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COMPETING VIA CREATION OF DISTINCTIVE ORGANIZATIONAL COMPETENCES: "HOW TO DO IT"

Abstract

The purpose of this paper is twofold: (1) to identify specific and generic organizational competences that comprise three different types of competitive advantages – product leadership, customer intimacy and operational excellence – and (2) to identify processes and approaches by which identified organizational competences are developed. Using the multi-case study approach, the main findings come into two tentative theory building conclusions. (1) Behind different ways of competing there are only four distinct organizational competences – innovation competence, competence of managing business risks, operational competence and stakeholder influence competence. These four competences form three distinct ways of competing: competing via product leadership, competing via customer intimacy and competing via operational excellence. (2) All four organizational competences are composed of nine organizational processes and approaches: bonding, attracting, showcasing, specialization, capitalization, internationalization, specialization, quality control, cost monitoring, and shielding. However, due to the case study research design, this paper provides limited generalizability and thus calls for validations via quantitative research approaches.

Keywords: Competitive advantage, value proposition, organizational competences, competence creation processes.

1. Introduction

Competitive advantage is defined as the wedge between the value a company creates for the customer and the relative costs of producing this value; for a competitive advantage to exist these gaps should be greater than those of competitors (Brandenburger, Stuart, 1996). Every product/service creates a specific value for customers (Anderson, Narus, Van Rossum, 2006). The conceptual basis of customer value is referred as value proposition (Barnes, Blake, Pinder, 2009), distinct ways of competing (Porter, 1985), or value discipline (Treacy, Wiersema, 1993). Distinct ways of competing are broadly categorized into three generic types: product leadership, customer intimacy and operational excellence. These value propositions are mutually exclusive and should be carried out by different business organizations (Hagel, Singer, 1999). Each value proposition has distinctive organizational competences behind it. In theory, distinctive organizational competence behind product leadership is the capacity to conceive attractive new products and services and commercialize them (Hagel, Singer, 1999). Distinctive organizational competence behind customer intimacy is the capacity to identify, find, acquire and build relationships with customers. Distinctive organizational competence behind operational excellence is the capacity to build and manage facilities for high volume, repetitive operational tasks.

These core organizational competences behind different types of competitive advantages provide little how-to advice to managers. There is a need for a more fine-grained view of different organizational competences that fuel competitive advantage in product leadership, customer intimacy and operational excellence. "What specific and generic organizational competences compose different types of competitive advantages and how these organizational competences are developed" is the focus of this research. Development of distinctive organizational competences is closely related to organizational learning, more specifically to knowledge creation (Argote, Ophir, 2002). Knowledge creation is about developing specific skills, expertise, processes, relationship, and outputs that (1) results in superior performance and (2) competitors are unlikely to acquire or copy in a cost or time-effective way (Miller, 2003). Knowledge creation is about development of VRIO resources that fuel the competitive advantage of the firm (Barney, 1997). Organizational capabilities or competences build and manipulate existing VRIO resources of the firm (Eisenhardt, Martin, 2000).

Though the essence of competitive success are organizational competences (Prahalad, Hamel, 1990), existing literature provides little guidance how to create distinctive organizational competences that will result in a competitive advantage in product leadership, customer intimacy or operational excellence.

This paper aims to help fill this gap by studying how organizations detect, create and leverage distinctive organizational competences - skills, knowledge, processes, relationship, proper ties, or outputs an organization possesses – to sustain a competitive advantage in product leadership, customer intimacy or operational excellence. To do so, we used a longitudinal case-study design. We used the concept of organizational learning as a frame of reference and applied it to three different business organizations - Pipistrel with a competitive advantage in product leadership, BiaSeparation with a competitive advantage in customer intimacy and Optotek in operational excellence - to grasp how business organizations develop valuable skills, knowledge, processes, relationship, proper ties, or outputs and sustain a competitive advantage of product leadership, customer intimacy or operational excellence over time. Thus, our paper has an inductive part and a deductive part (Gavetti, Rivkin, 2007). The inductive part uses detailed observation of the knowledge creation process of three companies, Pipistrel, BiaSeparation and Optotek in order to identify often overlooked constructs that can play a crucial role in the knowledge creation process. The deductive part steps beyond our three focal firms and asks what our findings imply, in theoretical generality, about how the process of knowledge creation/acquisition empowers the competitive advantage of the firm.

The remainder of this paper is organized into four parts. The second section briefly discusses different types of competitive advantage and organizational competences. The third section outlines the research design as suggested by Eisenhardt's (1989) recommendation for building theory from casestudy research. It introduces how cases were selected, the research instrument was crafted, and data were gathered and analyzed. Following Eisenhardt's (1989) recommendations, the fourth section aims to come up with relevant hypothesis and unfolds the literature around how organizations detect, create and leverage distinctive organizational competences. The final section comes up with some tentative closures.

2. Types of competitive advantage

Different types of competitive advantages build on different economic logics of the business, the nature of competitive battles and cultural imperatives (Hagel, Singer, 1999). To leverage these different economic, competitive and cultural imperatives, specific competences are needed. Roots of competitive advantage are core competences (Prahalad, Hamel, 1990). The core competences present distinct clusters of knowledge that differentiate a company strategically from competitors. Distinct knowledge is hidden and embedded in technical systems, skills of employees, and managerial systems and deeply rooted in values (Leonard Barton, 1992). These distinct technical systems, skills of employees, and managerial systems and value competitors cannot easily be copied by competitors; therefore they are asymmetric across companies – also referred to as organizational asymmetries - and thus compose the essence of the competitive advantage (Miller, 2003).

From an economic, competitive and cultural perspective, there are three different types of businesses (Treacy, Wiersema, 1993): product leadership, customer intimacy, and operational excellence. Customer intimacy and operational excellence are different types of core competences behind product leadership,. The core competence behind product leadership is product innovation defined as the capacity to conceive attractive new products and services and commercialize them (Hagel, Singer, 1999). The core competence behind customer intimacy is customer relationship management defined as the capacity to identify, find, acquire and build relationships with customers. The core organizational competence behind operational excellence is infrastructure management defined as the capacity to build and manage facilities for high volume, repetitive operational tasks.

These core organizational competences behind different types of competitive advantages provide little how-to advice to managers. A more fine-grained view of different organizational competences that fuel competitive advantage in product leadership, customer intimacy and operational excellence is needed. "What specific and generic organizational competences compose different types of competitive advantages and how these organizational competences are developed" is the focus of the research here.

3. Research methodology

We used a longitudinal case-study design (Eisenhardt, 1989; Yin, 1996) and took a grounded approach (Glaser, Strauss, 1967). The grounded theory approach requires researchers to ignore the litera-

ture of theory and fact on the area under study. Because it is difficult to enter the field without preconceptions of organizational competences in mind, we followed Gavetti and Rivkin's (2007) approach and tried to distinguish the notions of organizational competences with which we entered the field from concepts that we truly induced. To minimize the likelihood of replacement of actual findings with the preconception of organizational competences, the research design triangulated multiple data-collection methods, employed quantitative multi-casestudy analysis, multiple investigators and multiple interpreters of data. Research methodology design and headings followed Eisenhardt's (1989) recommendations for building theory from case-study research.

3.1 Getting Started

We started the research with a research question regarding what specific and generic organizational competences compose competitive advantages of product leadership, customer intimacy or operational excellence, how these organizational competences are developed and what distinctive learning processes lie behind each competence development. We began the data gathering process with preconceptions that organizational competences are a distinct composition of skills, knowledge, processes, relationship, proper ties, or outputs that fuel different types of competitive advantages. We recorded these preconceptions in a document that is available from the author. We identified constructs at this stage and did not articulate a hypotheses, in order to maintain theoretical flexibility.

3.2 Selecting Cases

First, we needed to find companies with a distinct competitive advantage in three value disciplines – product leadership, customer intimacy and operational excellence. We approached that task by examining the business magazines, professional magazines, the Internet , business and professional circles and compiled a list of 15 Slovene companies– Atech, Akrapovič, BiaSeparation, Bisol, Eurolabel, Hidria, Genelitik, GenePlanet, Instrumentation Technologies, Metrel, Optotek, Pipistrel, Seaway Group, Studio Moderna, and Tajfun – that proclaimed a competitive advantage in specific market niche internationally (Table 1 in Appendix).

In the second step, six senior management consultants close to these companies ranked these companies by three criteria: (1) ranking by the most distinctive competitive advantage in product leadership; (2) ranking by the most distinctive competitive advantage in customer intimacy and (3) ranking by the most distinctive competitive advantage in operational excellence. Three companies ranked at the top were depicted for further in-depth study: Pipistrel was identified as the company with the most distinctive competitive advantage in product leadership; BiaSepearation was identified as the company with the most distinctive competitive advantage in customer intimacy and Optotek was identified as the company with the most distinctive competitive advantage in operational excellence.

3.3 Crafting Instrument

In the third step we conducted in-depth interviews with the CEOs and other long-tenured senior leaders in the companies. We held several sessions of three-hour-long interviews on average. We started the interview with the open-ended question "in what skills, knowledge, processes, relationship, proper ties, or outputs is your company substantially better than the competitors and how these skills, knowledge, processes, relationship, proper ties, or outputs have been developed and sustained over time". We listened carefully to what was reported and asked for more detailed explanations when the interviewee came across ill-justified competences. We also challenged interviewees when we came across contradictory views and explanations.

All interviews were transcribed and written in case study manner of 12 000 words in-length on average. As suggested by Eisenhardt (1989) we circulated case study write-ups to the interviewees, who could then edit them further. We also used data from internal company sources and complemented them with data found in secondary sources found at ajpes.com and gvin.com portal, company press releases, and other reports written by analysts and journalists. Interviews were conducted mainly in 2010-2011, while the time period analyzed in detail stretched from 2000 to 2010.

3.4 Analyzing Data

We did the bulk of our analysis after we conducted most of the interviews. After all of the case studies were approved, we read line by line to identify codeable concepts - words, sentences or phrases with possible significance. This process resulted in the capture over 130 fragments of text, each of which was tentatively labeled, then sorted into preliminary categories with similarly labeled text (Table 2 in Appendix show example of text decoding; full document of text decoding is available from the author). Next we examined these categories looking for relationships between them, in some case merging and/or relabeling the categories and documenting ideas and themes emerging from them. Through this rigorous process we played with meanings emerging from them and looking for new emergent themes, and then we compared the data across the three cases - finally we narrowed all subthemes into three core questions for each of the three businesses (Glaser, Strauss, 1967): (1) what is the core problem of the business (there's usually potential for the biggest profits); (2) what competences are required for effective unraveling of the business problem; and (3) how are identified competences developed. The process of decoding was performed by two people, both experienced in dealing with the interpretation process of qualitative research.

Table 1 summarizes core findings to the three questions (1) the nature of the core problem of the business (there's usually potential for the biggest profits); (2) the types of organizational competences required for effective unraveling of the business problem; and (3) the processes by which identified organizational competences developed for three distinct ways of competing - product leadership, customer intimacy and operational excellence.

	What is the core problem of the business?	What competences are requi- red for an effective solution of the core business problem?	How are identified competences developed?
Product leadership	The core problem is how to sell the product design to a regula- tory agency and customers and turn it into dominant design. This grand problem is disguised into two sub problems: how to win the regulatory bodies on your side; and how to change customer preferences. Put differently, the core problem is to create value for potential cu- stomers and other stakeholders, and make them see and grasp the value created.	Competence about design of new categories of planes (opera- tional competence).	Investments into own research institute, coo- peration with universities, participation at the professional events, headhunting for the best experts, loyalty of employees; operates like cooperative not profit –seeking firm, selective patenting.
		Competence to shape customer preferences towards the use of a new category and to influence the regulatory bodies to appro- ve its use and second (stakehol- der influence competence).	Investments into an external sales and distri- bution system that functions like a coopera- tive, participation at different quality reward competitions like NASA, European Business Award etc.; total facility and product system designed in a fuel efficient manner (long befo- re eco building became popular); cooperation with NASA and other global reference institu- tions (the European Quality Award).
		Competence how to manage multiple-categories of planes over many markets to diversify (minimize) business risk (com- petence of managing business risks).	Outsourcing production, sales and distribu- tion activities; and focusing only on research, competing and teaching.
Customer intimacy	The problem is how to enter the established relationship between incumbents and appropriate small portion of the value created for yourself. The problem of entering the esta- blished relationships between incumbents which appropriate the greatest part of value-cre- ated industry pie is disguised in the problem of effective risk management for the customer and the company; and the com- pany capacity to survive in the long-term without potential for short-term gains.	Effective neutralization of busi- ness risks for the customer and the company (competence of managing business risks).	Financing the business with long-term profit seeking investors (business angels, and ven- ture capital funds), patenting and investment into a highly-networked, highly expert, highly internationalized sales force; workforce loyalty.
		Competence to influence inve- stors and manage their prefe- rences, expectations (stakehol- der influence competence).	Get long-term financial funds, investors Moving headquarters close to investors; inves- tments into personalization of relationships with customers is developed by participation at professional events, organization of own professional events, headhunting a sales force that have good and trustful relationships with customers.
		Competence to innovate economies of scale for yourself (operational competence).	Clear justification of cost savings for customer. Own cost efficient production methods; eco- nomies of scale.
Operational excellence	The main business problem is how to create product niches with above average growth potential (innovate new product categories) and sell it to all incumbents so that economies of scale are created for the com- pany and economies of scope are created for the incumbents.	Competence to create the business niche with high- growth potential / innovate new product categories (innovation competence).	Investments into an active member of diffe- rent platform where different members from different fields contribute their ideas how the field of photonics may look in the future.
		Competence to work with competitors and create econo- mies of scope for the incum- bent firms (so that their sales product portfolio is complete) (stakeholder influence compe- tence).	Investments into B2B relationships with incumbents; trust is legitimized by incorpo- ration of Canon – big MNC that does not compete with Optotek customers directly.
		Competence to innovate economies of scale for yourself (operational competence).	Incorporating Japanese quality control and cost control business standards.

4. Shaping Hypotheses

The fundamental business axiom is that the money lies where the biggest business problems are (Christensen, 2003). Put differently, the tougher the business problem, the greater the profit creation opportunities. However, the greatest profit creation opportunities are difficult to see and implement because top decision makers wrestle with cognitive, structural and institutional inertia (Gavetti, 2011). The theory of competitive advantage provides some tentative propositions where to search for biggest money-making opportunities (Brandenburger, Stuart, 1996), namely to look for solutions that allow (1) effectively creating value for the customer in a completely novel way; (2) efficient capturing part of the customer value (a market pie) for yourself; or (3) effective creation and capturing value from incumbents firms.

The research has shown that the core business problem of Pipistrel, which holds the competitive advantage in product leadership, is how to create value for the customer completely anew. In the case of Pipistrel, creating value for the customer in a completely novel way mainly deals with how to innovate new product categories of UL planes; and how to make prospective customers and aviation regulators regulators can be viewed as institutional customers - value these novel categories of UL planes. Put differently, the core business challenge of competing with product leadership is how to create value for the customer completely anew, which can be further divided into: (1) how to create and embody the value in a product; and (2) how to make others appreciate the value embodied in the product (change their structure of preferences).

Proposition 1A. Competing with product leadership is effective when the core business problems are related to: (1) how to create and embody the value in a product; and (2) how to make others appreciate the value embodied in the product (impact their preference structure).

The research has shown that the core business problem of BiaSeparation, which holds the competitive advantage in customer intimacy, is efficient capturing part of the customer value (a market pie) for itself. In the case of BiaSeparation, efficiently capturing part of the customer value (a market pie) for yourself mainly deals with how to reduce drug production cost for all kinds of customers ranging from big pharma companies to small bio-drug firm start-ups; and how to manage business risks of longterm financing of the BiaSeparation business model. Universally speaking, the core business challenge of competing with customer intimacy is how to efficiently capture part of the customer value (a market pie) for oneself, which can be further decomposed into: (1) how to create and embody the value in a product that saves cost for customers; and (2) how to manage business risks that originate from shortage of long-term financers.

Proposition 1B. Competing with customer intimacy is effective when the core business problems are related to: (1) how to create and embody the value in a product that saves cost for customers; and (2) how to manage business risks that originate from shortage of long-term financers.

The research has shown that the core business problem of Optotek, which holds the competitive advantage in operational excellence, is the effective creation and capturing value from incumbent firms. In the case of Optotek, the effective creation and capturing value from incumbent firms mainly deals with how to innovate a new product category of medical lasers attractive for big global producers of medical lasers and how to produce this novel product category in a cost-efficient manner. To generalize, the core business challenge of competing with operational excellence are: (1) how to enter incumbents by innovating in a complementary product that create economies of scale for incumbent firms; and (2) how to reduce the production cost for oneself in such a way to maximize economies of scale.

Proposition 1C. Competing with product leadership is effective when the core business problems are related to: (1) how to enter incumbents by innovating in a complementary product that create economies of scale for incumbent firms; and (2) how to reduce the production cost for oneself in such a way to maximize economies of scale.

Different types of competitive advantages evolve around different features of the core business problem (Hamel and Heene, 1994, Dosi et al., 1998). The features of the core business problem define organizational competences required for the effective resolution of the different features of the business problem (Gavetti et al., 2007, King et al., 2001, Dosi et al., 2000). Our research has revealed two types of organizational competences that are required for the effective resolution of different features of the business problem: (1) generic organizational competences that do not dependent on the nature of the business problem, and (2) specific organizational competences that depend on the nature of the business problem. Generic competence independent of the nature of the business problem is a competence to influence and manage the expectations of most relevant external stakeholders (customers, investors, regulators etc.). This is aligned with the Frooman (1999) proposition that the competence to influence stakeholders is the core VRIO resource of the firm. Specific organizational competences that depend on the nature of the business problem are: competence to innovate, competence to manage business risk and operational competence.

Proposition 2A. Regardless of the type of competing, the required competence for long-term company survival is competence to "influence stakeholders".

Investments into the development of specific organizational competences are valuable only when they are aligned with the nature of the business problem. Research has shown that in addition to competence to influence stakeholders, Pipistrel, which holds a competitive advantage in product leadership, attributes its success to two types of organizational competences: competence to innovate, and competence to manage business risk. Competence to innovate is – the capacity to think creatively, to relentlessly pursue new product variations, to commercialize them quickly (Treacy and Wiersema, 1993) – is needed to address "how to create and embody the value in a product" aspect as a core business problem.

Competence to innovate enormously increases the business risk due to over-exploration of the novel product categories on the account of exploitation of existing product categories (Levinthal and March, 1993). Due to above the average business risk, competence to innovate it has to be complemented with the competence to manage (minimize) business risks. More specifically, capacity to manage the financial aspect of the business risk is according to the Federation of European Risk Management Association on the increase (Sadgrove, 2005).

Proposition 2B. Establishing the competitive advantage in product leadership requires two competences: innovation competence and competence to manage business risks.

In addition to competence to influence stakeholders, BiaSeparation, which holds a competitive advantage in customer intimacy, attributes its business success to operational competence and to competence to innovate. Operational competence is important for effective tailoring of BiaSeparation's generic products (CIM monolithic columns needed for purification of drug concentrates) to adapt specific drug production processes for a diverse group of customers, ranging from big multinational pharma companies to small bio-drug startups. Their drug production processes are unique, and present the source of the competitive advantage for BiaSeparation's customers. Their drug production processes are in most cases wholly protected by patents at the national drug agencies like the FDA in the USA or the EMA in the EU. BiaSeparation holds state-of-the art operational competence in a very narrow product line. Being the only one in the world in this specific product line - the supply of CIM monolithic columns, BiaSeparation's competitive advantage is driven by several drivers: scale, capacity utilization, linkages, vertical integration, location, timing, learning, policy decision and government regulations (Porter, 1985).

Yet operational efficiency in tailoring CIM monolithic columns to individual customer needs is very expensive due to the fact that big revenues are expected to come with substantial time delay. This creates substantial business risks. "One principle such companies understand well is the difference between profit and loss on a single transaction and profit over the lifetime of their relationships with a single customer" (Treacy and Wiersema, 1993). Operational competence has to be coupled with competence to manage business risk. More specifically, the capacity to manage the commercial aspect of business risk, which presents the highest share of all types of risks according to FERMA (Sadgrove, 2005).

Proposition 2C. Establishing the competitive advantage in customer intimacy requires two competences: operational competence and competence of managing business risks.

Research has shown that Optotek attributes its success to the competence to innovate, operational competence and competence to influence stake-holders. Optotek seeks ways to minimize overhead costs, to reduce transaction costs, eliminate unnecessary intermediate production costs, and optimize business processes across functional and organi-

zational boundaries. However, being operationally efficient – performing similar activities better than the competitors - is not sufficient for a sustainable competitive advantage (Porter, 1996). Optotek sustains its competitive advantage in operational efficiency or excellence by innovating new product categories that complement the portfolio of big incumbents and create economies of scope for them.

Proposition 2D. Establishing the competitive advantage in operational excellence requires two competences: innovation competence and operational competence.

Figure 1 graphically summarizes the interaction between distinctive ways of competing (product leadership, customer intimacy, and operational excellence) and different types of organizational competences.

Figure 1 Types of competitive advantage and competences



Source: Author

Analysis of Pipistrel and Optotek, which both exhibit competence to innovate, showed that companies use multiple approaches to develop this competence. First, both companies work in close cooperation with universities, have active membership in different professional platforms, compete in international professional events etc. This approach to development of innovation competence we labeled bonding. Secondly, both companies are headhunting the world's best technical experts globally; also both companies invest a lot into personal relationships and profit sharing schemes with employees, which results in a high level of employee loyalty. This approach we labeled attracting. The third group of activities which result in the development of innovation competence include selective patenting; competing in international professional events, participating at conferences, professional events, and organizing own professional events. This approach we labeled showcasing.

Proposition 3A. Innovation competence is developed through bonding, attracting and showcasing.

Analysis of Pipistrel and BiaSeparation, both of whom exhibit competence to manage business risk, is developed also by different processes. First, both companies focus only on a few core activities (research), outsource the rest of value adding activities (production, sales and distribution activities) and educate their stakeholders (customers, producers, distributors etc.) how to conduct these outsourced activities. This results in the reduction of the business-risk. We labeled this approach specialization. Secondly, both companies finance its investments exclusively by equity capital instead of debt capital, which also reduces the risk of insolvency. We labeled this approach capitalization. Last but not least, both companies - though being small - sell their products globally, with a highly internationalized sales force; highly internationalized management board. Internationalization reduces diversified business risk on multiple-territories.

Proposition 3B. Competence over managing (minimizing) business risk is developing through specialization, capitalization and internationalization.

As Porter (1996) proposed, operational competence is established by "any number of practices that allow a company to better utilize its inputs ...Some companies are able to get more out of their inputs than others because they eliminate useless efforts, employ more advance technology, motivate employees better, or have greater insight into managing particular activities..." Analysis of Optotek and partly also BiaSeparation, which both exhibit operational competence, showed that this competence is the result of unique cost efficient production methods, focus on narrow product lines sold globally that fuel economies of scale, efficient quality control system (that eliminates bad products, and minimizes waste of time and material) and clear cost control business standards. We labeled these approaches specialization, quality control and cost monitoring.

Proposition 3C. Operational competence is developed through specialization, quality control and cost monitoring.

All three companies possess competence to influence stakeholders. This competence is developed by three different approaches. The first approach is bonding that is enforced through participation at different quality award competitions like the NASA, the European Business Award; cooperation with the NASA and other global reference institutions; moving the headquarters close to the investors-owners, investments into B2B relationships with incumbents and personalization of relationships with customers etc. The second approach is labeled specialization in narrow, state-of-art competence base. All three companies cover a very narrow product line, offer it internationally, invest into an external sales and distribution system or develop an internal one by headhunting a sales force that have good and trustful relationships with customers. The third approach we labeled shielding. For instance Canon – owner of Optotek - provides a shield for Optotek's business initiatives and presents an important source of legitimization of Optotek's business practice.

Proposition 3D. Competence of influencing stakeholders is developed via bonding, specialization and shielding.

Figure 2 graphically presents processes and approaches by which different organizational competences are developed. Specialization and bonding are two most effective approaches to the development of organizational competences. Specialization is a crucial building block of three organizational competences: competence to influence stakeholders, operational competence and competence to manage risks. The process of bonding is the building block of two competences: the competence to influence stakeholders and the competence to innovate.

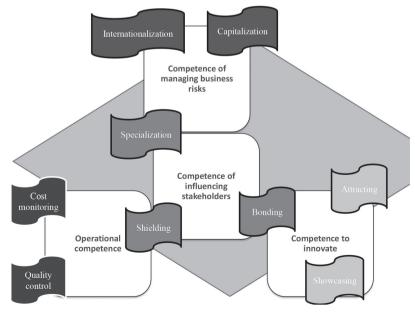


Figure 2 Processes behind the development of organizational competences

Source: Author

5. Concluding Remarks

The processes by which core organizational competences that lie behind different types of competitive advantages remain a sort of puzzle. This paper aimed to look behind the veil and uncover some of the dominant processes that result in the creation of distinctive organizational competences and sustainable competitive advantages.

The analysis we conducted here identifies nine processes that result in four distinct organizational competences: bonding, attracting, showcasing, specialization, capitalization, internationalization, specialization, quality control, cost monitoring, and shielding. The processes of bonding, attracting and showcasing create the organizational competence to innovate. Processes of specialization, capitalization, and internationalization create organizational competence to manage (minimize) risk. The processes of specialization, quality control, and cost monitoring build up the organizational competence of operational efficiency. And finally, the processes of bonding, specialization and shielding result in organizational competence to influence stakeholders.

Furthermore, our research revealed that different organizational competences result in different types of competitive advantage. Competence to influence stakeholders, competence to innovate and competence to manage risk result in a competitive advantage in product leadership. Competence to influence stakeholders, competence to manage risk and operational competence result in a competitive advantage in customer intimacy. Competence to influence stakeholders, competence to innovate and operational competence result in a competitive advantage in operational excellence. Though product leadership, customer intimacy and operational excellence are three distinct, mutually exclusive ways of competing, our research revealed (1) that they are all built out of four organizational competences and (2) that these four organizational competences are developed by similar knowledge creation processes. The distinctive way of competing does not come from different organizational competences or different competence creation processes, but from different ways of combining these competences into cohesive architectures (Baldwin, Clark, 2000). Each type of organizational competence thus presents a unique module, and competitive advantage originates from unique compositions of different modules (organizational competences) together in cohesive wholes.

However, due to the case study approach, the paper provides limited generalizability of conclusions to mainly technologically intensive, small and medium sized companies that are run by entrepreneurial founders. To overcome the research limitation of limited reliability, the author suggests the application of a similar qualitative research approach to labor intensive, large companies with dispersed ownership and management structure. To overcome the research limitation of limited research validity, the author also suggests the application of a large-scale quantitative research approach on a similar set of companies, namely technologically intensive, small and medium sized companies that are run by entrepreneurial founders.

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(ENDNOTES)

1 Average effective workers, calculated on the actual working hours performed in the years.

Appendix:

Name	Competitive advantage	Revenues 2010 (in M €)	Revenues 2000 (in M €)	Average employees 20101
Atech	First in the Alpe Adria region in the production and supply of electro-motors and navigation control systems for heaters on biomass	5,5	1,4	69
Akrapovič	First in the world in titanium exhaust systems for racing bikes	31,6	7,8	415
BiaSeparation	First in the world (the only one) in CIM monolithic columns - the most cost efficiency technology used in the purification stage of bio-drug production process	3,1	0,3	41
Bisol	First in the world (the only one) in top quality photovol- taic modules (the highest electricity extraction ratio and the lowest outwear of photovoltaic modules)	60,4	0	125
Eurolabel	Third in the world in the software service of design and printing of labels with bar codes and RFID labels	3,2	0,55	38
Hidria	Third in the world in diesel cold start systems for internal combustion engines. Proactive design manufacturer for OEM and tier 1 suppliers. First in the world in range extenders for hybrid electric vehicles. Proactive design manufacturer for OEM. Second in Europe in Alu die ca- stings for automotive steering systems. Proactive design manufacturer for tier 1 and tier 2 suppliers.	187	77	2611
Genelitik	Number one in Slovenia in providing the product of "advice on optimal nutritional and lifestyle choices based on genetic analysis"; geographically in the process of refocusing on the EU market and Wellness centers	0,13	0	2
GenePlanet	Number one in Slovenia in providing the product of "advice for prevention of potential (curable) diseases based on genetic analysis"; geographically in the process of expanding to the CEE region and B2C market	0,42		3
Instrumentation Technologies	First in the world in the production, supply and advice in instrumentation for beam particles, that is instrumenta- tion for measuring the positions of elementary particles in accelerators	5.4	0,18	51
Metrel	First in Europe in the production and supply of test and measurement instruments for electrical safety of installa- tions in the low voltage electrical distribution industry	12,1	10,3	168
Optotek	First in the world in OEM sales of ophthalmological lasers for diagnostics and therapy. Used to be proactive designer. Transitioning from OEM to own branding strategy. In year 2011 60% of revenue expected from own brand.	4,38	2,1	51
Pipistrel	Number one in the world in the new and recently established categories of ultra light aircraft: first in the world in double seat motor gliders that can turn into pure gliders once in the air; first in the world in two-seat gliders with an auxiliary and in the category of electric two-seater airplanes; first in the world in newly established category of electric two seater gliders (not yet approved for flying in many countries).	7,2	0,67	53
Seaway Group	First in the world in sails and motor boat design for OEM. Proactive designer. Main revenue driver royalties are received throughout product life cycle from designed boats. Transitioning to own brands: Shipman - a line of carbon sailing yachts, Skagen - a range of world-girdling raised pilothouse motor yachts, and Greenline - a line of carbon boats with an electric engine.	34,3	4,58	185
Studio Moderna	First in Central and Eastern Europe in electronic retailing and direct marketing	250	25	4500
Tajfun	First in Europe in the production and supply of three point logging winches	15,1	5,5	137

Table 1 List of companies with a competitive advantage in a specific market niche internationally

Competitive advantage in product leadership. Case: company Pipistrel.		
First order codes (only a few examples):	Sub-themes identified:	Aggregate findings and construct development:
We started to produce ultra-light planes (ULP) more than two decades ago. The company was set up in 1982 At the beginning there were no flight standards for the ULP, later international and natio- nal aviation agencies posed severe flight constraints and conditions for ULP We constantly influence these agencies and their standards for ULP flights We shape them This is our main strategic task. The IATA adjusts stan- dards by our new UL planes	This business is determined by the rules of exter- nal regulatory bodies (national aviation agency). External regulatory bodies (international aviation agency) determines the market niches by setting flight standards; when doing so it looks for planes of some referential agents; Pipistrel is such a refe- rence. 	 #1: What's the core problem of the business: The core problem of the business is how to sell the product design to a regulatory agency and customers and turn it into a dominant design. This grand problem is disguised into two sub problems: how to win the regulatory bodies on your side; and how to change customer preferences.
Mana them 20 means are use started decoming have	At the basis is the support of a plane without an	#2. What compatences are remined for effective
More than 20 years ago we started dreaming how to fly an ultra-light plane without any engine, how to design an energy neutral plane. Back then fuel consumption for ULP was not important yet today it is getting extremely important. Twenty years ago we were laughed at, now we can laugh. Because of our twenty-year old philosophy of flying planes without an engine, we are way ahead of the com- petition. Even if they try to copy us today, it is im- possible to copy the deep knowledge that we have developed during the years of experimentation and failure over design and production of energy effi- cient ULPs.	At the beginning the concept of a plane without an engine and the company was perceived as foolish, irrational; the company needed to sustain the peri- od of foolishness. After some time what seemed foolish turned out to be a lead competence. Huge diversity across customers. Total customization of product production. 	 #2 - What competences are required for effective unraveling of the business problem: Competence to design new categories of planes; Competence to shape customer preferences towards the use of a new category; Competence to influence the regulatory bodies to approve its use and second; Competence how to manage multiple-categories of planes over many markets to diversify (mini- mize) business risk.
The French people want different kinds of planes than the Italians, Saudi Arabs, Brazilians or the Chinese. French men take planes to be their big toys, while Italians want planes to show off to their neighbors with as much light as possible. We design each plane to fit the preferences of a specific custo- mer. Every customer matters.		
We intentionally do not invest either in marketing, or in sales We do not want these activities and jobs. They are needed, yet we preserve the scarce resources to invest in research, development and design of new categories of ULP. Very innovative products are being introduced in professional ma- gazines, they have won the professionally quality and innovation awards and this is the best mar- keting possible through which we also impact the regulatory bodies. We have been following in this direction for over 20 years now.	The advanced design of UL planes (with follow-up publicity in diverse media) serves as replacement for cost-consuming sales and marketing activities. 	 #3 -How competences are developed: Competence about design of new categories of planes is developed via investment into an own research institute, cooperation with universities, participation at the professional events, headhunting for the best experts, loyalty of employees; operates like a cooperative not profit – seeking firm, selective patenting. Competence for shaping customer preferences is developed by investments into an external sales and distribution system that functions like a co-
We developed the first five prototypes, we conduct tests and when they are well passed we decompose the new category of ULP into a set of parts whose production is outsourced to specialized producers. We have tight quality control procedures following the Japanese TQM philosophy. Also outbound business activities like sales and maintenance are outsourced to our distributors.	New product innovation is the core business adding activity – after the development of product speci- fication, production and value chain activities are completely outsourced. Only the first few prototypes are produce by the company. 	 and distribution system that functions lace a coperative, participation at different quality awar competitions like the NASA, the European Bt siness Award; total facility and product system designed in fuel efficient manner (long before ecbuilding became popular). Competence for influencing the regulatory bod es is developed by cooperation with NASA an other global reference institutions (the Europea quality rewards). Competence of managing multiple-categorie of ULP over many markets to diversify (min mize) business risk is developed by outsourcin production, sales and distribution activitie and focusing only on research, competing an teaching.

		Competitive advantage in customer intimacy. Case: Company BiaSeparations.			
First order codes (only a few examples):	Sub-themes identified:	Aggregate findings and construct development:			
We produce support products that make API and drug development processes more efficient Our ustomers are bio firms and R&D departments of oig pharma. Our products are called We are the only ones in the world that are develo- oing and offering intelligent filters. In professional terms, they are called monolithic chromatographic columns. Monoliths are enabling tools for the puri- ication of biomolecules in nanometer range (virus, etc.) that offer unprecedented possibilities. They stand for elaborate design of high speed, high effici- ency, and high yield in downstream processing. We have more than 100 variations of monolithic chro- natographic columns.	Provide support to the customer key value adding processes. One product in many variations. 	 #4: What's the core problem of the business: The problem how to enter the established relationship between incumbents and appropriate small portion of the value created for yourself. The problem of entering the established relationships between incumbents which appropriate the greatest part of value-created industry pie is disguised in the problem of effective risk management for the customer and the company; and the company capacity to survive in the long-term without potential for short-term gains. 			
We are small and the drug development process ta- ces time and involves uncertainties. Our customers want assurance that we will still be around in 10 ye- try' time when the final drug and drug development process is patented and launched on the market. Despite the fact that our technology reduces drug development and production costs significantly lox), this is not enough to earn the trust of the customers. We need to develop trust and convince inn/her that we are capable of long-term survival. Deherwise we are too risky a choice for a customer despite the considerable costs savings that we pro- ride for them.	Proof of being capable of surviving long-term. Cre- ating substantial cost and quality benefits for the customer is not enough. Proof of being capable of surviving long-term 	#5 –What competences are required for effective unraveling of the business problem: Competence of effective neutralization of busi- ness risks for customers and the company; Competence of effective personalization of rela- tionships with all stakeholders (customers, inve- stors, also competitors) and to treat them non- rationally like family in order to enhance chances for long-term huge success (rationality). 			

When we develop a specific product (intelligent	Company employees are consulting and working	 e jointly on important research projects (value adding activities) with customers. They are acting as clients' employees. I Development of a customer network through an activite presence at professional events and networks. 	 #6 – How competences are developed Competence of customer/company business
filter) for a client, we have to constantly provide	jointly on important research projects (value		risk management is developed by financing the
product servicing to the clients. Practically spea-	adding activities) with customers. They are acting		business with long-term profit seeking investory
king we place our employee into the client's lab to	as clients' employees.		(business angels, and venture capital funds), pa-
provide continuous support and advice to their API	Development of a customer network through an ac-		tenting and investment into highly-networked,
innovation and drug development process.	tive presence at professional events and networks.		highly expert, highly internationalized sales for-
We constantly attend professional conferences, symposia and other events to come across new trends and new potential clients.		 e.g. workforce loyalty. Competence of effective personalization of relationships with investors is developed by moving headquarters close to investors; competence of effective personalization of relationships with customers is developed by participation at professional events, organization of own professional events, headhunting a sales force that have good and trustful relationships with customers. 	

Competitive advantage in operational excellence. Case: company Optotek		
First order codes (only a few examples):	Sub-themes identified:	Aggregate findings and construct development:
The medical laser systems market has been expan- ding at a steady rate worldwide in the last 25 years. Lasers in general have been on the rise from the 1960s on, when a laser started spreading around many diverse sectors from manufacturing tools, production of machine high-strength steels, manu- facturing of photovoltaic cells, semiconductors and miniaturized components for the computer indu- stry to medical sector Currently, lasers are being extensively employed for diagnosis and treatment of a number of diseases, which hitherto were difficult to treat using traditi- onal medicine.	This is a mature type of business that serves mul- tiple industries from tooling to computer industry and medicine. There's wider usage of lasers for medical diagnosis and treatment. 	 #7: What the core problem of the business is: The main business problem is how to create product niches with above average growth potentia (innovate a new product category) and sell it to all incumbents so that economies of scale arcreated for the company and economies of scopare created for the incumbents. Instead of com peting with incumbents – where it is not possibl to win – Optotek has selected to cooperate with big incumbents.
Optotek grasped the opportunity and in 1999 de- veloped the first Nd:YAG lasers for treatment of secondary cataract and in 2004 also a special laser application for post-surgical treatment of glauco- ma. The latter is known more as slit lamps. Optotek's strategy was to approach established companies that produced and sell different medical lasers from dermatology, ophthalmology and den- tistry, but lack slit lamps in their product offer. The strategy proved right. After 2000 all products were sold at first to OEMs.	Optotek is the first in the world in developing a new type of laser for treatment of secondary cataract (no one had it at the time of its development). Innovate new product categories and offer them to incumbent firms so that their sales product portfo- lio is complete. 	 #8What competences are required for effective unraveling of the business problem: Competence to detect the business niche with high-growth potential before others (be the firs mover) Competence to innovate new product categori- es and create economies of scope for incumben firms (so that their sales product portfolio is complete) Competence to innovate economies of scale for yourself
 Optotek is organized into two departments, resear- ch and development and production. Collaboration between the two is tight. Production is organized in small-batches at best amounting to 100 pro- duct/ batch. Each batch is adjusted to new learning from the R&D department and feedbacks from the OEMs. I am (CEO, Boris Vedlin) a member of Photonics 21, where new trends in laser technologies and new applications are spotted. 	Two organizational units – one for innovating new business niches, and another for innovating and implementing cost-efficient production solutions. Top management is member of the EU platform where different members from different fields con- tribute their ideas on how the field of photonics may look like in the future. 	 #9 - How competences are developed Competence to detect new business niches with high-growth potential before others (be the firs mover) is developed by being an active membe of a different platform where different member from different fields contribute their ideas or how the field of photonics may look like in the future. Competence to innovate new product catego ries and create economies of scope for incum bent firms (so that their sales product portfoli is complete) is developed by top managemen personal trust base investments into B2B relati onships with incumbents; trust is legitimized by incorporation of Canon – big MNC that does no compete with Optotek customers directly. Competence to innovate economies of scale for yourself is developed by incorporating Japaness quality control and cost control business stan dards.

Source: Author

Natjecanje stvaranjem svojstvenih organizacijskih sposobnosti: "Kako to učiniti"

Sažetak

Svrha ovoga rada je dvojaka: (1) identificirati specifične i generičke organizacijske sposobnosti koje čine tri različite vrste konkurentskih prednosti - vodstvo proizvoda (product leadership), individualiziranu ponudu vrijednosti kupcima (customer intimacy) i operativnu izvrsnost (operational excellence) - i (2) identificirati procese i metode razvoja identificiranih organizacijskih sposobnosti. Metodom studije slučaja, glavni rezultati ukazuju na dva provizorna zaključaka za izgradnju teorija. (1) Iza različitih načina natjecanja postoje samo četiri različite organizacijske sposobnosti – inovativna sposobnost, sposobnost upravljanja poslovnim rizicima, operativna sposobnost i sposobnost utjecanja na dionike. Ove četiri sposobnosti čine tri različita načina natjecanja: natjecanje vodstvom proizvoda, natjecanje individualiziranom ponudom vrijednosti kupcima i natjecanje operativnom izvrsnosti. (2) Sve četiri organizacijske sposobnosti sastoje se od devet organizacijskih procesa i pristupa: povezivanja, privlačenja, pokazivanja, specijalizacije, kapitalizacije, internacionalizacije, specijalizacije, kontrole kvalitete, praćenja troškova i zaštite. Međutim, zbog dizajna studije slučaja, ograničena je mogućnost generalizacije rezultata rada te je stoga potrebno provjeriti valjanost zaključaka kvantitativnim metodama istraživanja.

Ključne riječi: konkurentska prednost, ponuda vrijednost, organizacijske sposobnosti, procesi stvaranja sposobnosti