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Making use of the crowd

Can crowdsourcing function as an enabler for Swedish small – and medium size enterprises?

Master thesis within Business Administration

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Abstract

The purpose of this study is to explore the concept of crowdsourcing and how this can be exploited by small- and medium size enterprises in Sweden, to function as a mean for improvement. In order to achieve this, a working conceptual model was outlined and three research questions were formulated. The literature review consist of the origin, concept and process of crowdsourcing, its advantages and disadvantages, similar concepts, as well as the resource based view (RBV) in line with McGrath et al. (1995). This study conducts a multiple holistic case study, using a qualitative method and an inductive approach. Four Swedish companies were interviewed and the gathered data presented in the empirical findings. This data was further compared and interpreted in relation to the literature review in the analysis chapter.

The conclusions of the study are that crowdsourcing can function as an enabler with the premise that the process can enable Swedish SME's to compete with larger companies. However, some sort of tradeoff is a necessary and furthermore a decision has to be made whether such an initiative should be pursued. Furthermore, the complexity of the crowdsourcing process is determined by the nature of the initiative.

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1 Introduction

In the following chapter, the chosen area of research is clarified. The chapter includes a historic perspective of crowdsourcing, as well as modern day examples and the possible challenges small- and medium sized enterprises may face concerning crowdsourcing. The chapter also includes what existing research has already been conducted surrounding the topic and the potential gaps in literature. Three research questions are outlined, followed by a clarification of the study's purpose and the delimitations of the study.

1.1. Background

Seeking help from the public regarding idea generation has always been prominent. However, the realization of the power of the crowd has broadly been overlooked or ignored, or at least until the recent upswing concerning the concept of crowdsourcing. Nowadays, crowdsourcing is something that is used by well-known global companies around the world, including; Coca Cola, IBM, Microsoft, Google, GE and McDonalds to mention a few (eyeka, 2015).

Crowdsourcing is not a new concept even though it just recently got its name. In 1714, the British government were stuck on a solution to what was called 'The longitude problem', which made sailing troublesome. The problem was how to calculate their longitude at sea, which required knowing the local time (by observing the sun), but also simultaneously knowing the time at some reference point for example Greenwich (nmm, 2015). The British Government offered a £20,000 award for a solution to the problem. In 1783, the French academy of science offered a prize of 2400 livres by orders from King Louis XVI, if someone could come up with a method to extract alkali from sea salt (Kiefer, 2002). In 1936, Toyota held a public logo design competition in which they received 27.000 entries; the result of the competition is the logo seen today (toyota-global, 2015).

In recent years, there has been a large interest by academics and practitioners concerning crowdsourcing as an open innovation model. However, these studies have especially been focused on large, North-American companies (Vigier, 2007). In general, the majority of prior research has been focused on open innovation and large or multinational enterprises and not specifically on crowdsourcing (Bianchi et al. 2010; Christensen, Olesen, and Kjær 2005; Lecocq and Demil 2006; Van De Vrande et al. 2009). The results in terms of open innovation are various. For instance the aforementioned researches came to the conclusion that open innovation implies that companies depend on critical external knowledge assets to be successful in realizing innovative endeavors. In addition, they concluded that small technology-based companies are drivers for upcoming technological innovation, due to highly specialized and deep technical knowledge.

By reviewing previous research within the topic, we found that there is a lack of research conducted concerning small- and medium sized enterprises (SMEs) and their ability to access and implement the concept of crowdsourcing as an enabler for improvement (Sivula & Kantola, 2014). Is crowdsourcing then a concept that can be explored by SMEs with limited resources?

1.2. Problem Discussion

The size of the company has an impact on its respective performance conditions (Boswell, 1972; Boter & Holmquist, 1998). Penrose (1995) states that the position of smaller companies regarding the external world differs from those of larger companies, as the latter tend to have competitive advantages. Penrose explains that the market connections of larger companies tend to be more extensive, they have a better position on the capital market and larger internal funds. According to Penrose, the lack of access to capital can be viewed as one the major restrictions of a small company. In addition, the author mentions, that large companies have accumulated valuable experience and, due to their size, they have an advantage concerning technological and organizational economies.

The SMEs' 'smallness' generally implies a weak resource base and this leads, compared to larger companies, to different operating conditions (Boswell, 1972; Boter and Holmquist, 1998). Whereas larger companies have the resources and financial means necessary in order to invest in processes, SMEs continue to be faced with limited resources. This lack in resources can pose a problem concerning the protection of intellectual property, as it can been seen as risky to share innovation problems within a network (Souza et al., 2009). This has an impact on their ability to engage in innovative efforts and consequently on their ability to achieve a competitive advantage. SMEs have a great impact in the European economy and therefore, they should improve their innovation capabilities, and manage their innovation processes (Vigier, 2007).

McGrath et al. (1995) focused on the management processes through which activities at the subunit level of companies are translated into competitive advantages. The result of the research was that the emergence of competence, which is the ability of an initiative to reliably meet or exceed its objectives, is a necessary precursor to competitive advantage. McGrath et al. (1995) identified the emergence of comprehension and deftness as central to the emergence of competence. According to McGrath et al. (1995), a principal mechanism through which companies develop new competitive advantages is through the pursuit of new initiatives. In undertaking new initiatives, a company may utilize resources which are already at its disposal to enter new market areas, to enter new market with lower cost, with greater efficiency or with a more attractive offering, than competitors (Barney, 1991).

The authors' position in this paper is that SMEs, as they lack especially financial resources, are not able to support the beforehand explained transaction, opportunity and agency cost. It represents a problem, as the possibility to tap new market areas, to enter new markets with lower cost, to operate more efficiently or with a more attractive offering is restricted. McGrath et al. (1995) therefore argue that less costly initiatives have to be taken by SMEs in order to develop competitive advantage. The authors of this study propose the concept of crowdsourcing as an emerging competence that allows minimizing costs and further focuses on comprehension and deftness suggested by McGrath et al. (1995).

1.3. Purpose

The purpose of this study is to explore the concept of crowdsourcing and how this can be exploited by small- and medium sized enterprises in Sweden to function as an enabler. This will be carried out through a qualitative research in order to obtain the required information necessary to answer our purpose.

1.4. Working Conceptual Model

Based on the conceptual model of McGrath (1995) (further explained in chapter 2 *Frame of References*) the authors' purpose is graphically illustrated (see figure 2). Following the model by McGrath et al. (1995), the study explores crowdsourcing as an enabler for Swedish small- and medium sized enterprises. The model suggests that the utilization of crowdsourcing emanates from a problem or challenge at hand. This study explores if crowdsourcing, as an emerging competence, can be used as a mean to solve a specific problem or challenge at hand, it does not necessarily have to lead to a competitive advantage as suggested in the model by McGrath et al. (1995), but rather to performance improvement suggested by the working conceptual model below. Performance improvement is viewed as financial and operational improvement.

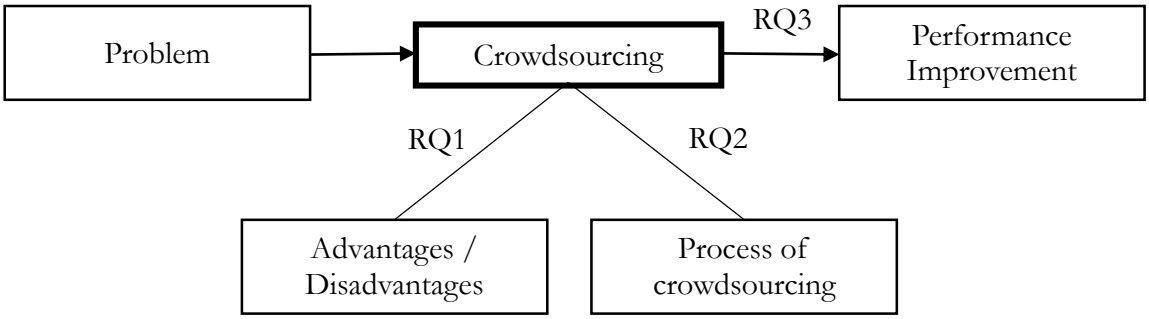

Figure 1 - Working conceptual model (Own model)

Based on the working conceptual model, three research questions were outlined regarding the process, advantages/disadvantages and performance. These questions were chosen as it is of interest to identify the advantages/disadvantages of the initiative, how the process of utilizing crowdsourcing is structured and furthermore, if this can result in a performance improvement for Swedish small- and medium sized enterprises.

1.5. Research Questions

In line with the main purpose, this study explores the following research questions:

- RQ1: What are the advantages and disadvantages related to crowdsourcing?
- RQ2: What is the process of implementing crowdsourcing?
- RQ3: Can using crowdsourcing amount to performance improvement?

1.6. Definitions

The core concept of this research is "*crowdsourcing*", which was first defined by Jeff Howe, who coined the term in 2006. He defines the concept as *"…the act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, generally large group of people in the form of an open call"* (crowdsourcing, 2015). According to Howe, it is a way for many to do the work and tasks previously handled by a few and are based on the internet (Howe, 2006). It is the collection of information and consequential solutions in a nontraditional and rather chaotic way (Greengard, 2011).

This research focuses on the generation of ideas emanating from the open crowd, thus the concept of crowdsourcing in the study is not limited to the internet, but also include physical forums in which companies can make use of the crowd, often related to 'open innovation'. The authors have chosen not to distinguish the physical and online aspects of reaching the crowd with the premise of these two approaches being closely intertwined, for example, specialized intermediaries often work towards both of these approaches. Thus, this study puts more emphasis on the crowd in itself and its idea generation, rather than blindly following the definition of the concept coined in 2006 by Howe.

In this study, a SME is defined in accordance with the European Commission's definition; "*The category of micro, small- and medium-sized enterprises (SMEs) is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding 50 million euro, and/or an annual balance sheet total not exceeding 43 million euro*" (European Commission, 2003 p. 13).

The purpose of the research seeks to analyze, if crowdsourcing can function as an enabler in Swedish SMEs. Enabler in this research aligns with the following definition "*Capabilities, forces, and resources that contribute to the success of an entity, program, or project*" (businessdictionary, 2005). According to Caves (1980), a resource is anything that can be seen as a strength or weakness of a company. In other words, a company's resources can be tangible and intangible assets, which are tied to the company at a given point of time. Examples of such resources are machinery, capital, specific knowledge, brand names, trade contacts etc. (Wernerfelt, 1984).

1.7. Delimitations

This research focuses primarily on, and is mainly delimited to crowd wisdom. However, it also touches upon aspects included in the concepts of crowd creation and open innovation, but only in regards to utilizing crowdsourcing in a physical forum. Crowdfunding will be defined, but does not hold any part in this study. Furthermore, the basis of the working conceptual model illustrated, is delimited to the RBV solely in terms of the development of the conceptual model by McGrath et al. (1995). Hence, other aspects related to the RBV are excluded.

Since a gap in theory concerning SMEs has been identified, this study is delimited to solely include this company categorization. Larger companies will not be studied, as they have received previous attention in research. Furthermore, due to financial restraints and the geographical proximity, the study have been further delimited to only include Swedish SMEs, hence, SME's operating in other countries will not be explored. Also, as a result of the time restrains and lack of information regarding Swedish companies who have used crowdsourcing, the sample is delimited to two companies who have had successful experiences and two companies acting as intermediation platforms in crowdsourcing processes.

2 Frame of References

The theoretical framework of the study is presented in this chapter and introduces literature that is relevant to the study. This chapter consists of the resource-based view, the concept of crowdsourcing, its actors involved, intermediation platforms, general advantages versus disadvantages not limited to SME's, and similar concepts to crowdsourcing.

2.1. Resource-Based View

In 1959, Penrose was one of the first scholars to identify the importance of resources to a company's competitive position. The author stated that a company consists of 'a collection of productive resources' and that "*these resources may only contribute to a firm's competitive position to the extent that they are exploited in such a manner that their potentially valuable services are made available to the firm*" (Penrose, 1959, p.24). In other words, the competitive advantage of a company lies in the application of a bundle of valuable tangible or intangible resources at the company's disposal (Wernerfelt, 1984, Penrose, 1959).

Based on the resource-based view (RBV), McGrath et al. (1995) focused on the management processes through which activities at the subunit level of companies are translated into competitive advantages for the company. What is of concern in the study by McGrath et al. is how companies develop idiosyncratic resources, which can then be deployed to competitive advantage. According to Selznick (1957), companies are fundamentally idiosyncratic, which means that they accumulate unique combinations of resources and abilities, which allow them to gain rents on the basis of 'distinctive competence'.

In the study by McGrath et al. (1995), the antecedents to competence are comprehension and deftness, whereas 'comprehension' is defined as "*the outcome of a process by which elements of individual know-how and skill become linked*" (p. 255). The linkage permits a group working together to answer a question as if it was understood by the group, even though the understanding is beyond the understanding of every individual member of the group (Weick and Roberts, 1993). 'Deftness' is seen as a quality in a group, which permits heedful interactions to be conducted at minimal cost (McGrath et al., 1995). McGrath et al. specifically argue that deftness allows to minimize opportunity, transactions and agency cost within a new initiative. Firstly, activities will be more costly, as patterns of efficient interrelations are not yet developed, as members of a new initiative cannot immediately trust one another's skills, aptitudes and capabilities. Therefore, emphasis need to be placed upon building interactions on the part of skilled employees (opportunity cost). Secondly, there might be confusion in terms of responsibilities, required information, priorities etc., which leads to constantly renegotiating the implicit or explicit contracts governing interrelations (transaction cost). Thirdly, investments must be made to create forms of control, to evaluate performance, to establish sanctions and to reward people, as there is a lack knowledge about one another's aptitudes, motivation and level of commitment in a new initiative (agency cost). Furthermore, "… *in part sustained superior performance, conceived as the ongoing ability to earn rents, stems from competitive advantages created by the firm's idiosyncratic assets*" (McGrath et al. 1995. p.257).

The result of the research was that the emergence of competence, which is the ability of an initiative to reliably meet or exceed its objectives, is a necessary precursor to competitive

advantage. McGrath et al. (1995) identified comprehension and deftness as central to the emergence of competence.

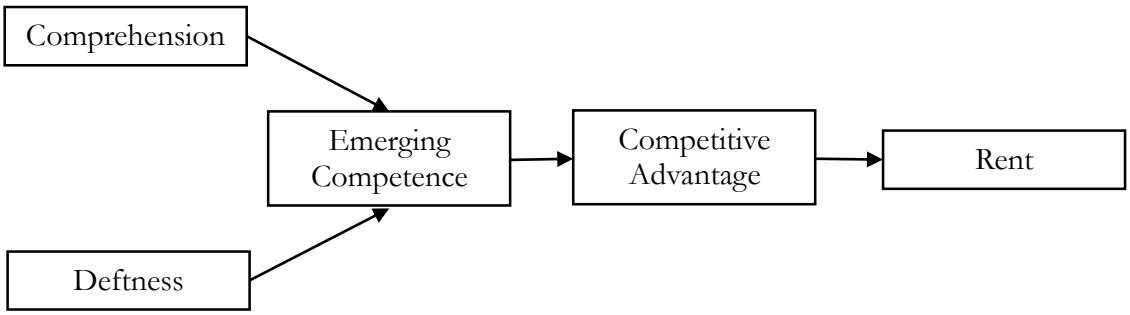

Figure 2 - Conceptual model by McGrath (1995)

2.2. Crowdsourcing

2.2.1. Origin

In order to maintain their profitability in the competitive global economy, companies might have to outsource some parts of their operations to another company, both domestically and globally, as this can provide more efficient operations with the same or exceeding quality (Coyle et al. 2008). According to Lacity and Hirschheim (1993), *"outsourcing, in its most basic form, can be conceived of as the purchase of a good or service that was previously provided internally from outside providers"* (p. 74).

The concept of outsourcing is not new, but the competitiveness of the global environment has increased the scope of outsourcing on the domestic, as well as on the global level. Whereas the concept was once concentrated on services, such as transportation and warehousing, which are tangible, asset-based services, outsourcing today focuses, in addition, on strategic and customer focused areas (Coyle et al., 2008). One of the recent managerial trends is to focus on the core competences and to outsource all other activities in order to gain and retain competitiveness. Especially from a supply chain and logistics perspective, the growth in outsourcing increases the importance of effective and efficient global networks, which are becoming more and more complex and challenging (Cui & Hertz, 2011). Regarding the complexity and challenges, technology has had a major impact, as it endorsed individuals and smaller companies to connect to the world's 'knowledge pool' (Coyle et al. 2008).

The growth and the process of the Web 2.0 technologies and capabilities has resulted in various sociotechnical systems, receiving attention from scholars. One of these phenomena is crowdsourcing, which has seen its wide applications in practice and attracts attention from scholars. It is a simple, but powerful, concept which seeks to mobilize competence and expertise (Estellés-Arolas & González-Ladrón-de-Guevara, 2012).

2.2.2. Process

Zhao & Zhu (2010) have outlined the components, processes and actions involved in crowdsourcing between the assigner, intermediation platform and provider (Fig.4.). Firstly, the actions between the assigner and the platform are the submission of a task, validating (evaluating the responses gathered and selecting the best ones) and, if the crowdsourcing initiative offers rewards, rewarding the chosen submissions. Furthermore, a responsibility of the intermediation platform is to set the rules and delimitations of the process. The

actions between the platform and provider are push and pull, which indicate the functionalities, e.g. customizations that are provided by the intermediation platform in order to attract the crowd and give incentives to participate (Kittur et al. 2008). Participation, in this sense, consists of feedback in the form of ideas and solution generation, and is when people take action by responding to the tasks provided by the assigner through the platform. Furthermore, the assigner may also, in some cases, have some contact directly with the providers without going through the means of the intermediation platform, concerning for example enquiring information for the providers and the assigner to help with the information required.

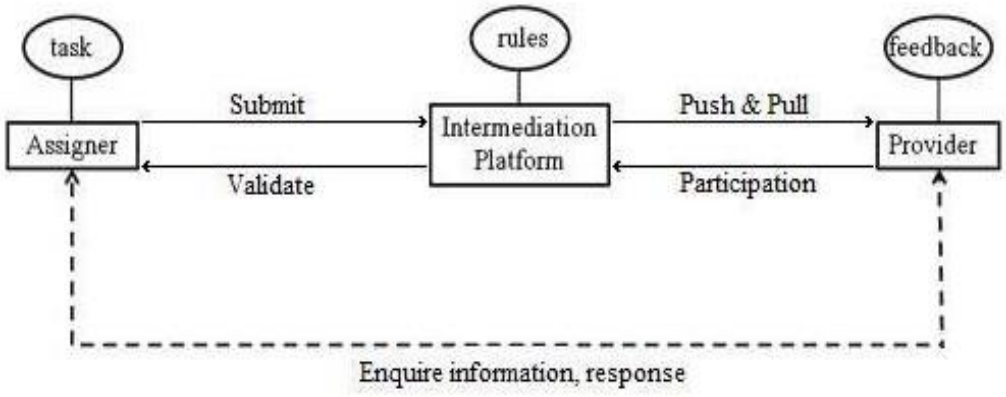

Figure 3 - Components, processes and actions of crowdsourcing (Authors altered version of Zhao & Zhu's model, 2012)

Hence, it is important to clarify the role of the actors, their respective tasks, the incentives and the intermediation platform used. This will be explained hereinafter.

2.2.2.1. Actors

The crowd refers to a group of individuals whose characteristics of number, heterogeneity and knowledge are set by the requirements of the respective crowdsourcing initiative. (Estellés-Arolas & González-Ladrón-de-Guevara, 2012). Regarding the type of people, it is important to note that it concerns an open call. It is of significance that the call is neither limited to experts, nor to preselected candidates. The nucleus of the crowd is amateurs, such as, for example students (Schenk & Guittard, 2009). Regarding the number of people, the crowd consists of an indeterminate and large group of individuals, who do not necessarily know each other. According to La Vecchia & Cisternino (2010), the optimum number of people is dependent upon the crowdsourcing initiative, as the gathered information needs to be filtered and evaluated. The level of heterogeneity of the crowd is dependent on the type of initiative considered, as some types require the wisdom of a heterogeneous crowd, where every individual brings in its personal knowledge (Surowiecki, 2005), whereas other types would benefit from a homogenous crowd.

The crowdsourcing initiators are in many cases companies, but can also be public organizations or individuals. The crowdsourcing initiator can be any given entity that has the *"…means to carry out the initiative considered…"* (Estellés-Arolas & González-Ladrón-de-Guevara, 2012, p. 195).

2.2.2.2. Tasks

Tasks range from routine to complicated, thus any non-trivial problem can benefit from crowdsourcing (Doan et al. 2005). Moreover, the tasks can range from creative tasks to those related to innovation (Reichwald & Piller, 2006). Regardless the complexity of the problem, Heer and Bostock (2010) emphasize that the task must be divisible into lower-level tasks, as to be processed by individual members of the crowd.

The specific task implies the voluntary contribution of the individual's work, knowledge, experience or money (in the case of crowdfunding, which will be explained in further detail in 2.3. *Similar Concepts and Types of Crowdsourcing* (Estellés-Arolas & González-Ladrón-de-Guevara, 2012)).

2.2.2.3. Incentives

The objective of the crowdsourcing initiator is to obtain a solution for a specific problem or task. This is achieved through the fulfilment of the task by the crowd. As a result, the crowdsourcing initiator benefits from the contribution of the crowd, which can be experience, knowledge, or assets in the case of crowdfunding (Estellés-Arolas & González-Ladrón-de-Guevara, 2012).

A monetary compensation might be offered as a reward for participation. However, the incentive does not necessarily have to be monetary; the individuals might obtain satisfaction of a given necessity, whether it be economic compensation, social recognition, self-esteem or the development of individual skills (Estellés-Arolas & González-Ladrón-de-Guevara, 2012). The optimum situation for the crowdsourcing initiator would be that the reward is not material, but rather that the motivation for participation is driven by interest and passion for the activity (Stewart et al. 2009).

2.2.2.4. Intermediation Platforms

According to Derham, et al. (2011), social media is something that can be used by businesses for a number of functions, such as marketing, design and product development etc. The emergence of Web 2.0 has enabled companies to reach large scale latent workforces online, which had previously been impossible (Saxton et al., 2013). Using social media as a means for business is something that can be particularly useful for small- and medium sized enterprises, as it requires a low level of IT skills, minimal cost and low barriers (Derham et al., 2011).

The continually developing web technologies have enabled the possibility to reach an ever increasing number of potential workers at a low cost, which is possible for both bigger and smaller companies to exploit with the possibility to 'outsource' a wide selection of organizational tasks to the crowd (Saxton et al. 2013).

Another way to assess crowdsourcing is by the mean of an external platform specialized for said agenda. These intermediation platforms build a link between the providers and the assigners (Zhao & Zhu, 2012). Furthermore, the platform provides a public sphere in which people can discuss and work together in order to develop solutions (Chanal & Caron-Fasan, 2010).

2.2.3. Advantages and Disadvantages

Crowdsourcing offers both advantages and disadvantages. According to Patrick Meier (cited in Greengard, 2011), crowdsourcing can be very efficient if the right community participates. Information can be shared quickly and effectively, which results in high speed

responses and quickly filled information gaps. In comparison with traditional techniques, crowdsourcing is often viewed as less expensive and less time-consuming (Greengard, 2011). The major advantage of crowdsourcing is its relatively low cost. However, the amount of money involved can vary from micro-payments to payments of several million dollars, depending on the type of crowdsourcing initiative (Greengard, 2011).

As crowdsourcing allows for the participation of countless contributors, positive network effects can be achieved (Schenk & Guittard, 2009). Hence, complex tasks can be solved. Through the open call, a mass of skilled individuals are addressed, these individuals usually have different solutions for the given problem (Howe, 2006). The resulting solutions have to be evaluated in terms of approach, tradeoff and especially quality. In this case, quality refers to originality of the proposed solution and the way it matches the expectations (Schenk & Guittard, 2009).

According to Greengard (2011), there are companies who state that the concept is expensive and unreliable. This is due to unsuccessful experiences, as even the companies who made successful use of the concept, state that there can be bad data and faulty observations, as anyone can participate. In addition, there are concerns in terms of the accuracy of the data, as it is difficult to distinguish between untrusted and trusted sources. This problem cannot be solved by restricting the participation, as this would defeat the entire purpose of crowdsourcing. Thus, errors and inaccuracies may occur (Meier, cited in Greengard, 2011). According to Wiggins & Crowston (2011), crowdsourcing may lead to an information overload. Furthermore, problems can occur in the evaluation, as it can be difficult to identify the qualified solutions. There are studies that have shown that the solutions obtained from the crowd can be assessed so to compete with professionals. However, concerns may arise regarding the quality of the solutions. This is especially the case in terms of solutions related to science or business innovation issues (Wiggins & Crowston, 2011).

Especially for the client company, crowdsourcing are not only considered to be a success factor but can also be viewed a risk factor. The intermediation platform can be viewed as a third party upon which the client company may be dependent, as the client is somewhat reliant on the decisions taken by the respective intermediation platform (Schenk & Guittard, 2009). Furthermore, there might be a risk in terms of knowledge and know-how. Likewise traditional outsourcing, the client company faces risks of 'unlearning' and 'brain drain'. In addition, crowdsourcing can lead to a competitive risk to the client company, as the developer of a solution may reuse its suggestions to also address the needs of other client companies (Schenk & Guittard, 2009).

In terms of the technology used, companies have two options; they can either develop their own crowdsourcing system or they can use a third-party crowdsourcing intermediation platform. According to Vukovic (2009), most of the existing crowdsourcing systems do not facilitate the dynamic formation of reaching a team of globally located individuals. In fact, Vukovic (2009) states that there is a lack in flexible and proactive team discovery and building mechanisms, as well as a comprehensive set of tools and computational services for the crowd to take part in problem-solving.

Last but not least, a challenge is to publicize such a platform and to create a network of volunteering participants, especially in the case where a third-party intermediation platform is not used, but the initiative is rather conducted by the company itself. This is time-consuming and requires a significant amount of money and effort (Greengard, 2011). According to Meier (cited in Greengard, 2011), the lack of financial resources is something

that a lot of nongovernmental organizations are experiencing. In contrast, having a large number of participants, results in an enormous volume of data, which has to be sorted in terms of relevance and usefulness. This can be very time-consuming and is a difficult process that has to be managed (Greengard, 2011).

Table 1 – Advantages & Disadvantages of crowdsourcing

Advantages	**Disadvantages**
Positive network effects	Information overload
Complex tasks can be solved	Unreliable, Concerns in accuracy of data
High speed responses	Risk factor • Dependence on platform • Competitive risk
Range of solutions	
Speed of information sharing	
Relatively low cost	

2.3. Similar Concepts and Types of Crowdsourcing

It is important to clarify the differences and similarities between open innovation and crowdsourcing, as well as the different types of crowdsourcing.

"Open innovation assumes that internal ideas can also be taken to market through external channels, outside the current business of the firm, to generate additional value" (Chesbrough, 2003 p.24). Thus, companies cannot rely only on their own research, but should acquire inventions or intellectual property from other companies, as nowadays competitive advantage is often based on the leveraging of the discoveries of others (Chesbrough, 2003). According to Gassmann and Enkel (2004), open innovation is the cooperative creation of ideas not within the company, but outside the boundaries of the company. The authors outline three different types of open innovation processes: 'Outside-in', which is the integration of external knowledge from parties, such as suppliers, customers or other individuals; 'Inside-out', which is the provision of internal knowledge and innovation to external users; and 'Coupled', which is the coupling of both approaches in alliances with partners.

According to Seltzer & Mahmoudi (2012), a key technique for open innovation is 'crowdsourcing', which is confirmed by Leimeister et al. (2009), who state that open innovation can be effectively carried out by crowdsourcing. However, the authors further outline some differences between the concepts; open innovation focuses solely on innovation processes of companies, while crowdsourcing has a wider coverage and target audience. Furthermore, crowdsourcing is concerned with linking a company with an undefined crowd, whereas, when applying the open innovation strategy, companies tend to interact with stakeholders, which are mainly customers or other companies (Chesbrough 2003; Leimeister et al. 2009). Thus, open innovation and crowdsourcing do have a common ground, as in both cases knowledge is distributed and competitive advantage can be generated. Furthermore, both can be used to reach a crowd, which can be a defined crowd in the case of open innovation or an undefined crowd in the case of crowdsourcing.

There are three types that are included in the concept of crowdsourcing; these are crowdfunding, crowd wisdom and crowd creation (Sivula & Kantola, 2014). The most

common type of crowdsourcing is crowd wisdom, as it serves to extend, for example, a new product or service feature, by internally or externally extending the knowledge of the company with the use of crowdsourcing. In other words, it serves as an idea or knowledge generator for a new product or service for a company, as the crowd, by giving its opinion, can improve the product or service and make it more useful or appealing for the customer (Sloane, 2011). In terms of crowd creation, the crowd can, for example, partly implement projects, such as programming an IT system. This type of crowd usually include individuals that are in some way participating in a company's activities, for example, employees, suppliers, customers and potential customers etc. The third type of crowdsourcing is crowdfunding and serves as tool to collect either micro or macro amounts of capital for a company or a specific project. In this case, the crowd can participate by investing capital to the respective company (Prive, 2014).

2.4. Summary of the Literature Review

RBV: According to the resource-based view introduced by Penrose (1959), competitive advantage of a company lies in the application of tangible or intangible resources at the company's disposal. Based on the RBV, McGrath et al. (1995) state that sustained superior performance stems from competitive advantages created by the company's idiosyncratic assets and further, that the emergence of competence is a necessary precursor to competitive advantage.

Crowdsourcing: The origin of crowdsourcing is based in the need to maintain profitability in the competitive global economy and thus might have to outsource some activities (Coyle et al. 2008). The process of crowdsourcing involves an assigner, an intermediation platform and a provider (the crowd) (Zhao & Zhu, 2010). The tasks range from routine to complicate (Doan et al., 2005) and the incentives from monetary to non-monetary (Estellés-Arolas & González-Ladrón-de-Guevara, 2012). Crowdsourcing can amount to advantages, such as, positive network effects (Schenk & Guittard, 2009) and relatively low cost (Greengard, 2011, as well as disadvantages, such as, an information overload (Wiggins & Crowston, 2011) and dependency on the used platform (Schenk & Guittard, 2009).

Similar concepts: There are differences and similarities between open innovation and crowdsourcing (Chesbrough 2003; Leimeister et al. 2009). Both can be used to reach the crowd, but open innovation focuses on the defined crowd, whereas crowdsourcing focuses on the undefined crowd. Furthermore, there are different types of crowdsourcing; crowdfunding, crowd wisdom and crowd creation (Sivula & Kantola, 2014).

3 Methodology

In the following chapter, the research philosophy and the approaches are presented. The chapter outlines the selected research methods and procedures for data collection and how the data will be analyzed. Furthermore, it discusses the chosen research strategy and the techniques with which the primary data and the frame of reference are processed. Finally, the chosen methodology is evaluated.

3.1. Research Philosophy

Research is the process of generating new knowledge by gathering data that answers a specific research question (O'Leary, 2010). Interpretivism is applied to this research, as it focuses upon the details of a situation and a reality behind said details (Saunders, 2009). Interpretive research is known as research that provides contextual depth. Hence, the interpretivist perspective is the most suitable for this study, as it is necessary to focus on certain details concerning the process of crowdsourcing in order to create an understanding required to answer the outlined research questions. However, the results of this kind of research are often criticized in terms of the ability to generalize, which will be discussed hereinafter. The generalization for interpretive research is less valuable (Saunders et al., 2009), and therefore qualitative and less structured research methods are relevant. Hence, semi-structured interviews are conducted, which allow the interviewees to speak somewhat freely surrounding the topic, which enables the authors to further explore the concept of crowdsourcing.

In line with the chosen philosophy, different choices are made. As a way of structuring and depicting the issues underlying the choices made during this research, the 'research onion' by Saunders will be followed:

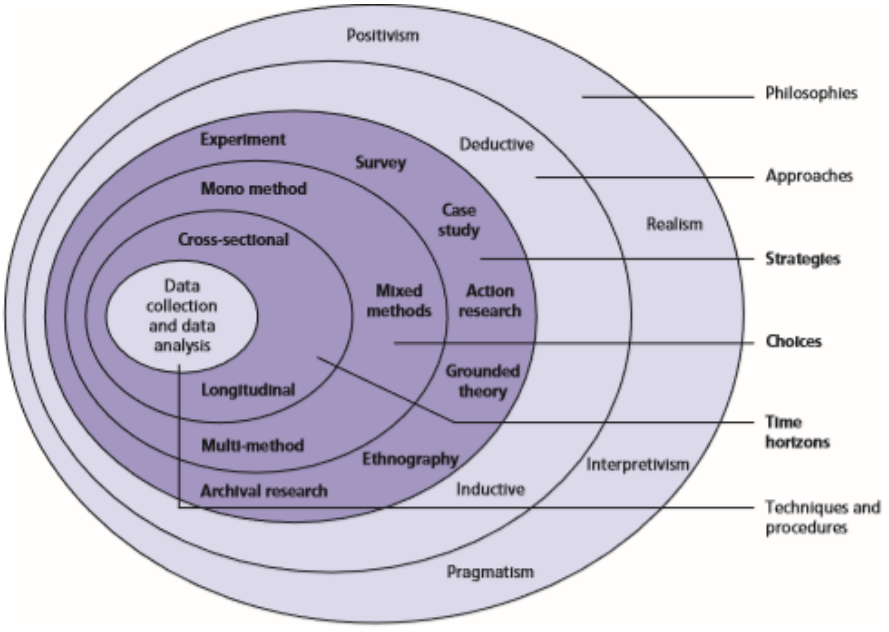

Figure 4 - Research onion by Saunders et al. (2009)

3.2. Nature of Research Design

The main aspects for choosing an appropriate research method emanates from the problem and the purpose of the research (Kumar, 1999). The purpose of the study serves as a foundation for the research perspective indication, which can be exploratory, explanatory or descriptive. However, a research project may have more than one purpose or the purpose may change over time (Saunders et al., 2009).

This research follows the exploratory approach, as this allows for the interpretation of the studied phenomena and the exploration of the conceptual model presented in the problem discussion. In addition, it allows for flexibility and adaptability to change (Saunders et al., 2009). A descriptive research is not chosen, as it is only used to describe characteristics of objects. Furthermore, explanatory research is not chosen, as it seeks to recognize cause- and effect relationships (Zikmund, 2010). In contrast, exploratory research allows for the possibility to discover new ideas and is furthermore not an end in itself, but is often considered as a first step with the premise that additional research will be conducted (Zikmund, 2010). This choice of the exploratory approach is in line with the purpose of the study, as it aims to find out what is happening, seeking new insights and assessing the phenomena of crowdsourcing in a new light.

3.3. Research Approach

The second layer is the research approach, which in accordance with the aforementioned 'research onion' can be either inductive or deductive. Induction is used when research emanates from empirical and practical evidence, which is later used to form theories. On the contrary, deduction emanates from existing research (Ghauri & Grønhaug, 2010). However, according to Dubois & Gadde (2002), there is also a third method, called abduction, which can be described as a fusion of deduction and induction, wherein the researcher elaborates theories based on empirical data, but does not reject existing theoretical models.

The role of a deductive research is to test an already existing theory, which is not seen as the appropriate approach. As stated in the introduction chapter of this study, there is no existing theory that explains the role of crowdsourcing for small- and medium sized enterprises that can be tested. This also explains why an abductive approach is not seen as a suitable approach.

This research is based on the inductive approach, as the objective, in accordance with Saunders (2009), is to develop a deeper understanding concerning the nature of the phenomena. Small samples and qualitative data collection are used in order to explore different views of the concept of crowdsourcing. The research process of this study began with gathering information considering the phenomena of crowdsourcing in large companies through scientific articles. The process continued with transferring the concept to small- and medium sized enterprises. A working conceptual model was developed in order to contribute to theory by exploring the respective elements of the model through interviews within companies using or facilitating the concept. The working conceptual model was then altered and the findings of the empirical data collection were incorporated, as to present the outcome of this research.

3.4. Research Design

In the research design, the general plan of how the research question will be answered is outlined. It provides a framework for the research and includes the objectives of the study, in order to ensure that the data collected is appropriate for analyzing the working conceptual model. Firstly, the chosen research strategy is justified, followed by the research choices made.

3.4.1. Research Strategy

The third layer of the 'research onion' is the research strategy selection, which is built upon the objectives of the research, the extent of existing knowledge, the time and other resource scopes (Saunders et al., 2009). Yin (2009) outlines the most common research strategies; case studies, experiments, archival analysis and surveys. The strategies are appropriate for different approaches, methods and areas of study.

In order to select the appropriate research strategy, the strengths and weaknesses, as well as different data collection and analysis techniques of the different strategies are weighted. Documentation and archival records related to crowdsourcing are difficult to find and were rejected on the premise of being too time consuming. In addition, observation was rejected on the premise of being too costly, and a survey was rejected as the information available regarding companies using crowdsourcing were limited. Hence, identifying a sufficient number of companies to participate would be difficult.

Case studies are likely to be *"the preferred strategy when 'how' or 'why' questions are being posed, when the investigator has little control over events and when the focus is on a contemporary phenomenon within some real-life context" (*Yin, 2009, p. 2). This research applies case study as research strategy, as rich empirical data can be gained through this strategy, which is the basis for the exploration of the conceptual model and the answering of the research questions. A case study is an "*empirical inquiry that investigates a contemporary phenomenon in depth and within its real life context, especially when the boundaries between the phenomenon and the context are not clearly evident*" (Yin 2009, p.16). This allows for contribution to theory, as new insights emerge through patterns of relationships, both within and across cases that are found during the data analysis. Case study research is therefore particularly appropriate for the inductive approach of the study at hand.

This research strategy is in line with the exploratory purpose, as the primary objective for undertaking a case study is to explore the uniqueness and to understand the distinctiveness of every single case (Simons, 2009). It is an in depth investigation with meticulous attention to detail (Zikmund, 2010). The four selected cases illustrate multiple perspectives, which is seen as a strength of the chosen strategy. By analyzing the four distinctive cases, it can be explored if and how crowdsourcing can function as an enabler. An additional strength of using case studies, which justifies the chosen strategy, is that it is flexible and neither time dependent nor constrained by method (Simons, 2009).

3.4.2. Research Choices

There are two case study strategies dimensions: single case versus multiple case and holistic case versus embedded case. In terms of the first dimension, a single case is often used where it represents a critical or unique case, whereas multiple cases focus upon the need to establish whether the findings of the first case occur in other cases (Saunders et al., 2009). A multiple-case design can serve various purposes, such as exploration, testing or building theories (Mills et al., 2010). Since the purpose and research question of the study require a

general understanding of the concept of crowdsourcing, a multiple-case study was chosen for this research. It was not chosen in order to explore, if the findings of the first case occur in the other three cases, but rather in order to explore four different perspectives. The second dimension refers to the unit of analysis: If the research is concerned only with the companies as a whole, as a distinctive unit of analysis, it refers to a holistic case study, whereas if the research concerns more than one unit of analysis within a company, it instead refers to an embedded case study (Saunders et al., 2009). The focus of this research is not an in-depth study of different hierarchal units within a single company, but rather the comparison of several distinctive units of analysis as companies as a whole. In conclusion, the research choices of the study align with a multiple holistic case study.

There are two ways of gathering data based on the type of information sought: quantitative- and qualitative research, or a combination of the two (Eliasson, 2013). Qualitative business research elaborates upon interpretations of market phenomena without depending on numerical measurements, such as a quantitative research (Zikmund, 2010). Furthermore, quantitative research regards the development of mathematical models, theories and/or hypotheses pertaining to phenomena, which is not suitable for answering the research questions. In contrast, the strength of qualitative research is the profound focus on a particular phenomenon, in order to precisely examine and understand the meaning of a phenomenon (O'Leary, 2010). Hence, this study employs the qualitative research approach and qualitative data collection, as the richness of qualitative data allows to explore the nature of crowdsourcing and to understand how and if crowdsourcing can function as an enabler for Swedish small- and medium sized enterprises.

Following the qualitative data collection technique, different methods can be applied: Either a single data collection technique and corresponding analysis procedures (mono method) or more than one data collection technique and analysis procedures (multiple methods) (Saunders et al., 2009). The mono method is applied in this qualitative study: a single qualitative data collection technique is combined with qualitative data analysis procedures. The choice of the mono method data collection technique will be justified in 3.6.2. *Data Collection* and 3.6.3. *Data Analysis*.

3.4.3. Time Horizon

When studying a particular phenomenon at a particular point in time, the time horizon of the study is cross-sectional. In contrast, longitudinal studies focus on change over a period of time (Saunders et al., 2009). Due to time constraints, a longitudinal research is not possible and therefore a cross-sectional study is carried out, which is further seen as appropriate for the qualitative research. The interviews for this qualitative study are conducted over a period of two months.

3.5. Techniques & Procedures

3.5.1. Literature Review

The literature review is used to explore the topic, define questions and to theoretically strengthen the study (O'Leary, 2010).

The literature review is chosen through the evaluation and interpretation of articles and books produced by researches, scholars and practitioners in the areas of outsourcing, company resources and crowdsourcing. The selection of articles and books, which were suitable for the area of the research, was selected through a brief analysis of numerous scientific papers. This brief analysis was carried out by reading the abstract, examining the

indicated keywords and skimming the overall article. This first step resulted in a collection of several relevant articles and was then followed by a deeper evaluation.

The major source of significant literature was found through the Google Scholar search engine and other electronic databases. Furthermore, following up references in already reviewed articles was essential to the formation of the literature review. In addition, relevant literature was received from the supervisor of this study.

3.5.2. Data Collection

Gathering relevant information to answer the research question can be carried out by primary and secondary data collection. Primary data is data that has been precisely collected for a particular research aspect, while secondary data is data that has been previously collected for a different purpose (Ghauri & Grønhaug, 2010). This study consists solely of primary data. No secondary data has been used, as no real control over data quality can be ensured. Furthermore, the initial purpose of this study might not match perfectly or might have affected the presentation of the data. Primary data is produced for the sole purpose of the research at hand, and is thus consistent with the outlined research questions.

3.5.2.1. Sampling Method

The primary data collection of this research is organized through interviews with four different companies, as interviews are helping to obtain reliable and valid data on the area of interest (Saunders et al., 2009). Interviews are also chosen for other reasons: there was only available information concerning a limited number of small- and medium sized enterprises using crowdsourcing, using interviews also aligns with the exploratory purpose of the study and the objective to analyze different perspectives. Other methods of primary data collection, such as observation and questionnaires, were not used for the reasons mentioned in 3.5.1. *Research Choices*.

The sampling method applied in this study is non-probability sampling, which is suitable for qualitative research (Kumar, 1999). In order to answer the research question and to fulfill the purpose of the study, purposive (judgmental) sampling and consequently the researchers personal judgments of selecting respondents have been used (Saunders et al., 2009).

A small sample of four companies is selected, as a deep analysis and understanding of the cases is needed in order to evaluate if crowdsourcing can function as an enabler and hence to contribute to theory by exploring the outlined working conceptual model introduced in the 1.2. *Problem Discussion*.

The cases were selected based on the relevance to the topic and in order to get a multiple perspective from different actors of the crowdsourcing process. Solely cases that are particularly informative and are suited best to answer the research questions are chosen. The different perspectives represent unique cases that differ considerably from each other. This is in line with the purposive sampling strategy heterogeneous (maximum variation) sampling, which allows a collection of data in order to explain the key themes and to document uniqueness (Saunders et al., 2009). To ensure maximum variation within a sample, Patton (2002) suggests identifying diverse characteristics (sample selection criteria) prior to the selection, which is conducted accordingly as explained in 3.6.2.2. Case selection.

In addition, the snowball sampling method has been used, which refers to identifying subsequent respondents through initial respondents (Saunders et al., 2009). During the interview with Sqore an additional contact was obtained, as the interviewee suggested that gaining this further perspective would be considered as interesting for the study.

3.5.2.2. Case Selection

Case selection is the rational selection of one or more instances of a phenomenon as the particular subject of research. The most important selection criterion is the relevance of the cases for the research objective (Mills et al., 2010). Four distinctive relevant cases with specific characteristics are selected: two Swedish SMEs that have used crowdsourcing and furthermore two companies that can act as different intermediation platforms for a crowdsourcing process.

The cases were selected with the premises of being Swedish small- and medium sized enterprises in accordance with the EU Commission definition and relevant to the topic. Within the companies, the interviewees were selected based on their knowledge regarding crowdsourcing.

The case companies Åre Skidfabrik and MyCuff are especially important, as they allow to explore the reasons for using crowdsourcing, the conducted process and the results obtained through the use of the concept. These cases both applied crowdsourcing, however they made different choices regarding the use of platform and subsequently the process. Åre Skidfabrik used an online forum to assess their crowdsourcing initiative, whereas MyCuff used a physical forum.

In contrast, the other two case companies; Sqore and Kalmar Science Park are important, as they act as an intermediation platform/facilitator of the crowdsourcing process. Exploring and interviewing different options of intermediation platforms is seen as valuable for the study, as the role of an intermediation platform is significant for the process of the crowdsourcing initiative. By interviewing different actors of a crowdsourcing process, the study will be able to gather different perspectives, which are relevant in order to obtain a deeper understanding, answer the outlined research questions and subsequently align with the purpose of the study

3.5.2.3. Contact Procedure

The chosen companies were identified through the web and contacted by e-mail. Regarding the snowball sampling, the proposed participant was also contacted by e-mail. The e-mail specified the research topic and suggested date, if there was a willingness to participate in the study. None of the contacted companies were unwilling to participate in the research. A standardized interview guide was sent to the participants beforehand, if requested.

3.5.2.4. Interviews

The purpose of the study is to understand the reasons for the decisions that the companies have taken. The semi-structured interview gives the opportunity to elicit answers where explanation is needed (Saunders et al., 2009). For the researchers, in order to achieve a higher response rate, semi-structured interviews are conducted rather than using questionnaires. Furthermore, by establishing personal contact, control over who answers the questions is ensured.

In terms of the nature of the questions, the semi-structured interview allows a large number of questions to be answered and allows questions to be either complex or open-ended. In addition, the order of the questions may vary (Saunders et al., 2009). The questions were developed on the basis of the theory and the conceptual model presented in chapter 2 *Frame of Reference*.

Exploratory qualitative research with a cross-sectional time horizon of multiple case companies demands flexibility during the interviews. Therefore, a predetermined list of questions was prepared, but varied depending on the nature of the company. As shown in table 2, semi-structured interviews on the phenomenon of crowdsourcing are held with managers of two Swedish small- and medium sized enterprises, one crowdsourcing platform, as well as with one independent organization acting as a facilitator of crowdsourcing initiatives. The formulated interview guide (see appendix 1 & 2) includes a set of various questions in the area of research, which was customized depending on the interviewee and its individual perception.

Table 2 – Interviewed companies

Company	Type	Name of interviewee	Position of interviewee	Date / Length	Type
Åre Skidfabrik AB	Applied crowdsourcing	Carl Geijer	Co-Owner / CEO	19.3.15 17min	Skype
MyCuff AB	Applied crowdsourcing	Sixten Engström	Founder / Co-Owner / CEO	27.3.15 33min	Skype
Sqore AB	Platform	Jacob Westerlund	International Account Manager	18.3.15 23min	Skype
Kalmar Science Park	Neutral institution / facilitator	Louise Östlund	CEO	14.4.15 27 min	Skype

The interviewees were first contacted by e-mail and the interviews were then held via Skype, due to the geographical position of the companies. This was decided upon in advance in unison with the supervisor of the study. The interviews are conducted in Swedish to ensure the quality of the information and minimize the risk of information being lost due to a potential language barrier. The interviews are audio-recorded and furthermore transcribed into English. The authors of this research have chosen to use the interviewees name instead of the company name, as the interviews reflect upon personal opinions and can therefore not represent the views of the overall company.

In order to demonstrate credibility, an appropriate level of knowledge is gathered before the interview. Relevant information is sent to participants beforehand if requested. In order to reduce the emergence of bias during the interview and increase the reliability of the information obtained, questions are phrased clearly and in a neutral tone of voice. Attentive listening skills are shown as follow up questions were asked, which are necessary in order to explore explanations and further ensure reliability and credibility of the study.

3.5.3. Data Analysis

Depending on the deductive or inductive approach, there are a number of different qualitative analytical strategies, which have implications for procedures involved in the analysis of the gathered data (Saunders et al., 2009). Due to the chosen strategy, the data collection resulted in a vast amount of data, which implied a complex qualitative data analysis. Within inductive research, data collection, data analysis and the development and verification of propositions are an interactive process (Kvale, 1996). Thus, analysis is carried out during the collection of data, as well as at later stages of the study.

Even though there is no standardized process of data analysis, the three main type processes are; summarising of meanings, categorisation of meanings, and structuring of meanings

using narrative (Saunders et al., 2009). The processes allow one to interact with qualitative data in order to integrate related data, identify key themes or patterns, develop theories based on these patterns or relationships and further draw and verify conclusions (Kvale, 1996).

At the beginning of the analysis, it was not clear what emerging themes would end up composing the theory. The qualitative analysis involved summarizing, categorizing and structuring. Overall, it was an ongoing process and the interest was intrinsic; the researchers aimed to understand what was important in the respective cases. In order to be able to draw valuable conclusions, a systematic analysis of the qualitative data is carried out (Zikmund et al., 2010).

Following Mills et al. (2010), selectiveness came into play, as major themes emerged and hence, meaningful categories are derived from the data and an emergent structure relevant for further analysis is provided. The categories were not derived from the theoretical framework, as this study follows the inductive approach and is exploratory. Relationships are recognized and categories are developed in order to identify similarities and differences between the different cases. These will furthermore serve as the basis for potential changes made to the study's outlined working conceptual model.

In order to strengthen the depth and breadth of case study findings, the concept of triangulation, which is the application of multiple methods in one study, should be applied (Mills et al., 2010). The researchers are aware of this and of the deficiencies and biases that can flow from single methodologies. However, the researchers did not apply the concept of triangulation, as there was no other option available for data collection due to the lack of information regarding companies using crowdsourcing. The data collection and analysis was instead carried out through the different views of the two authors of this study. Furthermore, the conclusions of the collected data are based on the four different perspectives of the phenomenon of crowdsourcing.

3.6. Method Evaluation

To ensure the quality of the research, Yin (2009) discusses that four 'tests' should be conducted: construct validity, internal validity, external validity and reliability. The evaluation is not carried out according to the criteria by Yin, but to different criteria, such as neutrality & subjectivity with transparency, dependability, authenticity, transferability and auditability. This study instead aligns with the method evaluation of the post-positivist indicators introduced by O'Leary (2009), as this method evaluation is deemed more appropriate concerning qualitative studies based on interpretivism. By using these criteria, the researches seek to prove the trustworthiness of said qualitative study.

Qualitative research is less structured and more researcher-dependent compared to quantitative approaches (Zikmund, 2010). It is researcher-dependent in the sense that the researchers had to extract meaning from unstructured audio-recorded responses. The aim was to extract meaning and to convert into to information, which resulted in subjective data. According to Simons (2009), subjective data are an integral part of the data from case studies. The results are researcher-dependent and different researchers may reach different conclusions based on the same data gathered (Zikmund, 2010). Even though qualitative research lacks the quality of being certifiable, which is "*the ability of different individuals following the same procedure to produce the same results*" (Zikmund, 2010 p. 135). This should not be considered a weakness, as it is a characteristic that leads to various insights. Subjectivities

are recognized and subjective positioning is disclosed in this study, which indicates neutrality and transparency within the mentioned subjectivity (O'Leary, 2010).

To further evaluate the applied methodology, the consistency of the methods needs to be considered. Reliability refers to the consistency and stability of research results (Mills et al., 2010). The goal of reliability is therefore to minimize the biases and errors in the research (Yin, 2009). The latter can be caused by misinterpretation of questions, the physical setting, the nature on interaction, and predetermined attitudes (Kumar, 1999). Following O'Leary (2009), this study is seen as dependable rather than reliable, as the methods applied are systematic and designed to account for research subjectivities: the gathered raw data is documented systematically and the interviews are held solely with actors that have been involved in the area of research that were willing to participate. Furthermore, the interviews are held according to the proposed dates by the interviewees, in order to avoid mood biases and to avoid interruptions.

A third indicator is if 'true essence' has been obtained. In quantitative research, the indicator is concerned with the validity of the research, which is "*the accuracy of a measure or the extent to which a score truthfully represents a concept"* (Zikmund, 2010 p. 307). However, the study at hand is qualitative and the chosen indicator is therefore authenticity. The research is authentic, as it is concerned with true value, but recognizes that multiple truths may exist (O'Leary, 2010).

Furthermore, it has to be evaluated, if the findings are applicable outside the immediate frame of reference. The shortage of theoretical generalization may restrict the value of the achieved results for practitioners and academics, as the chosen qualitative research approach does not allow for relating the results to all Swedish small- and medium sized enterprises. On the other hand, qualitative case studies frequently suggest that their strength is not achieving significant possibilities of generalizability (Mills et al., 2010). The findings might be relevant to other small- and medium sized enterprises beside the interviewed companies, and can therefore somewhat demonstrate national transferability (O'Leary, 2010).

The research can be verified and shows auditability, as the research context and methods are thoroughly explained and transparent, which enables this research to be reproduced. In addition, the reader is able to follow clearly how conclusions are drawn and interpreted.

4 Empirical Findings

In the following chapter, the empirical findings are presented. The interview guides were based upon the working conceptual model presented in the introduction chapter. Subsequently, the structure of this chapter aligns with the main issues identified. For readability purposes, the material is divided based on case companies. The empirical material was gathered from Åre Skidfabrik AB, MyCuff AB, Sqore AB and Kalmar Science Park.

4.1. Åre Skidfabrik AB

Åre Skidfabrik was indirectly founded in 1981, when the founders Patrik Söderlund and Stefan Cederberg started making snowboards in their parents garage. In 1993, Extreme Snowboards of Scandinavia was founded. In 1998, the company started manufacturing skis. In 2008, the company was bought by Norwegian Skigutane, just to be bought back in 2011 by the original founders together with Carl Geijer, Anders Selvehed and Johan Hjelte. The interview has been conducted with Carl Geijer, co-owner and CEO who works with sales, marketing and development.

4.1.1. Process

In 2012, Åre Skidfabrik were proposed by the idea to, in collaboration with freeride forum (a forum for ski enthusiasts, mainly freeriders), develop a free-riding ski. Geijer explains that this idea emanated from four active members on the forum, with whom Åre Skidfabrik had been in previous contact with. The idea was to collectively build a freeriding ski. Geijer states that at this time Åre Skidfabrik was very good at building all mountain skis, but quite far behind when it came to freeriding skis. The first step of the process was to do a delimitation of how the project should look like. This was further posted in the forum and consisted accordingly to Geijer of a background, delimitation and an encouragement to contribute with ideas and suggestions. He further explains that the initiators of the project (the four guys) acted as moderators on the forum, but that there was a lot of work 'behind the curtains'. According to Geijer, it took approximately two months to decide on the outer shape of the ski. Furthermore, Åre Skidfabrik arranged an open house in which people could visit the factory and view a model of the ski. Geijer explains that around 50 people from the forum showed up and that everyone still thought that the ski looked good. The next step was to make molds and start building prototypes, which were tested throughout the spring. Geijer states that it took eight months from the project being posted to the forum, to the time that Åre Skidfabrik had an actual ski.

4.1.2. Incentives

When asked what the incentives were for people to participate with ideas and suggestions, Geijer clarifies that the incentives was solely that it was something new and fun, that ski interested people could be involved in product development. He further explains that this project was something unique and the first time that one conducted ski development collectively on this scale. This basically was the first crowdsourced ski ever. Geijer explains that the project thread grew into top three biggest product threads concerning skis in the world. Even though the post was in Swedish, the thread has been commentated around 1700 times and viewed 700,000 times.

4.1.3. Advantages and Disadvantages

Geijer states that there are a lot of advantages with using crowdsourcing as a mean. Firstly, it can be used to achieve a tremendous market research for a product, service etc. He continues to clarify that crowdsourcing enables companies who do not have the economical or organizational resources to do so otherwise, and is a way for smaller companies to conduct a big market research, as you *"democratize the information supply through open innovation or crowdsourcing"* (Geijer, C., Personal communication, 2015-03-19). Another advantage according to Geijer is that you involve potential customer, who take pride in contributing *"…they view themselves almost as 'co-owners' or 'co-developers' of the product"* (Geijer, C., Personal communication, 2015-03-19). Finally, Geijer states that if you conduct such a process in the correct way, you might gain 'goodwill' and marketing in combination with the project.

Geijer also mentions some perceived disadvantages with using such a concept. He states that it is very resource demanding, considering especially time, but also aspects such as knowledge, which according to Geijer can be a problem for smaller companies, as they often have limited resources. He explains that doing a project like this is very time consuming, but since the company was able to exploit a forum consisting of very product interested people within the specific area of interest, it was easier to retrieve information or specific knowledge necessary for the project. He continues to state that there are possibilities for using crowdsourcing wherever there are interested people that you can surround yourself with. However, you need to find the right platform or forum in order to be able to drive a discussion. Geijer also mentions that it is not certain that all smaller companies have the prerequisite to drive such a discussion.

4.1.4. Outcome

When asked about the success of the project, Geijer gives examples of several outcomes, which indicates that the project had been successful. Firstly, Geijer states that they reached their goal by taking a developmental and technological leap; they went from being behind on the market of freeriding skis to being at the very front with this model, which is still accurate today concerning this model. Åre Skidfabrik also obtained an enormous amount of marketing and the ski was very well-known, even before it was released to the market. Furthermore, in 2014 Åre Skidfabrik received the gold award in the category of off-piste skis with this model at ISPO, the world's biggest sport exhibition held annually in Munich.

Geijer clarifies that none at Åre Skidfabrik was aware of the concept of crowdsourcing, when initiating the project and that the company had to find a 'name' for what they had done, when writing their press-release. Geijer further explains that this (two years ago) fortunately aligned perfectly with the popularity of crowdsourcing and open innovation.

When asked about if Åre Skidfabrik would ever conduct a similar project again, Geijer responded that they probably would not, since the success of the previous project has been so substantial, *"… I think everything that we will make after this in terms of open innovation or crowdsourcing would just be perceived as a bad copy of the first"* (Geijer, C., Personal communication, 2015-03-19). However, Geijer is open to the possibility to possibly conduct such a project, but in a much smaller scale.

4.2. MyCuff AB

MyCuff is a male accessory e-commerce company founded in 2012 and has since the start offered customer personalized cufflinks and tie-pins. Nowadays, they have extended their selection to include products, such as ties, bowties, handkerchiefs and girdles. The company's business idea is to provide the customer with the possibility to show their personal style in a new and exciting way. The interview was conducted with Sixten Engström, founder and CEO of the company.

4.2.1. Problem

Engström states that, like any other small business, MyCuff are experiencing challenges in how to grow, what products to sell and how to get through the 'static' created by bigger actors, in this case, in the male accessory industry. A challenge MyCuff had experienced, was the large part of sales that were conducted 'offline'. Engström explains that only 7% of all sales in Sweden emanates from e-commerce, the rest are from brick and mortar stores. He continues to explain that in order to further increase volume, it is necessary to find resellers both offline and online who can push your products. However, the high degree of customization and tailor-made products are, according to Engström, a fundamental problem in MyCuff's value-offering, which makes it difficult to have resellers. As each product is specialized for the individual customer, it is not possible to have a stock to send to resellers. Engström explains that the challenge was "*finding a flow offline*" (Engström, S., Personal communication, 2015-03-27). He continues to state that the company had been stuck on this challenge; they have had some ideas, but none real or simple enough of how to solve it.

4.2.2. Process

This resulted in a crowdsourcing project in 2014, using a platform named crowding.se (nowadays absorbed by Sqore) in which 35-40 students participated in a physical forum. Engström explains that it started with him explaining the case and the problematic behind it, which the participating students further brainstormed. According to Engström, the students quickly came up with the same ideas to potentially solve the problematic as MyCuff had previously thought of themselves. Engström explains that in this moment he thought to himself that this might not be as valuable as hoped. However, after a while new ideas emerged, which could be developed further. Also, even if the ideas were the same, a whole new foundation emerged where the ideas were built up and strengthened by participants selling arguments etc.

4.2.3. Incentives

When asked about the incentives for participation in the crowdsourcing project, Engström explains that even though there was a smaller monetary reward for the best ideas that was shared and developed, he believes that other incentives, such as getting insight into a company and being able to help can be just as equal or even a better incentive. This refers especially to entrepreneurial students interested in eventually starting their own company. He also explains that this project was organized in such a way that it aligned in connection with the students' everyday life, door-in-door, with no pre-sign up. Thus, there was no bigger interruption, commitment or tradeoff for the students to participate. According to Engström, this 'drop in' mentality can also be viewed as an incentive for participation.

4.2.4. Advantages and Disadvantages

Engström states that there are several advantages with using crowdsourcing, first of all it can create awareness and a sort of belonging, which according to Engström is what drives a successful company. He further states that "*you can either spend a lot of money in marketing to try to create belonging or you can use crowdsourcing*" (Engström, S., Personal communication, 2015-03-27) as a way to remove the financial aspect and instead trying to surround the company with interested people, thus get the belonging this way.

According to Engström, there are also some disadvantages and preparations to using crowdsourcing as a process. First of all, crowdsourcing is something that is very time consuming. He further explains that it is important to have a finished strategy that answers questions, such as *"where do we want?", "where will we end up?"* etc. (Engström, S., Personal communication, 2015-03-27). He further states that one cannot solely rely on that a potential platform will do the job, as these often handle a lot of project simultaneously. He explains that you have to use your own social channels, both offline and online, in order to 'push' people towards your crowdsourcing project. Something that Engström believes that many companies might overlook. He continues to state that there lies a tremendous amount of work behind a crowdsourcing project with no guarantee of receiving anything from it, which Engström perceives as both a risk and a disadvantage.

4.2.5. Outcome

Engström clarifies that the biggest advantage gained from this project was that the participants that were interested in the company did not just only stick to the problematic at hand, but instead started questioning and exploring other different parts of the companies. According to Engström, this resulted in an enormous amount of ideas, marketing suggestions, contacts etc. concerned with completely different areas of the company than the one at hand, due to the good insight into the company enabled by the case. Furthermore, Engström explains that when you tell the participants about your processes and defend your ideas, you encounter a lot of counter questions, which you might not thought about before, as you might have got caught up in a homogenous mentality "*this is how it works" and "this is how we do it"* (Engström, S., Personal communication, 2015-03-27). Thus, getting new perspectives from the people attending the crowdsourcing project and for them to question current processes or ways of doing certain things, can serve as a valuable mean for the company.

4.2.6. Future Perception of the Concept

Engström explains that he believes that there is a general low awareness of crowdsourcing and similar concepts and how these concepts work. He believes this to be a reason why crowdsourcing is not widely used by Swedish SME's. He continues to speculate, if this might be industry connected, that for example IT might have a higher awareness than traditional industries. According to Engström, another reason could be insecurity in how to proceed with such a project if it is untried territory for the company.

Engström explains that he clearly sees crowdsourcing as something that can bring success to a company, but at the same time he states that you have to evaluate how much time such a project would take from the core activity of the company and determine whether or not to make use of the concept.

4.3. Sqore AB

Sqore (formerly studentcompetitions.com) was founded in 2010. It started out as a pure listing site, but has since expanded to include a range of different services and products related to connecting innovative minds with global opportunities. The vision of the company is to "*be the world's most credible certifier of skills that matter to the market*" and their outspoken mission is "…*to provide people across the globe equal access to opportunities*" (Westerlund, J., Personal communication, 2015-03-18). The interview has been conducted with Jacob Westerlund, International Account Manager at Sqore working with innovation competitions. An innovation competition in this sense, takes the form of crowdsourcing, but with the premise that the contribution from the crowd amounts to a competition between individual perceptions, in which the top contributions get rewarded.

4.3.1. Process

Westerlund works on a daily basis with meeting new kinds of customers and, together with these customers, plan how the innovation competition should look like, how to reach potential participants and furthermore executing the competition itself.

Westerlund states that the crowdsourcing process of the customer is dependent on the stage the customer is currently at. If the crowdsourcing process takes place at an early stage, the company is often searching for a more 'disruptive' innovation, where you have a 'broader' question, as in these cases you are often searching for something new and different. This requires a longer process. If the crowdsourcing process instead takes place at a later stage, where you are looking for something more specialized, the process is shorter. Westerlund further explains that the process for Sqore is quite similar for each innovation competition. They sit down together with the customer and plan the competition from start to goal, analyzing the demographic, if the competition should be local or global, if it should reach different markets etc. The next stage is to build the actual competition site, where a standardized platform is available, which is later customized and tailored to suit each individual competition. Westerlund continues to explain that the next stage in the process is to launch the competition, and in combination with this, also market the competition. He further states that the competition period usually last for eight weeks and then there is about two weeks of screening the submissions. Furthermore, Sqore, in collaboration with the company, conduct a jury process from which a winner is then selected. Westerlund continues to clarify that Sqore do not actually evaluate the submissions, but rather act as a facilitator of the process. They can help the customer conduct a broader screening in which irrelevant submissions are removed.

While conducting innovation competitions, somewhere between a third and a fourth of the budget is put towards marketing, as this accordingly to Westerlund is very important. He continues to explain that the marketing is often made up of four parts, firstly Sqore have their own global database with 400,000 registered actors, which serves as a foundation. Furthermore, Sqore have connections with approximately 2000 universities, marketing partners, such as incubators and science parks and lastly, as complementary to the potential participants mentioned, Sqore also often buy advertisements online at sites such as, facebook, google and linkedin to obtain the segments requested. Westerlund further explains that, even though the competition is built at their own site, they might also use other listing platforms in order to spread and market the competition. Each competition differs and Westerlund explain that they have had everything from 100 submissions to 10,000 submissions.

4.3.2. Advantages and Disadvantages

Westerlund states that there are a lot of advantages of using crowdsourcing. He claims that there are advantages that impact the company internally, but also advantages that impact the company externally. According to Westerlund, what impact the company internally are the external perspectives obtained, as companies regardless of size, become rather homogeneous in its way of thinking. Furthermore, he states that using crowdsourcing can be a way to cooperate between different product areas (silos) and be a way to work cross-functional between these silos. Another advantage, suggested by Westerlund, is that crowdsourcing often serves as a mean for reaching the market faster and that it has the theoretical formula of reaching everyone. Externally, Sqore often have a secondary goal in helping their customers build their innovative brand. This can serve as an advantage with the mentality of *"every company wants to be an innovative company"* (Westerlund, J., Personal communication, 2015-03-18).

According to Westerlund, there are also some disadvantages of using crowdsourcing. He states that some companies might be uncomfortable with opening up and actually sharing the information, which is a prerequisite for using such a mean, and further explains that you have to be open and share a little in order to gain a lot. Another disadvantage according to Westerlund is that not every challenge that you are facing can be solved by the means of crowdsourcing or innovation competitions, some are better than others. At the early stages of the process, Sqore often try to determine, if the challenge that the company has can be solved through this mean or not.

4.3.3. Drivers for Implementation and Challenges

Westerlund explains that there could be several different reasons to use crowdsourcing. It might be that you are searching for a new idea or concept, but also that you are looking for a team of people or entrepreneurs that can be willing to execute an idea. He continues to clarify that the latter example often can be just as important, as finding a new idea, and continues to add taking an existing idea to the 'next' level through crowdsourcing as another suggestion to the crowdsourcing incentive.

Westerlund continues to state that there are mainly bigger companies that are making use of this concept at the moment, and that it is more difficult for smaller companies to work with crowdsourcing or innovation competitions, due to their often necessary focus on their operative core. He explains that it might be quite costly for small companies to make use of crowdsourcing, and suggest standardized platforms in order to be able to meet smaller companies demand. He further states that he sees no particular industry or process that is more keen on using crowdsourcing than another, however, recently processes concerning 'sustainability' have been a trending topic.

4.3.4. Incentives

When asked what he thinks the incentives of the crowd for participating is, Westerlund responded by stating that according to him, there has been some change in incentives, and that there is less focus on potential monetary compensation. However, Westerlund still believes that a monetary compensation might be the most effective way and the easiest to communicate to the crowd. Nowadays, there are also a range of other potential incentives, for example the possibility for the people behind the idea to work in collaboration with the company for 6 or 12 months, the possibility to be 'coached' or being able to pitch your idea to the CEO during a lunch. Westerlund further states that another quite common incentive is travel, or inspiration trips, *"…it can be an incentive just to go and visit bigger companies at different*

locations" (Westerlund, J., Personal communication, 2015-03-18). So nowadays, there is more focus on collaboration.

4.3.5. Future Perceptions of the Concept

When asked about what the future holds in store for crowdsourcing, Westerlund stated that the whole area is under heavy development and that there is no real 'answer sheet' yet; there is nothing wrong or right. However, he believes that the concept is heading towards some sort of crossroad, where there will be specialized concepts for smaller companies, with softer incentives, no big monetary reward and a shorter process, and at the same time a specialized concept for bigger companies, with big rewards and a longer process. He further explains that he believes that there will not really be anything in between these two concepts.

4.4. Kalmar Science Park

Kalmar Science Park is primarily owned by Kalmar Kommunbolag AB. Their business idea is to provide a creative gathering point for ideas and innovative companies interested in growth. They want to increase the attractiveness of the region by contributing with innovation, inspiration and network building in close cooperation with the business world and the Linnaeus University. The interview has been conducted with Louise Östlund, CEO at Kalmar Science Park.

4.4.1. Role

Östlund works on a daily basis in collaboration with knowledge intensive companies that are aiming for growth. She states that Kalmar Science Park are currently working with 85-90 companies and that they have both incubators working with start-ups, as well as a Science Park working with established companies and an e-commerce cluster.

According to Östlund, crowdsourcing is experiencing a high incline in popularity. She continues to clarify that the mentality has existed prior to the name of the concept (crowdsourcing) been coined. She explains that Kalmar Science Park is acting as a facilitator for these crowdsourcing or innovation processes. Östlund explains that this is a very important role especially as a security mean, but also to make sure that the process is executed. Since the Science Park is neutral in the process, it also serves to solve potential disagreements that might occur. Östlund clarifies that every Science Park in Sweden currently works with open innovation and crowdsourcing. However, as a result of the great amount of SME's active in the region, the Science Park has developed a special methodology for Swedish SME's to make use of the concept, which she perceives has been very successful.

4.4.2. Process

Östlund explains that these open innovation/crowdsourcing processes often translates into two whole day sessions. In the last project, 35 people participated and included a spread demographic of everything from retirees and students to big national suppliers in order to get as big of a spectrum as possible. She clarifies that it is the Science Park that is responsible for inviting the participants. Furthermore, the participants are encouraged to work freely regarding the case and the Science Park, as facilitators, does not disturb during the process "… *they have to handle the challenge by themselves through an existing structure we have provided*" (Östlund, L., Personal communication, 2015-04-14). It is Kalmar Science Park's responsibility to, after the sessions, pass down the information and results obtained to the company.

According to Östlund, the first time a company makes use of an open innovation/crowdsourcing process, this should be conducted in a physical forum preferably with a neutral facilitator, in order to get a perception of what the concept is about and get someone to guide you. She explains that thereafter, it would be possible to conduct and manage such a process by themselves through, for example, the mean of an outspoken open innovation/crowdsourcing intermediary.

4.4.3. Incentives

Regarding the incentives for participation, Östlund explains that participating in such a process is completely 'pro bono' with no monetary compensation. The incentive is rather for participants to educate themselves by solely participating in such a process. In combination, participants also receive a diploma stating that they have participated. She clarifies that in order to get the 'right' people, it is important that the participants "…*participate because they are interested in the process*" (Östlund, L., Personal communication, 2015-04-14) and are not driven by a monetary reward.

4.4.4. Advantages and Disadvantages

In terms of advantages, Östlund mentions that using such a process can result in getting a better unity internally, concerning the questions at hand, and in addition getting valuable perspectives otherwise not obtained. Furthermore, crowdsourcing can be used to obtain market verification. Östlund sees no distinguished disadvantage of using crowdsourcing or open innovation, but instead believes that this is something being restricted by ignorance; that companies do not know what such a process consist of, how it works or simply that an unknowing process is perceived as scary. She believes that the concept has to be translated to the market in the form of real examples taken from Swedish companies, in order to ensure that companies understand that this is something that they need in order to innovate new markets, to get companies to move away from the fixed frameworks previously explored. Östlund continues to clarify that innovation processes do not solely have to do with product- or service development and gives the example of using such a process for the sole purpose of setting up their own business. However, Östlund states that everything is dependent on the mindset of the CEO that he/she needs to be apt to change *"… we can never conduct a crowdsourcing process if the CEO have a closed mindset"* (Östlund, L., Personal communication, 2015-04-14).

4.4.5. Future Perception of the Concept

When asked about the future of crowdsourcing, Östlund believes that the first step is to educate the companies and introduce them to the concept. Furthermore, she believes that this will result in companies absorbing this mindset and innovate further by themselves. By time, Östlund is convinced that this will evolve into a common process to choose from, that it will become a natural element to the business world.

5 Analysis

In the following chapter, the empirical findings and the frame of reference are compared and interlinked. The structure of this chapter follows that of the conceptual model developed and presented in the introduction chapter. Even though, 'problem' is not part of any research question, it is important to show that the use of crowdsourcing emanates from a problem and will therefore be discussed first. Furthermore, changes are made to the working conceptual model based on the findings.

5.1. Problem

As illustrated in the conceptual mode, crowdsourcing is grounded in a problem. However, this problem can be solved by different means other than crowdsourcing, for example, through outsourcing or in-house solutions. A reason why Swedish SMEs do not use crowdsourcing to the same extent as bigger companies can, according to Engström and Östlund, be that there is a lack of awareness regarding the concept. This is strengthened by Geijer's statement that Åre Skidfabrik was not aware of the concept of crowdsourcing until after the process had been conducted.

According to Penrose (1995), SMEs generally have limited resources. The problem can on the one hand be the lack of economic resources or access to capital, which restricts the company to execute for example a market research to analyze the preferences and the demand of the market. According to Geijer, crowdsourcing can enable companies that do not have the economic resources to conduct a tremendous market research. Furthermore, there can be a lack in organizational resources, which restricts the company to develop new ideas or to solve a problem. We believe that this perceived restriction is something that can be diminished by exploiting the collective thinking through crowdsourcing, as this would function as democratizing the information supply.

According to Souza et al. (2009), a lack of resources can also pose a problem concerning the protection of intellectual property, as is can be seen as risky to share specific information. This aligns with Westerlund's view that companies can be uncomfortable with opening up and sharing the information required to conduct a crowdsourcing initiative. However, Westerlund believes that this does not generally have to do with lack in resources, but rather something that permeates all sizes of companies.

According to Penrose (1995), large companies have accumulated valuable experience and, due to their size, have an advantage concerning technological and organizational economies. This aspect implies that smaller companies may have a restricted choice in process of how to solve a problem or challenge at hand, as smaller companies may lack valuable experience, as well as technological and organizational resources to solve the problems on their own. This aligns with the perception of the cases of Åre Skidfabrik and MyCuff. Westerlund also states that it is important to know that crowdsourcing is not suitable for all kind of problems a company is experiencing.

5.2. Advantages and Disadvantages

As crowdsourcing allows the participation of countless contributors, positive network effects (Schenk & Guittard, 2009; Rohlfs, 1974) can be achieved, which is mentioned as advantage in the theory. Westerlund argues that utilizing crowdsourcing can be a way to cooperate between different product areas (silos) and a way to work cross-functional

between these silos, which he perceives as an internal advantage. Furthermore, Schenk & Guittard (2009) argues that a complex task can be solved by addressing a mass of skilled individuals, something that aligns with the nature of crowdsourcing. As Westerlund states, crowdsourcing has the theoretical formula of reaching everyone. In our opinion, crowdsourcing contributes to a positive network effect, as it can be used to build stronger relationships. This aligns with Engström's view that using crowdsourcing can create some sort of 'belonging' to the company, as you surround yourself with interested people. Stronger relationships consequently add value to the company. In accordance with this, Östlund also believes that using crowdsourcing can result in a better internal unity.

Furthermore, Schenk & Guittard (2009) argues that addressing a mass of skilled individuals will usually result in different solutions for the given problem. Westerlund, Östlund and Engström all mention the external perspectives obtained from crowdsourcing initiative as something very valuable for the company. Engström furthermore argues that these external perspectives are something that can reduce the homogeneity in thinking that often exists within companies. He continues to state that MyCuff obtained an enormous amount of ideas and marketing suggestions as a result of their crowdsourcing process. Thus, we believe that crowdsourcing enables companies to gather a broad range of perspectives that bring value and can help companies overcome challenges or problems.

The major advantage of crowdsourcing is, according to Schenk & Guittard (2009,) its relatively low cost. In comparison with traditional techniques, it is less expensive and less time-consuming (Greengard, 2011). However, the time perspective contradicts the views of Engström and Geijer, who state that using the concept can be very time-consuming. This can be viewed as especially challenging for smaller companies, as this might take time from their core-activities. Östlund and Geijer also state that using crowdsourcing can be an economically sustainable way for smaller companies to conduct a bigger market research and get market verification otherwise not obtainable. We believe that it is important to be aware of the time aspect required for most crowdsourcing initiatives. Furthermore, companies have to evaluate how much time the crowdsourcing process would take from the company's core activity and weigh this tradeoff in comparison to the potential advantages. One can argue that the tradeoff can be perceived as more significant for smaller companies with limited resources, and that this might be the reason why the concept is being more frequently used by larger companies. Additionally, it is important to remember, as Engström stated, that there is no guarantee for problem solving, using crowdsourcing. However, all interviewees have experienced, according to themselves, successful crowdsourcing processes. Furthermore, Geijer states that using crowdsourcing can also be knowledge demanding. We believe that the degree of knowledge required is determined by the nature of the problem at hand. If finding a solution for said problem is emanated in the specific knowledge of the crowd, a forum/platform targeting potential participants with the specific knowledge is required. Åre Skidfabrik succeeded with this by using 'freeride forum' as their crowdsourcing platform.

Information can be shared quickly and effectively, which results in high speed responses and quickly filled information gaps (Greengard, 2011). This aligns with the view of Westerlund, who states that crowdsourcing often serves as a mean for reaching the market faster. Furthermore, according to Wiggins & Crowston (2011) crowdsourcing may lead to an information overload. We believe this risk can be decreased by the help of intermediation platforms or facilitators, which, as Östlund and Westerlund state, can help the companies with facilitating responses and conduct a broader screening in which irrelevant submissions are removed. However, Engström also points out that the company

should not solely rely on the intermediation platform to execute the initiative properly, as these often handle many projects simultaneously.

Schenk & Guittard (2009) outline that there might be a competitive risk in terms of knowledge and know-how. This aligns with Westerlund who states that companies often are reluctant in opening up and sharing information, which is a necessity in conducting a crowdsourcing initiative. Östlund furthermore states that the crowdsourcing initiative is dependent on the mindset of the CEO, who needs to be apt for change. We believe, in accordance with Westerlund, that in order to conduct a successful crowdsourcing initiative you need to share a little in order to gain a lot.

The following table is used to summarize the advantages and disadvantages identified in the empirical findings (see Table 3).

Table 3 - Analysis advantages & disadvantages of crowdsourcing

Advantages	**Sqore AB**	**Åre Skidfabrik AB**	**MyCuff AB**	**Kalmar Science Park**
Positive network effects*	Cooperation between different product areas / way to work cross-functional			
Complex task can be solved*				
High speed responses*				
Range of solutions*			Generation of enormous amount of ideas, marketing suggestions, contacts etc.	
Speed of information sharing*				
Relatively low cost*		Mean to achieve a tremendous market research → enables companies that do not have the economical or organizational resources		
External perspectives	External perspectives		New perspectives	Valuable perspectives otherwise not obtained
Mean for reaching the market faster	Mean for reaching the market faster			Market verification
Involvement of potential customers		Involvement of potential customers		
Marketing		Gain marketing		

Create belonging			Create belonging	Better internal unity
Awareness creation			Creation of awareness	
Disadvantages	**Sqore AB**	**Åre Skidfabrik AB**	**MyCuff AB**	**Kalmar Science Park**
Information overload*				
Unreliable- and concerns in accuracy of data*				
Risk factor* • Dependence on platform • Competitive risk		Need of right platform or forum in order to be able to drive a discussion	No reliance on solely the platform	
Problem of opening up and sharing the information	Problem of opening up and sharing the information			
Resource demanding (time & knowledge)		Resource demanding (time & knowledge)	Time consuming	
Not every challenge can be solved through crowdsourcing	Not every challenge can be solved through crowdsourcing		No guarantee for problem solving	
Need of a finished strategy			Need of a finished strategy	
Dependence on mindset of the CEO				Dependence on mindset of the CEO

* Advantages and Disadvantages emanating from theory

'Complex tasks can be solved', 'high speed responses', 'speed of information sharing', 'information overload' and 'unreliable- and concerns in accuracy of data' are all advantages and disadvantages mentioned by theory, but not mentioned in the case interviews. We believe that, even though these were not mentioned in the interviews, the aspects are still important to consider in the evaluation of whether or not to implement a crowdsourcing initiative. The advantages and disadvantages mentioned in the interviews emanate from individual perception; this might be the reason why the aforementioned aspects were not suggested.

5.3. Process of Crowdsourcing

According to Schenk & Guittard (2009), it is of significance that the crowdsourcing initiative is an open call, thus the call is not limited to experts or preselected candidates. However, Surowiecki (2005) argues that the heterogeneity of the crowd is dependent on the type of process considered to use crowdsourcing for. This latter perspective aligns with the view of Geijer, who argues that their possibility to use a somewhat heterogeneous forum specialized for the challenge at hand (freeride forum) was a key factor in the success of their crowdsourcing initiative. Geijer, Engström and Östlund furthermore emphasize the importance of surrounding yourself with 'interested' people in order to achieve the desired outcomes.

There are several different crowdsourcing initiatives, these can for example range from routine to complex and from creative to innovative (Doan et al. 2005). That crowdsourcing initiatives can differ is something that all interviewees are aware of, as Östlund clarifies, it does not solely have to do with product- and service development. Westerlund further explains the high degree of customization of different crowdsourcing initiatives. A crowdsourcing process at an early phase (e.g. a new product innovation), which requires a 'broader' question is more time-consuming and complex, than a crowdsourcing process that is implemented at a later phase in which the question is more specified.

The initial incentive or objective for companies to utilize crowdsourcing is to obtain a solution to a specific problem, which is further fulfilled by the crowd (Estellés-Arolas & González-Ladrón-de-Guevara, 2012). The participants of a crowd might obtain satisfaction, whether it is monetary compensation, social recognition, self-esteem or developing individual skills. What is considered the best incentive for participation is something that is somewhat divided between the different interviewees. Even though all interviewees believe that the focus on monetary compensation for such initiatives is decreasing, Westerlund argues that a monetary compensation is the easiest incentive to attract and motivate participants. However, Östlund is stating that in order to get the 'right' people it is important that participation is due to interest in the process itself and not driven by monetary reward. This latter aspect aligns with the views of Stewart et al. (2009), in which the optimal solution for a crowdsourcing initiator is that the motivation for participation is not material, but instead emanates from passion for the activity. Geijer states that the reason for participation in Åre Skidfabrik's crowdsourcing initiative was solely that it was something fun and new for interested people. Engström argues that he believes that even though there was a smaller monetary reward, the reason for participation in MyCuffs initiative was the possibility for participants to get insight into the company.

We believe that the most appropriate incentive is determined by the nature of the crowdsourcing initiative. If there is a requirement for specific knowledge from the crowd, for example as in the development of Åre Skidfabrik's off-piste ski, it is easier to attract truly interested participants to the project, and exploit this interest as incentive, rather than using a monetary reward. However, if the initiative consisted of a general question with no specific knowledge required to answer, it might be more difficult to create a 'belonging' to the company and a smaller monetary reward might be required.

According to Zhao & Zhu (2012), an intermediation platform builds a link between the providers and assigners. It provides a public sphere in which participants can discuss and work in collaboration in order to develop solutions (Chanal & Caron-Fasan, 2010). Östlund emphasize the importance of the role as facilitator or intermediation platform, and that this fills somewhat of a security role in the process. She furthermore argues that the first time using a crowdsourcing initiative, this should be conducted in a physical forum with a neutral facilitator to guide the process. This will enable companies to make use of other intermediary platforms in future crowdsourcing initiatives. This is in accordance with how MyCuff proceeded with their crowdsourcing initiative, a physical forum consisting of 35-40 students with former crowding.se as a 'facilitator', whilst Åre Skidfabrik used 'freeride forum' as an online intermediation platform.

According to Zhao & Zhu (2012), the process of a crowdsourcing initiative emanates from a perceived problem or challenge for the company (assigner). This problem or challenge is further submitted by the means of an intermediation platform, which includes the delimitations and guidelines of the project (rules). This is further translated to potential participants (Providers), who through participation provide feedback and solutions, which

are moreover evaluated (validated). During the process, there might also be a connection between the assigner and provider, regarding information etc. (This model is explained in greater detail in chapter 2 *Frame of Reference*).

The two crowdsourcing processes conducted, based on the information obtained from the interviews, are subsequently explained and inserted into the altered model (see Fig. 7).

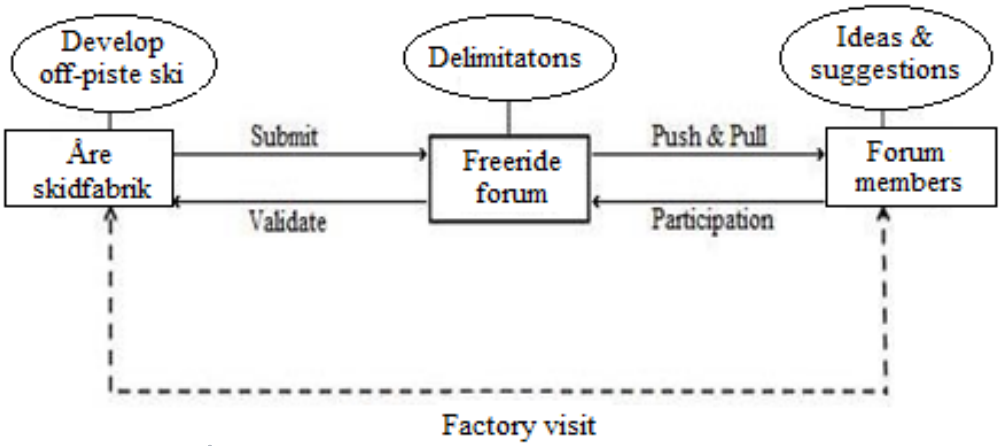

Figure 5- Case implementation Åre Skidfabrik (Authors altered version of Components, processes and actions of crowdsourcing, Zhao & Zhu, 2012)

Åre Skidfabrik had a challenge in developing an off-piste ski. They submitted this challenge by the means of freeride forum as intermediation platform, which enabled members of the forum to participate in the project. The members posted their ideas and suggestions to the forum, which was further evaluated by the initiators of the project. Furthermore, Åre Skidfabrik provided the opportunity for participants to visit the factory during the development process.

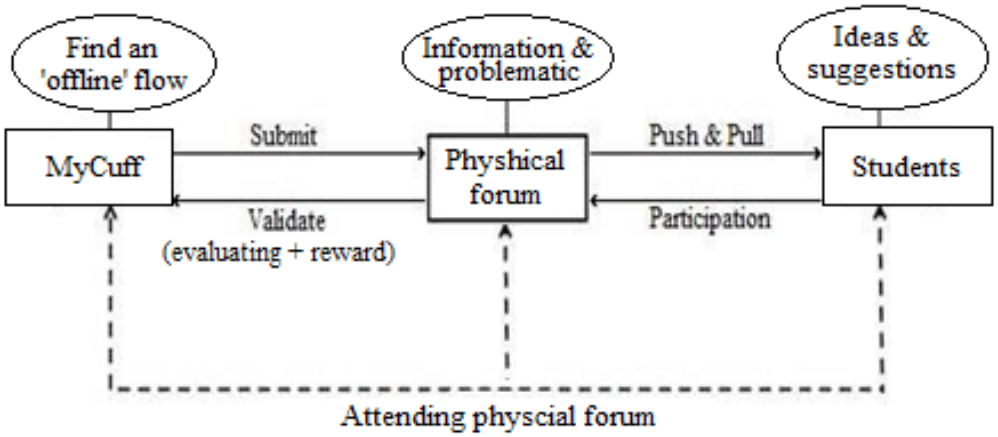

Figure 6 - Case implementation MyCuff (Authors altered version of Components, processes and actions of crowdsourcing, Zhao & Zhu, 2012)

MyCuff have a challenge in finding an offline flow of customizable goods. They arranged, in collaboration with crowding.se, a physical forum, in which students were introduced to the background and problematic of the case. The participants collectively discussed ideas and suggestions, which were later evaluated by the company. The best ideas or suggestions were rewarded with a small monetary compensation. Furthermore, MyCuff attended the physical forum and provided information and answered questions the participants provided.

We believe it is important to distinguish the online and offline crowdsourcing initiatives, as these function somewhat different. Conducting the process in a physical forum will generate more of a two-way communication (if the company is present) and drive a discussion between participants. Conducting the process online through the Web 2.0 has the possibility to generate a greater amount of responses and participants, as there is not maximum number of participants, which is often the case with a physical forum. By using an online platform, one also has a greater opportunity to gather ideas from people outside the geographic proximity needed for a physical forum.

Furthermore, we would argue that the process of conducting a crowdsourcing initiative for SME's and larger companies does not differ to any greater extent. However, the will to exclude any monetary compensation can be viewed as a more attractive option for SME's, as this could help to further reduce the financial impact, as suggested by Östlund, Engström, Westerlund and Geijer.

5.4. Performance Improvement

According to McGrath et al. (1995), 'deftness' and 'comprehension' are central to the emergence of competence, which is further a precursor for competitive advantage. The 'deftness' in a crowdsourcing process would translate into the cost regarding building interactions of the part of skilled participants (opportunity cost), reducing confusion in regards to responsibilities, required information etc. (transaction cost), as well as cost regarding evaluating performance, create forms of control and rewarding people (agency cost). Crowdsourcing can be used as a mean to minimize these costs compared to other alternatives, as crowdsourcing exploits the voluntary crowd as their work force. This aligns with the views of Engström, that you can either spend a lot of money in marketing or you can use the means of crowdsourcing. 'Comprehension' is described by McGrath et al. (1995) as linkage of individual skills and know-how in a process to create an understanding by the group, which would normally go beyond the cognitive capabilities of any single member. This aspect aligns with crowdsourcing, as it, in its nature, collects individual know-how and drives a discussion, which links together with other individual know-how. Westerlund states the importance of obtaining external perspectives from the crowd as a way to minimize the homogeneity in thinking within a company. Based on this, we can argue that the deftness and comprehension of a crowdsourcing initiative, at least theoretically, can result in an emerging competence for the company.

We believe that this emerging competence can further result in either or both an operational improvement or knowledge improvement. In the case of Åre Skidfabrik, it is clear that the initiative has had an operational and financial impact. Geijer clarifies that the company emerged as one of the top contenders in off-piste skis with this model. However, in the case of MyCuff, there is no distinct operational improvement to be identified. Instead, the company obtained external perspectives and ideas, which reduced the homogeneity in thinking, hence knowledge improvement. Engström states that the crowdsourcing initiative was very valuable for the company, as it resulted in an enormous amount of ideas, marketing suggestions etc. Furthermore, we believe that knowledge improvement could further be used to foster operational improvement.

In addition, we believe that the 'improvement' obtained functions the same way for smaller companies as for larger companies, as a result of the democratization of supply of information. This is based on the premise that solutions obtained through crowdsourcing have the possibility to generate a competitive advantage.

5.5. Altered working conceptual model

Based on the empirical findings, the outlined working conceptual model has been altered to include the identified data. Furthermore, the research questions in the working conceptual model that were outlined for this study have been replaced by a short answer or outcome, further explained in the conclusions of this study.

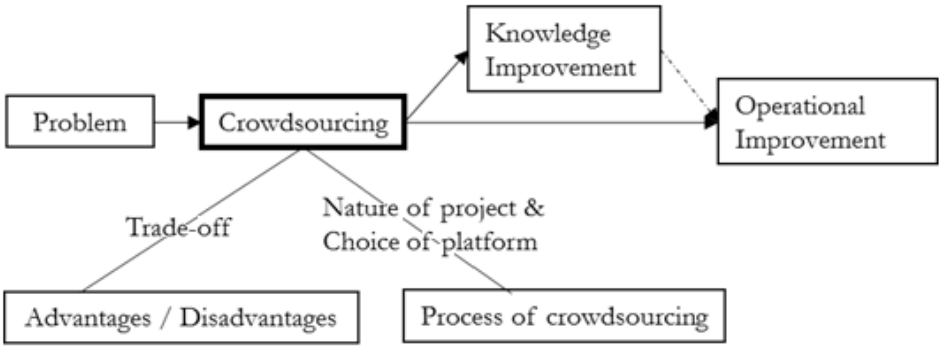

Figure 7 - Altered working conceptual model (own model)

Crowdsourcing can function as an enabler for Swedish SME's with the premise that it can enable smaller companies to compete with larger companies. Using the process can result in operational- and/or knowledge improvement. Concerning the advantages versus disadvantages, a decision has to be made, whether the tradeoff required for using crowdsourcing is worth pursuing. Furthermore, the process of the initiative is determined by the nature of the project, which also emanates in the choice of intermediary platform.

6 Conclusions

In this chapter, the research questions are answered, which serves as the basis for fulfilling the purpose of the study. In addition, implications in regards to a managerial recommendation and theoretical contribution are given, as well as the limitations of the study and the suggestions for further research.

The purpose of this study was to explore the concept of crowdsourcing and how this could be exploited by small- and medium sized enterprises in Sweden to function as an enabler through the creation and investigation of three research questions, emanated from the authors outlined working conceptual model. Based on the empirical findings, in combination with the study's frame of references, some final conclusions can be drawn.

Firstly, this study explored what the advantages and disadvantages related to crowdsourcing were. Based on the perceived advantages and disadvantages of the investigated case companies, in combination with those mentioned in the frame of references, it was identified that there are several different advantages and disadvantages related to the utilization of crowdsourcing. Crowdsourcing can serve as a mean to, for example, conduct market research and develop a product etc. at a lower financial impact than other alternatives. Crowdsourcing can, in some aspects, enable smaller companies to compete with bigger companies, as it democratizes the supply of information. However, there will naturally be some sort of tradeoff that has to be made, as using such a concept is perceived as very time-consuming. One can further argue that the tradeoff is considered to be more significant for SME's in regards to their often limited resources. The main question companies need to ask themselves is, if the advantages of using such a process are worth the time taken from the company's core activity and furthermore other disadvantages identified, such as, the risk of information sharing and the fact that there is no guarantee that the crowdsourcing initiative actually generates ideas and solutions perceived as significant or valuable.

Secondly, this study also explored what the process of implementing crowdsourcing was. It was made clear that there is no 'one way' of implementing such a process, but rather that the process of crowdsourcing is determined by the nature of the initiative. If companies are looking for something new or innovative, the process will be longer and more complex than if companies have a more specific question at hand. Furthermore, the usage of an intermediation platform can be important for the company concerning both security and guidance. For smaller companies, a physical forum in combination with a facilitator might be the best 'first' choice of crowdsourcing, as this enables companies that do not have a full awareness of the concept to utilize crowdsourcing, and furthermore educate themselves concerning this. The incentives of the initiative can also be somewhat determined by the process in terms of choice of the nature of the project, forum and participants. Reaching an 'interested crowd' can diminish the need of a monetary compensation. However, if the question or challenge at hand does not require any specific knowledge from the crowd (a true open call), it can be more difficult to create the same sense of 'belonging' and it might thus be necessary to offer a smaller monetary compensation to attract participants.

Finally, the study explored if using crowdsourcing can amount to a performance improvement. Based on the altered working conceptual model presented in chapter 5 *Analysis*, the 'performance improvement' box was altered, as it was identified that the 'improvement' a company can obtain from the generation of ideas and solutions can take

two different forms. It can either be an operational improvement, knowledge improvement, or a combination of the two. If the ideas and solution result in a specific product or service etc., the initiative will have had an operational and financial impact to the company. However, if the crowdsourcing initiative does not result in a specific product or service, but rather external perspectives from individual know-how, this would lead to knowledge improvement for the company and function as a way to reduce homogeneity in thinking. This knowledge improvement can become a basis for future operation improvement initiatives.

6.2. Implications

6.2.1. Managerial recommendation

This study can serve as a mean for increasing awareness regarding the concept of crowdsourcing for Swedish small- and medium sized enterprises. It can furthermore be used as a mean for providing an understanding regarding the different options of intermediary platforms/forums that are available, how the process function, what questions a company must asked themselves before engaging in such a process, what advantages versus disadvantages there are, and finally how such an initiative is executed.

6.2.2. Theoretical contribution

Based on the empirical findings, in comparison with the literature review, the working conceptual model was altered to best suit the emerging information obtained throughout the study. As a result, the altered working conceptual model can be viewed as contribution in terms of theory, as it identifies and illustrates previously not mentioned aspects of a crowdsourcing process. Arguably, the illustrated model is not limited to SME's exclusively, but can rather incorporate companies of different size. However, the links in the altered working conceptual model need to be explored differently depending if the process involves a small- or medium sized enterprise or a larger companies. The fact that the model can be used to include SME's, and furthermore incorporates how to interpret the links to appropriately suit this specified company categorization, has resulted in gaps in theory being filled.

6.3. Limitations

Since the study had a predetermined time horizon, the sample size subsequently had to be limited, hence only four case interviews were conducted. With this small sample size, the ability to generalize in analysis becomes limited as the findings cannot be translated to the larger population.

6.4. Further research

Since this study concerns only Swedish small- and medium sized enterprises, it may not be accurate and transferable to small- and medium enterprises in other cultural contexts. Further research need to be conducted concerning SME's in other countries. Also, since this study based its working conceptual model solely on McGrath et al. (1995) view of the resource based view, additional research emanating from other theoretical contexts is necessary. Furthermore, additional research regarding a larger sample of SME's using crowdsourcing is needed, preferably a quantitative study, in order to obtain generalizable findings.

As this study only includes companies who have had successful experiences of utilizing the concept of crowdsourcing, further research should be conducted in regards to companies that have used the concept, but instead have a had an unsuccessful experience in implementing such an initiative. This would amount to yet another perspective, which would be valuable for companies considering executing a crowdsourcing process.

List of references

Primary data

Geijer, C., Co-Owner/CEO Åre Skidfabrik AB, Interview via Skype, 19.3.15

Engström, S., Founder/Co-Owner/CEO MyCuff AB, Interview via Skype, 27.3.15

Westerlund, J., International Account Manager Sqore AB, Interview via Skype, 18.3.15

Östlund, L., CEO Kalmar Science Park, Interview via Skype, 14.4.15

Literature

Bianchi, M., Orto, S. C., Frattini, F. and Vercesi P. (2010). *Enabling Open Innovation in Small- and Medium-Sized Enterprises: How to Find Alternative Applications for Your Technologies*. R&D Management 40(4), 414–430.

Barney, J. (1991). *Firm Resources and Sustained Competitive Advantage*. Journal of Management March 1991 vol. 17 no. 1 99-12

Boswell, J. (1972). *The Rise and Decline of Small Firms*. Allen & Unwin, London.

Boter, H. and Holmquist, C. (1998). *The impact of size, industry, and nation on internationalization in small and medium-sized enterprises*. In: Donckels, R. and Miettinen, A. (Eds), *Entrepreneurship and SME Research: On Its Way to the Next Millennium*, Ashgate, Aldershot.

Caves, R. E. (1980). *Industrial organization, corporate strategy and structure*. Journal of Economic Literature. 58, pp. 64-92.

Chanal, V., Caron-Fasan, M. L. (2008). *How to invent a new business model based on crowdsourcing: The CROWDSPIRIT Case*. Conférence de l'Association Internationale de Management Stratégique, Nice, May.

Chesbrough, H. W. (2003). *Open innovation: The new imperative for creating and profiting from technology*. Harvard Business Press.

Christensen, J. F., Olesen, M. H., Kjær, J. S. (2005). *The Industrial Dynamics of Open Innovation: Evidence from the Transformation of Consumer Electronics*. Research Policy 34(10), 1553–1549.

Cooper, R. G., Edgett, S. J., Kleinschmidt, E. J. (2003). *Best Practices in Product Innovation: What Distinguishes Top Performers?*. Ancaster ON: Product Development Institute.

Coyle, J.J., Langley, C.J, Novack, R.A., Gibson, B.J. (2008). *Managing Supply Chains - A logistics approach*. 9th edition. South Western Cengage Learning

Derham, R., Cragg, P. and Morrish, S. (2011). *Creating Value: An SME and Social Media*. PACIS 2011 Proceedings. Paper 53.

Doan A, Ramakrishnan R, Halevy AY. (2011). *Crowdsourcing systems on the World-Wide Web*. Communications of the ACM. 54(4): 86–96.

Eliasson, A. (2013). *Kvantitativ metod från början*. Lund: Studentlitteratur

Estellés-Arolas, E., González-Ladrón-de-Guevara, F. (2012). *Towards an integrated crowdsourcing definition*. Journal of Information Science 38(2) 189–20

European Comission (2003). *Enterprise and Industry Publications: The new SME definition, user guide and model declaration*. Available from: <http://ec.europa.eu/enterprise/policies/sme/files/sme_definition/sme_user_guide_en.pdf>

Gassmann, O., Enkel, E. (2004). *Towards a Theory of Open Innovation: Three Core Process Archetypes*. Proceedings of the RADMA conference.

Greengard, S. (2011). *Following the Crowd*. Communications of the ACM. 54, 2, 20-22

Heer J, Bostock M. (2010). *Crowdsourcing graphical perception: using mechanical turk to assess visualization design*. In: Proceedings of the 28th international conference on human factors in computing systems, CHI'10, ACM, New York, 2010, pp. 203–212.

Howe, J. (2006). *The rise of crowdsourcing*. Wired Magazine, 14(6), 1–4.

Kiefer, D. M. (2002). *It was all about alkali*. Today's Chemist at Work. pp. 45–6.

Kittur, A., Chi, E. H., & Suh, B. (2008). *Crowdsourcing User Studies with Mechanical Turk*. In: Proceedings of the twenty-sixth annual SIGCHI conference on Human factors in computing systems, pp. 453–456.

La Vecchia G, Cisternino A. (2010). *Collaborative workforce, business process crowdsourcing as an alternative of BPO*. In: Proceedings of first enterprise crowdsourcing workshop in conjunction with ICWE 2010. Berlin/Heidelberg: Springer-Verlag, 2010, pp. 425–430.

Lacity, M. C., Hirschheim, R. (1993). *The Information Systems Outsourcing Bandwagon*, MIT Sloan Management Review

Lecocq, X., and Demil, B. (2006). S*trategizing Industry Structure: The Case of Open Systems in a Low-Tech Industry*. Strategic Management Journal 27(9), 891–898.

McGrath, R. G., MacMillan, I. C. & Venkataraman, S. (1995). *Defining and developing competence: a strategic process paradigm*. Strategic Management Journal, Vol. 16, 251-275

Prive T. (2012). *What is crowdfunding and how does it benefit the economy*. Forbes. Available from http://www.forbes.com

Reichwald R, Piller F. (2006). *Interaktive Wertschöpfung - Open Innovation, Individualisierung und neue Formen der Arbeitsteilung*. Gabler, Wiesbaden

Saxton, G.D., Oh, O., Kishore, R. (2013) *Rules of Crowdsourcing - Models, Issues, and Systems*. Information Systems Management, Volume 30, Issue 1

Schenk, E., Guittard, C. (2009). *Crowdsourcing: What can be Outsourced to the Crowd, and Why*? <halshs-00439256v1>

Seltzer, E., Mahmoudi, D., (2012). *Citizen Participation, Open Innovation, and Crowdsourcing: Challenges and Opportunities for Planning*, Sage publications

Selznick, P. (1957). *Leadership and Administration*. Harper & Row, New York

Sivula, A.,Kantola, J., (2014). *Combining crowdsourcing and Porter's value chain*. International Journal of Advanced Logistics, 3:1-2, 17-26

Sloane, P. (2011). *A guide to open innovation and crowdsourcing: advice from leading experts*. London: Kogan Page Limited

Sloane P. (2011). *The brave new world of open innovation*. Strategic Direction; 27(5): 3–4.

Souza, L., Ramos, I., Esteves, J. (2009). *Crowdsourcing Innovation: A Risk Management Approach*. In: The Proceedings of the 4th Mediterranean Conference on Information Systems, Athens, Greece

Stewart, O., Huerta, J.M., Sader, M. (2009). *Designing crowdsourcing community for the enterprise*. In: Proceedings of the ACM SIGKDD Workshop on Human Computation, HCOMP '09. New York: ACM, pp. 50–53.

Surowiecki, J. (2005). *The wisdom of crowds*. New York: Anchor Books

Van De Vrande, V., De Jong, J. P. J., Vanhaverbeke, W., De Rochemont, M. (2009). *Open Innovation in SMEs: Trends, Motives and Management Challenges*. Technovation 29(6–7), 423–437.

Vigier, P. (2007). *Towards a Citizen-driven Innovation System in Europe: A governance approach for a European innovation agenda*. Innovation 20(3), 191–202

Vukovic, M. (2009). *Crowdsourcing for enterprises*. In: Proceedings of Congress on Services, pp. 686–692.

Weick, K. E., Roberts, K. H. (1993). *Collective mind in organizations: Heedful interrelating on flight decks*. Administrative Science Quarterly. 38, pp. 357-381.

Wernerfelt, B. (1984). *A resource-based view of the firm*. Strat. Mgmt. J., 5: 171–180. Doi: 10.1002/smj.4250050207

Wiggins, A., Crowston, K. (2011). *From conservation to crowdsourcing: A typology of citizen science*. In: Proceedings of the Forty-fourth Hawai'i International Conference on System Science (HICSS-44).

Zhao, Y., Zhu, Q. (2012). *Evaluation on Crowdsourcing Research: Current Status and Future Direction*. Information Systems Frontiers, Online First published online April 11, 2012

Methodology:

Ghauri, P.N., Grønhaug, K. (2010). *Research methods in business studies*. Pearson Education. Harlow. 4th Edition

Kumar, R. (1999). *Research methodology: a step by step guide for beginners*. SAGE publications, London

Kvale, S. (1996). *An Introduction to Qualitative Research Interviewing*. SAGE publications, London

Mills, A. J., Durepos, G., Wiebe, E. (Eds.). (2010). *Encyclopedia of case study research*. Thousand Oaks, CA: SAGE Publications

O'Leary, Z. (2010). *The essential guide to Doing your research project*. Sage publications, Los Angeles

Patton, M.Q. (2002). *Qualitative Research and Evaluation Methods*. Thousand Oaks, CA: Sage. 3rd Edition

Saunders, M., Lewis P., Thornhill, A. (2009). *Research Methods for Business Students*. Prentice Hall, Harlow. 5th Edition

Simons, H. (2009). *Case research in Practice*. Sage publications, Los Angeles

Yin, R.K. (2009). *Case study research: design and methods*. London: SAGE. 4th Edition

Zikmund, W. G., Babin, B. J., Carr, J. C., Griffin, M. (2010). *Business Research Methods*. South - Western, Cengage Learning. Canada, 8th Edition

Webpages:

Crowdsourcing – Why the power of the crowd is driving the future of business. Howe, J.. Available from: < http://www.crowdsourcing.com/> [16 February 2015]

Definition: enablers. N.d. Available from: <http://www.businessdictionary.com/definition/enablers.html> [16 February 2015]

From "Toyoda" to "Toyota". N.d. Available from: <http://www.toyota-global.com/showroom/emblem/history/> [16 February 2015]

John Harrison and the Longitude problem. Royal Museums Greenwich. N.d. Available from: <http://www.nmm.ac.uk/explore/astronomy-and-time/time-facts/harrison > [16 February 2015]

Roth, Y, 2012. *The 6 best global brands use creative crowdsourcing.* Available from: <http://news.eyeka.net/2012/03/the-6-best-global-brands-use-creative-crowdsourcing/> [16 February 2015]

Appendix

Interview Guide 1 – Companies *

Introduction
Can you briefly tell us about your company and your role within the company?

Crowdsourcing & Other alternatives
How did you become aware of the concept?
What kind of suggestions were you looking for?
Did you consider other alternatives? Which other alternative did you choose and why?
What are the disadvantages and advantages?

Crowdsourcing process
What kind of platform did you use?
What are the different steps of the crowdsourcing process?
What was the incentives for the crowd to participate?
Was it a successful project and why?
How do you measure success in terms of crowdsourcing for the overall company?

Future of crowdsourcing
Do you think you are going to use crowdsourcing in the future?
Is crowdsourcing in your opinion an enabler for Swedish SMEs?
What is in your opinion the future of the concept?

** This is a standardized interview guide, further questions were asked based on responses*

Interview Guide 2 – Platform / Institution *

Introduction
Can you briefly tell us about the company, and your role in the company?

Crowdsourcing & Respective role
What are the disadvantages and advantages?

Crowdsourcing process
What are the different steps of the crowdsourcing process?
What was the incentives for the crowd to participate?
Can you give us an example or a successful project? How do you measure success in terms of crowdsourcing for the company?
Do you think that it more difficult for smaller companies than bigger companies to use this concept?
What kind of companies use your service the most, in terms of for example size?

Future of crowdsourcing
Is crowdsourcing in your opinion an enabler for Swedish SMEs?
What is in your opinion the future of the concept?

** This is a standardized interview guide, further questions were asked based on responses*