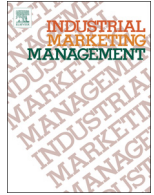




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B2B SME management of antecedents to the application of social media

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ABSTRACT

This paper elucidates how business-to-business (B2B) small and medium-sized enterprises (SMEs) can manage antecedents to the application of social media for potential contributions to their business. This in-depth qualitative research study was conducted at four plastic-producing SMEs from October 2013 to October 2014, with follow-up interviews in October 2015.

The findings reveal two important antecedents to the application of social media that overcome the gap between acknowledging the usefulness of social media and its actual limited application in practical B2B contexts. First, open collaborative business model innovation is needed to apply social media in local business processes. Second, central and distributed leadership must be integrated to create ownership and responsibility across the SME organisation and beyond to customers and partners. These findings differ from the social media application stages and the gaps between them identified in the previous literature. The developed model makes a contribution to the B2B SME field and to academia by recognising the importance of integrating critical antecedents before social media application can enhance business in B2B SMEs. This understanding is beneficial for the B2B SMEs and for society.

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1. Introduction

As highlighted by van de Vrande, de Jong, Vanhaverbeke, and de Rochemont (2009), management becomes increasingly complex as a consequence of requirements for enhanced innovation collaboration. Therefore, van de Vrande et al. (2009) suggests further in-depth research on how small and medium-sized enterprises (SMEs) with limited resources can handle the challenges of managing innovation collaboration. In recent years, an increasing number of enterprises have adopted digital social media. Web 2.0 is characterised by interactive two-way user-generated (USG) online communication and collaboration (Michaelidou, Siamagka, & Christodoulides, 2011). Marketing scholars have highlighted that these “emerging technology tools can enable the exchange process to become more efficient and effective” (Agnihotri, Dingus, Hu, & Krush, 2016; Marshall et al., 2012) between buyers and sellers. As more specifically noted by Andzulis, Panagopoulos, and Rapp (2012), Web 2.0 “makes it easier for potential customers to ask questions or express needs while also making it more natural for salespeople to uncover additional selling opportunities, track customer activity and communicate success stories” (Agnihotri et al., 2016). Therefore, the application of social media via Web 2.0 holds interesting possibilities for enhanced business-to-business (B2B) innovation and collaboration between B2B sellers, buyers and partners. Through the application of social media, B2B SME managers have the opportunity to

overcome the typical resource limitations of SMEs through enhanced online collaboration with customers, suppliers and partners to promote innovation and business opportunity creation for the involved parties.

The literature on SMEs digitalisation reveals the following: “a great gap remains between the potential and actual use of social media by B2B firms” (Järvinen, Tollinen, Karjaluoto, & Jayawardhena, 2012; p. 102). Social media adoption in the B2B context has proceeded more slowly than in the business-to-consumer (B2C) context, where it is frequently applied, e.g., in online shopping (Järvinen et al., 2012; Michaelidou et al., 2011; Siamagka, Christodoulides, Michaelidou, & Valvi, 2015). Moreover, challenges often occur for SME managers due to a lack of time and available resources (Brink & Madsen, 2015; Edwards, Delbridge, & Munday, 2005; Murphy, 1996). Tan, Chong, Lin, and Eze (2010) stress the opportunity to overcome the shortage of resources and suggest applying Internet communication tools (ICT), as they have “become a necessity particularly in industry sectors, which were highly competitive” (Pickernell et al., 2013; p. 869). The literature explicitly notes that social media application is beneficial for overcoming resource limitations and creating business through B2B collaboration. However, it is also noted that social media application is evolving relatively slowly in B2B SMEs. Thus, a paradoxical gap in knowledge is revealed in the understanding of social media application in B2B SMEs. This is interesting for a more thorough investigation of the research question: *How can B2B SMEs manage the antecedents of social media application to enhance business in their enterprises?*

The enhancement of business in this article is in accordance with the concept of ‘value’ from the business model literature. Here, the

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understanding of Osterwalder and Pigneur (2010; p. 22) of value is highlighted as “the aggregation, or bundle, of benefits that a company offers customers”. Osterwalder and Pigneur connect the term value to the increase in revenue streams and the cost advantages experienced by the B2B SME and its collaboration partners. Thus, the enhancement of business is applicable to all involved collaboration parties – customers, suppliers, partners and the B2B SME.

In the present research, a qualitative in-depth case study from October 2013 to October 2014 was applied at 4 B2B SMEs in the plastic production industry in Denmark, with follow-up interviews in October 2015. The plastic-producing network association in Denmark has approximately 80 members, including a few large global enterprises such as Lego, Danfoss and Velux, and many B2B SMEs participate. Competition in the sector is intense, and the SMEs often collaborate with both domestic and global suppliers and partners. The fierce competition has resulted in industry consolidation. By the end of the period from 2000 to 2010, analyses show 23% fewer enterprises, 34% fewer employees, and a revenue increase of 23% (Plastindustrien, 2012). Thus, the research context is characterised by a need for innovation to overcome competitive challenges and resource limitations and enhance business. The SMEs in this sector typically employ relatively highly educated experts, e.g., chemical engineers and laboratory employees, for innovation and the enhancement of business. B2B SMEs do often not have employees with specific education in IT, but they typically have highly educated people in their organisations. The participating B2B SMEs perceive a need to apply social media, and the participating managers use several social media tools in their personal lives, so they know the technicalities of the IT tools from private application. However, application in the B2B SME context is very different. The research in this paper was financed through the Danish Agency for Science Technology and Innovation, Ministry of Science Technology and Innovation and conducted in collaboration with the Danish Plastic Production Network Association, called PlastNet. None of the parties had any influence on the study design, collection, analyses or interpretation of data, and these parties did not influence the writing of this paper or submission to this journal.

The paper begins with a literature review of B2B social media application through B2B SME business models and processes and continues with a literature review of studies on leadership in organisational knowledge creation. The methodology is presented next, followed by the findings summarised in a model for enhanced understanding of social media application in the B2B SME context. Next, the managerial implications and theoretical contributions are highlighted, and a discussion on the limitations of the findings follows. A conclusion completes the paper.

2. Literature review

The research question leads to a review of the cross-disciplinary literature on B2B SMEs and their use of social media, their use of local business processes and business models, and their use of leadership for organisational knowledge development to enhance their businesses. First, the B2B SME social media application, business process and business model literature is reviewed to define existing knowledge on the enhancement of business through the application of social media. Then, the literature on B2B SME leadership and organisational knowledge creation is reviewed to reveal the leadership and organisational capabilities required for social media application. Hereby, light can be shed on the knowledge gap between B2B SME manager's acknowledgement of the usefulness of applying social media for business enhancement and the contrasting actual limited application in their own B2B SME organisations.

2.1. B2B SME social media application in the business model and business processes

The use of social media in SMEs in a B2B context is far less researched than that in B2C markets. However, there has been an increasing

amount of academic work within the B2B field over the past few years (Järvinen et al., 2012; Siamagka et al., 2015). Research has been conducted to elucidate the general application level (Chen & Holsapple, 2013; Parker & Castleman, 2007) and, more specifically, how social media has been applied in the SME B2B context (Dahnil, Marzuki, Langgat, & Fabeil, 2014; Huotari, Ulkuniemi, Saraniemi, & Mäläskä, 2015; Jussila, Kärkkäinen, & Aramo-Immonen, 2014; Järvinen et al., 2012).

The following definition of social media is from Kaplan and Haenlein (2010; p. 61): “Social Media is a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of User-Generated Content (UGC)”. Social media is thus seen as an advanced collaborative and communicative user application. The definition of social media highlights two key issues: Web 2.0 and UGC. The transition from Web 1.0 to 2.0 is the transition made “from publishing to participation, from intrusion to invitation, from individuals to communities” (Berthon, Pitt, Plangger, & Shapiro, 2012). This transition is further highlighted in the different stage models on how advanced a company is in its social media adoption (Chaffey, 2009). For example, the Department of Trade and Industry (2003) introduced the ‘DTI Adoption Ladder’, with a breakdown of elements in five sequential progressive entities for increased innovation and value creation (use of emails, websites, online brochures, online business and progressive use of integrated systems). Moreover, Taylor and Murphy's (2004) ‘CPIT model’ (Connect, Publish, Interact, Transform) provides a two-dimensional progressive approach with six business process activities identified in the model: Logistics/delivery, Finance, Purchasing/procurement, Operations, Processing/assembly, Marketing/sales & After-sales service (Taylor & Murphy, 2004). Here, the close combination of business processes and social media application for successful value creation is shown. Finally, Willcocks and Sauer (2000) enhance the approach with a model consisting of four progressive stages with gaps in between that range from an “anxiety gap” between stages 1 and 2 in which business technology transaction capabilities must be developed, to an “organisational capability gap” between stages 2 and 3 in which process re-organising capabilities must be developed, to a “value transformation gap” between stages 3 and 4 in which a customer-focused organisation must be developed according to the model. The progress of understanding in the models calls for leadership to overcome these relatively complex and challenging gaps in social media application to create business opportunities. As Wynn et al. (2013; p. 918) highlight, “SMEs may have difficulties in reaching stage 2 (Wilcocks and Sauer's (2000) model) due to the financial and human resource constraints”. In their case studies, Wynn et al. (2013; 930) emphasise the need for “process owners to take on full responsibility” and that “strong leadership from senior managers are also needed for selection of software, etc.”.

Local B2B SME processes are consolidated in the SME business model, and therefore, B2B SME leadership is essential for creating process responsibility and the related business model responsibility. The leadership of both by senior managers plays an important role in social media application. As Wynn et al. (2013) stress in their case study, the earlier mentioned stage models do not emerge in reality; instead, the importance of the connection between local business processes and the overall business model and the responsibility of business process and business model owners in the B2B SMEs is revealed to be somewhat more blurred.

Thus, the literature has shown that the application of social media is perceived as very interesting for B2B SMEs as a means for enhancing business and for overcoming resource limitations. The impact of social media application is likely to vary depending on actual business processes and is thus highly context-laden and dependent on the relevant business processes and available resources and capabilities in the SME (Spinelli, Dyerseon, & Harindranath, 2013; Wynn et al., 2013).

Regarding business enhancement and value creation, Chesbrough (2010, p. 354) states, “The economic value of a technology remains latent

until it is commercialised in some way via a business model". The understanding of business processes in the combined framework of the business model in B2B SMEs is thus essential for harvesting business opportunities through social media application. Järvinen et al. (2012) highlight the benefits from openness and collaboration in business process relationships as follows:

- More efficient exchange for communication and transactions.
- Awareness of purchase opportunities through the generation of leads for the SME brand.
- Stronger relationship building with customers, suppliers and partners through deliberately "cultivating conversations, when the customer is willing to receive and respond and not when a firm wants to produce and communicate" (Järvinen et al., 2012; p. 114).

The arguments above indicate the high potential for enhancing B2B SME business based on open business processes and business model innovation through the application of social media. This potential is also stressed and summarised by Walters (2008) with the notion of "disintermediation", which arises when current channel members become redundant and are either replaced by new intermediaries or simply bypassed. Here, the enhancement of business emphasises openness for rich information exchange, relational exchange, and joint learning. An open business model innovation through local business process collaboration can thus facilitate social media application to enhance the business of B2B SMEs.

Based on the previous literature review on the application of social media, the following is proposed:

Proposition 1. *The application of social media and Web 2.0 for business enhancement requires SME managers in the B2B context to enable open business model innovation.*

This proposition hereby underpins the argument that open business model innovation through connected local business processes is an antecedent for social media application and Web 2.0.

2.2. B2B SME leadership and organisational knowledge creation

A single B2B SME typically has limited resources (Brink & Madsen, 2015; Edwards et al., 2005; Murphy, 1996;), and social media application often requires investments in hardware, software and the development of manpower resources and capabilities. This limitation could explain the lag in the application of social media tools in SMEs as compared to larger firms (Chen & Holsapple, 2013; Dahnil et al., 2014). Conversely, the application of social media provides interesting opportunities to overcome the generally perceived lack of resources. As stressed by Järvinen et al. (2012, p. 103), the use of digital tools and the management of knowledge complement each other in a successful social media application. Leadership in organisational knowledge creation is thus anticipated to serve as an important antecedent for supporting social media application to enhance B2B SME businesses.

Organisational knowledge creation is dependent on knowledge processes. Thus, understanding of and leadership in local complex processes are considered to be core activities for organisational knowledge creation. This is noted by Ramdani et al. (2013, p. 736): "Without a better understanding of the complex processes and the differentiating factors that affect the level of ICT adoption, the drive to develop ICT will not successfully contribute to SMEs' competitiveness". Here, the role of drive and leadership is expressed in the understanding of local processes for ICT adoption/social media application in the business model and for leadership of the necessary organisational knowledge creation.

The literature on leadership and organisational knowledge creation has emerged over the past decades from different scholarly fields. As highlighted by von Krogh, Nonaka, and Rechsteiner (2012) in their scholarly review of the leadership of organisational knowledge creation, an important continuum exists ranging from centralised to distributed

leadership. The continuum of leadership is situated on one end in an "overall structural" layer and on the other end in a "core local activity" layer. In relation to social media and the Web 2.0 approach, open communication is crucial. This is supported by the findings of Brennan and Croft (2012; p. 112), who highlight that companies with the most social media activity and experience "empower staff to engage with wider audiences with little overt corporate oversight". Social media application is thus situated within the "core local activities" and is highly context-laden through local business processes that dis-embed and re-embed local actions, as in the notion of the "travel of ideas" as termed by Czarniawska and Joerges (1996). Locally experienced business processes are thus essential for the aggregated business model to succeed. SME managers typically need not be familiar with all of the local business process activities conducted in their B2B SME organisation for the business model to succeed.

Von Krogh et al. (2012, p. 254) define distributed leadership as a "spontaneous, intuitive, participative, fluid, integrative diffusion of skills in formalising local practices". A distributed leadership approach thus supports the development of local business process activities and the resulting knowledge creation which will in turn support social media application. In contrast, centralised leadership represents a hierarchical approach in which the SME manager makes decisions and outlines business model activities and the related communications. A centralised leadership business model imposes a top-down direction on activities, which is beneficial when the organisation needs to join forces, join resources across functions and overcome gaps in organisational capabilities for social media application. Centralised leadership provides the direction for strategic organisational alignment in the SME to support the application of social media to enhance B2B SME business. B2B SME managers need to make decisions and facilitate the joint application of organisational social media, but they also need to empower employees, customers, suppliers and partners to take responsibility for local business processes in the business model (Wynn et al., 2013). Thus, SME managers need to integrate the two contrasting leadership approaches by executing both centralised and distributed leadership for social media application to enhance business (Wynn et al., 2013). This is a considerable challenge that requires advanced leadership capabilities, termed by Hamel (2009, p. 98) as "Management 2.0". Many SME managers are entrepreneurs (Brink & Madsen, 2015), who generally take a centralised leadership approach to controlling activities, as highlighted in the literature on the preferred behaviours of entrepreneurs (Jung, 1968). The aim of SME managers in controlling activities has been stressed as a barrier for social media application by Siamagka et al. (2015), as seen in a comment from a manager interviewee in their research: "lack of control [by the SME manager], I think, is the central barrier" to social media application. A contradiction is therefore anticipated to exist between the typical SME managerial entrepreneurial leadership behaviour in favour of control with a focus on central leadership and the required integration of central- and distributed leadership for social media application to enhance the existing B2B SME business.

Moreover, the reasons behind the lack of social media application can be grounded in the characteristics of B2B industries. First, there are fewer transactions taking place between actors, but they are typically more economically significant than those in the B2C context. This imposes more risk embodied in a single larger business transaction. Second, business relations in the B2B context have traditionally been characterised by face-to-face meetings, which tend to create personal relationships (Brennan & Croft, 2012; Michaelidou et al., 2011). As a consequence, it is rarer and riskier to acquire experience with customers, suppliers and partners through a social media application in the B2B context than in the B2C context. However, in the B2B context, it is anticipated that synergy from the open business model approach will counterbalance the difficulties and risks. Social media application provides a platform for open, accessible "conversations" with employees, customers, suppliers and business partners (Järvinen et al., 2012). The notion of "Management 2.0" (Hamel, 2009; p. 98) highlights that this

transparency is “often just as effective as a rigidly applied rule book and is usually more flexible and less expensive to administer”. More effective and efficient transparent conditions can thus be organised as antecedents for social media application, as also supported by Wynn et al. (2013) in their case studies.

Based on the literature review on B2B SME leadership for organisational knowledge creation to enhance business, the following proposition is posed:

Proposition 2. *The application of social media and Web 2.0 for business enhancement requires SME managers in the B2B context to integrate central and distributed leadership.*

This proposition hereby underpins the argument that integration of central and distributed leadership is an important antecedent for the application of Web 2.0 social media to enhance business in B2B SMEs.

The two propositions are thus anticipated to serve as antecedents and pillars for the application of Web 2.0 social media. This is shown in Fig. 1.

Fig. 1 shows that the application of Web 2.0 social media needs the antecedents of open business model innovation and integrated central and distributed leadership to enhance the business of B2B SMEs. This argument is different from the previously acknowledged stages of social media application, as in this case, two antecedents are needed. One antecedent is an open business model innovation that combines business processes, social media technologies and the overall business model to support social media application. The other antecedent is the integration of centralised and distributed leadership to support leadership responsibility for the overall aim of the business model and the local business processes; this allows the firm to achieve coherent social media application in the B2B SME organisation and beyond.

In the next section, the methodology is presented.

3. Method

The research method is based on a qualitative case study supplemented by an action research approach to collect the data for analyses. The action research approach represents “a living practice”, as highlighted by Carson and Sumara (1997). The action research approach in this paper is conducted using Weick and Quinn's (1999) notion of a “reversed classical Lewin (1946)” (Lewin, 1946), which in this research approach is to freeze, re-balance and unfreeze. This approach can reveal the behavioural patterns of the B2B SMEs, which can be discussed with the participants; the participants can then choose to change their behaviour, continue with the same behaviour or choose a third way. Alternatives for other actions are given by the researchers and discussed

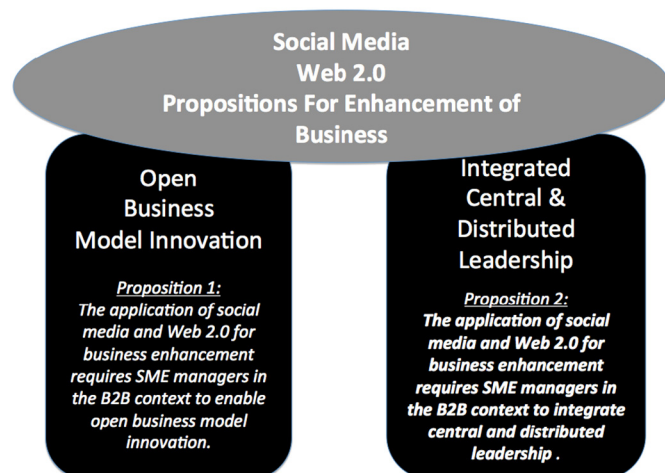


Fig. 1. Antecedent pillars for the application of Web 2.0 social media.

with participants in an action-learning context. Data are revealed through the participant's selection of actions in relation to the actual application of social media. The actions and their impact can then be collected as data on social media application in the B2B SME context.

This type of research means that the action researcher not only observes but is deeply involved in the actions within the researched area and can thus become biased in evaluating findings from the research. Therefore, care is needed via repeated reflections and discussion of the findings with the case study participants, academic colleagues and third-party persons with knowledge about the case field. The data collected are examined through several lenses: checked with data from other sources, engaged with critically within the literature stream, and collectively deconstructed and decentred to obtain awareness of biases and the underlying forces and interests present (Leitch, 2007; McIntyre, 2008; McNiff & Whitehead, 2009).

For the analyses of the research material, a deductive qualitative analysis is employed based on the propositions derived from the review of the existing literature. The propositions were elaborated through qualitative data analyses (Eisenhardt, 1989; Yin, 2009). The research was conducted from October 2013 to October 2014, with follow-up interviews in October 2015. The research process started with an invitation to four B2B network meetings for SMEs on business development within the Danish plastic production industry through the journal “Plast Panorama” in October 2013. The research was aimed at providing B2B SMEs with opportunities for business development in an action research process. During the first meeting in November 2013, additional information was provided on the research project. Eight SMEs within the plastic product manufacturing industry participated, and four continued participation in the research.

The initial screening of each SME took approximately one day per enterprise. Information was gathered and discussed with each B2B SME manager regarding the following cross-disciplinary issues:

- Personal behavioural patterns of the manager – according to the typologies developed by Jung (1968) and Jacobi (1973).
- Cultural profile of the organisation – according to Cameron and Quinn (2011).
- Business model generation – according to Osterwalder and Pigneur (2010).
- Opportunities for cash flow generation – according to Koller, Goedhart, and Wessels (2015) and Epstein and Yuthas (2013).
- Selection of a project by the B2B SME manager for innovation in the subsequent network meetings.

Management is a multidisciplinary issue according to Easterby-Smith, Thorpe, and Lowe (1991). Therefore, there is a need to gather data for application within different disciplines. Heuristic inquiry processes regarding the collected data (Hiles, 2008) during the research period from October 2013 to October 2014 provided rich data for the subsequent deductive analyses.

Rae and Carswell (2001) note that entrepreneurial learning in SMEs is primarily supported by experience and discovery. In addition to this stance, Deakins and Freel (1998, p. 146) state, “interventions must be based on helping the entrepreneur to learn rather than imposing prescribed solutions and consultancy”. The conducted action research used this approach to promote innovation through the SME managers' insight and understanding of the particular B2B context, leadership, SME organisation and business development approach. Furthermore, discussions with the SME managers on opportunities and beneficial actions in their respective enterprises were conducted. Here, the SME managers perceived that the application of social media would be useful to enhance their business. An anonymous overview of the participating SMEs is shown in Table 1.

Table 1 shows that self-selection provided this research study with B2B SMEs that all aimed for growth, both in size and profitability. Their earnings are adequate considering the earlier financial crises and

Table 1
Anonymous overview of participating SMEs.

SME	Number of employees	Aim for growth	(Earnings before interests, tax and depreciation) -EBITDA –margin on average last three years	Project aim
N1	30	Yes -both in sales and profit.	15%	Communication of the capabilities of the enterprise in the market.
N2	40	Yes -both in sales and profit.	5%	Visibility of the products of the enterprise in the market.
N3	380	Yes - both in sales and profit.	8%	Annual growth of 20% within specific selected sales activities for certain customer segments.
N4	10	Yes - both in sales and profit.	7%	Product development with specific customers and synergy impacts to the rest of the market/other customers.

the fierce competition within the plastic-producing industry. Their projects have different foci in terms of enhanced communication within SMEs as well as within markets and with customers. None of the participating enterprises were competitors, and they did not know each other beforehand. The differences found between the plastic-producing SMEs are anticipated to provide robust findings, as the identified challenges to social media application can provide findings across 'Converging lines of inquiry' (Yin, 2009; p. 115). The participants predominantly highlighted the same issues as those already recorded – just from different perspectives.

The content of the first network meeting was framed by the researchers. The primary aim of the first meeting was to become familiar with each other, the enterprises, the selected projects and the business challenges. The content of the subsequent network meetings (2–4) was framed in collaboration with the participating SME managers. Table 2 provides an overview of the themes of the four network meetings.

Table 2 indicates that in the very early phases of the research, the content of the network meetings focused on communication, international sales and, particularly, social media application. This led the researchers to conduct the literature review on social media application in B2B SMEs and organisational knowledge creation.

Other larger and medium-sized plastic production enterprises presented their experiences in the meetings. In these presentations, the larger enterprises shared how they approached social media application and the 'lessons learned' from this in their enterprises. Especially in meeting 2, a larger actor with approximately 500 employees within plastic production (this is an enterprise with substantial growth) presented their use of social media and the impact it has had on their business. The enterprise uses a LinkedIn company page where they present case stories, new trends in the market, new regulations, jobs, new customers and their collaboration projects. Moreover, they use Instagram and Facebook to achieve broader connection and communication to interested/interesting persons on the advanced solutions provided by the enterprise and need for knowledge in current projects within many different concrete applications. Here, students and other highly educated

people were the focus of the communication. Additionally, they use YouTube videos to provide easy explanations of the many advanced applications, e.g., within design and energy optimisation. Social media application is in this enterprise very important for initiating contact with customers. Their customers have typically limited focus on plastic production and tend to contact collaboration partners with highly advanced and specific knowledge within chemistry and/or B2B processes for support on development of plastic product solutions and services worldwide. The application of social media has thus a very high impact on their business through an approach that the larger enterprise calls 'create more for less'. In the action research process, researchers working in social media context-relevant areas also provided knowledge and elaboration on how other B2B SMEs had applied social media.

The network meetings were aimed at creating a platform for the SMEs to discuss and apply the knowledge gained in the meetings (Leitch, 2007; Moss, Alho, & Alexander, 2007). Follow-up interviews were conducted by phone a year later in October 2015. Thus, the following data were available for the research:

- Information from the initial screening meetings – approximately 8 h.
- Recordings from network meetings 2, 3 and 4 – approximately 4–5 h each.
- Follow-up interviews with the SME managers on the impact in their SME.

In the following section, the findings on the application of social media in B2B SMEs are revealed.

4. Findings and discussion

The participating SME managers were aware of the significance of enhancement of business through social media in their business model. They all used several of the Web 2.0 tools in their personal lives, so they knew something about the technicalities of social media application and had a prior perception of social media as an important

Table 2
Overview of the content of the network meetings.

Network meeting No.	Content
1.	Presentations Presentation on project management – university researchers
2.	Theoretical approach to internationalisation – university researchers. One larger player within plastic-producing enterprises presenting their approach and experiences on social media.
3.	Another larger player within plastic-production presenting their approach to and learning from internationalisation. Theoretical approach for application of social media – university researchers
4.	A third larger player within plastic-production presenting their approach to and learning from internationalisation – SMEs presenting their project achievement & challenges

Issues discussed by the SMEs
Presentations on own SME, business challenges and business development projects
Elaboration on the need to improve project management in own SME
Social network activity on values
Own SME approach to internationalisation and application of social media in their projects
Own SME learning from application of social media in their project development
The SMEs participating in 'hot chairs' on their hot topics for business development

potential factor contributing to their business, as N3 highlights: “*There is no doubt it will become the communication channel of the future, and given that we are becoming more internationally oriented, there will come more enquiries that way [social media], simply because the younger generation works intensively with it today*”.

The findings showed that the B2B SME managers thus perceived the positive contribution of applying social media to their business model and business processes, but in different ways due to their different business models. Whereas the primary overall goal of the participating SMEs was basically the same, ‘*increasing sales and profit through enhanced business communication*’, the SMEs’ social media application foci aimed for different sub-goals and different activities to achieve these sub-goals:

N1: Increase employees’ communication capabilities.

N2: Increase communication about products to the market.

N3: Increase communication about customer applications of plastic material.

N4: Increase communication about product development for collaboration.

The observations of these different areas embrace the context-specific nature of the B2B activities, as noted by Håkansson and Waluszewski (2007). This means that social media application must be adapted to the business processes and business model of the enterprise, creating a unique social media application. Thus, there is a need for specific “*core local knowledge of business activities/ processes*”, as highlighted by (Wynn et al., 2013) in the literature review.

The findings stress that the SME managers were hampered by a lack of knowledge on how to select the appropriate social media tools for their specific business model and business process innovation context. N4 expressed this by saying:

“... well, we talked about LinkedIn last time, and there is some Google, and there is some YouTube, and there’s something called Twitter, and then there’s something called a lot of something else, and every time you check the app icon, then there’s a new one. It’s, of course, something you have to acquaint yourself with, but it could be relevant to know which application is the most appropriate one for us to become professional in”.

Moreover, the managers seemed to struggle with the actual use of social media for open business model innovation, as revealed in the following citations:

N1: “... but from there [LinkedIn] to discuss and explain about your business, and to tell why you are the right partner for them [customers] next time they need material or packaging – I have a hard time seeing that, I must say”.

N2: “I won’t rule out that it might work, but I still have a hard time seeing it [social media application] happening. One thing is to think it’s a good idea, but you also need to get it done”.

N4: “What should I do with social media, if they don’t use it, my customers?”

These citations show that the SME managers found it difficult to consider and imagine how social media application would work in their own business processes. A combination of context-laden local business processes and local capabilities appear to be present and influencing the selection of the appropriate social media tools for their specific business process. The B2B SME managers could not imagine the specific activities and processes that would lead to social media application making a contribution in their own SME business. Although during the meetings, the B2B SME managers acknowledged that they had seen and discussed “*interesting suggestions on how to do it [social media application]*” from other research findings and from another experienced larger enterprise that had applied social media to create awareness of the enterprise and its advanced product and service solutions, resulting in growth, the B2B SME managers still hesitantly wondered how to apply social media in their own B2B SME.

In summary, Proposition 1 The application of social media and Web 2.0 for business enhancement requires SME managers in the B2B context to enable open business model innovation was supported, as the

managers were generally positive about open business model innovation through social media application. During the research, their positive assumptions were confirmed by other research findings and by a larger enterprise in the same B2B context. However, the lack of actual “*core local process*” capabilities and the lack of knowledge on how social media tools could contribute to their own business processes hindered the actual use of social media. More understanding and insight is needed than the highlights provided by the experience of other enterprises working with social media application and by the literature supporting the benefit of social media application. However, in the follow-up interview a year later, one of the SMEs had employed a social media application expert, and another SME planned to hire a salesperson with social media capabilities in the near future. Three of the SME managers used the business model innovation approach provided in the network meetings (Osterwalder & Pigneur, 2010) in decisions around the selection of business opportunities and in collaborative projects with customers and partners. This means that the network meetings discussing social media application created awareness and subsequent specific actions to implement actual social media applications. It appears that time is needed to digest the opportunities that social media applications offer local processes to make a contribution to SME business. This stresses the required antecedents of open business model innovation and open business process collaboration for the application of Web 2.0 social media to make a contribution to business. Proposition 1 is hereby supported in the research for the longer time horizon of about a year.

Additionally, the combination of centralised and distributed leadership was examined. Centralised leadership focuses on direction and the joint employment of resources in the SME for social media application. Distributed leadership focuses on delegating the responsibility for “*core local activities*” to employees and/or partners who have a thorough knowledge of the actual B2B processes. It was revealed that SME managers struggled with this combination, as shown by the following citations:

N3: “... you outsource it [social media] and say that we need to get on this wave. I personally have a challenge with it [outsourcing of social media application], but the discussion of outsourcing is very relevant”.

N1: “And then I ask, how we can motivate employees to make sure to answer in a timely manner [on social media]. In addition, we can measure it, and we can ‘punish’ them if they do not do it or we can call it an attempt to motivate, or you can attempt to make the processes autonomous... However, in reality, there are two elements in social media; one element is to have employees communicate a message, another element is to get employees to gather information externally for business model innovation”.

N3: “... if we say ok, we are present in five places: our webpage, LinkedIn, Facebook, a blog and YouTube... - well, then I have to hire two more employees to always be online because I have to have someone to answer all of those social media”.

The citations above disclose several challenges within the leadership area on social media application. First, it appears that the SME managers consider eliminating “*the perceived challenge of understanding social media tools*” by outsourcing social media activities to other organisations with experience in social media application, as highlighted by N1. However, this was considered to be difficult in practice, as heard in subsequent discussions, because it was perceived to require a high level of local process knowledge and too essential to their B2B processes to be outsourced. Second, the SME managers perceived the need for distributed leadership but lacked the knowledge of how to motivate employees to develop activities that will contribute to the SME business. The SME managers considered how their leadership could remain centralised through “*carrot and stick*” or automated approaches that would align the processes. Moreover, the managers were somewhat uncertain about the opportunities for motivation and control through incentives. In addition, resource challenges to control the “*local social media communication*” existed, as highlighted by N3. The resource challenges depend on the amount of communication taking place, according to the actual level of social media application. However, the aim of social

media applications is generally increased communication, so the SME managers are actually ultimately concerned about the degree of “*wrong/time-consuming*” communication. This was a commonly perceived risk that was taken very seriously in the discussions by the participating B2B SME managers. They acknowledged the need for integrated central and distributed leadership. However, they hesitated because of their fundamental tendency towards centralised leadership and a fear of the drawbacks from distributed leadership, particularly around losing control of the local process activities conducted by their own employees towards customers.

In summary, **Proposition 2** The application of social media and Web 2.0 for business enhancement requires SME managers in the B2B context to integrate central and distributed leadership was not supported in the short term, as the SME managers participating in the research were not ready to acknowledge the necessary integration of central and distributed leadership as a viable way to apply Web 2.0 social media. However, in the follow-up interview, two of the SME managers were ready to distribute more leadership in relation to social media application. It appears that a serious barrier is present in the short term in the SME management perception of “*losing control*”, as also found by Siamagka et al. (2015). However, in the long term, the SME managers become open to more distributed leadership around the application of social media to business processes by hiring employees with previous experience with social media application. It appears again that time is needed to digest the opportunities for integrating central and distributed leadership to contribute to the business. This stresses the antecedent requirement of integrated central and distributed leadership for Web 2.0 social media application. **Proposition 2** is hereby supported by the research in the longer time horizon of about a year.

The findings are summarised in Fig. 2.

Fig. 2 shows that open business model innovation and the combination of central- and distributed leadership are antecedents for Web 2.0 social media application to enhance business. Open business model innovation requires collaboration with customers, suppliers and partners for knowledge creation across business processes on all levels of the B2B SME. Moreover, distributed leadership approaches bring serious challenges for SME managers, who typically have a central controlling approach to leadership. However, over time, it appears that some of the B2B SME managers acknowledged and took concrete actions on these challenges to address the areas that were lacking. It appears that over time, the management of enhanced business through awareness of the two antecedents of open business model innovation in combination with the awareness of the different leadership approaches can enhance business. This management model means, on the one hand, a more thorough antecedent business approach highlighting business opportunities in the overall business model together with local business process

transformation through social media application and, on the other hand; a more thorough antecedent leadership approach highlighting the need for both distributed local leadership responsibility and central leadership responsibility for social media application.

5. Managerial implications

Interesting and challenging managerial implications emerge from the findings and from the developed model based on these findings. These findings indicate that B2B SME managers need to be involved and take the lead on social media application in a manner that secures collaborative knowledge creation about local business processes in alignment with the overall business model opportunities to enhance business. Additionally, the B2B SME managers need to secure involvement and ownership by those employees working with local business processes and the related application of social media. Leadership focus is needed to transform the current local business processes through social media application to support the overall aim of the business model.

As already mentioned, Hamel (2009) has noted that control through transparency is much more efficient and effective than direct managerial control, so the control mechanisms in the B2B enterprise must be transparent in the social media application. Moreover, time must be prioritised for up-front discussion of the overall business model and of the specific business processes to create the knowledge required by the employees and by the SME managers to enhance business. Decisions and actions need to be conducted that support contributing activities on all levels in the B2B SME and in the B2B context of customer enterprises, supplier enterprises and partner enterprises. This requires a challenging collaborative approach to leadership and collaboration on business model innovation at all levels in the organisation. This means that transparency also becomes important for leadership and business innovation actions in relatively small B2B SME organisations.

Thus, B2B SME managers must let go of their typical centralised control approach and develop a more democratic leadership style that allows employees to take leadership in the local business processes; further, managers must acknowledge the importance of involving employees to ensure that the social media application is grounded in the organisation.

6. Theoretical implications

One theoretical implication is that in the B2B context, the stage models in the literature do not appear to be applicable. Instead, a more complex approach is needed that recognises up front the antecedents of leadership and open business model understanding before social media can actually be applied. This means a cross-disciplinary approach to social media application including the literature streams of leadership and organisational motivation, business model innovation and the technicalities of social media application in SMEs. Hitherto, the focus in the literature has primarily been on the technicalities of social media application, as highlighted in the previous literature review. The contribution of this research is to stress the need for antecedent knowledge within leadership and business model innovation to be used within B2B SME context for social media application to enhance the business of the SME. This research thus adds to existing knowledge by building awareness of the important antecedents and by highlighting the need for a much more up-front and integrative process of these two antecedents than exists in stage models highlighted in the literature.

7. Discussions

The literature has focused on social media tools and the transformation of applications from Web 1.0 to Web 2.0 to create two-way communication, as noted in the introduction and the literature review. The focus of research has primarily been on the application level in larger enterprises and B2C SMEs. This means that research, in general, has

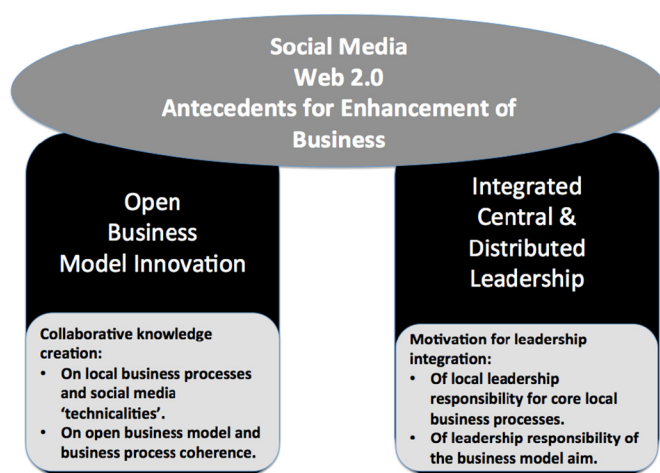


Fig. 2. Overview of antecedents for Web 2.0 to contribute in B2B SME context.

been limited in the B2B context and primarily approached in the same way as in other areas. Previous research has revealed that B2B SMEs are behind in social media application. The research in this paper aims to take the B2B SME field a step forward by explaining how managing the antecedents of B2B SME social media application can enhance SME business.

As noted, the findings in this qualitative B2B research are highly context-laden, and typically, the steps can be blurred between the overall business model and the required change in business processes. Knowledge creation combining specific local business processes, opportunities for social media application and the aim of the overall business model is necessary to reveal the steps to be taken by the B2B SME. However, this process has only received limited focus from the research in social media application in B2B SMEs. It must be noted that in the B2B context, customers, suppliers and partners play an important role in the specific business processes because these processes typically have a direct impact on their businesses. Customers, suppliers and partners also play an important role in the alignment of the overall business model, with the aim of creating a collaborative contribution for the involved participants. Therefore, the management of social media application in the B2B SME context involves collaboration for the enhancement of business for the involved participants. This is only researched to a limited extent in the previous literature streams on B2B SMEs.

The findings reveal that the challenges for B2B SME managers are primarily situated within the management of the antecedent leadership approaches and the antecedent business model integration of local business processes. Neither of these two challenges is easy for SME managers to overcome. One reason is that the SME managers typically take an approach that requires centralised control over the organisation and therefore do not take the necessary time to support the creation and integration of distributed leadership. Another reason is that they simply do not have the time or the specific knowledge required themselves to lead the efficient and effective application of social media that includes business model innovation and the transformation of local business processes in the B2B SME organisation. The research conducted in this paper can take the understanding of the B2B SME field one step further by offering a more thorough understanding of these two antecedents and the necessity of integrating them to ultimately contribute to business for B2B SMEs.

This research thus allows a new cross-disciplinary understanding of social media application with a new focus on B2B SMEs. The issues that need further discussion is noted in short in the following:

- Awareness of antecedents of business model innovation and different leadership approaches.
- Elaboration of the different leadership approaches and the collaboration issues included.
- Highlighting the transparency needed for control of business model innovation and business processes.

Further research steps need to be taken, as the exploration of this research question opens a path for new research to elaborate the findings.

8. Limitations

Limitations are present in this research due to the context-laden nature of B2B qualitative research. Therefore, it will be necessary to conduct research in other enterprises within plastic-producing enterprises to verify the model. However, the findings from four very different B2B enterprises highly converge on their challenges to social media application. As noted by Yin (2009), a convergence of findings across different cases is a strong indicator of robust findings. Therefore, the applicability of the findings in the developed model to B2B plastic-producing SMEs may be anticipated to be relatively high.

Conducting research in enterprises outside of the plastic-producing sector will also be necessary to verify the model. As the findings

converge across a range of dimensions, it could also be anticipated that the findings may converge across industries. This anticipation is speculative and not very clearly grounded. Further research should be conducted in other business sectors to reveal if the possible convergence of findings across business sectors is valid.

The previous discussions and the considered limitations suggest further research into the application of social media and related fields such as business model development, business processes, collaborative organisational knowledge creation and central and distributed leadership in the B2B SME context. Moreover, conducting research in cross-disciplinary fields will be interesting, as it will enhance the contribution to SME business.

9. Conclusion

This paper elucidated how B2B SMEs can manage the antecedents of social media application to enhance business in their enterprises. The research was conducted as a qualitative action research case study with four plastic-producing SMEs from October 2013 to October 2014 with follow-up interviews in October 2015.

The findings provide an enhanced understanding of the knowledge gap on B2B SMEs. These firms perceive the usefulness of social media for its potential contribution to their business and the contrasting limited actual application of social media in the SME business context. The findings reveal two important antecedents for social media application to overcome the gap between acknowledging the usefulness of social media and its actual limited application. First, open collaborative business model innovation for the application of social media in specific business processes in the B2B SMEs is needed. These specific business processes need to be aligned with the overall aim of the business model innovation of the B2B SME. Second, the integration of central and distributed leadership is needed to create ownership and responsibility across all levels of the B2B SME organisation.

These findings differ from the perceived stages of social media application, with gaps between, found in the literature. Instead, the two antecedents of open business model innovation and the integration of central and distributed leadership approaches are emphasised as being necessary before social media application can really make a contribution to B2B SMEs. Thus, the model developed based on the findings from this research can contribute to the B2B SME field by highlighting the two antecedents required and the managerial and theoretical implications for efficient and effective social media application. The model furthermore makes a contribution to academia by providing a more thorough understanding of social media application and its antecedents, which is needed for enhanced educational dissemination and further research in the B2B SME context.

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