open Innovation: A New Paradigm for Understanding Industrial Innovation Networks. In Chesbrough, H., Vanhaverbeke, W., West, J. (eds.) Open Innovation: Researching a New Paradigm. Oxford University Press, UK, 1—14.

Christensen, J. F.(2006), Wither Core Competency for the Large Corporation in an Open Innovation World? In Chesbrough, H., Vanhaverbeke, W., West, J. (eds.) Open Innovation: Researching a New Paradigm. Oxford University Press, UK, 35—61.

Coleman, J. S. (1988), Social capital in the creation of human capital. American J. of Sociology 94:6, 95—20.

Creswell, J.W. (2003), Research design - Qualitative, Quantitative and Mixed Methods Approaches. Sage Publications, Thousand Oak, CA, USA.

Dyer, J. H., Singh, H.(1998), The relational view: cooperative strategy and sources of inter-organizational competitive advantage. Academy of Management Review 23, 660—679.

Fincham, R. (2002), Narratives of Success and Failure in Systems Development. British J. of Management 13, 1—14.

Ganguli, S.(2007), Coopetition Models in the Context of Modern Business. J. of Marketing Management 6:4, 6—16.

Graham, S. J. H., Mowery, D. C. (2006), The Use of Intellectual Property in Software: Implications for Open Innovation. In Chesbrough, H., Vanhaverbeke, W., West, J. (eds.) Open Innovation: Researching a New Paradigm. Oxford University Press, UK, 184--204.

Harland, C. M. (1996), Supply Chain Management: Relationships, Chains and Networks. British J. of Management 7, 63--80.

Håkansson, H. & Snehota, I. (1995), Developing Relationships in Business Networks. Routledge, New York, USA.

Light, B. (2001), The maintenance implications of the customization of ERP software. J. of Software Maintenance and Evolution: Research and Practice 13, 415--429.

Kuitunen, H., Jokinen, J.-P., Lassila, A., Mäkelä, M., Huurinainen, P., Maula, M., Ahokas, M., & Kontio, J. (2005), Finnish Software Product Business: Results from the National Software Industry Survey 2005, Centre of Expertise for Software Product Business, Tekes, Helsinki, Finland.

Pollock, N., Williams, R., Procter, R. (2003), Fitting Standard Software Packages to Non-standard Organizations: The 'Biography' of an Enterprise-wide System. Technology Analysis and Strategic Management 15:3, 317—332.

Sawyer, S. (2000), Packaged Software: Implications of the Differences from Custom approaches to Software Development. European Journal of Information Systems 9, 47—58.

Simard, C., West, J. (2006), Knowledge networks and the geographic locus of innovation. In Chesbrough, H., Vanhaverbeke, W., West, J. (eds.) Open Innovation: Researching a New Paradigm. Oxford University Press, UK, 220--240.

Van de Ven, H.A (2007), Engaged Scholarship A Guide for organizational and social Research. Oxford University Press, New York, USA.

Vanhaverbeke, W.(2006), The interorganizational context of open innovation. In Chesbrough, H., Vanhaverbeke, W., West, J. (eds.) Open Innovation: Researching a New Paradigm. Oxford University Press, UK, 205—219.

Vanhaverbeke, W., Cloodt, M. (2006) Open innovation in value networks. In Chesbrough, H., Vanhaverbeke, W., West, J. (eds.) Open Innovation: Researching a New Paradigm. Oxford University Press, UK, 258—284.

von Hippel, E.(1987), Cooperation between rivals: Informal knowhow trading. Research Policy 16:6, 291—302.

Walsham, G.(1995), Interpretive Case Studies in IS Research: Nature and Method. European J. of Information Systems 4, 74--81 (1995)

Williamson, O.E. (1991), Comparative Economic Organization: The Analysis of Discrete Structural Alternatives. Administrative Science Quarterly 36:2, pp. 269—296.