Market-oriented CSR implementation in SMEs with sustainable innovations: an action research approach

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Abstract

Purpose – The purpose of the study is to identify and analyze critical mediating and moderating market intelligence challenges faced by the SMEs when implementing corporate social responsibility (CSR) based on an applied market-oriented business model (MOBM).

Design/methodology/approach – Focusing on developing CSR-integrated market intelligence, this study uses an action research method by analyzing four case studies. Data is collected through interviews, interactive and knowledge-sharing meetings and on-site observations. The study is part of a larger European Union project using the developed MOBM to follow the four companies’ CSR implementation and learning process over a 14-month period. The action research includes seven meetings; between these, the researchers introduced the SMEs to different business focus areas, where CSR is a vital part of the MOBM.

Findings – This study shows that the SMEs are too technology-focused and have little initial idea of how to integrate CSR advantages for market intelligence into their internationalization. The MOBM model offers insights and knowledge on the strength and weakness of the internal organization to meet challenges in internationalization.

Originality/value – Via case study and action research, this study spotlights the challenges that SMEs face in the CSR implementation process and how they deal with those challenges to develop market intelligence competence internally. Instead of following a traditional research approach, the current study applies a CSR-based method where the SMEs go through a knowledge development process that originated from a theoretically designed MOBM.

Keywords CSR, Market orientation, Business model, SMEs, Case study, Mediator, Moderator, Knowledge development

Paper type Research paper

1. Introduction

Corporate social responsibility (CSR) and market orientation (MO) have traditionally been studied as two separate concepts. Recently, however, research interest in investigating how MO can contribute to CSR intelligence of companies has increased (Felix, 2015; Han et al., 2013), but most of the studies target larger companies (Qu, 2014; Santos, 2011). Concerning small and medium-size enterprises (SMEs), CSR research has focused on the resource barriers that companies encounter...
when implementing the concept or how it affects them as partners in the supply chain (Colovic and Henneron, 2018; Jorgensen and Knudsen, 2006; Lepoutre and Heene, 2006).

The market intelligence (MI) perspective of MO is commonly used in research to identify the needs, desires and concerns of the consumers and provide innovative solutions and satisfaction (Christensen et al., 2015; Jebarajakirthy et al., 2016; Qu, 2014). This perspective can also help SMEs to develop MI regarding the perception of CSR among consumers and understanding the importance of implementing the concept within their operations (Halkos and Skouloudis, 2017; Han et al., 2013; Jorgensen and Knudsen, 2006; Luo and Homburg, 2007; Maignan and Farell, 2004). Sundström and Ahmadi’s (2019) study provides support for positive effects of CSR-influenced MI that meets customer needs on firm responsiveness and performance as well. Also discussed is how CSR-influenced MI allows firms to create sustainable innovations focusing on economic, social and environmental concerns (Rosca et al., 2017; Lubberink et al., 2017; Delmas and Pekovic, 2018).

So far, few studies have drawn attention to the challenges that innovative SMEs face in adapting their operations to CSR in international MO (Baden et al., 2009; Sen and Cowley, 2013). To fill this gap, this study assumes that a theoretically based market-oriented business model (MOBM) can support the SMEs’ learning and knowledge development process related to CSR. According to Rissanen et al. (2019), internationalization is a complex process requiring developing knowledge of several value-based environmental concerns. This complexity requires support from business models adapted to the specific context of the international market (Rissanen et al., 2019). They argue that companies have no other choice but to change their home market business model to the conditions that apply internationally. The MOBM used here is based on the same adaptation principles, assuming that the same conditions apply when developing knowledge of international CSR.

Theoretically, the developed MOBM follows Kohli and Jaworski’s (1990) intelligence principles and the assumption that collected CSR knowledge of the market, diffused in the organization and applied in practical action, can contribute to superior competitive advantages. Instead of studying how SMEs work with CSR-integrated MI, the MOBM offers an interactive framework by combining development of market knowledge and applying this knowledge in SMEs to generate CSR-based market competence for internationalization. In close relation with SMEs, a MOBM process is constructed and put into practice so that market knowledge in relation to CSR can be developed and implemented by following the concepts in different phases of the model. We suggest that this approach of developing CSR-integrated MI can contribute to improved negotiation power and increased competitive edge for SMEs when dealing with critical international buyers.

This study focuses on four case SMEs that have developed sustainable innovations that contribute to a circular economy. The situation analysis showed that they lacked knowledge and skills to implement CSR in the business operation and adapt to critical demands on the international market. The purpose of the case research study is to identify and analyze critical mediating and moderating MI challenges faced by the SMEs when implementing CSR based on an MOBM.

The study contributes to research by applying the principles of MI in a theoretically developed business model containing CSR. It contributes to practical implications by action research: the researchers have actively participated in the knowledge development process while implementing market-oriented CSR intelligence in four case SMEs. This case study approach contrasts with previous studies by applying the MI principles on SMEs to develop knowledge of customers’ CSR needs in the international market.
2. Theoretical background
The theoretical background for understanding the CSR-integrated MI approach involves the understanding of MO and its interaction with CSR implementation (Brik et al., 2011). MO research assumes that companies need to develop knowledge (Narver and Slater, 1990) or intelligence (Kohli and Jaworski, 1990) about the market to effectively meet and even exceed customers’ future needs for innovations. The social awareness among people influences firms to think responsibly and implement CSR whether they are large or small (Colovic et al., 2019). The CSR expectations of buyers are important for firms to meet (Colovic and Henneron, 2018; Halkos and Skouloudis, 2017), and MO provides the knowledge regarding those CSR expectations (Luo and Homburg, 2007). The MO perspective has an innovative feature as an intrinsic part of the concept, developing both innovativeness as part of company culture (Slater and Narver, 1998) and cross-sectional intelligence to improve responsiveness to exceed customer needs (Kohli and Jaworski, 1990). Researchers at present refer to them as complementary concepts, because both assume that there is a need to develop innovations that strategically exceed the needs of the market identified through MO to become successful.

2.1 The MO intelligence perspective
MO research has received considerable interest due to the concept’s critical focus on and success with business performance (Masa’deh et al., 2017). The studies of Kohli and Jaworski (1990) and Narver, and Slater (1990) have had a major impact on MO research with respect to the understanding of innovative implications and their impact on organizational performance. The main contribution of MO is its influence on and movement toward a proactive customer orientation based on developed market knowledge. According to Kohli and Jaworski (1990), market knowledge is transformed and developed as organizational intelligence, while Narver and Slater (1990) address how interfunctional coordination of core activities can develop a consumer-oriented innovative business culture.

Most research in the field has studied how the companies actually work when applying the concepts and their contribution to knowledge development. The MI perspective developed by Kohli and Jaworski (1990) is used here to investigate how MO can provide a more exact picture of market trends (Bhattacharyya and Jha, 2015; Song and Liao, 2019). This concept is adopted to reveal a business model that SMEs can use to develop MI within their respective businesses, helping them to respond to international market demands. Kohli and Jaworski (1990) discuss the need for company-wide acceptance based on the generation and dissemination of market information, applied as organizational responsiveness to developed MI. According to this perspective, organizations collect market information concerning consumer needs, desires and demands, as well as relevant environmental circumstances, as part of MI in order to implement an intelligent mindset in the organization (Bhattacharyya and Jha, 2015). A company’s adaptation, shown as responsiveness to market needs, reflects the company’s tendency to act on market requirements that influence business performance (Kohli and Jaworski, 1990; Sundström et al., 2016).

However, external factors framed as moderators (market turbulence, competitive or collaborative environment, stable economic standing) are contingencies directly affecting the MI and performance relationship (Kohli and Jaworski, 1990, p. 14). Mediating effects are contingencies influencing the internal work (i.e. learning capacity, management of human resources, implementation issues) that is strategically undertaken to shape and improve business performance (Liao et al., 2011). This indicates that there are both external and internal circumstances that affect the extent to which MI can have successful impact on performance.

MI develops through the interchangeability that exists between collected external information that is disseminated internally and transformed as organizational knowledge
and competence. Then MI is applied to the market via responsiveness. For instance, the SMEs can internally disseminate collected information coming from collaborations with external stakeholder and business partners (Haverila and Ashil, 2011).

Hence, internal and external sources have critical impact on MI efficiency in influencing organizational innovativeness (Trim and Lee, 2008). In particular, market segment information used to develop competitive intelligence can provide an organization with knowledge of how to create the most effective value for the customers to gain a competitive edge (Trim and Lee, 2008; Tuan, 2013; Wright et al., 2009). Company innovativeness research deals with how to adopt internal knowledge of the market to improve product development, do market research and develop market strategies (Miller and Friesen, 1978). From a strategic standpoint (Siguaw et al., 2006), innovativeness requires long-term planning and openness to new technical and organizational solutions and ideas (Hurley and Hult, 1998; Roth et al., 2017). The rationale of innovativeness is to take advantage of the company’s internal capacity to enter new markets: a systems-based, firm-wide orientation related to innovations (Zehir et al., 2011). Innovative firms are those developing knowledge-based structures consisting of organization-wide shared beliefs that guide and direct the firm strategically and then take actions to innovate that leads to sustainability (Malesios et al., 2018; Roth et al., 2017; Zehir et al., 2011). The term sustainable innovations refers to initiating innovations that respond to sustainability features through a responsive attitude and influence a circular economy (Lubberink et al., 2017; Rosca et al., 2017; Delmas and Pekovic, 2018).

According to MO and innovation research, innovative firms are those collecting information, developing knowledge and responding to markets’ needs in ways that replace incumbent innovations with new products and services in the market. Scholars of MO emphasize the need to develop knowledge that goes far beyond customer-led expectations and what regular firms can offer (Narver and Slater, 1990). Therefore, it is important for SMEs to prioritize MO and take initiative for internal and external MI that can influence their sustainable innovativeness (Lubberink et al., 2017) and responsiveness or CSR.

2.2 CSR as part of the MO agenda
During recent decades, the business interest in engaging in CSR has increased, having effect on both research and practice by paying attention to social, environmental and economic responsibility issues (Carroll, 2015; De Bakker et al., 2005; Lockett et al., 2006). The CSR concept, like MO, can be applied generally to various organizations and business contexts, which requires that this umbrella term be defined related to context and the specific circumstances under investigation (Colovic et al., 2019; Wong et al., 2011). CSR research often draws attention to how the concept can be integrated through systematic implementation of standards and guidelines (Crittenden et al., 2011; Lindgreen et al., 2012; Mirvis and Googins, 2006). Followers of a systematic CSR implementation approach suggest that the process is incremental and commonly initiated more or less ad hoc, then continued more systematically with management and organizational issues, before managing external stakeholder concerns. According to Lindgreen et al. (2012), if internal and external factors are properly implemented, the concept can end up being fully integrated into the core business.

From an SME perspective, systematic implementation of sustainability standards can provide a competitive advantage in business networks (Malesios et al., 2018; Ciliberti et al., 2008; Hyder et al., 2017). However, research shows that CSR is not easy for the SMEs to implement in operations, due to scarce resources and capacity (Colovic et al., 2019; Klerkx et al., 2012; Santos, 2011; Wegner et al., 2016). Customers in the market are becoming increasingly concerned about companies practicing CSR when entering the market with new products (Luo and Homburg, 2007; Maignan et al., 1999). Research is so far scarce regarding linking the two concepts to each other to understand and meet better market conditions and requirements.
The CSR concept does not have a commonly accepted definition (Colovic et al., 2019). In our study, we focus on CSR as responsive action that SMEs can follow, influenced by stakeholder knowledge and MI. Stakeholder theory is closest to providing an understanding of the need to incorporate market relationships and responsibilities as an integrated part of internal knowledge that is visible in interchangeable internal–external adaptability processes. Freeman (1999) discusses the inclusion of CSR interests related to businesses’ interrelationship to critical stakeholders. This extended responsibility requires SMEs to act responsibly in relationship to stakeholders no matter where they globally exist and no matter what the specific circumstances are that they must have knowledge about (Colovic and Henneron, 2018; Halkos and Skouloudis, 2017; Alonso et al., 2018; Park and Ghauri, 2015; Baden et al., 2009). Freeman (1999) further claims that there are “numerous applications of the stakeholder concept in the areas of ethics and social responsibility as they pertain to marketing” (p. 156).

Freeman et al. (2007) especially emphasize the need to look at the role of leadership and suggest paying closer attention to the leader–follower relationship and its contextual and processual influence on performance. According to them, traditional leadership theories give less direction to follow; the business world has become too complex to manage with the increase in power relationships and too many factors and processes to control. They suggest creating commitment and inspiration by using practical models that help the current leaders to create consistency between company core values, behavior aspects and business incentives. Their proposals strongly point to the need for hosted internal knowledge development that governs internal and external key stakeholder behavior. These proposals are considered when developing the MOBM used in this article, where the interchangeability between internal knowledge developments is based on collected international market condition information.

The implementation of CSR as an integrated part of business activities is considered beneficial for business performance (Malesios et al., 2018; Lamb et al., 2017) and internationalization (Colovic and Henneron, 2018; Rittenhofer, 2015). This is especially the case since implemented responsible actions can change company behavior, affect organizational culture and provide opportunities to bind the company functions together (Lindgreen et al., 2012) for performing effectively in an international market (Colovic and Henneron, 2018). Market-oriented SMEs should in particular take into account the vital role of CSR for achieving intelligence-based performance (Coppa and Sriramesh, 2013; Felix, 2015; Rashidin et al., 2018; Rittenhofer, 2015). Ideally, CSR integration in business and responsiveness can improve image and reputation (Luo and Homburg, 2007; Maignan et al., 1999), increase performance and shareholder value (Malesios et al., 2018; Qu, 2009) and attract talented candidates and increase staff motivation (Riccò and Guerci, 2014).

2.3 MO-CSR integration in SMEs
During the last decades, it has become apparent that it is not enough for innovative SMEs to create product or service innovations (Santos, 2011). Along with innovative development, MO-influenced production strategy or service processes, the SMEs need to work for sustainability goals by integrating CSR into their business operations (Malesios et al., 2018; Jørgensen and Knudsen, 2006). Many larger global corporations now work with CSR/sustainability implemented as an integral part of both internal and external business operations. This means that SMEs who are suppliers to larger companies face the challenge to adapt their operations to the requirements that they impose on them (Colovic and Henneron, 2018).

However, for SMEs the implementation of CSR poses a difficult challenge due to their limited resource capacity (Colovic et al., 2019; Santos, 2011). Recent internationalization
studies of SMEs show a predominant focus on practical issues, indicating that SMEs perceive CSR as less important for them compared to larger global corporations (Colovic et al., 2019; Coppa and Sriramesh, 2013; Rittenhofer, 2015). Still, studies show that as suppliers the SMEs have to rely on larger companies to survive, requiring their compliance with corporate codes of conduct (Klerkx et al., 2012). When global suppliers are selected based on carefully chosen compliance criteria, responsibility and business opportunities extend to those that comply with the stated requirements (Ciliberti et al., 2008). This means that CSR offers competitive advantages for SME suppliers meeting sustainability terms, while those without codes of conduct face the risk of losing corporate confidence and sending business deals to others (Malesios et al., 2018; Colovic and Henneron, 2018; Hyder et al., 2017). This situation requires supply chain companies to develop CSR-integrated MI to comply with critical buyer requirements, so that innovation offers are consistent with purchasing companies’ demands (Halkos and Skouloudis, 2017; Halkos and Skouloudis, 2018; Ayuso et al., 2013; Luo and Homburg, 2007).

Researchers claim that innovations are inherently linked to the success of organizations, but the mechanism by which CSR initiatives of SMEs can improve their performance through innovation still requires more attention (Martinez-Conesa et al., 2017). Studies have found that SMEs’ CSR initiatives are more occasional (Rittenhofer, 2015) than strategically influenced. SMEs often focus on being present in the national market rather than being international (Michailova and Wilson, 2008), and their CSR practices are influenced by national culture (Halkos and Skouloudis, 2016). Continuous CSR initiatives based on MI development allow SMEs to be innovative, responsive and competitive in the local and international arena.

The MOBM as developed and implemented in this study has been derived from the theoretical knowledge on MI and CSR practices for SMEs’ innovativeness and internationalization. The strength of the model lies in applying it in a real-world situation, following the different phases of the MOBM process. The basic assumption is that SMEs that have, or can develop, CSR-integrated MO capacity are those with better conditions to succeed and sustain their success in the market (Felix, 2015; Halkos and Skouloudis, 2018). The four case SMEs in the study who have developed circular economy innovations need to integrate CSR in their MI operations to meet the demands of excellent buyers with high sustainability requirements.

3. Method
This research is part of an EU-funded project focusing on SMEs’ role and contribution to regional development. The firms are selected for having developed sustainable innovations contributing to a circular economy. When the project was initiated, the companies had a need to develop knowledge of the international market. The innovations were aimed at international buyers, which meant that they needed to develop market strategies that were aimed at not only the first buyer but also incorporated knowledge of the subsequent customer chain. The study is based on CSR implementation data gathered through interviews, company visits, observations and group meetings with four different case SMEs. The method is founded in action research, where the researchers have actively participated in the SMEs’ knowledge development process. Table 1 provides information regarding the case SMEs.

The study rests on the application of a theoretically developed MOBM, where case SMEs participated in four work package (WP) activities, with seven meetings held at SME premises. By introducing and following the knowledge development in areas included as part of the MOBM, the participating case SMEs could gradually develop knowledge about strategic importance and the conditions of prioritized markets, including CSR.
The model assumes that SMEs can develop market-related CSR knowledge by participating in project meetings held on company premises and being assigned to work with introductory MO-related areas on their own between meetings. The case SMEs’ development of CSR knowledge and experiences could be followed by their presentation at the next meeting of the work carried out in their own organization. Presentations of their own work and experiences contributed to the sharing of knowledge between the SMEs. This allowed researchers to follow the process and collect data accordingly. This knowledge-sharing approach was central to the whole study.

3.1 The MOBM process
The study uses a process of four phases making up the MOBM process, as the basis for data collection, analysis and gradual implementation of knowledge areas in the SMEs (Figure 1). This process is grounded in the MOBM model for the generation of CSR-based market knowledge for internationalization. The first phase deals with mapping of the status of SMEs for gathering information to integrate MO with CSR. The second phase concerns establishment of innovative culture to support dissemination of CSR-based MO in the organization. The concept of the third phase is responsiveness to address and fulfill customer needs from the combination of MI with CSR practices. The fourth phase deals with evaluation, revision and improvement of the applied model to fit with SMEs’ internationalization strategies and efforts. The MOBM process thus discusses and analyzes how CSR-based MO is developed, implemented and met challenges to affect SMEs’ marketing performance.

By following the MOBM process, project presentations, including lectures, guest lectures, seminars and workshops, were conducted to provide CSR-related international market knowledge. The business process consisted of four interactive R&D WPs, with separate meetings in between. Description of the WPs:

(1) WP 1 (2017) included project introduction, situation/gap analysis and data collected related to the chosen market.

(2) WP 2 (2017–2018) followed up on WP 1 to disseminate and develop new knowledge of the market in the organization.

(3) WP 3 (2018) followed up on WP 2 to create plans and strategies to develop responsiveness to market needs.

(4) WP 4 (2019) consisted in the evaluation of knowledge development and improvements to the MOBM.

<table>
<thead>
<tr>
<th>Case SMEs</th>
<th>Year of establishment</th>
<th>Products</th>
<th>Number of employees</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha</td>
<td>1984</td>
<td>Machines for two-dimensional roll forming of sheet metal</td>
<td>11</td>
<td>SEK 20m (about US$2.2m)</td>
</tr>
<tr>
<td>Beta</td>
<td>1989</td>
<td>Thermal processes and applications based on plasma technology</td>
<td>16</td>
<td>SEK 45m (about US$5m)</td>
</tr>
<tr>
<td>Gamma</td>
<td>2004</td>
<td>Advanced radar systems and measurement solution products</td>
<td>250–300</td>
<td>SEK 39.7m (about US$4.25m)</td>
</tr>
<tr>
<td>Delta</td>
<td>2009</td>
<td>High-quality technology products within renewable energy such as solar power for deserts, biofuels and power from waste</td>
<td>23</td>
<td>SEK 13m (US$1.4m)</td>
</tr>
</tbody>
</table>

Table 1. Characteristics of the case SMEs
Figure 1. The market-oriented business model process, including the development processes and exchange of knowledge and experiences.

- **Work package 1.**
  - Meeting 1 and 2
  - The gathering of information
  - Developing market knowledge by CSR integrated market orientation: introduction

- **Work package 2.**
  - Meeting 3 and 4
  - Market knowledge dissemination
  - Developing innovative culture based on CSR integrated market orientation for internationalization

- **Work package 3.**
  - Meeting 5 and 6
  - Responsiveness to market information
  - Developing CSR plans and strategies exceeding customer demands and market conditions

- **Work package 4.**
  - Meeting 7
  - Evaluation of CSR work and business model improvements

Company work: developing innovative culture based on gathered market knowledge

Company work: developing market plans and CSR strategies for entering international market

Company work: evaluation and corrections

Company work: mapping, situation analysis, and information gathering
3.2 Case study and action research

Situation analysis, ensuring that the SMEs correctly identified the MO-related CSR problems, took place in close collaboration between the involved partners. To gain an initial understanding of the SMEs’ prerequisites, difficulties with implementing CSR-influenced MO and what scientific support the researchers could offer, four meetings were organized at the university campus and the SMEs’ premises. During the last stage of the process (see Figure 1), the case SMEs wrote down main challenges and implications obtained from their work to implement the MOBM process in their core business.

Applying the case study method enabled collecting data in different forms on a continuous basis throughout the project. The qualitative method is suitable for handling a high level of interaction and complex data for theory development and conducting case studies (Eisenhardt, 1989; Yin, 2014). Further networking between the participating SMEs was an important aspect in the knowledge development process. To act with this kind of practical problem and theory development, the data needs to cover activities and interactions, actual processes, antecedents and consequences of activities by participants in a relational system (Doz, 2011).

Major sources of the data were on-site observations, individual interviews with the key personnel and workshops with SMEs presenting their work and seminars to a wider audience. Observations were conducted at the firm premises to see how WP activities function and what improvement is necessary to make the implementation more effective. The SMEs allowed the researchers to visit their factories and committed full support during the research process. Whole-day workshops took place in connection with the SMEs’ presentations and completion of the introduced themes in WPs. Individual interviews took place at the SME premises to discuss MO and CSR challenges and implications. Seminars and workshops took place with the four SMEs and other corporate members of the Triple Steelix business cluster to exchange ideas on the development of the MOBM process and to support the SMEs’ implementation of the MOBM components.

Data were analyzed for practical feedback and research related to the implementation of CSR as part of the MO process. Transcribed data were managed and analyzed by the use of the NVivo program. NVivo was used to support the coding of the data into different nodes, discover tendencies and identify the four main themes. Compiled data were summarized in four different cases based on the four themes and the WPs. Following Miles (1979), data was condensed by refining, iterating and revising the existing frameworks to suggest new leads for further data collection. This approach was helpful to analyze the cases and enable case comparison and finding themes. According to Doz (2011) and Eisenhardt and Graebner (2007), rich qualitative data, which this study expected to generate, will support theory development. The four themes in this article are related to the keywords CSR implementation, sustainability in products, challenges and implications.

Ethically, this case study research applies the UNESCO code of conduct in social science, which relates to our responsibility for the procedures and desire to avoid negative integrity side effects for the researched SMEs. The participating representatives of the case SMEs were informed that collected data was used for research purposes, and their consent was obtained to use the information. All representatives from SMEs had a leading position in the company. They were promised anonymity and offered the opportunity to review and approve the presentation of their companies. Moreover, we researchers have no relationship to the SMEs beyond the research study.

4. Results

All four case SMEs share a common development feature: they have developed a sustainable innovation that needs to replace incumbent technical innovation to be successful on the
international market. Their innovations include and can contribute to sustainability in any form, with the ability to contribute to a circular economy. They are all very aware that their innovations contribute to sustainability, but none of them has implemented CSR strategically in operations. Due to the specific nature of the technical innovation, the targeted business customer is part of an international market. Their business customers are discerning and possess advanced requirements inherent in B2B relations. All the SMEs have experienced obstacles to commercializing the innovation internationally, which means they want market-oriented knowledge to be developed and customer contacts adapted to their specific product innovation and market conditions.

4.1 Alpha
Alpha manufactures machines for two-dimensional roll forming of sheet metal. The SME has produced more than 100 traditional 2D roll-forming machines in the past 32 years. By applying new technology, the company developed advanced roll-forming machines in 2009 to produce lightweight, more accurate and environmentally friendly products to meet the increasing demands of their customers. The machines were commercially developed during 2013–2015. A large number of worldwide patents protect the company’s technology for advanced dynamic roll forming.

According to the managing director,

From the outset, we had a high level of creative skills, which were often driven by a technical and innovation-oriented mind-set rather than what the market needed. We realize an increasing need to change the focus in order to create profitability in an increasingly competitive industry.

Alpha management decided to concentrate on MO by focusing on team building and understanding the international market in relation to its technological competence.

When introducing WP 1 and situation analysis, we found that the SME had very little perception of what CSR requirements they need to comply with in the priority market. In WP 2, the SME invested considerable effort into collecting data from a priority market, disseminating information to employees in the company to discuss the needs that the market demands of them. Nevertheless, CSR-related issues were given low priority when discussing customer needs. In WP 3, they started to develop strategies for how to differentiate product offerings to diverse markets and segments. Although they were tasked to market the products as sustainable and communicate how they contribute to sustainability, Alpha representatives showed little interest in how to implement CSR in relation to the organization and the market requirements. The biggest challenges they addressed were how to meet high production costs and strategically how to enter a specific international market with incumbent innovation. This contributed to obstructive implications in management, implying their greatest focus was on technological development and continuing business survival through increased 2D technology. In conclusion, Alpha practices MO and holds several meetings in the organization in order to improve market focus, but strategically it focuses on how strategically to improve product and technical offerings.

4.2 Beta
Beta’s main objective is to provide, develop, serve and advise clients on thermal processes and applications based on plasma technology. Much of the company’s development work is carried out in project form. The SME provides engineering, technical, economic, operational and marketing services on a consulting basis, with emphasis on metallurgical, chemical and environmental processes. Beta’s laboratory and pilot plant facilities constitute the most advanced capability in the world for developing new processes and applications based on nontransferred environmentally friendly plasma energy. During the past few years, the SME
has developed a method to minimize energy consumption for burning and transform fly ash into resources instead of waste. The preliminary discussion with the combustion industry has been successful, and the whole enterprise is conducted through networking. Beta finds itself in a leading technological position but has difficulty marketing.

The process leader says:

We have been successful in establishing our method in a completely new industry, but the major challenge lies in truly managing the opportunity and leading to the sale of our technology. The challenge is also to use this opportunity as a springboard internationally; to utilize the fact that Sweden offers a pioneer technology to take care of fly ash.

During WP 1–WP 4, the project leader considered it valuable to discuss and exchange experiences with companies sharing similar experiences to theirs. Throughout the MOBM process, the representative of Beta had difficulty disseminating new ideas as an integrated part of the SME organization. Other project operations contributed to high costs, which meant that the developed MI, including the implementation of CSR, extended to the process leader. As mentioned by the process leader, their innovation contributes to significant environmental improvements through reduced storage of environmentally hazardous waste in unsuitable environments. Beta has not implemented CSR in the business during the knowledge process and does not communicate information about the circular economy work performed externally.

Recently, however, Beta has started to cooperate with external industrial actors; hopefully this will lead to increased use of the innovation they offer, also improving sustainability. The last evaluation revealed that the company had experienced internal organizational problems during the course of the project with low ability to influence the knowledge development process. These problems were resolved in the fall of 2019, and the company is working with new management on the areas included in the MOBM. A review of the company website shows that they have now established a very clear environmental profile and responsibility.

Beta has a strong sustainability approach to getting the product out on the market but finds it difficult to get internal support for the innovation, because the business is too project-driven. They have a major project underway that receives the most business attention, which is why Beta has to turn to external players for support to bring the innovation to the market. The innovation’s sustainability contribution is part of their product, but the lack of internal support makes it difficult for Beta to implement CSR in core operations.

4.3 Gamma
Gamma develops advanced radar systems, measurement solutions and customer products. The major challenges are related to technology, since measurement and customer solutions have demanded high accuracy in adapting to current standards for radio transmitters. Gamma operates about 5–10 years ahead of the applicable standards. As the SME works exclusively with end customers and the market for developing new products, the company has a distinct market focus. The managing director formulates their view as follows:

Today we sell radar systems on the international market through a German partner, but we have the strategy of reaching higher value chains and selling measurement and customer products on our own in the future. The possibility of collaboration with the academy has opened new opportunities systematically to think about marketing, as well as exchange ideas and experiences with other innovative companies within the collaborating network.

In WP 1, Gamma showed strong awareness that their product can contribute to increased sustainability by facilitating measurements that are otherwise both costly and environmentally hazardous. Throughout the MOBM process, their focus was on technical development. From WP 1 to WP 4, their attention was fixed in a technology mindset that is
difficult to release, even though various sustainability issues were highlighted in several occasions. The Gamma representative often returned to the technical problems initially identified. The SME is working to develop MO strategies that include sustainability, but knowledge is not spread throughout the organization. The SME has not implemented CSR in business operations, arguing that the buying companies do not ask for such requirements because their preferences are directed toward price and the requested technical quality of the products.

Gamma’s innovation helps to pinpoint and streamline advanced metrics that contribute to more efficient and sustainable resource utilization. However, company management was primarily involved in this project, which, based on our interpretation, contributed to the CSR implementation not being properly disseminated in the organization. Gamma claims that customers do not ask about how they work with CSR in the organization. Critical buyers are most interested in what benefits the technology and the products themselves can contribute to their organizations.

4.4 Delta
Delta works with innovations in the field of environment and energy usage. Delta focuses on high-quality technology products within renewable energy, such as solar power for deserts, biofuels and power from waste. The SME has not yet achieved significant sales as they are still in the start-up phase. Delta experiences enormous pressure from the market even though they do not market the environmentally friendly product as a brand of the company itself. The SME is confident about their product quality and contribution to sustainability but lack insight in how to target and approach the market. As the managing director summed up:

The problems we see today are – like many others – we do not dare to say no. We jump on all issues we find interesting.

At the WP 1 stage of the MOBM process, it came up that the company needs a clear-cut marketing strategy and a few promising markets to prioritize. The managing director highlights the role of collaboration with other companies sharing their experiences:

I see it as an incredibly valuable synergy to meet others who have the same problems and opportunities, where you can speak openly and help each other without having to think of each other as competitors. Actually, there are very few who really are competitors. Everyone benefits from interacting.

Delta is aware and proud that their company contributes to sustainability. Their business in India has given them important knowledge of conditions in emerging parts of the business world. Even so, Delta has not implemented CSR in its business operations, nor does the SME use their knowledge in its internal and external communication. They integrate lean management into the business but do not communicate these benefits to their stakeholders. The interviews showed that there are many strong-willed people in the company and that they have difficulty agreeing on which marketing strategy to prioritize. Marketing managers see the whole world as a market, while others consider it more reasonable to invest strategically in the markets that can be mastered. In order to develop MI, the SME invited representatives from different countries to visit the company in order to increase its market knowledge and to facilitate continued business contacts. During WP 3, the SME received a large order, which improved their ability to expand their business capacity. They focus on expanding by doing business strategically, oriented toward selected markets.

Sustainability was a strong driving force behind Delta’s innovation, with its connection to renewable and more efficient energy use. With an excessive focus on solving technology and production problems, there was no time systematically to implement CSR in business operations. The lack of internal coordination has caused the company to devote most time to ad
hoc and urgent matters. They have implemented Lean as support for safe production but lack a supporting structure to help them take advantage of the benefits of CSR implementation.

Table 2 shows the development of CSR implementation in the four SMEs from WP 1 to WP 4.

5. Discussion
Previous studies have commonly examined CSR from a traditional implementation perspective, mainly paying attention to how the concept is systematically and incrementally integrated into operations with support of standards (Crittenden et al., 2011; Lindgreen et al., 2012; Mirvis and Googins, 2006). Often, formal concepts such as standardization do not take into account the specific and contextual CSR requirements that prevail internationally (Colovic et al., 2019; Rissanen et al., 2019). Implicitly, standardization assumes that the same rules apply regardless of different market conditions. In addition, several CSR standards are perceived as too complex to handle for SMEs that lack the necessary resources. Previous studies testify that there is uncertainty about how effective a standardized implementation actually is; research shows differing results from CSR efforts (Crittenden et al., 2011). Instead, Rissanen et al. (2019) emphasize that internationalization requires careful planning to understand how the chosen market differs from the domestic market. The process requires the use of business models that succeed in capturing customer valuations, financial conditions, key resource requirements and how they can be implemented in key activities. Most important is to understand the customers’ values and needs, which are the main components included in the MOBM.

This study applies a market-oriented CSR approach, where attention is specifically focused on the various conditions and needs of the specific international market chosen by the case companies. The MOBM helped the companies to capture contextual differences and gave them a targeted approach to support the companies’ internationalization. In particular, the application of the MOBM contributed to understanding the parallel interplay that exists between internal and external processes to develop CSR knowledge meeting international market requirements. According to the systematic CSR approach, knowledge is first implemented internally in the organization before being integrated externally with stakeholders (Crittenden et al., 2011; Lindgreen et al., 2012). Instead, the MI CSR perspective shows that external knowledge of the market needs to be integrated internally in order to effectively meet international market requirements.

The study verified that the internationalization process is complex (Rissanen et al., 2019). The SMEs encounter several mediating and moderating challenges influencing how to disseminate and respond internationally to collected CSR market information. The following

<table>
<thead>
<tr>
<th>Work package 1</th>
<th>Work package 2</th>
<th>Work package 3</th>
<th>Work package 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situation analysis and data collection</td>
<td>Data dissemination: Developing market knowledge</td>
<td>Responsiveness: Strategic response to market needs</td>
<td>Evaluation of the CSR-integrated MI process for internationalization</td>
</tr>
<tr>
<td>Alpha Low CSR implementation</td>
<td>Some CSR implementation</td>
<td>Some CSR implementation</td>
<td>Some CSR implementation</td>
</tr>
<tr>
<td>Beta Some CSR implementation</td>
<td>Some CSR implementation</td>
<td>Some CSR implementation</td>
<td>Some CSR implementation</td>
</tr>
<tr>
<td>Gamma Low CSR implementation</td>
<td>Low CSR implementation</td>
<td>Low CSR implementation</td>
<td>Low CSR implementation</td>
</tr>
<tr>
<td>Delta Some CSR implementation</td>
<td>Some CSR implementation</td>
<td>Some CSR implementation</td>
<td>Some CSR implementation</td>
</tr>
</tbody>
</table>

Table 2. Levels of CSR-integrated MI in the MO-BM process
two sections discuss (1) mediating effects that primarily relate to challenges of disseminating CSR because of internal organizational obstacles and (2) moderating effects related to strong technology and production orientation as well as weak international demand to meet CSR requirements.

5.1 Mediating effects of organizational coordination

The intelligence perspective on MO (Kohli and Jaworski, 1990) assumes that intelligence can be developed in the organization if three different criteria are met. The first criterion relates to developing awareness; that is, organizations need to be aware of the requirements that exist in order to develop knowledge at all. To meet that criterion, Kohli and Jaworski (1990) suggest that companies have to gather information about market needs to initiate processes to build up a knowledge base. The second criterion is to disseminate the knowledge in the organization to be cross-functionally integrated into the organization (for CSR, see Malesios et al., 2018; Lamb et al., 2017). The third intelligence criterion is to apply knowledge in practice and strategically by responding to market needs. This implies that if one criterion is not met, this causes problems in other steps. This study noted that the case companies met the first criterion, showing good knowledge of how their innovations contribute to a circular economy and the need to work for CSR. This means that they had developed awareness of the need to meet CSR requirements.

They experience, however, several mediating challenges in meeting criterion 2, disseminating knowledge in the organization. MO literature often refers to how mediators and moderators influence the relationship between MI components and the performance of completed processes (Kohli and Jaworski, 1990; Sundström and Ahmadi, 2019). While moderating effects have direct and significant influence on a company’s performance and are difficult to change, mediators can indirectly work to help or prevent an organization from achieving results (Kohli and Jaworski, 1990; Liao et al., 2011). Both the Beta and Delta cases have experienced mediator constraints. In Beta’s case, ongoing organizational restructuring made it difficult to get legitimacy to develop CSR intelligence for the project because other ongoing projects were prioritized in terms of resources. When internally competing for resources, priority is given to the project that has progressed the most. In Delta’s case, problems arise contributing to mediator constraints when the pressures from external demands cause internal conflicts of resources and where issues relating to technology and production were prioritized. The cases show that internal coordination and support are crucial to disseminating CSR intelligence in the organization. Internal competition for resources and inadequate coordination meant that the utilization of CSR knowledge failed to affect MO criteria 3, the application of CSR intelligence in the international market in a practical and strategic way.

5.2 Moderating effects on CSR

Moderating effects within MO literature often relate to external factors that influence the MO and performance relationship (Lio et al., 2011). Examples of moderators are market turbulence, complexity of the competitive or collaborative environment, economic standing and other contingencies directly affecting the MO and performance relationship (Kohli and Jaworski, 1990, p. 14). Results from the case study show that moderators that directly influence CSR implementation are demands from critical buyers, pushing the SMEs to establish their own guidelines for taking responsibility for sustainability actions. According to Gamma, it is enough to convince international buyers that technology and products contribute to sustainability; of lower interest is how CSR is integrated in case organization. In addition, moderating demands from international buyers had direct influence on how SMEs strategically manage different needs. As in the case of Alpha, this created internally
<table>
<thead>
<tr>
<th>Sustainability in production</th>
<th>CSR implementation</th>
<th>Moderating and mediating challenges and barriers</th>
<th>Implication for MO/CSR responsiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alpha</strong></td>
<td>(1) Reduces use of resources in production</td>
<td>(1) Low initial knowledge of market CSR demands</td>
<td>(1) Different strategies depending on products and economic needs</td>
</tr>
<tr>
<td></td>
<td>(2) Energy- and cost-saving innovations</td>
<td>(2) Low implementation of CSR in the organization</td>
<td>(2) Difficult to reach buyer-chain market with disruptive innovation</td>
</tr>
<tr>
<td><strong>Beta</strong></td>
<td>(1) Nontransferred environmentally friendly plasma energy</td>
<td>(1) High knowledge of market demands</td>
<td>(1) Product orientation</td>
</tr>
<tr>
<td></td>
<td>(2) Reduced use of resources</td>
<td>(2) Low implementation of CSR in the organization</td>
<td>(2) Low internal legitimacy due to competing projects</td>
</tr>
<tr>
<td></td>
<td>(3) Energy- and cost-saving innovations</td>
<td></td>
<td>(3) A need to find external partners for collaboration</td>
</tr>
<tr>
<td><strong>Gamma</strong></td>
<td>(1) Facilitating measurements</td>
<td>(1) Some knowledge of specific market demands</td>
<td>(1) Management governed</td>
</tr>
<tr>
<td></td>
<td>(2) Energy- and cost-saving innovations</td>
<td>(2) Low implementation of CSR in the organization</td>
<td>(2) Low buying company CSR pressure and requirements</td>
</tr>
<tr>
<td></td>
<td>(3) Time efficiency</td>
<td></td>
<td>(3) Focus on technical and production requirements</td>
</tr>
<tr>
<td></td>
<td>(4) Reduced use of resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Delta</strong></td>
<td>(1) Renewable energy such as solar power for deserts, biofuels and power from waste</td>
<td>(1) Some knowledge of market demands</td>
<td>(1) Unstructured organization</td>
</tr>
<tr>
<td></td>
<td>(2) Energy- and cost-saving innovations</td>
<td>(2) Low implementation of CSR in the organization</td>
<td>(2) Need for coordination</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(3) Mediating constraints due to coordination problems and focus on technical issues and production</td>
<td>(3) Production and technology focus contribute to low CSR in MI</td>
</tr>
</tbody>
</table>

Table 3. Critical challenges and implications of case SMEs implementing MI-influenced CSR
conflicting resource demands, affecting how to develop CSR intelligence. This problem consists in how to disseminate CSR intelligence in the organization when several parts of the buyer chain have different requirements and needs.

The overarching interest in technical development and production issues from critical buyers also has moderating effects on the SMEs’ work with the MOBM. This means that developing CSR intelligence supported by the MOBM is given low legitimacy when competition is fierce. Then they have to prioritize meeting technical and production needs in the international buying market.

In sum, sustainability is a common feature in all SME innovations, but the benefits of circular economy contribution are scarcely taken into account, providing low CSR inclusion in SME activities. Several authors (e.g. Malesios et al., 2018; Colovic et al., 2019; Ayuso et al., 2013; Ciliberti, 2008; Jorgensen and Knudsen, 2006) mention a number of reasons influencing weak CSR implementation in SMEs, such as shortage of time and resources, absence of expertise and considering it a matter of compulsion imposed by large buyers.

In this case study, these reasons are verified. However, not only resource problems impede the dissemination and implementation of CSR in SMEs. Additional factors that contribute to challenges adopting MOBM internationally include insufficient organizational coordination, a need for comprehensive restructuring and market demands prioritizing technical and production issues (see Table 3).

6. Conclusion
This study aims to identify and analyze how mediating and moderating challenges affect the development of CSR with the support of a MOBM. By focusing on the development of MI-influenced CSR, the analysis investigated how the SMEs handle three interrelated levels of MI. The research helps to show that both internal and external processes create disseminating challenges that impede the effective development of MI related to CSR. The study shows that the SMEs perceive the work with MOBM as a robust tool, as it could be adapted to both their own needs and those of the international market.

This current study has both theoretical and practical implications. Through the model, companies get a theoretically based tool to direct toward the chosen international market. The study contributes to theory in three ways. Firstly, the study highlights how knowledge about CSR requirements in the market is developed through the interplay between external and internal knowledge development. From a MI perspective, to understand the complexity of a market’s CSR needs, companies have to collect external data, disseminate it internally in the organization and then apply it externally to internationalization. This is in particular contrary to the traditional CSR implementation assumption that recommends first to understand the home market context before directing activities toward the external market.

Secondly, the case study integrates three concepts that are usually, and each individually, considered too complex to handle. The article contributes to the theoretical broadening needed to investigate complex situations described in this article. CSR research often relates to systematization and standardization based on national or global criteria to which SMEs have difficulty to relate. By using CSR in an international context, this study has shown that the market’s needs can theoretically be analyzed through the lens of MO.

Thirdly, most difficult to manage are moderating effects coming from the external environment. In the study, these represent low interest from external buyers to place CSR requirements on the case companies as suppliers. Although the SMEs have developed innovations that further the circular economy, this study contributes by showing that besides resource constraints there are internal and external circumstances in the companies’ business contexts that influence their interest in implementing CSR in their MO (see also Halkos and Shouldis, 2017; Colovic et al., 2019). The SMEs work with sustainability requirements but
without being able to take advantage of these arguments in relation to international buyers. Focus is on technical and production-oriented development, while the companies’ implementation and development of CSR intelligence are of minor importance. The study thus contributes to both CSR and MO research, showing that there are factors and mechanisms outside of an SME’s ability to influence that directly affect how well the concept is applied to the international market. Another important contribution is highlighting CSR-integrated MI to strengthen support efforts for internationalization, a limitation also pointed out by Sheikh and Beise-Zee (2011), Rittenhofer (2015), Rashidin et al. (2018) and Song and Liao (2019).

The study contributes practically by showing the impact of understanding the mediating and moderating challenges companies face when applying a MOBM. Specifically noted is that the lack of internal coordination and strong management-driven restructuring processes has major impact on SME legitimacy in developing CSR intelligence. Instead of coordination providing support to the process, the pressure on companies to produce has contributed to internal chaos where many wills and demands govern. There are also internal restructuring processes that affect the case SMEs’ legitimacy in applying the MOBM effectively. Further, the model can also be used to identify weaknesses and strength in the organization suggesting what companies need to work with.

One limitation of the study is the number of cases. Future research could expand the investigation to more cases to verify the findings and find out how SMEs can make use of long-term sustainability knowledge to improve practice of CSR-based MI in internationalization. This study has concentrated on technology-focused firms, but we think that the MOBM model could also be tried in less tech-heavy firms to see how it works there. As the focus is on CSR-based MI development, this model can be tested by the service-oriented firms in a different study. Considering characteristics of the different industries, thorough replication of the model could be a difficult job. Future studies could, however, come up with new insights on the development of MOBM-like custom models to fit their internationalization efforts. As a method, the action research applied in this study can be replicated in other firms irrespective of the industries. Internal coordination and restructuring challenges, which are a precondition for successful knowledge dissemination according to MO, need to be accounted for to improve internationalization. A further study could deal with SMEs’ efforts and how to overcome moderating barriers for internationalization by using CSR arguments with buying companies.

References


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