

Entrepreneurs' Social Ties and International Digital Entrepreneurial Marketing in Small and Medium-Sized Enterprise Internationalization

Man Yang, Peter Gabrielsson 🕩, and Svante Andersson 🕩





Abstract

Digitalization has enabled entrepreneurs to adopt digital tools to create opportunities and reach customers in international markets. Yet, the understanding of international digital entrepreneurial marketing in the global marketplace is limited. Drawing on social network theory, the authors investigate how entrepreneurs' social ties and firms' international digital entrepreneurial marketing influence small and medium-sized enterprise (SME) internationalization. Based on multiple case study methodology, the results suggest that entrepreneurs' bonding and bridging ties facilitate different dimensions of international digital entrepreneurial marketing. That further enhances the intensity and geographic scope of SME internationalization. SME internationalization also reinforces entrepreneurs' accumulation of social ties. This study contributes to international marketing research by developing the dimensions of the international digital entrepreneurial marketing concept and exploring its important role in SME internationalization.

Keywords

international digital entrepreneurial marketing, SME internationalization, entrepreneurs, social ties, qualitative case study

In the global business environment, leveraging social contacts and utilizing digital technology have become essential for international market expansion (Sheth 2020; Vasilchenko and Morrish 2011). Entrepreneurs may face challenges when looking to internationalize their small and medium-sized enterprises (SME), as they may lack a wide distribution network and have neither a sufficient product or service range nor the sales volume to leverage economies of scope and scale (Felzensztein, Deans, and Dana 2019; Masiello and Izzo 2019; Reuber and Fischer 2009, 2011). Prior research suggests that entrepreneurial marketing's innovative, cocreated, and low-cost marketing means can help SMEs internationalize (Crick, Crick, and Chaudhry 2020; Hagen and Zucchella 2018; Hallbäck and Gabrielsson 2013; Sullivan Mort, Weerawardena, and Liesch 2012). Entrepreneurial marketing refers to "proactive identification and exploitation of opportunities for acquiring and retaining profitable customers through innovative approaches to risk management, resource leveraging and value creation" (Morris, Schindehutte, and LaForge 2002, p. 4).

Incorporating digitalization into entrepreneurial marketing looks promising, as it can enable digital affordances (Autio et al. 2018) to support firms' development of digital products. Firms can also utilize digital channels for innovative products, services, distribution, and promotion, accessing global markets from the outset (Monaghan, Tippmann, and Coviello 2020; Shaheer and Li 2020). In our study, we use the term "digitalization" in line with Ritter and Pedersen's (2020) definition: "digitalization refers to the application of digital technologies" (p. 182). A deeper understanding of how entrepreneurial marketing can be conducted digitally could act as a key market-based resource to support the SME entrepreneurial process (Liu, Eng, and Takeda 2015). At Myontec, an entrepreneurial firm offering intelligent clothing for health, the entrepreneur's social ties were used to engage ambassadors. These key opinion leaders had positive connections with potential customers and were able to promote Myontec's products on social media. This digital entrepreneurial marketing measure generated foreign sales for Myontec in many different international markets. International digital entrepreneurial marketing may thus be an ideal tool to convert entrepreneurs' social ties into market-based resources enabling SME internationalization. However, the extant international marketing literature has barely scratched the surface of the important role international digital entrepreneurial marketing can play during SME internationalization.

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In entrepreneurial marketing, small businesses often collaborate with other actors to use their resources, combine resources, and use resources in new ways (Andersson, Evers, and Gliga 2018; Morris, Schindehutte, and LaForge 2002). Thus, entrepreneurs' social ties play a crucial role.¹ They are defined as the interpersonal network of connections between people, comprising all interpersonal ties, as opposed to interorganizational ties (Ellis 2000; Nahapiet and Ghoshal 1998; Shane 2003). However, prior international marketing research provides little knowledge on how entrepreneurs' social ties influence the application of international digital entrepreneurial marketing among SMEs to gain international customers. Previous research has, however, recognized the value of entrepreneurs' social ties to firm internationalization, so this study aims to extend that knowledge (Kontinen and Ojala 2011; Musteen, Datta, and Butts 2014; Vasilchenko and Morrish 2011). But social ties do not in themselves necessarily deliver benefits related to internationalization. We need to understand how firms' international digital entrepreneurial marketing can be accomplished with entrepreneurs' available social ties, and how the marketing and ties lead small businesses to international markets.

Accordingly, we study the following question in this research: How do entrepreneurs' social ties and firms' international digital entrepreneurial marketing influence SME internationalization? Using a longitudinal design, we conduct six case studies of SMEs from Finland and Sweden. Our research contributes to the international marketing domain in several ways. First, we contribute to the entrepreneurial and digital perspectives on international marketing by developing the concept of international digital entrepreneurial marketing and exploring its underlying dimensions and their influence on firm internationalization. Hence, the study contributes at the interface of entrepreneurship and international marketing (Freeman and Cavusgil 2007; Knight 2000; Yang 2018; see Yang and Gabrielsson [2018] for a review). The work also contributes to the digital aspect of international marketing for internationalization (Monaghan, Tippmann, and Coviello 2020; Shaheer, Li, and Priem 2020). We offer new insights on an entrepreneurial approach to international marketing research in a digitalized world. This provides an international digital entrepreneurial marketing perspective that is absent from previous studies (Freeman, Edwards, and Schroder 2006; Gil-Barragan, Belso-Martínez, and Mas-Verdú 2020; Vasilchenko and Morrish 2011).

Second, this research adds knowledge on microfoundations in international marketing research (see call by Coviello, Kano, and Liesch [2017]). We explain the interaction between SME entrepreneurs' social ties at the micro level and international digital entrepreneurial marketing and internationalization outcomes at the firm level. Our study suggests that entrepreneurs' microlevel bonding and bridging social ties facilitate the development of different dimensions of international digital entrepreneurial marketing at the firm level. This further enhances the intensity (share of foreign sales of total sales) and geographic scope (number and location of foreign markets) of SME internationalization. Moreover, we observed the influence of a feedback loop whereby firm-level internationalization outcomes (i.e., internationalization intensity and geographic scope) affect the development of microlevel entrepreneurs' bonding and bridging ties. This provides new insights into research on social ties (Ellis 2011; Masiello and Izzo 2019) and entrepreneurial internationalization (Felzensztein, Deans, and Dana 2019; Musteen, Datta, and Butts 2014).

Literature Review

Entrepreneurial Marketing and Digitalization

Marketing is applied to achieve the main purpose of business (i.e., to create customers; Drucker 1954) and is essential for entrepreneurial firms targeting international marketplaces (Samiee, Katsikeas, and Hult 2021). Although international marketing has been researched from many different perspectives, relatively few studies have examined how digital transformation has affected entrepreneurial firms' internationalization (Samiee, Katsikeas, and Hult 2021) and how digitalization has changed the routes to customers in international markets. The importance of marketing has made it a challenging area for resource-constrained SMEs competing with large firms in international markets. Thus, entrepreneurial firms have found innovative ways to deal with customer creation. This behavior has also been acknowledged in academia, under the concept of entrepreneurial marketing. That concept arose from research progress at the marketing-entrepreneurship interface (Hansen and Eggers 2010; Hills, Hultman, and Miles 2008; Miles et al. 2015) and addresses practitioners' need to cope with increasing uncertainty from rapid changes in technology and customer preferences (Algahtani and Uslay 2020; Whalen et al. 2016). According to Morris, Schindehutte, and LaForge (2002), entrepreneurial marketing comprises seven elements: opportunity-driven approach, proactiveness, innovation focus, customer intensity, risk management, resource leveraging, and value creation.

We consider it important that entrepreneurial marketing research integrates the digitalization perspective to further advance its theorizing. Digitalization is "the organization and utilization of algorithms and digital data structures for the performance of control, communication and execution of tasks, largely operationalized through networked computer hardware and layers of firmware, middleware, and software, connected through a set of standardized interfaces such as application programming interfaces" (Autio, Mudambi, and Yoo 2021, pp. 6–7). There are two forms of digitalization through which entrepreneurial marketing may be conducted (Autio, Mudambi, and Yoo 2021). The first is digital communication technologies, which can digitize and automate cross-border processes, such as

¹ Following Ellis (2011), this article employs the more generic meaning for social ties: social ties are those between people. This is not to diminish the significance of different types of ties. However, "the conceptual benefits gained from speculating about the effects of different tie types remain unclear" (Ellis 2011, p. 121), because social ties change over time. For example, friends or employees may become business partners, and vice versa.

foreign market penetration and customer relationship management (Poulter et al. 2020). During internationalization, entrepreneurial marketing may be undertaken across distant geographic points through digital communication technologies, such as social media, websites, video, and other information and communication technologies. The second is digital in situ technologies, which can be viewed as production and operations management tools (Bertsimas, Kallus, and Hussain 2016) and can be directly embedded in products and services. They offer entirely different forms of user experience and value proposition (Baskerville, Myers, and Yoo 2020); examples include artificial intelligence (AI), big data analytics, robotics, and 3D printing. Given the fast-paced development of digitalization, its use in marketing has evolved from digital means serving as marketing channels to digitalization influencing all parts of the marketing mix (price, product, place, promotion) and marketing strategy (Kannan and Li 2017). Researchers have identified four themes in digital marketing research: channels, social media, digital relationships, and digital technologies (Herhausen et al. 2020).

However, in focusing on digital communication technology, the extant entrepreneurial marketing literature has provided few insights into digitalization per se. For instance, social media offers myriad opportunities for entrepreneurial marketing. But the rapid rate of change may threaten the impact of investment (Fink et al. 2020). In addition, research has highlighted the role and function of citizen-led social media forums in cocreating value in the marketing of political discourse (Amoncar 2020). Jones, Alford, and Wolfenden (2015) find that customer engagement in digital channels generates an immediate flow of data back to the firm, in the form of web analytics that could provide insights into which offerings and campaigns were successful. Other entrepreneurial marketing literature has suggested that the affordances of online businesses appear to offer breakout opportunities. Yet, relying on incremental experimentation and copying others resulted in homogeneous approaches to marketing among ethnic minority entrepreneurs (Anwar and Daniel 2016). Given the importance of entrepreneurial marketing and digitalization to small businesses' international marketing, there is good reason to integrate these two aspects and develop the concept of international digital entrepreneurial marketing by exploring its underlying dimensions.

Social Ties and Internationalization

The network approach to internationalization suggests that different networks, such as social networks and business networks, influence SME internationalization (Chetty and Holm 2000; Loane and Bell 2006). Insights from social network theory in the extant internationalization literature suggest that social (network) ties are crucial to international opportunity recognition (Ellis 2011; Johannisson 1987), access to information and resources (Kemper, Engelen, and Brettel 2011), and entrepreneurial internationalization (Kontinen and Ojala 2011; Prashantham, Dhanaraj, and Kumar 2015; Söderqvist and Chetty 2013). We focus on entrepreneurs' social ties at the micro level to understand internationalization, because any action at the firm level derives from the organization's personnel (Coviello 2015). Thus, we must understand microfoundations in international marketing research. Scholars define microfoundations as causes of a phenomenon that are located at a level of analysis lower than the phenomenon itself (Foss and Lindenberg 2013; Foss and Pedersen 2016). Our study focuses on two perspectives concerning social ties: bonding ties and bridging ties. Bonding ties are strong tie connections with multiple and repeated interactions (Coleman 1988; Hite 2003; Putnam 2000). Bridging ties are weak ties between diverse individuals through information sharing (Burt 2000, 2007; Putnam 2000). Scholars have discovered and justified the importance of both bonding ties and bridging ties in internationalization as follows.

On bonding ties and internationalization, scholars have suggested that entrepreneurs' bonding ties ultimately engender greater knowledge of foreign markets, which enhances the results of the SME's first internationalization push (Musteen, Datta, and Butts 2014). Thus, bonding ties are useful for acquiring knowledge in international markets, due to strong linkages between the actors (Söderqvist and Chetty 2013). Moreover, bonding ties can accelerate internationalization (in terms of speed, degree, and number of foreign countries) for resourceconstrained SMEs, because they can reduce risk and efficiently manage scarce resources (Gil-Barragan, Belso-Martínez, and Mas-Verdú 2020).

On bridging ties and internationalization, Prashantham (2008) argues that bridging ties derived via nonredundant ties with dissimilar actors could facilitate entrepreneurial internationalization through exploratory innovation in new ventures. Similarly, Kontinen and Ojala (2011) find that when familyowned SMEs started to internationalize, entrepreneurs had to acquire bridging ties that would enable foreign operations. Moreover, scholars have suggested that a neutral agency's intervention in terms of architecting, brokering, and coaching can facilitate the formation of bridging ties from multinational subsidiaries to SMEs and strengthen the likelihood of knowledge outcomes, which leads to SME internationalization (Prashantham and McNaughton 2006). Bridging ties can deliver accelerated internationalization for SMEs with fewer resource constraints because they may provide more sources of novel information. Firms can use their existing resources to identify international opportunities (Gil-Barragan, Belso-Martínez, and Mas-Verdú 2020).

Research suggests that entrepreneurs have stronger ties during the early phases of firm development (Söderqvist and Chetty 2013). The importance of bonding ties then diminishes as firms internationalize, because strengthening the same ties does not necessarily provide multiple opportunities for new business. Bridging ties, in contrast, may provide the firm with different types of knowledge resources and multiple foreign business networks, thus becoming more important for internationalization at the later phases of firm development (Suseno and Pinnington 2018; Tang 2006). However, creating and retaining both bonding and bridging ties demands resources. Thus, it is crucial for internationalizing firms to strike a balance between bonding and bridging ties to succeed in internationalization (Han 2006).

The extant literature has recognized the essential role of social ties in influencing SME internationalization. But there seems to be disagreement on how and when they influence different dimensions of internationalization, such as intensity (share of foreign sales of total sales) and geographic scope (number and location of foreign markets). Previous studies have highlighted social ties' influence on SME internationalization through knowledge (Musteen, Datta, and Butts 2014; Prashantham and McNaughton 2006), innovation (Prashantham 2008), foreign market knowledge (Coviello and Munro 1997; Ellis 2000; Söderqvist and Chetty 2013), dynamic marketing capabilities (Evers, Andersson, and Hannibal 2012), technological and marketing capabilities (Laurell, Achtenhagen, and Andersson 2017), and access to resources (Debrulle and Maes 2015) (see Table 1). Yet, the current literature has overlooked the value of the digital entrepreneurial marketing perspective to enhance our understanding of how entrepreneurs can internationalize their SMEs using their social ties. Therefore, we seek to develop the theoretical perspective of digital entrepreneurial marketing to advance our knowledge on entrepreneurs' social ties and SME internationalization.

Internationalization Intensity and Geographic Scope

Scholars have offered various conceptualizations of internationalization (Marshall, Brouthers, and Keig 2020; Sullivan 1994). This study investigates two distinct facets: intensity and geographic scope. Intensity of internationalization refers to a firm's revenue from foreign countries as a share of its total revenue in a given year (Geringer, Beamish, and DaCosta 1989; Narteh and Acheampong 2018). Geographic scope refers to the geographic diversification of the firm's foreign markets around the globe (Freixanet and Renart 2020). The intensity and geographic scope of internationalization can capture the firm's commitment to serving customers in foreign markets (Miller, Lavie, and Delios 2016; Sleuwaegen and Onkelinx 2014).

The recent literature calls for research to advance our understanding of internationalization outcomes in relation to digital innovations (Shaheer, Kim, and Li 2022) since digital technologies and infrastructures (i.e., digital affordances) can support business scale-up (Autio et al. 2018).

The role of the new digital environment and the emergence of digital entrepreneurship are highlighted in accelerating internationalization (Gabrielsson, Raatikainen, and Julkunen 2022). Specifically, entrepreneurs apply both pull- and push-based tools in digital communication to build interest and facilitate interaction among network contacts. Moreover, research has suggested that manufacturing firms' network interaction with customers on digital platforms could improve the intensity of internationalization (Liu, Wu, and Song 2022). However, we need more theoretical and empirical understanding of how entrepreneurship (i.e., entrepreneurs' social ties), entrepreneurial marketing, and digitalization play a role in the intensity and geographic scope of internationalization. Next, we describe the method of our empirical study.

Method

The exploratory and theory-building nature of this research led us to adopt a qualitative case study method (Dana and Dana 2005; Eisenhardt and Graebner 2007), and in particular a multiple case study approach. The comparative perspective obtained from multiple cases allows researchers to reveal or eliminate alternative explanations and provides rich evidence for theory building (Eisenhardt 1989; Eisenhardt and Graebner 2007; Siggelkow 2007).

Case Companies

We selected case companies from similar contexts for theorizing (Eisenhardt and Graebner 2007). The application of similar contexts can "control the extraneous variation" and minimize country-specific effects, allowing us to focus on the variation of the theoretical constructs of interest (Gehman et al. 2018, p. 288). Specifically, we drew six health industry companies from Finland and Sweden, two Nordic countries with small, open economies and limited domestic markets where internationalization is essential for growth (Luostarinen and Gabrielsson 2006). The health industry is knowledge-intensive and characterized by fast growth worldwide and many innovation opportunities for entrepreneurs (Chang, Jack, and Webster 2017; European Commission 2020; Pandro 2017). Further, the industry exhibits "multiple objectives, diffuse power and knowledge-based work" (Denis, Langley, and Rouleau 2007, p. 179), with its own set of regulations and systems (Laurell 2018). Finland and Sweden have similar health care systems, formal institutions supported by a taxation-based regime whose aim is to ensure that every citizen has equal access to health services (HealthManagement 2010). Prior research has shown that small, informal institutional differences do not seem to affect firms' international marketing behavior (Gabrielsson, Gabrielsson, and Seppälä 2012). The European Union has made digitalization in health care one of its top priorities, and firms in the industry are currently undergoing a digital transformation (European Commission 2018).

The companies were selected from a database provided by the Health Startup Association of Finland and from an informal network of health companies collaborating with a university in Sweden. We employed theoretical sampling criteria (Eisenhardt and Graebner 2007) in our selection. First, in addition to operating in international markets, the firms had to be less than 25 years old to ensure that they had been founded after the internet was in general use in the 1990s to apply digital tools in entrepreneurial marketing. Second, they had to demonstrate preliminary evidence of their use of digital technology in marketing. That was verified from their internet home pages to ensure that the selected cases would be fruitful for our investigation. Such evidence could include, for example, descriptions of digital products, links to social media accounts, or other digital marketing tools. Third, the founders and/or current owners had to be available for interview. Based on these criteria, we contacted five Finnish firms, three of which agreed to participate in the study: Crown

Table I. Linkage of	f Social Ties to SME	Internationalization.
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Study	Method	Findings	Link/Mediator
Coviello and Munro (1997)	Case study	Formal and informal contacts are developed, usually facilitated by the small firm's initial relationship. These relationships provide the market knowledge and potential access/mode of entry to markets around the world.	Foreign market knowledge
Ellis (2000)	Case study	Knowledge of foreign market opportunities is commonly acquired via existing interpersonal links rather than systematically collected via market research.	Foreign market knowledge
Prashantham and McNaughton (2006)	Case study	The formation of social ties has the potential to lead to knowledge outcomes and ultimately internationalization for the SME.	Knowledge
Prashantham (2008)	Conceptual	Bridging social ties with dissimilar actors could facilitate exploratory innovation, and then lead to entrepreneurial internationalization as a strategic renewal.	Exploratory innovation
Evers, Andersson, and Hannibal (2012)	Case study	Entrepreneurs in international new ventures manage social ties to build dynamic marketing capabilities for international competitive advantage.	Dynamic marketing capabilities
Söderqvist and Chetty (2013)	Case study	Social ties are important to gain access to resources (production, product technology) and knowledge about foreign markets.	Foreign market knowledge
Musteen, Datta, and Butts (2014)	Survey questionnaire	CEOs' social ties with stronger and greater diversity can develop better foreign market knowledge at the time of their first international venture, thus delivering better internationalization performance.	Foreign market knowledge
Debrulle and Maes (2015)	Survey questionnaire	Social ties have a positive effect on startup export intensity.	Access to resources
Laurell, Achtenhagen, and Andersson (2017)	Case study	Key individuals' social ties are essential to building technological product development capabilities in international new ventures' early phases, while marketing and sales capabilities are most critical in later phases.	Technological and marketing capabilities
The current study	Case study	Entrepreneurs' bonding and bridging social ties facilitate the development of digital entrepreneurial marketing, which then enhances and increases the intensity and geographic scope of SME internationalization.	Digital entrepreneurial marketing

CRO, MediSapiens, and Myontec. The three Swedish firms we contacted all agreed to participate: Camp Scandinavia, Carmona, and MonthlyCup. The case companies offer variety in terms of size, age, product versus service offerings, B2B versus B2C focus, digitalization, and the intensity and geographic scope of their internationalization. This variety enabled comparison and theoretical examination (Eisenhardt, Graebner, and Sonenshein 2016).

As presented in Table 2, the case companies internationalized into foreign markets at different levels of intensity. Just three years after its foundation, MediSapiens reached an internationalization intensity of 100%, whereas Carmona had no foreign sales at that time. The other case firms' intensity stood between these two outer markers. In 2019, Camp Scandinavia had the highest internationalization intensity (90%), while Carmona registered 5% in the same period, and the other firms fell between these two. The case companies also varied in their geographic scope of internationalization: some had internationalized around the globe, such as Myontec (Europe, North America, South America, Oceania, Asia), Camp Scandinavia (Europe, North America, Asia), and MonthlyCup (Europe, North America, Oceania). Carmona had just one foreign market, namely Denmark. The others' foreign sales were mainly in Europe and North America.

Data Collection and Analysis

Data were collected from multiple sources to enhance the validity of the study (Eisenhardt 1989; Piekkari, Welch, and Paavilainen 2009). Primary data were collected through 21 interviews between 2015 and 2021, with the case companies' entrepreneurs and key persons involved in international marketing and/or digital marketing. Table 3 presents detailed information on the interviews. The interview protocol included questions that addressed the milestones of each case's international digital entrepreneurial marketing and internationalization. We collected data from the cases' developmental phases, in order to capture the interactions between the entrepreneurs' social ties and the firm's digital entrepreneurial marketing, as well as the internationalization outcomes. The interviews were recorded and transcribed, totaling 463 pages (184,900 words) of transcriptions. We used secondary archival data to triangulate information on the early days of the firms, including annual reports, press releases, internal documents, company websites, brochures, and social media channels (see Table 3). For instance, the firm's year of foundation and intensity of internationalization (three years after foundation) were verified via the company's website or annual report or via a business registration organization (e.g., Fonecta, Kauppalehti). Given the

	Crown CRO	MediSapiens	Myontec	Camp Scandinavia	Carmona	MonthlyCup
Foundation (year and country)	2005 Finland	2009 Finland	2008 Finland	1996 Sweden	2004 Sweden	2014 Sweden
B2B/B2C	B2B	B2B	B2C and B2B	B2B	B2B	B2C (mostly) and B2B
Product/service	Service: clinical operations and other services	Service: IT solutions for biomedical data	Product: intelligent clothing, measuring muscle behavior with electromyography	Product: orthoses	Service: IT systems to register health case information	Product: menstruation cup
Number of employees, 2019	125	40	8	246	10	9
Annual turnover, 2019 Intensity of internationalization, three years after foundation	MEUR 14.6 30%	MEUR 2 100%	MEUR .37 50%	MEUR 39 50%	MEUR 1.4 0%	MEUR I.I 5%
Intensity of internationalization, 2019	75%	70%	30%	90%	5%	20%
Geographic scope of internationalization (year and country)	 2006 Estonia, Latvia, Lithuania 2009 Sweden 2013 Norway, Denmark 2014 United States 2015 Belarus 	 2010 Germany 2013 United States 2015 The Netherlands, Sweden 2016 United Kingdom, Iceland 2017 Luxembourg 2019 Italy 	 2008 Belgium 2010 United Kingdom, United States, Australia 2014 The Netherlands 2015 France, Italy 2016 China 2019 Germany, Spain, Portugal, Czech Republic, Brazil 	 1996 Norway, Denmark, Finland 1997–1999 Germany, Belgium, The Netherlands, Luxembourg 2000–2003 United Kingdom, Ireland, Austria, Switzerland 2004 United States 2005–2010 Australia, China 2010–2019 Argentina, India, South Africa 	• 2011 Denmark	 2015 Norway, Germany 2016–2017 Austria, Switzerland, Denmark, France, Italy, Hungary 2019 United States, Australia

Table 2. Information on Case Companies.

Notes: MEUR = million euros.

retrospective nature of the interviews in the initial phase of data collection, the archival data were important in providing details that the human memory may not preserve (Welch and Wilkinson 2004), such as firm size, turnover, and intensity and geographic scope of internationalization (see Table 2). Moreover, we used the website and press releases of each case company to triangulate the key milestones in our findings. There proved to be a high degree of consistency between archival documentation and the retrospective reporting of interviewees. At the developmental phase of data collection, the

follow-up interviews were accurate when the focal events were recent, which helped mitigate the retrospective bias of the interviews (Eisenhardt and Graebner 2007).

We used NVivo 12 Pro software for content analyses (Sinkovics, Penz, and Ghauri 2008). The study employs an embedded case-study design with multiple units of analysis (Scholz and Tietje 2002, p. 9): entrepreneurs' individual-level social ties, and firm-level international digital entrepreneurial marketing and internationalization. The data analysis comprised two main stages. The first entailed an *inductive* analysis driven

,			Internieur	Interminant.	No of Turner thed	
Company	No.	. Interviewee(s)	Time	Length	Pages/Words	Archival Data
Crown CRO	_	Founder and CEO	November 2017	157 minutes	30 pages/21,544 words	Annual reports, press releases, brochures, internal documents
	7	Founder and CEO	May 2018	92 minutes	30 pages/11.114 words	Website: https://crowncro.fl/ (including news. blogs)
	m	Director of business development	May 2018	124 minutes	47 pages/16,839 words	Twitter: https://twitter.com/crowncro
		Head of data services				LinkedIn: https://www.linkedin.com/company/crown-cro
	4	Founder and CEO	January 2019	57 minutes	35 pages/9,223 words	
	ъ	Founder and CEO	April 2019	68 minutes	19 pages/7,798 words	
	9	Founder and CEO	June 2020	24 minutes	13 pages/ 2,964 words	
MediSapiens	~	Founder and CEO	May 2018	50 minutes	16 pages/7,295 words	Annual reports, press releases, brochures, internal
	œ	Marketing director	May 2018	80 minutes	37 pages/14,190 words	documents
	6	Founder and CEO	June 2020	47 minutes	20 pages/6,461 words	Website: https://medisapiens.com/
						Twitter: https://twitter.com/medisapiens/ LinkedIn: https://www.linkedin.com/combany/medisapiens-
						ltd/
						Facebook: https://www.facebook.com/medisapiens/
						YouTube: https://www.youtube.com/channel/UCszklQq-
Munter	9	CEO	November	127 minutes	40 nages/20151 words	Vehsite: https://www.mvonter.com/
	2)	2018			Twitter: https://twitter.com/Myontec_Ltd
	=	Sales and marketing director	December	56 minutes	16 pages/7,429 words	LinkedIn: https://www.linkedin.com/company/myontec
			2018			Facebook: https://www.facebook.com/myontec/
	12	Founder and vice chairman of the board/former CEO	June 2020	45 minutes	17 pages/4,210 words	YouTube: https://www.youtube.com/channel/ UCU48hvU0tirX3GFbxM7ZyDg
	<u></u>	CEO	une 2020	29 minutes	13 pages/3,577 words	Web shop: https://www.myontec.com/shop
Carmona	4	CEO	December	63 minutes	13 pages/4,953 words	Annual reports, press releases, brochures, internal
			2018			documents
	15	CEO	April 2021	38 minutes	II pages/3,861 words	Website: https://www2.carmona.se
				!		LinkedIn: https://www.linkedin.com/company/carmona-ab/
Camp 2	9 !	CEO	February 2015	47 minutes	13 pages/7,394 words	Annual reports, press releases, brochures, internal
Scandinavia	2 9	CEO M	July 2015	23 minutes	5 pages/2,303 words	documents
	<u>o</u>	Marketing manager	March 2019	I U3 MINUTES	31 pages/13,245 words	VedSite: https://www.allardint.com
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	2				v pages/ 2, 173 WOI V	Scandinavia-au/ Facebook: https://www.facebook.com/AllardLJSA/
						Instagram: https://www.instagram.com/explore/tags/
						campscandinavia/
						YouTube: https://www.youtube.com/user/AllardUSA/
	:					featured
MonthlyCup	20	Founder and CEO	April 2019	97 minutes	35 pages/15,094 words	Annual reports, press releases, brochures, internal
	10	Digital marketing specialist Founder and CFO	lune 2020	21 minutes	9 pages/3 112 words	documents Wehsire: https://www.monthlycup.com
	i					Twitter: https://twitter.com/MenstrualCupCom
						Facebook: https://www.facebook.com/menskopp.se/
						Instagram: https://www.instagram.com/MonthlyCup_Com/
						Tou lube: https://www.youtube.com/channel/ LIC5RbwFr0KaD13OGI l0aha-va
						9/9/2010 10/00 10/00 10/00/00/00/00/00/00/00/00/00/00/00/00/0

Table 3. Interviews and Digital Data Sources.

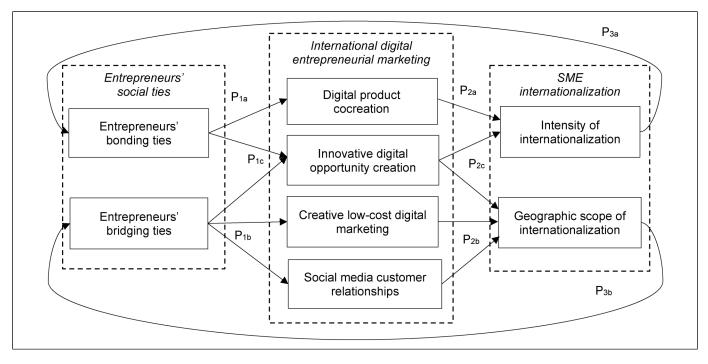


Figure I. A Framework on International Digital Entrepreneurial Marketing, Entrepreneurs' Social Ties, and SME Internationalization.

by empirical insights emerging from the data (see Corley and Gioia 2004). To establish "qualitative rigor," we inductively developed nodes of international digital entrepreneurial marketing based on the method of Gioia, Corley, and Hamilton (2013, p. 15). We first performed initial data coding and developed comprehensive first-order informant-centric concepts, and then we organized those concepts into the second-order theorycentric theme. Finally, we distilled second-order themes into aggregate theoretical dimensions (Gioia, Corley, and Hamilton 2013). The second stage of data analysis was deductive, employing concepts derived from the literature as codes. Thus, we deductively coded the constructs of bridging and bonding social capital. We first identified the themes of each construct based on the extant literature (Burt 2000; Coleman 1988; Vissa 2012), then explained each theme in more detail via a concept, and finally presented the data excerpts on each concept. Moreover, we created two nodes of SME internationalization: intensity of internationalization and geographic scope of internationalization, as presented in Table 2.

We analyzed each case and drew up case summaries with relevant quotes for interviewees to check and approve, and also received permission to name the case companies in the article. We then conducted a cross-case analysis to ensure the systematic combination of the data, and finally built explanations, proposed a framework, and developed propositions (Dubois and Gadde 2002). We next present the empirical results of our study.

Findings and Discussion

This study explores the concept and dimensions of international digital entrepreneurial marketing. In this section, we first present the empirical results and then discuss our findings on how entrepreneurs' bridging and bonding forms of social capital influence international digital entrepreneurial marketing in SMEs. We describe our empirical findings on how international digital entrepreneurial marketing influences the degree and geographic scope of SME internationalization, and how SME internationalization influences entrepreneurs' bridging and bonding social capital. We also develop a framework (see Figure 1) and propositions.

International Digital Entrepreneurial Marketing

Based on our empirical findings, we define international digital entrepreneurial marketing as the process of digital product cocreation and innovative digital opportunity creation that utilizes creative low-cost digital marketing and social media customer relationships across foreign markets. We discuss each of the dimensions of international digital entrepreneurial marketing together with the evidential data.

Innovative digital opportunity creation. We found that two of the case companies, MediSapiens and Carmona, had created entrepreneurial opportunities based on digital innovations in international markets. MediSapiens developed new AI-based services for the use, analysis, and interpretation of biomedical data (MediSapiens 2018). The founder and CEO of MediSapiens explained, "We try to understand what kind of data they're [potential international customers] handling because MediSapiens has seen a lot of biomedical data applications. We could help them [international customers] with data solutions." Carmona developed IT systems and platforms to handle data from different health case registries, enabling doctors around the globe to use the data for patient treatment decisions. The CEO of Carmona said, "Our business idea is to create value for patients by making data from registries easily available to them and medical doctors in our digital decision support systems. The system delivers opportunities to create better treatments." In this light, innovative digital opportunity creation describes creating digital entrepreneurship opportunities in foreign markets using digital in situ technologies directly embedded in firms' product or service offerings.

Digital product cocreation. Although digital services had not previously been available in their product offerings, two of the case companies, Myontec and Crown CRO, cocreated digital services with international partners.² Myontec shifted from internationally selling intelligent clothing that measures muscle behavior to including a monthly subscription fee for a digital service to monitor muscle movement. The company cocreated the technology with a university and went on to develop the digital service in collaboration with insurance companies and with firms interested in developing their employees' ergonomic practices. The founder and former CEO explained that the subscription service was "a much more viable model than trying to sell expensive products directly to [international] customers." Although Crown CRO's main business area was clinical operations, on entering foreign markets the company started a data management service. It used industry-compliant systems, biostatistics, and programming, in cooperation with clinical teams, scientific experts, and an electronic data capture system provider (Crown CRO 2021). The founder and CEO commented, "It's beneficial to have this kind of full-service project so we can offer [international] customers everything." Hence, digital product cocreation describes cocreating product offerings with partners in international markets using digital in situ technologies.

Creative low-cost digital marketing. We found that our case companies looked to creatively integrate different digital channels for international marketing at low cost. These channels included social media (LinkedIn, Facebook, Instagram, YouTube), online blogs, vlogs, videos, web pages (with online chat), web shops, and customer relationship management systems. However, what made international digital marketing entrepreneurial was its creative integration to reach the target audience abroad. The marketing director of MediSapiens explained, "We mostly focus on educating our [international] customers to build our credibility and always target the audience at whichever event we participate in." Similarly, the CEO of Myontec emphasized the importance of "creating content that interests [international] customers and distributing it on social media." Another feature of international digital entrepreneurial marketing is that these marketing efforts are run at minimum cost. For instance, Crown CRO created its own zero-cost "movie trailer" that it presented as a promotional video at international events. Myontec obtained free online publicity by launching international media campaigns. The data structure in Appendix A

presents more evidence. Thus, creative low-cost digital marketing refers to creatively integrating different international digital marketing tools at minimum cost through digital communication technologies.

Social media customer relationships. We found that our case companies, especially those selling to consumers, actively leveraged social media influencers to build closer relationships with customers. They either found ambassadors who were key opinion leaders (Myontec) or famous social media influencers (MonthlyCup) to share the use of the firm's products on social media, or they paid sponsored ambassadors to use their products at international events and communicate about the products on social media (Camp Scandinavia) (see Appendix A for data evidence). Further, the findings show that the case companies often tailored social media messages for specifically targeted interaction with international customer preferences and needs. For instance, MonthlyCup targeted its Facebook messages to women 25-35 years of age. Myontec tailored its social media messages to country-specific customers based on the local popularity of particular sports. Myontec's CEO explained, "If you post a message targeting Spain, you can focus more on cycling and football because we know we have a lot of customers in those sports. But if we're targeting Benelux, we'd be focusing more on cycling. In the Nordics, we could mention something related to winter sports depending on the occasion ... so we do tailor the message." Hence, social media customer relationships involve building close and interactive relationships with international customers by utilizing social media, an essential digital communication technology.

Entrepreneurs' Social Ties and Their Influence on International Digital Entrepreneurial Marketing

Our findings show that entrepreneurs' bonding and bridging ties play important roles in the business itself. The case entrepreneurs used strong, trustworthy personal contacts as bonding ties. For instance, the CEO of Camp Scandinavia said, "I've worked in this industry for a very long time, attending all the important trade fairs. When we entered new markets [in the Baltic countries], I knew who to approach." The entrepreneurs also enhanced network relationships through frequent contact. The founder and CEO of Crown CRO explained, "The frequent contacts and sharing of information are really important. ... I know the people well, so we meet regularly ... there are no big secrets because everyone knows everyone." As for bridging ties, the founder and CEO of MonthlyCup said, "It's very useful to get help from someone you know who can recommend other people." Entrepreneurs also expanded their network via international events and social media. For example, the founder and CEO of MediSapiens suggested that "the best way was to go to international conferences where you meet people and then find interesting contacts." The CEO of Camp Scandinavia told us that the company had used YouTube movies to reach end users abroad who were not formerly aware of their

² Digital product cocreation includes both products and services.

products. Appendix B presents more evidential data. Next, we present our findings on how entrepreneurs' social ties can influence international digital entrepreneurial marketing.

We found that entrepreneurs used strong ties and networkdeepening behavior to cocreate digital products (and services) with partners in international markets. The case companies' entrepreneurs used strong, trustworthy personal contacts in their own closed network, especially those who had long experience of working in the health sector. Strong ties within a closed network enhanced trust building and information sharing for cocreation. The founder and CEO of Crown CRO explained, "The strong personal contacts work better because when we have experience of working together, they know they can trust me. Then it's easier because I don't have to convince them we can do what we do, and do it well." Thus, the company was able to better cocreate digital services with the entrepreneur's frequent contacts and through information sharing. Similarly, the Carmona entrepreneur's close contacts and strong, trusting bonds with international customers were crucial to cocreating an online platform dealing with highquality registries for rheumatic diseases and multiple sclerosis. The CEO of Carmona said, "Our offerings have been developed in close cooperation with those responsible for the national registries, patient organizations and medical doctors, who are dealing with prescriptions for patients' treatment."

The preceding empirical findings suggest that entrepreneurs' bonding ties deepened their network relationships through closed networks. That facilitated their firm's employment of one particular international digital entrepreneurial marketing dimension: digital product cocreation in foreign markets. Burt (2019) has recognized that entrepreneurs' reputation established and maintained in a closed network, known as a "cocoon," is essential to engaging in and surviving the exploratory trial and error of getting a product ready for market. In our study, the entrepreneurs' bonding ties, accrued through cocoon and network-deepening behaviors, strengthened the case companies' cocreation of digital products with their partners in international markets. Such cocreation integrates digital in situ technologies that are directly embedded into their product offerings. Therefore, we propose:

P_{1a}: Entrepreneurs' bonding ties facilitate digital product cocreation in international markets.

Our findings show that entrepreneurs utilize new ties through bridging structural holes and engaging in network-broadening behavior to conduct creative low-cost digital marketing abroad. We found that entrepreneurs' competence in building bridges between disconnected actors in their network helped their firm conduct more creative digital marketing at low cost. This was because they were more active in event participation to interact with potential partners abroad, and in utilizing social media to communicate their products and benefit from word-of-mouth marketing at no or low cost. Moreover, when entrepreneurs bridge network ties and act as brokers, their firm can better leverage social media influencers to build international customer intimacy. Based on our case analyses, one outstanding way to efficiently leverage influencers is to bridge structural holes for new contacts who can act as key opinion leaders. The CEO of Myontec explained, "I use the ambassadors' or the customers' contacts. ... Some of those [ambassadors] come through networks. ... We use ambassadors and we sell direct, that's the model. It brings us better contacts when there's no reseller or distributor in between."

The preceding findings suggest that entrepreneurs' bridging ties may broaden their network relationships through brokerage. This facilitated their firm's deployment of two specific international digital entrepreneurial marketing dimensions: creative low-cost digital marketing, and social media customer relationships in international markets. These two dimensions both involved digital communication technologies, such as social media, international customer experience, and relationship management software. Burt (2005, 2019) has suggested that entrepreneurs as network brokers are more likely to be successful in communicating their proposal or vision to a diverse audience. Entrepreneurs as brokers are also more likely to respond quickly and effectively to problems, adapting practices or innovating new solutions based on their experience in other situations. However, there is little prior knowledge on how bridging ties relate to the development of the dimensions of international digital entrepreneurial marketing. Our novel findings suggest that the entrepreneur's firm can be more creative in integrating different digital marketing alternatives at low cost, and using social media to build close relationships with international customers by communicating the value of the firm's products or services. Therefore, we propose:

 P_{1b} : Entrepreneurs' bridging ties facilitate creative low-cost digital marketing and social media customer relationships in international markets.

We found that entrepreneurs utilized both bonding ties (building existing ties and deepening networks) and bridging ties (bridging new ties and broadening networks) iteratively to create opportunities based on digital innovations. For example, in the case of MediSapiens, the entrepreneur first created new bridging ties with international contacts from the pharmaceutical industry while working on a doctoral dissertation at a university medical school. Then, during a research collaboration project at the university, the entrepreneur established strong ties through frequent contact with a German pharmaceutical company. The entrepreneurial opportunity, biomedical data solutions based on data analytics, stemmed from the dissertation, and the enterprise's first international customer was the German pharmaceutical company. The entrepreneur said, "I knew one person in Germany from when I did my dissertation. It was very important for the first deal that we were able to converse well with each other and trusted each other." Carmona's entrepreneur had been building strong relationships with the company's customers from its inception. Indeed, the company's health information registration digital systems were developed with customers, primarily medical doctors in Swedish hospitals.

Thereafter, this deep collaboration with doctors enabled Carmona's entrepreneur to create bridging ties with a new customer group of pharmaceutical companies. The CEO of Carmona said, "We've built very strong bonds with our Swedish customers, who've been an important bridge to, for example, our new English customers." This further enhanced the development of the company's platform as a data solution to follow up on drugs and treatments (Carmona 2020).

The preceding findings suggest that entrepreneurs use both bonding and bridging ties to deepen their network relationships through a cocoon in closed networks, and broaden their network relationships through brokerage. Their iterative use of cocoon and brokerage strategies facilitated their firm's employment of one particular international digital entrepreneurial marketing dimension, namely innovative digital opportunity creation. This opportunity creation integrated digital in situ technologies directly into a firm's products and services. Previous literature has recognized that the cocoon and brokerage approaches are advantageous to entrepreneurs (Burt 2019; Burt and Burzynska 2017). Thus, we expect that the cocoon provides entrepreneurs with a safe haven for exploratory trial and error concerning digital innovation, whereas brokerage assists entrepreneurs in detecting and focusing on productive international opportunities. Moreover, prior research has found that social ties facilitate entrepreneurs' access to knowledgeable peers with whom to engage in sensemaking, thus enhancing idea objectification toward opportunity creation (Tocher, Oswald, and Hall 2015). This leads us to conclude that the iterative cocoon and brokerage ties jointly advance opportunity creation in international markets through digital innovation. Thus, we posit:

P_{1c}: Entrepreneurs' bonding and bridging ties facilitate innovative digital opportunity creation in international markets.

The Influence of International Digital Entrepreneurial Marketing on SME Internationalization

We found that one particular dimension of international digital entrepreneurial marketing, digital product cocreation, had influenced the internationalization intensity of the case companies. Cocreated data management services at Crown CRO increased the intensity of internationalization, especially in the United States. The CEO explained, "It improves our chances of winning new projects when we can offer the customer all the services related to the research, and they don't have to ask for an additional offer." Similarly, in cooperation with pension insurance companies and private firms striving to improve ergonomics for their employees, Myontec cocreated a new digital service to monitor muscle movement, for which it charged a monthly subscription fee. This subscription-based digital service model increased the company's internationalization intensity in Europe. The CEO explained how the company advanced into the Netherlands, for example: "The regulations there mean the employer is liable for occupational health care

costs, so they had an interest in this type of solution offering to improve ergonomics at the workplace." The empirical evidence thus suggests that when digital technology is directly embedded in products and services, digital product cocreation increases the intensity of SME internationalization. Therefore, we propose:

P_{2a}: Digital product cocreation increases the intensity of SME internationalization.

Our findings indicate that international digital entrepreneurial marketing assisted the case companies in expanding into foreign markets that are geographically distant from their home market. Although the companies were established in either Finland or Sweden, most had achieved this internationalization by applying creative low-cost digital marketing. For instance, since entering Estonia, Latvia, and Lithuania in 2006, Crown CRO's low-cost marketing helped the company continue its expansion, to the Nordic countries between 2009 and 2013 and to the United States in 2014 (see Table 2). The company created its own blogs with quality content and presented a self-made "movie trailer" as a promotional video at international conferences. MonthlyCup used the local language in different markets to reach potential international customers via social media at low cost around the globe, such as in Europe, the United States, and Australia. The founder and CEO said, "One of our staff has lived in Norway and can communicate in Norwegian on social media. Our product is also sold by some big grocery chains and we're cooperating with an influencer who has their own blog." Seeking international expansion, Carmona started actively establishing a social media presence and changed its website from Swedish to English. The CEO said, "We are using LinkedIn to reach professionals who are active in the pharmaceutical industry."

Social media customer relationships enhanced the geographic scope of internationalization among our case companies. For instance, Camp Scandinavia leveraged social media influencers and built customer relationships by sponsoring 20 product ambassadors in the United States to use their offering at sports events, and demonstrated on YouTube how the product can be used by different customers. Asked about the outcome, the marketing manager commented, "It raised awareness of our products and helped us reach new customers in the fragmented U.S. market." At Myontec, social media influencers were highly effective in facilitating further international expansion. The CEO said, "We're finding opinion leaders ... they're starting to share their [user experience in] Italy, Spain ... the Nordics, Poland, and Germany. We've noticed that their impact [on international sales] is even greater than through distributors." As an example, the CEO explained, "So that's how we got into China. The connection was a youth team coach who served at four different Olympics. ... We have a couple of really good ambassadors ... we get a lot of requests from Italy because of these people, they're using the product and talking about it [on social media] all the time."

The preceding findings show that two dimensions of international digital entrepreneurial marketing, namely creative low-cost digital marketing and social media customer relationships in international markets, enlarge SMEs' geographic scope of internationalization. Moreover, the influence of digital communication technologies is especially important to B2C firms, as the technology makes it possible to engage directly with many customers around the world (Monaghan, Tippmann, and Coviello 2020). Traditionally, B2B firms have fewer international customer relationships, making this change brought about by digital communication technologies less important to them. Utilizing the two international digital entrepreneurial marketing dimensions discussed previously, firms can overcome the barrier of geographic distance and increase the geographic scope of their internationalization. Accordingly, we posit:

 P_{2b} : Creative low-cost digital marketing and social media customer relationships increase the geographic scope of SME internationalization, especially for B2C firms.

Our findings show that the MediSapiens entrepreneur created entrepreneurial opportunities based on data analytics, and developed integrated management, analysis, and visualization of a big pharmaceutical company's next-generation sequencing and clinical data in the early drug development phase (MediSapiens 2019). This allowed the company to enter its first foreign market, Germany, just one year after foundation and then reach 100% foreign sales as a share of total sales (i.e., internationalization intensity). This big pharmaceutical company became a long-standing customer. Moreover, MediSapiens expanded into foreign markets geographically distant from its home market, for example to the United States in 2013 and to various European countries beyond Germany from 2015 (see Table 2). One key factor enabling MediSapiens's high internationalization intensity and large geographic scope through digital innovation was the potential, created by a digital technology-based product, for cooperation and integration of the offering with many players in the international ecosystem. The CEO of MediSapiens explained, "We were thinking about how to increase the trustfulness of our firm in the eyes of new and current [international] customers ... we started to engage in a number of pilots and research projects by offering our technology and expertise ... this led to potential international customers such as a German startup."

The second factor was that products based on digital innovation have the advantages of flexibility and scalability during internationalization: technological underpinnings are flexible and economies of scale are achievable (see also Monaghan, Tippmann, and Coviello 2020). Carmona had not reached the high intensity and large geographic scope of internationalization achieved by MediSapiens, but saw great opportunities for international growth with its platform offering "reliability as well as flexibility for any data gathering, data management and data processing needs" (LinkedIn post). The CEO of Carmona also stated, "We're also targeting medical and pharmaceutical [global] companies, we see an opportunity to grow internationally." As pharmaceutical companies are often global, Carmona expected its digital platform and new customer segment to enhance its international presence. MediSapiens's scale-related benefits helped enable its foreign expansion, despite the digital product needing a degree of adaptation for B2B customers. The CEO of MediSapiens commented, "The technology base is the same for all customers, but we have to adapt it to [international] customer requirements. We're trying to grow technology licensing to further increase scalability."

Our findings show that innovative digital opportunity creation from digital in situ technologies can enhance the intensity and geographic scope of internationalization, as firms can collaborate and integrate their product offerings with international players. The offerings also benefit from flexibility and scalability. This is supported by previous research findings that born-digital firms (digital from their inception) are flexible in how they configure and coordinate their international activity systems (Autio et al. 2018). Also, their offerings are readily scalable (Hennart 2014). Altogether, this allows for rapid international growth (Monaghan, Tippmann, and Coviello 2020). However, this type of opportunity creation does not always increase internationalization. In our context, the intensity and geographic scope of internationalization is dependent on industrial institutions in the health technology market, as in the Carmona case. Carmona's main product was built on national register data, which were treated differently in different international markets and therefore required considerable adaptation during internationalization. Thus, increasing the intensity and geographic scope of SME internationalization through innovative digital opportunity creation appears to require the similarity of industrial institutions across countries. Thus, we propose:

 P_{2c} : Innovative digital opportunity creation increases the intensity and geographic scope of SME internationalization, provided the industrial institutions are similar between the markets.

The Influence of SME Internationalization on Entrepreneurs' Social Ties

Our findings suggest that a high degree of internationalization in the international marketplace increases entrepreneurs' bonding ties. For instance, Myontec learned from increasing its intensity of internationalization that delivering interesting content through digital marketing, to create a presence in international markets, encouraged contact from interested customers. The company was thereby able to intensify customer relations, as opposed to simply telephoning a large number of potential customers. It bonded the company with totally new customers and developed the entrepreneur's bonding ties. The CEO of Myontec explained, "When we look at our sales strategy, the essential thing is that we've seen an increase in inbound sales. This means we'll serve those who are interested in us, and not involve ourselves so much with cold calling and visiting exhibitions. We'll create content that is of interest in social media directed at

international markets. Of course, you need to have the platform ready, such as CRM, web pages, internet chat, and web forms, so we know that when someone comes to our pages, we can directly start a discussion with them and have an idea of how we can best serve them."

Camp Scandinavia customized products for end users. A higher degree of internationalization delivered stronger and more trusting relationships for the entrepreneur with middlemen and customers in different markets. This enhanced bonding ties from foreign markets. The CEO of Camp Scandinavia said, "We manufacture an orthopedic product. We could've made the product readier for the end customers, but our middlemen would not have been so interested in promoting it. It's important that all parties in the [supply] chain can make money from our product. We can then build trust and the middlemen feed back detailed information from end customers, which is important to our product development." Since bonding ties can be strengthened through relationship intensity among different actors within a group (Prashantham 2011), internationalization intensity in a particular foreign market enables entrepreneurs to establish and sustain the trustworthiness of actors in that market. Based on our results, we posit:

 P_{3a} : A higher intensity of SME internationalization in a foreign market facilitates better development of entrepreneurs' bonding ties in that market.

We found that a large geographic scope of internationalization meant that the entrepreneur gathered experiential knowledge on customers in diverse international markets, which in turn helped expand the actor network and develop the entrepreneur's bridging ties. The CEO of Crown CRO commented on how the accumulated experience helped create bridging ties with new contacts: "Well, I attended a lot of face-to-face meetings, and everything was more or less based on the contacts and on people knowing me. And because people knew me it was quite easy for them to trust that I will deliver what I promise, that's what I've always done in my life. Because I'm experienced, I can convince a lot of customers to give their studies to us."

The larger geographic scope also increased entrepreneurs' bridging ties, since firms could reach potential customers and distributers in many countries, and relationships were built with individuals in the firms. The CEO at MonthlyCup said, "Through our websites and social media channels the rumor of our product is spread, and we get contacted by individuals who want to buy our product and sometimes also people who want to be representatives for our product in different countries." Satisfied customers gave positive feedback on product use through social media, which created new relationships. The Camp Scandinavia marketing manager commented, "Users who are satisfied with our products also mention it in their private social media channels, which in turn can give us even more relationships with potential distributers and customers." Mature social ties may provide new client introductions as new social ties are initiated (Puthusserry, Child, and Khan 2020). Thus, we expect that larger geographic scope increases the number of relationships with different international firms and actors, which enhances entrepreneurs' bridging ties. Hence, we posit:

 P_{3b} : A greater geographic scope of SME internationalization facilitates the better development of entrepreneurs' bridging ties across different foreign markets.

Cross-Country Comparison of Findings

We examined the country-level differences between the Finnish and Swedish case firms. Although not every single case firm applied all of the international digital entrepreneurial marketing dimensions, the dimensions were all evident in both the Finnish and Swedish case firms overall. Our model and propositions are supported by the data evidence from both countries, as can be seen from the preceding analysis. This was expected, since we purposefully selected similar countries to minimize the country-specific effects, which allowed us to focus on the variation of the theoretical constructs of interest. This result is in line with previous quantitative research that has investigated the internationalization processes and marketing strategies of firms originating in the two countries and found that the data can be analyzed as one entity (e.g., Gabrielsson, Gabrielsson, and Seppälä 2012).

Conclusions

Theoretical Contribution

This study offers a framework on international digital entrepreneurial marketing for SME internationalization (see Figure 1). It explains how SME entrepreneurs utilize their social ties to conduct international digital entrepreneurial marketing for internationalization. The study's findings and the resulting framework have a number of implications for the international marketing domain. We contribute to the entrepreneurial and digital perspectives on international marketing, developing the concept of international digital entrepreneurial marketing. That can be described as the process of product cocreation and innovative digital opportunity creation in international markets that utilizes creative low-cost digital marketing and social media customer relationships across foreign markets. We uncover four underlying dimensions of international digital entrepreneurial marketing: (1) innovative digital opportunity creation, (2) digital product cocreation, (3) creative low-cost digital marketing, and (4) social media customer relationships in international markets. The first dimension suggests directly embedding digital in situ technologies in firms' product offerings to create digital entrepreneurship (see also Nambisan 2017) in international marketing. The second suggests utilizing digital in situ technologies for value cocreation in international markets. The third dimension indicates the entrepreneurial spirit of international marketing, and "doing more with less" with digital communication technologies. The fourth entails building international customer relationships using digital communication technologies such as social media.

Unfolding the concept of international digital entrepreneurial marketing in this study advances the international marketing domain in two ways. First, the research contributes at the interface of entrepreneurship and international marketing (Freeman and Cavusgil 2007; Knight 2000; Yang and Gabrielsson 2017, 2018) by highlighting the importance of engaging innovativeness, proactiveness, and creativity in international marketing. Second, we explain how the digital aspect of international marketing enables firms to rapidly internationalize. We adopt a more nuanced and fine-grained approach than the prior research in showing how digitalization influences SME internationalization (Monaghan, Tippmann, and Coviello 2020; Shaheer, Li, and Priem 2020). Our study demonstrates how different dimensions of international digital entrepreneurial marketing influence the intensity and geographic scope of internationalizing SMEs. Digital opportunity creation increases both the intensity and geographic scope of internationalization, provided the industrial institutions are similar between the markets. Digital product cocreation increases the intensity of internationalization. Creative low-cost digital marketing and social media customer relationships increase the geographic scope of SME internationalization, especially for B2C firms. Thus, this study advances our knowledge on the entrepreneurial approach to international marketing in a digitalized world. The findings also evidence an international digital entrepreneurial marketing perspective that is absent from current research on social ties and internationalization (e.g., Gil-Barragan, Belso-Martínez, and Mas-Verdú 2020; Söderqvist and Chetty 2013; Vasilchenko and Morrish 2011).

Our study advances the understanding of microfoundations in international marketing research (Coviello, Kano, and Liesch 2017), revealing the relationship between entrepreneurs' microlevel actions (i.e., their bonding and bridging social ties) and firm-level activities and outcomes (i.e., firms' international digital entrepreneurial marketing and internationalization). As presented in our framework and propositions, entrepreneurs' microlevel bonding and bridging social ties facilitate the development of firm-level specific international digital entrepreneurial marketing activities. These enhance and increase the intensity and geographic scope of firm-level internationalization outcomes. Contrary to extant studies in the field (Hennart 2014; Hennart, Majocchi, and Hagen 2021), we do not see this behavior as accidental. Entrepreneurs intentionally and proactively employ international digital entrepreneurial marketing to gain international customers and build cooperation in distant markets. Entrepreneurs' bonding ties help develop firms' international digital entrepreneurial marketing, despite the liabilities of newness and foreignness during internationalization (Kleinhempel, Beugelsdijk, and Klasing 2022). The strong internationalization outcomes can be understood, for instance, through firm-level international digital entrepreneurial marketing's capacity to reach a large number of international customers cost-effectively, build trusting relations with foreign parties, and accrue scale-related benefits leading to growth in international markets. Moreover, firm-level internationalization outcomes influence the development of entrepreneurs' bonding and bridging ties at the micro level. As depicted in Figure 1, such influence creates an iterative circle that further reinforces the execution of firm-level international digital entrepreneurial marketing. That leads to further intensity and geographic scope of internationalization outcomes.

Practical Implications

This study has significant practical implications. First, we describe four important dimensions of international digital entrepreneurial marketing: digital product creation, innovative digital opportunity creation, creative low-cost digital marketing, and social media customer relationships. Managers of SMEs can choose from these when expanding to international markets. We also provide a number of practical examples of each dimension that may prove useful for firm managers. For instance, firm managers interested in innovative digital product creation for international markets could consider opportunities for creation of systems and solutions based on the latest information technology or data analytic tools. Managers interested in cocreating digital products may find it beneficial to cocreate these products with international suppliers and customers. Particularly, SMEs that provide physical products can partner with digital service providers to cocreate new digital solutions for international customers and introduce a monthly subscription fee to increase their international sales revenues. Creative low-cost digital marketing means that companies can create and deliver interesting content on their own social media accounts, utilize press to publish information on new products in their digital media channels, or find other ways to conduct digital marketing at low cost. Finally, managers interested in developing social media customer relationships may use ambassadors to promote their products or services and tailor social media messages to potential international customers' preferences and needs. In life science marketing, medical experts have long been used as key opinion leaders, and through social media their messages can cost-efficiently reach all around the world. Social media also makes it easy to deploy other stakeholders as key opinion leaders; for example, customers and users can testify to life science products' influence on health and quality of life.

Second, we found that the international digital entrepreneurial dimensions advance internationalization development and are therefore crucial to managers. They can consider whether to target enlarging the geographic scope of internationalization or raising internationalization intensity in current markets. For instance, digital product creation and innovative digital opportunity creation are particularly effective in increasing the intensity of internationalization in existing country markets. Creative low-cost digital marketing and social media customer relationships are well suited to increasing the geographical footprint of the SME.

Finally, managers should be aware that entrepreneurs' social ties can foster the development of a particular international digital entrepreneurial marketing dimension. For instance, entrepreneurs' bonding ties are especially useful for innovative digital opportunity creation and for digital product cocreation in international markets. Bridging ties are valuable in the development of creative low-cost digital marketing and in social media customer relationships. We recommend that managers strengthen their existing ties and deepen relationships with partners to cocreate digital products or services. Moreover, we suggest that international marketing managers reach out for new contacts in a variety of foreign markets and broaden their network relationships to creatively integrate different digital marketing tools at a low cost. This especially constitutes an opportunity for small B2C firms to use new digital technologies to create direct relationships with many international customers at a reasonable cost, for example, through the social media or vlogs of key opinion leaders in the industry. However, differences in the institutional settings of various foreign markets may influence the availability of particular digital marketing tools. International marketing managers should note that all new social ties that emerge during internationalization may prove valuable at a later date, when developing future international digital entrepreneurial marketing.

Limitations and Future Research Suggestions

Our study has limitations that provide future research avenues. The focus on the health industry means that caution should be exercised in generalizing beyond this context without first ensuring that the conditions are similar. Although the qualitative nature of the study limits generalization to a wider population, it does allow for analytic generalization back to a broader theory (Eisenhardt 1989; Piekkari, Welch, and Paavilainen 2009). This is supported by the theoretical framework and propositions developed in the study. We believe that the thick case descriptions will allow for naturalistic generalization. Readers can thereby recognize essential similarities to cases of interest

to themselves and utilize the results in their own context as applicable (Stake 2000).

The propositions developed in this study suggest particularly important links between the concepts examined, which should prove a promising area for further inquiry. Future studies could employ quantitative data to develop a scale for measuring international digital entrepreneurial marketing (see the scale development and validation process from Diamantopoulos [2005] and Böttger et al. [2017]). Subsequent studies could then transform our propositions into hypotheses and quantitatively test them with survey questionnaires. The survey could be based on the developed measurement scale of international digital entrepreneurial marketing, existing scales of bonding and bridging social ties (Cao, Simsek, and Jansen 2015), and internationalization intensity and geographic scope (Crick and Crick 2021). Further, as the boundary conditions of this study are the health industry and Nordic countries, it would be interesting to examine whether the use of international digital entrepreneurial marketing differs between industry and country contexts.

We have observed from the present study that entrepreneurs utilize more offline than online social ties. Thus, it would be interesting for future research to investigate the role of entrepreneurs' offline versus online social ties in firms' international digital entrepreneurial marketing. We were able to identify some differences between B2B and B2C SMEs, and we recommend further research to investigate differences and similarities between international digital entrepreneurial marketing and entrepreneurs' social ties in those settings. Further, it would be interesting for future research to study the relationship between international digital entrepreneurial marketing and firm financial performance.

Appendices

Associate Editor

Matthew Robson

Appendix A. Data Structure of International Digital Entrepreneurial Marketing.

First-Order Concepts with Data Excerpts	Second-Order Themes	Aggregate Dimensions
 Entrepreneurial opportunity in providing systems based on information technology "Our business idea is to create value for patients by making data from registries easily available to them and medical doctors in our digital decision support systems. The system delivers opportunities to create better treatments for the patients." (Carmona, CEO) "Our platform Compos proves once more that it delivers to the highest standard of quality, offering reliability as well as flexibility for any data gathering, data management and data processing needs." (Carmona, LinkedIn) 	Opportunity creation based on information technology	Innovative digital opportunity creation
 Entrepreneurial opportunity in providing solutions based on data analytics "We try to understand what kind of data they're [potential international customers] handling because MediSapiens has seen a lot of biomedical data applications. We could help them and give them ideas on data solutions." (MediSapiens, founder and CEO) "MediSapiens supports [big pharmaceutical company's] Future Clinical Trials program, which transforms clinical trials with #datascience. We provide our data model knowledge (such as #OMOP) and data quality and data management know-how to [the big pharmaceutical company] for this project." (MediSapiens, Twitter, May 25, 2021) 	Opportunity creation based on data analytics	

Appendix A. (continued)

First-Order Concepts with Data Excerpts	Second-Order Themes	Aggregate Dimensions
 Cocreating with customers a digital product to monitor muscle movement "Now it's shifting towards a complete package of product plus service, we take the subscription fee, every month They [international customers] pay for the technology platform, clothes, software, and the report to see where the load is in the upper body." (Myontec, CEO) "Can you evaluate Muscle Load while using Tools? Absolutely!! Check out this video: Evaluating Muscle Loading during welding work thanks to the great Team at Kemppi Oy and their Flexlite GX. Real down to earth and efficient Ergonomics at play!" (Myontec, Facebook, March 18, 2021) Cocreating data management services together with suppliers "Data services, something we started last August [in 2017]. We're utilizing different types of programs and developing ourselves to have a better base. It's beneficial to have this kind of full-service project so we can offer our international customers everything." (Crown CRO, founder and CEO) "Our close collaboration with our EDC provider allows us to leverage the power of an industry leading system that gives us the ability to innovate at the study design stage to create customized solutions that go beyond conventional ideas." (Crown CRO, website) 	Cocreating digital product	Digital product cocreation (includes services)
 Creating interesting content on social media and integrating different digital tools for target international customers "Creating content that interests the customer and distributing it on social media of course CRM, web pages, and chat on the web all have to be right when you're selling something internationally, especially if there's a consumer segment involved as in our case, you should have a web shop." (Myontec, CEO) "We use Facebook, LinkedIn and Twitter. We have our own YouTube channel as well We always promote all these activities [events] via our social media channels, email marketing, or website promotions we always target the audience at whichever event we participate in." (MediSapiens, founder and CEO) Collecting information online and creatively integrating different international digital marketing channels to reach potential customers "We use a data system that collects all information about all possible research-related issues from any country and company." (Crown CRO, founder and CEO) "We have comprehensive media intelligence in our key international markets. If menstruation's discussed in the media, we know it very quickly and target social media activities towards the discussion in different markets." 	Creative integrated digital marketing	Creative low-cost digital marketing
 (MonthlyCup, digital marketing/social media specialist) Being active on social media (for free) with quality content "LinkedIn, that's free of charge. I think we get quite good visibility from our postings. We're really trying to actively post there all the time about new things." (Crown CRO, founder and CEO) "We have blogs with concentrated quality content." (Crown CRO, head of data services) "We've tested other types of marketing communication, but the results weren't good. Social media's what our target group is using, and that's growing. It's also not as costly as TV commercials We were very active on social media during World Environment Day, showing how our product was good for the environment. We then had an extremely large number of people contacting us who wanted to be part of spreading our message, without any compensation." (MonthlyCup, founder and CEO) 	Digital low-cost marketing	

(continued)

Appendix A. (continued)

First-Order Concepts with Data Excerpts	Second-Order Themes	Aggregate Dimensions
 Finding ways to conduct (digital) marketing at a low cost "I got this idea to make a promotional video for the Bio convention and my brother did the '60s music for me we made what looked like movie trailers around our services. There was dramatic music, moving pictures, video, and the movie voiceover. Then we played it at international conferences and people really liked it, they gathered around to watch it." (Crown CRO, marketing director) 		
"We ran a couple of campaigns in the U.S., mainly for the media, showing this kind of technology exists and what you can do with it. We were extremely successful for example with the kickoff project in 2014, which generated more than a hundred media articles online and offline." (Myontec, CEO)		
 Using ambassadors and social media to build relationships with international customers "In the U.S. we have around 20 people acting as ambassadors. They're using our products at different events such as marathons and cycling competitions. They're not employed by us, but we pay their travel expenses and so on. They're communicating the use of ToeOFF® [product name] on social media but also arranging local events showing that it's possible to get help." (Camp Scandinavia, marketing manager) "The ambassadors use Twitter a lot, and then LinkedIn, because we have a scientific approach and need to show cases of international use. So we've been using LinkedIn to publish articles, cases of use, knowledge, experiences and so on." (Myontec, sales and marketing director) 	Leveraging social media influencers to build customer relationships	Social media customer relationships
 Sharing influencers' and experts' views on social media to build relationships with international customers "We're working with influencers. Some are contacting us and we're approaching others On Instagram we sponsor Lisette Alfredsson A YouTuber named Katrin Bernt published a review of our product. We didn't know about it but were getting a lot of new orders. Two days later we found the review on YouTube." (MonthlyCup, founder and CEO) 		
 "We use YouTube movies to show how our products can be customized for different diagnoses, where experts show how the products can be customized for personal use other YouTube movies show how using our products can enhance quality of life." (Camp Scandinavia, export manager) Tailoring social media messages based on potential international customers' preferences and needs "We've done something like this. If you post a message targeting Spain, you can focus more on cycling and football because we know we have a lot of 	Tailoring social media messages to build customer relationships	
customers in those sports. But if we're targeting Benelux, we'd be focusing more on cycling. In the Nordics, we could mention something related to winter sports depending on the occasion so we do tailor the message." (Myontec, CEO) "When we're working on Facebook we're targeting the segment and identifying 25- to 35-year-old women." (MonthlyCup, digital marketing/ social media specialist)		
 Sharing existing international customers' cases and interacting closely with them on social media "When current customers are involved in the sport, I'd say the main thing is social media. When they share their case studies, how they use something, we want to do the same, to follow them. We create webinars and our ambassadors have been doing the same. So that's where we want to interact Instagram, Twitter, Facebook, LinkedIn, using somewhat different profiles. Instagram and Twitter are very similar, even Facebook. LinkedIn is more like research, a more serious theme So we try to tailor our message and content for those channels." (Myontec, CEO) 		

Notes: Digital product cocreation also includes services.

Appendix B. Data Structure of Entrepreneurs' Social T	ies
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Construct	Themes	Concepts with Data Excerpts
Entrepreneurs' bonding ties	Leveraging strong ties	 Using strong, trustworthy personal contacts "The strong personal contacts work better because when we have experience of working together, they know they can trust me. Then it's easier because I don't have to convince them we can do what we do, and do it well I contacted the people I knew because I've been in this business so long I have quite a wide network." (Crown CRO, founder and CEO) "I can use my own personal contacts. There are the skiers and ski association that I've already been in touch with, the International Ski Federation." (Myontec, CEO) "I've worked in this industry for a very long time, attending all the important trade fairs. When we entered new markets, I knew who to approach." (Camp Scandinavia, CEO) "We got in the university side, we had this sort of research collaboration project with the pharmaceutical industry. And once we formed the company, the pharmaceutical inductive diverse diverse the provide the company.
	Deepening network relationships	 industry immediately wanted to continue it with us" (MediSapiens, founder and CEO) Enhancing network relationships through frequent contact "During years of collaboration that's just been a natural thing to happen. The frequent contacts and sharing of information are really important I know the people well, so we meet regularly, I mean there are no big secrets because everyone knows everyone." (Crown CRO, founder and CEO) "We have a lot of technology in-house, and know-how, and we've invested this into a few small startups who need this sort of technology, and become equity partners in them. Now one of those has exited, and also grown into a big customer. Another is on that same track." (MediSapiens, founder and CEO)
Entrepreneurs' bridging ties	Bridging structural holes for new ties	 Leveraging existing contacts for new contacts "In Lithuania actually no [contact from myself], but I contacted a friend who contacted somebody who contacted me, and we got together." (Crown CRO, founder and CEO) "At the beginning of 2000 [I was involved in] a joint project involving [a company called] Suunto and another called Clothing Plus Then Suunto had a friend in the U.S. in professional sports circles. He became interested in our product and started taking it there and got us the Pittsburgh Penguins as a customer." (Myontec, founder and former CEO) "My social competence makes it easy to talk to people and has been very useful for me as an entrepreneur. As an entrepreneur in a startup firm there are hundreds of things you're not an expert in, so you need to find others who can assist you. It's very useful
	Broadening network relationships	 to get help from someone you know who can recommend other people." (MonthlyCup, founder and CEO) Expanding network via events and social media "I'm quite good at networking. I was invited to an event, Prince Daniel's Entrepreneurial Day in Stockholm, where I met many people who might prove useful to my firm in the future." (MonthlyCup, founder and CEO) "The best way was to go to international conferences where you meet people and then find interesting contacts." (MediSapiens, founder and CEO) "On LinkedIn, when you 'like' something, post a blog, or whatever, it shows some people that we've 'liked' it, and then it's shown again to many people. So, a huge number of people can be contacted that way." (Crown CRO, founder and CEO) "We've made YouTube movies that show how our products can be used for people with different diagnoses. So we've reached end users who were not aware of our products." (Camp Scandinavia, CEO)

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