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Managing Digitalization: Challenges and Opportunities for Business

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Digitalization is a fundamental agent of transition for most kinds of businesses. However, digitalization is not a unitary issue. Instead, it takes place and provides opportunities and threats on different dimensions that can be approached in different ways.

One dimension of digitalization are operations in companies and beyond. Digital processes, efficiency or productivity of employees are aspects thereof. An example may be the connection of interfaces and computer systems to become more efficient. Another dimension is digital customer experience. That a company can improve the understanding of its customers' needs it is key to analyse the data of the customer journey and to adjust digital tools of e-commerce accordingly.

Characteristics like trust to the tool or simplicity are other aspects of customer experience. A further dimension are social aspects like leadership competences in a digital environment. As an exemplifying aspect, the error-culture can be mentioned. In an error-culture errors are accepted because they are seen as a means for improvement and thus for success. Another aspect, to mention just one more, is agile management what basically means the flexibility to approach necessary changes anticipating and fast.

To manage digitalization means, moreover to understand the own company as a part of an ecosystem or network in which different stakeholders are related to each other. Through digital platforms (like e.g. LinkedIn), individual networks of employees become more important. Such platforms support the blurring of company boarders as well as decentralization: it is becoming more unclear what belongs to a company and what does not. Under these circumstances individual, (sub)divisional or project-based contacts and networks are gaining relevance. The network character is elementary and has

to be considered when managing digitalization and seeking opportunities. These is in a nutshell the thematic field of this special issue.

The selected papers for this issue are a collection of contributions submitted to the MakeLearn & TIIM international conference held from 17 to 19 May 2017 in Lublin, Poland. The subject of the special issue can be seen as a specified part of the conference's topic, which was about the management of challenges in a networked society.

In the first paper, Martti Saarela, Daniel Örtqvist, Anna-Mari Simunaniemi, and Matti Muhos state that digitalization can revolutionise healthcare services and thus provide new business opportunities for innovative start-ups. They are interested in what are the critical incidents related to the early development stages of eHealth service start-ups. These early stages are said by authors to be decisive for the survival of a business. Based on semi-structured interviews and the Critical Incident Technique (CIT) 14 eHealth service start-ups in Sweden and Finland are examined.

The second paper is written by Bistra Vassileva. It is concerned with consumer behavioural models and aims to understand reactions of consumers to social network marketing. Reactions to social network marketing are explored in the paper based on the three criteria Level of brand engagement, word-of-mouth referral behaviour and purchase intensions. Data were gathered from 700 Bulgarian respondents. A factor and cluster analysis are applied. Overall, results show that consumers are willing to receive marketing information via social networks.

The purpose of the paper from Tomasz Szczepanik, Beata Skowron-Grabowska, Joanna Nowakowska-Grunt, and Anna Brzozowska is to identify the impact of information systems of logistic centres on services of courier companies when courier companies can use these information systems. Thereto in the third paper, a class of information systems of logistic centres used by courier companies are presented and considered. The results show which IT systems of logistic centres are of use for the courier companies. Moreover, results provide insights how the use of these IT systems in courier companies affects the information flow in their services.

The fourth paper is from Narasimha Rao Vajjhala and Salu George Thandekkattu and examines why the adoption of e-commerce has been slow and limited in Small and medium-sized Enterprises (SMEs), especially in transition economies. Based on a qualitative-inductive approach the authors analyse 30 interviews, which they conducted with managers from SMEs in Albania. They identified four key barrier factors: resource constraints, external environmental factors, or-

ganizational issues and resistance to accept new technologies. The findings can help to approach the adoption of e-commerce in transition countries.

In the fifth paper, Tuulia Nikunen, Martti Saarela, Eeva-Liisa Oikarinen, Matti Muhos, and Lari Isohella declare digital marketing to be a vitally important opportunity for micro-enterprises. Its goal therefore is to contribute to a more in-depth understanding of micro-enterprises' current strategies concerning new digital marketing tools that foster stronger costumer relationships. Based on interviews with two marketing service providers the paper describes how micro-enterprise clients use digital marketing to foster customer relationships. Results show that the practical understanding of digital marketing tools is of a high importance.

At last, I want to thank all the reviewers for doing such a good job. Each of them was either from the editorial board of Management or related to the University of Applied Sciences in Business Administration (HWZ). Moreover, my thank goes to Alen Ježovnik and Valerij Dermol for the good collaboration and their great support.

Critical Incidents of Growth in Nordic eHealth Service Start-Ups

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Digitalisation can revolutionise healthcare delivery and provide new business opportunities for innovative start-ups. Start-up businesses in the healthcare service sector are a promising source of new employment and innovations. The start-up stage is the most critical period for the survival of a business, as decisions made during the early stages have a definitive influence on success. This study seeks to clarify the early development of eHealth service start-ups. To summarise the research problem, the authors ask the following question: What are the critical incidents related to the early development of eHealth service start-ups? The units of analysis in this study are 14 Nordic eHealth service start-ups located in Sweden and Finland. The Critical Incident Technique (CIT) and semi-structured interviews were applied for data collection. The results are of interest to the public sector, which plays an essential role in healthcare as a service producer, but also as a creator of the business conditions of and opportunities for small businesses.

Key words: eHealth, start-up, critical incidents, Finland, Sweden
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Introduction

Due to obesity, aging populations and the increasing prevalence of chronic diseases, European healthcare systems are facing an increased social and healthcare demand (Pinto and Baracsi 2012; Van Limburg et al. 2011). This growing demand has led to a dramatic

increase in health spending in many nations, as this sector constitutes a significant percentage of the gross domestic product (GDP) (Pinto and Baracsi 2012). In 2013, health spending accounted for approximately 9% of the GDP in OECD countries (OECD 2015). In addition, healthcare systems have faced considerable challenges in the implementation and dissemination of new initiatives, despite the general perception that healthcare organisations are among the most knowledge-rich and research-based organisations (Barnett et al. 2011; Berwick 2003).

Increased healthcare service demands and economic challenges facing an already overworked healthcare system have led to the urgent need for effective, scalable, sustainable and innovative healthcare services (Rocha et al. 2013; Barnett et al. 2011; Pinto and Baracsi 2012). Technology development and digitalisation are seen as key responses to the increased requirements of cost effectiveness and quality improvements in healthcare systems and services (European Commission 2012; Agarwal et al. 2010); digitalisation can even revolutionise healthcare delivery (Parente 2000). In the USA, the digital health scene is already becoming highly dynamic, with numerous incubators and investors beginning to specialise in healthcare. The question is how high-growth companies in Europe can scale up quickly and globally to have the impact needed to tackle challenges in the healthcare industry (Pinto and Baracsi 2012). From the business perspective, digitalisation means opportunities for getting involved in areas as diverse as personalised medicine and advanced analytics, as well as mobile technologies and applications (European Commission 2012).

Although the market potential of eHealth services is strong, businesses are not currently realising the full benefits of digital services (European Commission 2015). There is an urgent need for innovations in healthcare practice and delivery in large healthcare markets (Chowdhury 2012). The concept of eHealth has been increasingly gaining the attention of researchers from different disciplines, including the medical, public health, technological and innovation management fields (Chen, Wen, and Yan 2014). According to the European Commission (2012), eHealth provides patients with more health-related information, facilitates increased involvement in health, improves access to health advice and treatment and allows people to monitor their health and well-being online through such devices as smartphones.

Due to innovations and competitive pressure produced by start-ups, increasing evidence suggests they are major factors in eco-

nomic development (Samuelsson and Davidsson 2009). Innovation is identified as a promising strategy for new start-ups. Because they can be more flexible and agile than established small and medium-sized enterprises, they are pioneer innovations and able to operate under conditions of limited competition for a prolonged period (Rosenbusch, Brinckmann, and Bausch 2011). Moreover, start-ups can be potential sources of new jobs and significant promoters of new service innovations in the healthcare service sector. Nanda and Rhodes-Kropf (2013) state that radical innovations require an orientation towards experimentation and a willingness to fail. According to Lumpkin and Dess (1996), autonomy, innovativeness, risk taking, proactiveness and competitive aggressiveness are factors that may all be present when a company enters the market. Nooteboom (1994) states that small firms have better behavioural qualities than larger firms to translate technology into a variety of new technology-product-market combinations.

Small companies or new entrants may be willing to accept greater risks than may be large firms. It is well known that death rates in early age are much higher than those in later are (Freeman, Carroll, and Hannan 1983). This hypothesis is called 'liability of newness,' as coined by Stinchcombe (1965), and it assumes higher risks of failure for young organisations compared to old ones. According to Pinto and Baracsi (2012), only the best ideas survive the so-called 'valley of death,' the financial period during which new start-ups begin activities to turn their ideas into marketable products or services.

The start-up stage is the most critical period for a company's survival, as incidents, coincidences and decisions made during the early stages of growth have a definitive influence on a company's productivity and success. Understanding the activities of new businesses is clearly an interesting field of academic study (Haltiwanger, Jarmin, and Miranda 2013). The early development of eHealth service start-ups has not been broadly studied. Therefore, this study highlights the critical incidents related to the development of eHealth service start-ups from the entrepreneurs' viewpoints in the Nordic context. To meet the aim of this study, the authors ask the following research question: What are the critical incidents related to the early development of eHealth service start-ups?

The results of this study may be used effectively in new eHealth service businesses to predict managerial challenges during the early stages of growth. In addition, intermediary organisations, such as public advisory services, can utilise the results to improve their services.

TABLE 1 Main Characteristics of Case Companies

(1)	(2)	(3)	(4)	(5)
A	Sweden	2014	5	Management and systems consultant
B	Sweden	2015	4	Cloud service
C	Sweden	2011	4	Accessories for mobiles
D	Sweden	2014	7	Online consultation system
E	Sweden	2015	2	Online healthcare
F	Sweden	2011	6	Communication system services
G	Finland	2013	1.5	Mobile application-related wellbeing
H	Finland	2014	3.5	Health data processing
I	Finland	2014	3.5	On-line wellbeing
J	Finland	2008	4	Product-related MedTech service
K	Finland	2010	5	Product-related MedTech online service
L	Finland	2012	4	Software-based wellbeing services
M	Finland	2014	2	Self-care user interface
N	Finland	2012	6	Product-related wellbeing service

NOTES Column headings are as follows: (1) case, (2) country, (3) established, (4) number of people, (5) service description.

Method

According to Neergaard and Ulhoi (2007), entrepreneurship research is context-specific, and it should be focused on entrepreneurs' behaviours and the real problems with which they must cope. Qualitative methods are used when the aim is to make entrepreneurs' stories visible and to understand enterprises in their natural context. Because each enterprise's circumstances are unique, the type of incident, context, strategy and outcomes cannot be generalised directly to other businesses.

In this multiple-case study, 14 start-ups in Sweden and Finland are analysed. According to Yin (1988), a multiple-case study design has a distinct advantage compared to a single-case design, as evidence is considered more compelling and the study design is therefore regarded as more robust. The empirical data for this study are based on semi-structured thematic interviews among start-up entrepreneurs or managers. The cases were analysed using the Critical Incident Technique (CIT) (Flanagan 1954). Interviewees were asked to identify and describe the critical incidents, as well as the consequences of those critical incidents for the business. A critical incident is an extreme behaviour, either outstandingly effective or ineffective with respect to achieving the general aims of the activity (Fisher and Oulton 1999).

All the interviews were audio-recorded and fully transcribed. The analysis of the data was based on a careful and continuous re-reading of the interviews. The data analysis was crosschecked by at least two researchers to obtain reliability.

Sweden and Finland are selected as the context environments of this present study because of interesting aspects related to their eHealth service business. The Swedish healthcare system is considered a model for other countries (OECD 2013), and Sweden advanced considerably in enabling the latest digital technologies to enhance productivity and innovation (World Economic Forum 2014). Finland is known for its high technology and it is one of the leading countries in digital performance globally. The ranking of the Digital Economy and Society Index (DESI) evaluation shows Sweden and Finland are leading countries at the global stage. The top-three performing EU countries are Sweden, Denmark and Finland (European Commission 2016). In addition, both countries are considered among the most innovative countries in the world, with Sweden being ranked second and Finland fifth (Dutta, Lanvin, and Wunsch-Vincent 2016). Therefore, we are justified in taking a closer look at eHealth service start-ups in the Nordic – more precisely Swedish and Finnish context.

Results

Based on the interviews, many positive and negative incidents emerged from the data. This paper represents the recalled incidents related to development of eHealth companies. In this results section, the identified eight themes of positive and negative critical incidents were classified from the data, namely:

- Human resources
- Marketing
- Financial resources
- External relations
- Regulations
- Decision making
- Development and delivery of services
- External support

HUMAN RESOURCES

The positive incidents that emerged were often related to staff and successful recruitment. Great developers, the first successful recruitments and multi-professional expertise in core teams are fac-

tors highlighted in terms of the developing of start-ups. A committed, experienced and reliable staff is considered extremely vital – the team must work well together.

> Those who work for us, they don't have any specific working hours but they work like hell and they are not stressed because this is rewarding all the time.

Previous experience with entrepreneurship helps during the start-up stage. In addition, a staff with good references is important, particularly because previous references are expected to have in cooperation with the public sector.

> References are always needed. Because some of us were well-known already before, so they know who we are, what this means and what we stand for.

Combinations of various competencies and a clear division of responsibilities between co-founders or between staff members were cited as positive incidents in many cases. A key positive critical incident seems to be that recruitment has been successful. In addition, in successful cases, much effort has been focused on increasing staff wellbeing. It could build a positive image as an employer, and this may affect the commitment of the staff.

On the other hand, negative incidents related to staff were revealed from the data. The personal relationships between owners and possible conflicts could be turning points of start-ups. In one case of a start-up, because of a conflict between founders, new arrangements regarding ownership were made. In effect, growth of this business was delayed. Recruitment problems are related to the inability to find competent and motivated employees for a start-up.

> I would definitely say that in the start-up phase, we recruited people and started to collaborate with people that were not right for the company.

In terms of growth management, negative incidents could emerge because during the start-up phase, everyone is completing many tasks and it becomes challenging to measure the results of the work. The recruitment of competent employees may be difficult as a start-up if job seekers perceive the company as risky. The most qualified employees have higher expectations regarding salary, as well.

> It is difficult for small companies to attract competent workers. It is difficult to pay them enough. We also have very bad option possibilities in Sweden.

MARKETING

Managers' experiences related to marketing appear clearly from the data. Customers' needs and willingness to accept new eHealth technology are crucial parts of success. From a manager's perspective, a positive incident often occurs when a start-up gets its first paying customer in the early stage.

> It was extremely good for us to have a real customer, so we didn't just develop something off the top of our head or the way we imagined it.

According to one start-up manager, an early customer can provide a proof a concept, which makes it much easier to attract other investors. One of the most important issues is to get in contact with care units and to convince them of the new technology.

> Our most significant thing was that we got our pilot product for use right there in a public health care organisation.

Customer feedback is considered an important factor for start-ups. Based on the feedback, services can been developed further.

> We went courageously to seek feedback from customers and apply them on pilot customers.

In addition to positive incidents, negative incidents related to marketing were revealed from the interviews. Local healthcare authorities, such as county councils, play a strong role in deciding which medical products, technologies and services are provided to end consumers. A small start-up has significantly fewer resources with which to compete against large international corporations, although getting attention and being accepted is crucial for their development. The resistance to try new technologies is regarded as common in public healthcare. Even if new eHealth technologies are provided free for test use, their implementation is difficult. The interviewees have the perception that healthcare actors are afraid of new technologies and implementing new ways to offer services. Care units and personnel are highly focused on their daily tasks, and implementing a new technology is not common practice.

> It is very symptomatic for the healthcare sector that you are very busy with your own thing and external things [. . .] The view of what a customer wants is forgotten.

In addition, incentives to develop and make services more effective are missing. Besides, the presence of constant surveillance and quality checking has been lacking in traditional healthcare. Success in public procurements and framework agreements with contracting

entities are essential to the survival of a newly established eHealth start-up.

> The biggest challenges are these framework agreements and procurements. As a new company, we don't have our own framework agreements and thus, we are dependent on other companies. We must work as consultants to them.

Previous references of successful contracts are a prerequisite for working with the public sector. Moreover, a lack of long-term procurement agreements leads to insecurity in hiring new employees. According to some eHealth start-up managers, doctors play a dominating role in decision-making within care units.

The newness of eHealth technology puts companies in a situation where they must take responsibility for educating both users and financiers. For instance, online shopping sets certain requirements for customers' technological capabilities. Persistence to convince customers and to make a start-up succeed is needed from the entrepreneur.

> We must educate both the consumers and society. Both. That's what we have had trouble with.

Success in start-up competitions is a way to gain funding and visibility, as well as to create networks. According to one case company, networking can be more successful when somebody has heard of or read about you in the newspaper.

> I think it's very important to meet people and to have these different experiences and education.

In some cases, visibility through start-up competitions has opened doors. Success in a start-up, as well as invention competitions and media visibility, help to give a business a head start. In addition, media visibility of the start-up culture has been a positive contributor to businesses.

> We had a lot of media attention in the beginning. We had a rocket start and since then we've had stable growth.
>
> To meet with the units, talk with them [. . .] to ensure they know us, see us and hear us.

However, negative incidents related to awareness of eHealth business emerged from the interviews. A major challenge is that society is still unfamiliar with the sector. As a small start-up, it is difficult to compete against large companies in obtaining visibility. The public sector is unaware of the eHealth solutions small enterprises could provide.

Financial Resources

Financial resources are one of the main themes of eHealth start-ups. Typically, positive incidents related to funding are turning points of their growth.

> I think it's very difficult to get the first investor, and that had quite a big influence, I think, because it's now much easier to get the second one.

Getting the first investor in the early stages helps to develop the technology further into forms that are more sophisticated. The psychological importance of private investors was also highlighted. Start-up entrepreneurs perceive it as encouraging having an investor who believes in their business. The role of the public sector as a funding actor (e.g. Vinnova, Tekes) was recognised as an important promoter of eHealth start-up businesses.

> Public funding has played an important role, because commercial customers have come slower than planned, so public funding has saved us in the way.

On the other hand, managers' experiences related to funding also emerged in a negative light. The lack of resources during the start-up stage is mentioned by nearly all cases. Therefore, external funding is required when challenges related to cash flow and revenues arise. However, external funding is not necessarily available. Banks and other potential financiers are unfamiliar with eHealth technology and they are unsure of how to tackle a new type of business.

> In a country like Sweden, it is basically impossible to hire someone to be paid for or to get bank loan. Therefore, we have put our own time on this. Evenings and nights and weekends.

> And the banks will not grant funding; nowadays the situation is so tight. So, it is very difficult to get anything from the banks, because these kinds of start-up companies do not have real guarantees.

Getting financing for new technology development is not necessarily easy. If other funding sources are not available, start-up owners may have to use their own savings.

> We built the first platform to show up. We did it with our own wallet. We kept it very tight.

In addition, business development during the early stage is difficult because of the discontinuity and fragmentation of funding. The focus of start-up managers' operations has been on seeking and applying funding more than on business development.

EXTERNAL RELATIONS

Start-ups consider cooperation and networking important elements for growth. In the healthcare sector, partnerships with bigger companies may open doors to close collaborations with practical care units. Moreover, cooperation with public sector actors is recognised as playing a key role in business in many cases. Start-up managers perceived cooperation with other companies in the same industry as a positive driver. Synergy is perceived positive, for example, in the business hubs of the health sector. Based on the interviews, positive incidents emerged when the interactions between different healthcare actors and the company were successful.

> Dialogue with operators in the field is essential.
> We have indeed achieved trust among such greater partners, big players [. . .] that they rely on a start-up company.

In addition, positive incidents arise when cooperation with research institutions is achieved. Obtaining research-based information about the effectiveness and benefits of a service or product is a prerequisite for action in the field of health services. The meaning of research-based credibility is central to the whole business.

REGULATIONS

The legal matters surrounding eHealth cause challenges. Because the sector is new, practices of the authorities lag behind. Many negative incidents related to regulations were revealed from the data. Start-ups consider legislation and quality standards strict for healthcare businesses. Furthermore, legislation regarding eHealth is to a large extent missing. On the other hand, the healthcare sector is strictly controlled by legislation, and technical requirements for innovations must be properly met. Ehealth technology differs from traditional technology, because it is alterable and includes new features that cannot be measured using old standards.

> What we really had needed all the time is help with the legal matters related to eHealth, because this is new. You must find a right partner to work with and it is very expensive.

In addition, bureaucracy causes troubles for eHealth start-ups. Official processes take a long time. New eHealth solutions may be falsely categorised among other alternative products and technologies, some of which are even regarded as illegal or whose legal status is at least questionable. Information and guidelines concerning applicable certifications are insufficient. Furthermore, certification

requirements have been prepared for existing static products and services.

> We have lost our efficiency to develop things quickly, partly because of these wait times and partly because of the lack of legislation for these kinds of products.

DECISION MAKING

In many cases, managers perceived companies' internal practices having influenced positively start-up growth. Data revealed that positive incidents occur when decision-making and ownership are separated at a very early stage. Plans to grow and reach new markets have been an integral part of quickly growing start-ups.

> We have concrete plans to get into new countries. This product will be completed and further developed.

A small co-founder team, wherein each team member has focused on different task areas based on their strengths and each member has clear shared responsibilities for his or her own sector, are seen as positive incidents during the early stages of a business. Moreover, the successful delegation of tasks, a clear mode of operation and shared ownership arrangements are perceived positively.

DEVELOPMENT AND DELIVERY OF SERVICES

Some interviewees had a positive experience with developing a minimum viable product for reasonably low costs.

> It is quite simple to get started, to make the first minimum viable product.

Developing proper contracts with the subscriber is important. A new start-up is eager to get started, and sometimes agreement matters remain in the background until something unexpected and unwanted occurs. Based on the interviews, the general slowness of the development of a product-related service was identified as a negative incident. Operating in new industry takes much time. Moreover, production costs are considered high.

> In Finland, when making an industrial product [related to service], the manufacturing cost is indeed quite staggering.

Because eHealth start-up services are typically linked to a technology product, the development stage takes time.

TABLE 2 Categories of Positive and Negative Critical Incidents

Category	Positive incidents	Negative incidents	Horizontal theme: Public sector
Human resources	Committed staff with experience and good references. The team works well.	Conflict between founders. Wrong recruitment decisions. Jobseekers perceive a start-up as a risky employer. Salary expectations exceed start-up's budget. Changes in team. Because everyone is completing many tasks, it is challenging to measure the results of the work.	Previous references expected in cooperation (framework agreements/public procurements).
Marketing	The first paying customers. Customers' needs and willingness to accept a new eHealth technology. Satisfied customers give positive feedback. Pilot users during product development. Visibility through media and competitions helps businesses get a head start. Persistence to convince customers and to make a start-up succeed.	Users and purchasers of eHealth technology need to be educated first. Resistance to try new technologies in public healthcare. Dominating role of doctors. Incentives to develop and make services more effective are missing. As a small start-up, it is difficult to compete against large companies in gaining visibility.	Public care units are important clients and test users. Success in public procurements and obtaining framework agreements. Public sector is unaware of the eHealth solution small enterprises could provide.
Financial resources	Financing in the early stages helps to develop the technology further. Having one investor makes getting another one easier. Business angels provide both financing and good advice. Both public and private funding are needed.	Lack of resources. Banks and other potential financiers unfamiliar with eHealth technology. Personal savings needed. Funding rounds take a long time. Fundraising takes resources from actual product development and marketing.	Public funding crucial in the early stages. Lack of public funding for commercialisation.

External relations	Partnership with bigger companies. Innovation cooperation with other start-ups. Cooperation with healthcare organisations. Visibility and contacts through start-up competitions.	Inadequate agreement practices lead to conflicts between partners.	Public sector care units important test environments. Research partnerships with public organisations that increase credibility. Public sector makes decisions on procurements: contacts and discussions important.
Regulations	Not mentioned.	Legislation regarding eHealth is to a large extent missing. Legislation and quality standards are strict for healthcare business. Bureaucracy and authority processes are slow. New eHealth solutions may be falsely categorised.	Legislation and authority guidelines. Technical requirements (patents, etc). Certification requirements have been prepared for existing static products and services.
Decision making	Decision-making and ownership separated. Plans to grow and reach new markets. Task and responsibility delegation. Focus on core products and processes.	Proper agreement practices. Lack of business skills.	Not applicable.
Development and delivery of services	Developing skills. Positive experience of developing a minimum viable product	Because eHealth start-up services are typically linked to a technology product, development takes time.	Not applicable.
External support	Experienced advisors with networks. External board supports decision-making. Access to experts and feedback through start-up competitions. Advisory board.	Focused on product development, not commercialisation.	The significance of public support, such as TEKES and Vinnova, is recognised.

EXTERNAL SUPPORT

Managers' perceived positive incidents were often associated with external support. Cases utilised expert services to focus activities and build strategy. To develop strategy planning, the start-ups utilised, for example, an advisory board or incubators. To foster strategy development, a variety of experts and feedback through start-up competitions were utilised. Experienced advisors with networks in the industry are important for eHealth start-ups.

> We have two or three advisors who have long experience in the med-tech industry and also medical industry.

> I think this incubator is quite good too, because they have a large network and connections.

In some cases, negative incidents occur due to a lack of public support related to the commercialisation of services. Particularly in Finland, public funding is targeted more at product development than at commercialisation.

Discussion

With this study, we identified the themes of positive and negative critical incidents in the context of Nordic eHealth service start-ups. Start-ups consider themselves ahead of their time, and the industry is still narrow. Because eHealth start-up services are typically linked to a technology product, developing product-related services takes time. Even if the start-up already has early customers, the income level is not sufficient to ensure profitability. The start-up stage is financed mainly by investment funding, personal savings and public support.

Several recalled critical incidents are related to the public sector. Table 2 (pp. 126-127) provides a summary of the categorised critical incidents. The public sector plays an essential role in the healthcare industry, both in positive and negative terms. However, the role of public actors is strongly connected to whether they are customers of the start-up. In Nordic countries, a major portion of the healthcare business is produced via public procurement. However, start-ups perceived themselves as having difficulties in setting up public contracts. In calls for tender, contracting entities require references and capacities that start-up businesses do not usually have yet. To highlight the importance of the public sector, it is presented as a horizontal theme across the categories related to critical incidents in table 2. The categories formed include human resources, marketing,

financial resources, external relations, regulations, decision-making, development and delivery of services and external support.

The main themes identified in this study seem to be in accordance with the main themes derived from the stages of growth theories about the start-up stage of a service-based firm (See Muhos et al. 2017). The similar themes include human resources, marketing, financial resources, decision-making, development, and delivery of services. However, in this context, one theme was identified: the regulations. In the context of eHealth business, the business environment is heavily regulated, and it is important for eHealth start-ups to cope with the challenges and opportunities of this environment.

The research focus of this study is limited to the context studied. The findings of the study cannot be directly generalised to other countries or business contexts and they depend on the time of data collection. Implementing this analysis in other business contexts would make an interesting study.

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Consumer Activities and Reactions to Social Network Marketing

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The purpose of this paper is to understand consumer behavioural models with respect to their reactions to social network marketing. Theoretical background is focused on online and social network usage, motivations and behaviour. The research goal is to explore consumer reactions to the exposure of social network marketing based on the following criteria: level of brand engagement, word-of-mouth (WOM) referral behaviour, and purchase intentions. Consumers are investigated based on their attitudes toward social network marketing and basic socio-demographic covariates using data from a sample size of 700 Bulgarian respondents (age group 21–54 years, Internet users, urban inhabitants). Factor and cluster analyses are applied. It is found that consumers are willing to receive information about brands and companies through social networks. They like to talk in social networks about these brands and companies and to share information as well (factor 2, brand engagement). Internet users are willing to share information received through social network advertising (factor 1, WOM referral behaviour) but they would not buy a certain brand as a result of brand communication activities in social networks (factor 3, purchase intention). Several practical implications regarding marketing activities through social networks are drawn.

Key words: social network marketing, social network behavioural models, brand engagement
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Introduction

During the last decades, the world is in a permanent state of change because of the rapid development of information technologies. Marketing practice is changing with the same pace while marketing academia is still lagging behind. Digital technologies are being integrated with marketing activities continuously or disruptively to reach Marketing 4.0, a new generation of marketing approaches, methods, tools, and practices (Jara, Parra, and Skarmeta 2012). This paper begins by outlining the challenges of social media (Web 2.0),

followed by a discussion about behaviour of Internet users in social networks. In this study, the author undertakes a quantitative research process and applies factor analysis on collected through face-to-face interviews data. Research objectives driving this paper are: (1) to develop a demographic profile of Bulgarian online users and to identify their social network behavioural models; (2) to identify the factors shaping consumer reactions to various brand-related marketing activities in social networks and to determine corresponding clusters of investigated Internet users. Based on the achieved results several practical implications regarding related marketing activities through social networks are drawn.

Challenges of Social Media Ecology

The emergence of Internet-based social media has made it possible for one person to communicate with hundreds or even thousands of other people about products and the companies that provide them (Mangold and Faulds 2009, 357). Social media is defined as a group of internet-based applications that build on the ideological and technological foundations of Web 2.0, allowing for the creation and exchange of user-generated content (Kaplan and Haenlein 2010). Various social media applications are developed to facilitate Internet users interaction, which include blogs, content communities, discussion boards and chat rooms, product and/or service review sites, virtual worlds, and social networking sites (Kaplan and Haenlein 2010, 101; Mangold and Faulds 2009, 358). In this paper, we focus on social networks such as Facebook, Twitter, Google+, Instagram, and Pinterest. Internet-based communication, especially through social media, has become a major factor affecting various aspects of consumer behaviour and customer purchase decision-making (Ioanas and Stoica 2014). Digitalisation transforms the purchase decision-making process, including the way customers search for information, consider and evaluate products and services, interact with the organisation, and make purchases. Traditional customer purchase decision making has been transformed as a process into so called 'digital consumer decision journey' (van Bommel, Edelman, and Ungerman 2014).

Social media phenomenon leads to formation of unique social media ecology, consisting of a diverse set of social media sites, which vary in terms of their scope and functionality (Kietzmann et al. 2011, 241). Social networking sites form a substantial part of contemporary social media ecology. Some of them, like Facebook, are close to what we can call interactive crowd communication because it tar-

gets all customers. Other social networking sites, like LinkedIn, are more focused professional networks. Twitter is a perfect example of real-time communication which continues to spread around the globe with more than 145 million users send on average 90 million 'tweets' per day, each consisting of 140 characters or less (Madway 2010).

Social media became an essential part of human life, which attracted the attention of marketers. Social media was adopted as important tool in today's hybrid inbound-outbound marketing communication mix. According to Kaplan and Haenlein (2010, 102) today's 'social media revolution' re-transforms the Internet back to its roots as a platform to facilitate information exchange between its users. Social media offer an unprecedented opportunity for marketers to search and analyse behavioural models of consumer communication and interaction in social networks to be able to develop proper marketing activities especially brand-oriented marketing communication campaigns.

Methodology

The research goal is to explore whether Internet users differ based on the following criteria: level of brand engagement, WOM referral behaviour, and purchase intentions because of consumers' exposure to social network marketing. Two specific research objectives are defined. The first objective is to develop a demographic profile of Bulgarian online users and to identify their social network behavioural models. The second research objective is to identify the factors shaping consumer reactions to various brand-related marketing activities in social networks and to determine corresponding clusters of investigated Internet users. Consumers are investigated based on their attitudes toward social network marketing and basic socio-demographic covariates. Factor and cluster analysis are applied to analyse collected data.

SAMPLING AND SURVEY METHOD

Target population is limited to the age group from 21 to 54 years, Internet users, and urban inhabitants. Quota sampling method is used to form the sample. The sample is representative by gender, age, and place of living (according to the Gemius research in 2015, see Vassileva 2017). The sample size is 700 respondents with level of confidence of 95.0% and confidence interval of ±3.7. The survey is administered through personal interview in respondents' homes in period

from 22nd August to 7th September 2016. Data are processed using SPSS 21.0.

The questionnaire consists of three sections. The first section explores the behaviour of Internet users in social networks and their attitudes toward social networks. The questions in second section are designed to collect data about the attitudes of respondents toward brands with online presence and their reactions on brand-related marketing activities of the companies in social networks. Third section covers respondents' demographics.

DEFINITION AND MEASUREMENT OF VARIABLES, RESEARCH MODEL

Four variables (gender, age, education, and monthly income of the household) are used as socio-demographic covariates in present research despite the controversial results about their influence on online customer behaviour (Campbell, Ferraro, and Sands 2014, 439–42). Additional question regarding possession of mobile devices is included in questionnaire. It is used as covariate as well since smartphones are treated both as an 'extension' to the social media and as a tool to use social networks (Rheingold 2002).

In order to determine market positions of social networks in Bulgaria two indicators are used: social networks where respondents support an account and the first social network where respondents signed in. The experience of respondents with social networks is measured by the indicator 'duration of social network usage.' Social network usage intensity is determined by 'average daily usage (in minutes)' and number of contacts. Frequency of social network usage by type of activities is determined as well. Social network loyalty is measured by 'the most preferred social network' and 'the most frequently used social network' indicators. The influence of inbound-outbound brand-related marketing communications is determined by measuring the 'carry-over effect' of communication message from ATL to BTL channels.

The research model presented in figure 1 is used to determine the clusters of investigated Internet users regarding their reactions to various brand-related marketing activities in social networks.

Indicator variables (represented with dashed line on figure 1) are measured on a scale comprising seven items (3 for informational motivation, 2 for convenience motivation and 2 for entertainment motivation). Behaviour variables represent customer reactions to brand-related marketing communication activities in social networks. They are measured on 22-item scale. The first 7 items (from item 2.1 to

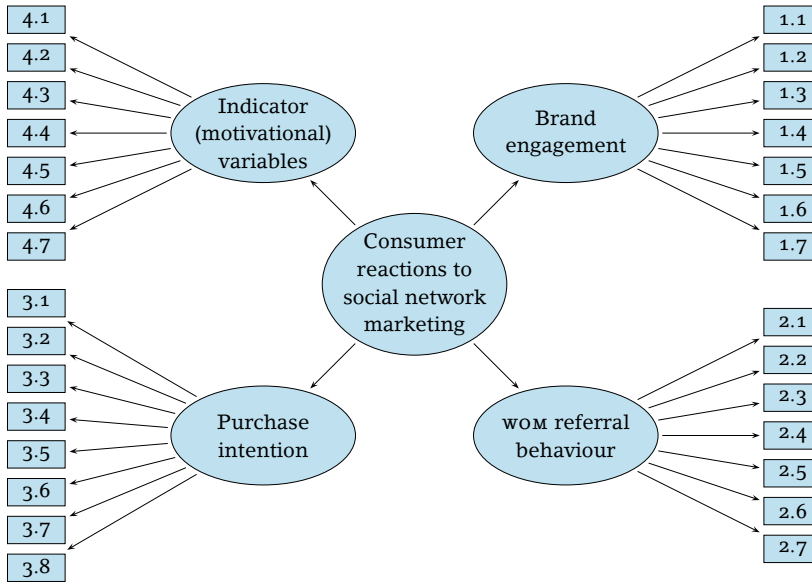

FIGURE 1 Research Model for Analysis and Evaluation of Consumer Reactions to Social Network Marketing

item 2.7 on figure 1) denote brand engagement, the next 7 items (from item 1.1 to item 1.7 on figure 1) indicate WOM behaviour, and the last 8 items (from item 3.1 to item 3.8 on figure 1) express purchase intention. Seven-point Likert scale is used for all variables.

Results and Discussion

DEMOGRAPHIC PROFILE OF BULGARIAN ONLINE USERS AND THEIR SOCIAL NETWORK BEHAVIOURAL MODELS

Approximately half of respondents (55.3%) do not have children below 16 years in their households. More than 80% of respondents assess their wealth being as satisfactory (50.6%), 32.4% – as good, 3% – as bad, and 14% – as very bad. The average age of respondents is 37 years (mean = 38 years, median = 37 years).

Less than 1% of respondents do not possess a mobile device. The share of respondents who own smartphones is 78.9%, followed by tablets – 50.6%, mobile phones different from smartphones – 39.1%, e-book readers – 15.7%, and smart watches – 4.1%. Facebook is the ultimate leader among social networks since 99.3% of respondents have an account there and approximately the same percentage (88.6%) of respondents registered in Facebook as a first social

TABLE 1 Demographic Profile of Respondents

Variable	Indicators	Percentage
Age	21–34 years	42.0
	35–44 years	32.6
	45–54 years	25.4
Education	Primary	0.4
	Secondary	24.0
	Upper secondary	7.0
	Bachelor/Master	68.6
Size of the household	1 person	7.7
	2 persons	23.3
	3 persons	34.3
	4 persons	26.3
	5 persons and more	8.4
Gender	Male	49.3
	Female	50.7
Monthly household income (BGN)	Up to 380	1.6
	381–750	9.4
	751–1000	16.6
	1001–1500	20.4
	1501–2000	18.9
	2001–2500	10.3
	>2500	8.2
	No answer	14.7

TABLE 2 Market Positions of Social Networks and Usage Level

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Facebook	99.3	88.6	0.1	124.07	3	1080	86.7
Google+	69.4	7.1	28.3	42.05	1	1440	8.1
Twitter	23.0	1.9	32.3	29.02	1	400	1.1
Instagram	24.1	–	16.6	22.00	1	120	0.9
LinkedIn	27.7	1.1	22.2	15,17	1	180	1.7
Pinterest	14.7	–	22.3	25.32	1	200	0.6

NOTES Column headings are as follows: (1) social network, (2) social network with account (%), (3) first social network signed in (%), (4) share of respondents with unused profile (%), (5) average daily use (minutes), (6) minimum (minutes), (7) maximum (minutes), (8) most preferred social network (%).

network. Google+ holds the second place, followed by LinkedIn (table 2).

Respondents use social networks mainly for communication purposes (to connect with the family and friends, 68.7% answered 'al-

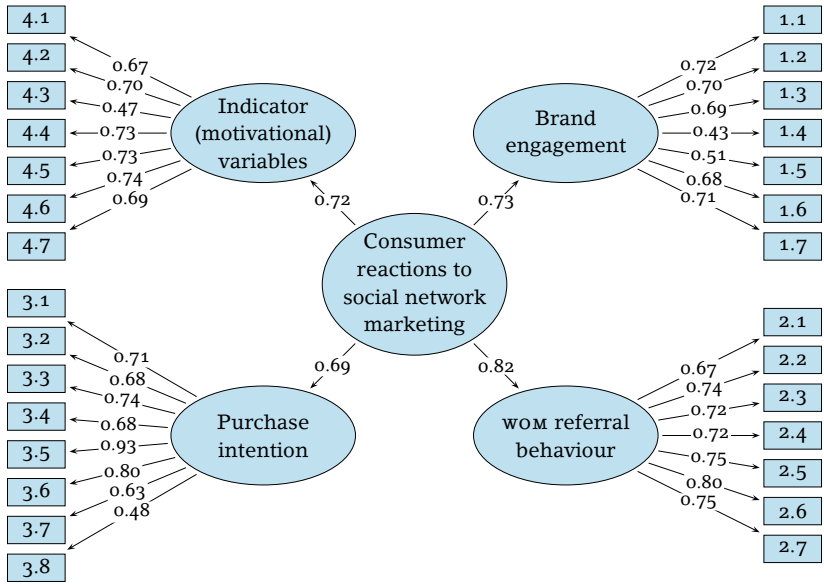

FIGURE 2 Research Model: Results from Factor Analysis

ways'), to search for information and news (66.3% answered 'always'), and for entertainment (61%). Social networks are seldom used for reviewing and sharing opinions. Approximately 40% of respondents maintain up to 200 contacts in their most frequently used social network. The relationship between the number of contacts and the social network with the highest usage intensity is statistically confirmed through χ^2-test (p = 0.0000, weak correlation).

REACTIONS TO SOCIAL NETWORK MARKETING

Factor and cluster analysis are applied to analyse Internet users regarding their reactions to various brand-related marketing activities in social networks. The value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.941. Bartlett's Test of Sphericity provides the following results: Approx. χ^2 = 14005.098, Sig. = 0.000. These results show an excellent sampling adequacy, which allows the conclusion that the items are consistent and form a measurement scale. The interpretation is done on Cronbach's alpha scale (the internal consistency is excellent for values equal or above 0.9).

The results from the factor analysis are presented on figure 2. Factor extraction is performed using Principal Components Analysis. As table 5 shows, the substantial part of the change is caused by the first factor.

TABLE 3 Results of Factor Analysis: Reliability Analysis (Behavioural Variables)

Items	(1)	(2)	(3)	(4)
I like to talk about brands/organizations that are advertised on social networks.	0.931			0.901
I am always interested in learning more about brands/organizations with online presence.	0.936			
I would be interested in receiving communications from a brand/organization via social networks.	0.957			
I am accepting of communications from brands/organizations providing they seek my permission.	0.963			
I am pleased to have others know which brands/organizations I affiliate with via social networks.	0.953			
I like to browse through social networks related to brands/organizations.	0.961			
Compared to other people, I closely follow news about brands/organizations.	0.963			
I would share a social networking advertisement with others if …				0.935
… an advertisement offers a discount or coupon for a particular product.		0.961		
… think that the advertised product would be useful to someone I know.		0.951		
… the advertised product is quite easy to be used.		0.969		
… the product solves a specific problem or issue that is experienced by someone I know.		0.944		
… an advertisement focuses on the positive benefits of a product or service.		0.950		
… an advertisement focuses on how to better deal with a specific problem or issue.		0.950		
… an advertisement mentions how other people are getting good results from a product.		0.970		

Continued on the next page

Cluster analysis is applied using data from matrix rotation with six interactions. Six clusters are determined. The size of the smallest cluster is 43 persons (6.1%), and the size of the biggest cluster is 189 persons (27%).

Based on the analysis the following conclusions regarding forecasting importance of the factors are done. Factor 4 possesses the highest forecasting importance, while factor 3 the lowest. The items, which correspond to factor 4 after matrix rotation, are the following:

- I use social networking to learn about new and unknown things;
- I use social networking to learn about useful things;
- Social networks are easy for use;

TABLE 3 *Continued from the previous page*

Items	(1)	(2)	(3)	(4)
I am likely to buy products that I see advertised on social networks.			0.961	0.901
I am likely to buy products that I see other consumers talking about on social networks.			0.960	
I am likely to buy products that I see on social networks if the price is appealing.			0.957	
I am likely to buy products that I see on social networks if the delivery period is satisfactory.			0.967	
I am likely to buy products that I see on social networks if it is a brand I know and trust.			0.959	
I am likely to buy products that I see on social networks if it is a new product.			0.961	
I am likely to buy products that I see on social networks if it is an exciting product.			0.938	
I am likely to buy products that I see on social networks if it is an upgrade to a product I already have.			0.965	

NOTES Column headings are as follows: (1) brand engagement, (2) WOM, (3) purchase intention, (4) reliability (Cronbach alpha). The values of Cronbach's Alpha correspond to the set of items included in the respective complex scale. Items (statements) are adapted from Campbell, Ferraro, and Sands (2014).

TABLE 4 Results of factor Analysis: Reliability Analysis (Indicator Variables)

Items	(1)	(2)	(3)	(4)
I use social networking to learn about new and unknown things.	0.854			0.759
I use social networking to learn about useful things.	0.848			
Social networks are a reliable source for information about products/brands.	0.969			
Social networks are easy for use.		0.804		0.928
Social networks are convenient for use.		0.826		
I use social networking to pass time.			0.739	0.653
I use social networking because I just like to browse the internet.			0.870	

NOTES Column headings are as follows: (1) information motivation, (2) convenience motivation, (3) entertainment motivation, (4) reliability (Cronbach alpha). The values of Cronbach's Alpha correspond to the set of items included in the respective complex scale. Items (statements) are adapted from Campbell, Ferraro, and Sands (2014).

- Social networks are convenient for use.

The item 'I am likely to buy products that I see on social networks if it is a brand I know and trust' does not correspond to any of the factors. The separation of factor 5 with the following items: 'I use

TABLE 5 Factor Analysis, PCA

Factor	Initial values			Factor loadings (rotation matrix)		
	(1)	(2)	(3)	(1)	(2)	(3)
1	11.976	41.295	41.295	5.222	18.007	18.007
2	2.403	8.288	49.582	4.779	16.480	34.488
3	2.182	7.523	57.105	4.527	15.610	50.097
4	1.583	5.458	62.563	3.321	11.451	61.549
5	1.323	4.561	67.125	1.617	5.576	67.125

NOTES Column headings are as follows: (1) total value, (2) percentage, (3) cumulative percentage.

social networking to pass time' and 'I use social networking because I just like to browse the internet' represents an interesting result within the indicator variables.

The survey clearly demonstrates that consumers are willing to receive information about brands and companies through social networks. They like to talk in social networks about these brands and companies and to share information as well (factor 2, brand engagement). Internet users are willing to share information received through social network advertising (factor 1, WOM referral behaviour) but they would not buy a certain brand as a result of brand communication activities in social networks (factor 3, purchase intention). The motivation to use social networks is related mainly to information about new and useful things, ease and convenience of use.

Regarding targeting opportunities of marketing communications through social networks the following conclusions could be useful. It was confirmed (ANOVA, $p = .003$) that there is a significant statistical relationship between the age group and the average daily usage (in minutes) of Facebook. Internet users from the age group 21–34 years spent on average 30 minutes more in Facebook than the age group 35–44 years and 45 minutes more than age group 45–54 years. This hypothesis was not confirmed for Google+, Twitter and LinkedIn but it was confirmed for Instagram ($p = .001$) and Pinterest ($p = .013$). For Instagram and Pinterest the direction of the relationship is contrary to Facebook. The usage levels raises with the increase of the age (5 minutes daily on average). The intensity of using social networks (average daily usage) increases with the duration of their use. It was confirmed for Facebook (ANOVA, $p = .004$) and Instagram (ANOVA, $p = .010$). In four years' time span the average usage of Facebook raised with 86 minutes on a daily basis. The relationship between the gender and the daily usage of social networks was confirmed

for Twitter (p = .002), LinkedIn (p = .002) and Pinterest (p = .001). Women spend more time daily in Twitter and LinkedIn, while men spend more time in Pinterest. There is no difference between men and women for Facebook daily usage.

Conclusions and Implications for Future Research

The changing role of information and communication technologies in marketing poses a substantial challenge to both marketing academics and practitioners. Understanding customer behaviour is a complex task for marketing researchers especially in a digital environment. The research goal of presented study is to explore whether Internet users differ based on the following criteria: level of brand engagement, WOM referral behaviour, and purchase intentions as a result of consumers' exposure to social network marketing. Consumers are investigated based on their attitudes toward social network marketing and basic socio-demographic covariates. Facebook is the ultimate leader among social networks with 99.3% of respondents having an account there and approximately the same percentage (88.6%) of respondents signed in Facebook as their first social network. Google+ holds the second place, followed by LinkedIn. It becomes clear that brand-marketing activities of Bulgarian companies should focus on Facebook as a main communication channel.

The relationship between the number of contacts and the social network with the highest usage intensity (measured as average daily use in minutes) is statistically confirmed. This result confirms the importance of Facebook because it is the social network with the highest usage intensity in Bulgaria. The confirmed statistical hypothesis suggests that Facebook possess huge potential for WOM referral behaviour.

The survey clearly demonstrates that consumers are willing to receive information about brands and companies through social networks. They like to talk in social networks about these brands and companies and to share information as well. Internet users are willing to share information received through social network advertising but they would not buy a certain brand because of brand communication activities in social networks. The motivation to use social networks is related mainly to information about new and useful things, ease and convenience of use.

Further detailed analysis of combined influence of hybrid inbound-outbound brand-related marketing communication on Internet users could be used to achieve a synergy effect through micro

brand interventions. The author continues to work on segmentation of social media users by applying Latent class analysis (LCA) to determine the difference in their reactions to social network marketing activities.

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The Application of Computer Systems Used in Logistics Centres by Courier Companies

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In the era of pervasive computerization, the need for rapid and uninterrupted transmission and receiving information handling systems is an essential component of business operations. The use of information technology to use the full capabilities of systems supporting the implementation of the basic processes in the logistics centres ensures proper implementation of tasks. Hence, courier companies cooperating with logistic centres have the opportunity to use the information systems used in logistics centres for the execution of the courier business. The purpose of this article is to identify the impact of information systems used in logistics centres for courier companies services. The article presents a class of information systems used in logistics centres and the number of systems used by courier companies. Characterized the impact of information systems to improve the operation of logistics centres and assesses the extent to which the use of the information system of logistics centres affects the information flow in courier companies. The study showed that the use of the IT systems offered by the logistics centres streamlines the efficiency of information flow in the courier service. Research has shown which IT systems logistics centres are use and how their use by courier companies affects the information flow in courier services.

Key words: logistics centre, courier company, computer systems, information technology
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Introduction

Technological advancement has an impact on all domains of social life by creating opportunities previously unavailable and unknown (Kromer 2008, 93). Courier companies which operate in logistics centres offer new solutions to customers and communities, this way giving them new prospects and opportunities to familiarise themselves with innovative concepts and ways of using them (Kauf et al. 2016, 67). Implementing the latest technologies is both a challenge for courier companies and an opportunity for them to operate more efficiently and be of a greater interest to potential customers and business partners (Witkowski and Bąkowska-Morawska 2011, 75). The introduction of new solutions in the design, construction and operation of management information systems is the key to greater efficiency of logistics operations in logistics centres (Bitkowska and Weiss 2016, 44), as well as a way to avoid the effects of the economic crisis (Kauf 2010, 2–8) or enhancing the competitiveness (Sitko-Lutek, Phusavat, and Comepa 2011, 812). These actions are the result of established strategy (Stachowicz 2006, 59).

The dynamics of technological development and its practical application can be examined on the example of IT systems that ensure the efficient functioning of courier companies.

Computer Systems Used in Courier Companies

The key aspect of the courier company management is to ensure the seamless flow of information, which enables an immediate exchange of information both within the company and with the external environment, which includes local communities, suppliers, business partners and customers. The use of information systems helps transmit information during order fulfilment (Łęgowik-Świącik et al. 2016, 120). The computer system may be characterised as 'an information system' (Wrycza 2010, 76) which is a set of connected elements, whose function is to process data with the use of computer technology (Grandys 2000, 49). In practice, this means a system in which information is exchanged, processed and stored mainly by computers. 'The information system used in the organisation building, providing the managing body with information necessary in management processes, is called the management information system' (Nowicki and Turek 2010, 183). Information systems are created with the use of computer technology regardless of courier company size (Kisielnicki 2009, 50).

In the beginning, the courier company designs and implements

appropriate structures and organisational processes. It selects a set of methods and tools to use and defines their configurations and control parameters. That enables the launch of planning applications (Kisielnicki 2013, 30). Integrating information technology tools with logistics processes means that systems become an integral part of the logistics subsystems as well as being a platform for the rationalisation of logistics operations. All activities related to the computerisation of a courier company are aimed at integrating various subsystems in order to provide faster and more efficient flow of information (D'Atri, De Marco, and Casalino 2008, 32). For that reason, integrated information systems (Wrycza 2010, 345) have been developed and implemented in courier companies. They are to be the main source of information for managers supporting them in decision-making (Liu et al. 2013, 54). Integrated information systems are the source of innovation and organisational changes, enabling the performance of work in a new way. The evolution of those systems has allowed extending the scope of their functional area and, thus, providing information support for other areas of an organisation.

Among the trends in the development of integrated computer systems are (Łobejko 2005, 8–10):

- a wider range of business services (such as, ERP II, MRP II, ECR, WMS),
- better use of Internet technology in e-businesses,
- development of applications for mobile platforms,
- systems supporting knowledge management (e.g. Business Intelligence).

The progress of computer technology involves the rapid development of information systems used in the management of the organisation which has a broad range of software, often tailored to its individual needs (Ding, Guo, and Liu 2011, 133).

The courier company is required to use the entire range of IT solutions and complex IT systems to support the effective use of information (Prajogo and Olhager 2012, 135). This is done by Information and Communication Technologies (ICT). Those are the technologies involved in the collection, processing and transmission of information electronically (see stat.gov.pl). Information and communication technologies use mainly the Internet, wireless networks, fixed and mobile telephony and electronic mass media, which include radio and satellite TV (Pawełoszek-Korek 2009, 122). ICT technologies include IT systems enabling the use of information and IT solutions. There are two groups connected with ICT technology: the produc-

tion of communication equipment (including computer, communication, network and office equipment as well as the equipment for data transmission) and services (including software, telecommunications and IT services, see www.paiz.gov.pl). ICT technology provides hardware, advanced Internet services, electronic management, electronic commerce, security of networks and systems in addition to mobile Internet access. The impact of ICT on the functioning of a modern courier company and on the environment is huge. For the courier company this means the possibility of speeding up the information exchange, owning an organization virtual database, having access to Internet services and online marketing through social media (Batorski 2011). The use of ICT technology and the optimum application of available resources like electronic communication tools have a positive effect on the performance of courier companies by using programs to manage accounting modules, human resources, and enterprise resource planning (Uwizeyemungu and Raymond 2012, 13) (ERP) (Huang and Yasuda 2016, 4–5), and to update the database on the Internet (ERP II) (Beheshti 2006, 184–93) as well as optimising property resources and providing planning and financial management of the company (MRP II) (Monk and Wagner 2006, 69). The use of systems provided by logistics centres allows courier companies to improve services of courier deliveries. Also, the use of channel distribution strategies integrating the supply chain of manufacturers, distributors and traders (e.g. the e-commerce market) in order to build a cost-effective system that responds to the specific needs of the consumer (ECR) (Wojciechowski 2011, 151–2), allows organisations to integrate modern management methods and assistive technologies in order to improve the level and quality of customer service while reducing inventory and costs throughout the supply chain. WMS systems for coordinating storage and streamlining all the processes are often the technology supporting the managing system.

Information Systems in Logistics Centres for the Needs of Courier Services

The logistics centre which wants to provide logistics services of high quality using modern solutions, is forced to use the IT system. Using this type of modern technology is inseparably connected with the possession of appropriate hardware and software. Logistics centres offer comprehensive service to their customers thanks to the high level of specialisation and complexity of services (Kott 2012, 78). They include services related to transportation, storage and handling, formal and legal services and associated assistance (Skowron-

TABLE 1 Use of IT System to Managing Logistics Centres

Statement	Yes (%)
Is the system essential to manage the logistics centre?	100,0
Does the IT system meet the expectations of the logistics centre?	100,0
Does the logistics centre provide courier companies with the IT system?	100,0

Grabowska 2010, 31). The competitiveness of courier companies nowadays requires businesses to use multiple solutions to meet customers' expectations. Quality and delivery times are the priority (Bela 2016, 49). Therefore, it is necessary to use the IT system for the efficient service. The logistics centre, which has implemented the system, is seen as a positive influence, which results in the improvement of its image.

The research task was realized by conducting a survey among courier companies operating in logistic centres in the European Union. Due to the large area of the surveyed area, the survey was addressed to companies located in the European Union countries, which exceeds 250000 km^2 such as Germany, France, Finland, Sweden, Spain, Italy and Poland. The survey questionnaire was distributed to 90 logistic centres with courier companies and 90 courier companies located in these logistic centres, which received 58 questionnaires completed by logistic centres and 53 questionnaires completed by courier companies. The study was designed to investigate the pairs of logistic centres associated with the courier service; therefore, questionnaires were rejected from the questionnaires that were filled out. Hence, the survey sample consists of 44 logistic centres and 44 courier companies. The survey was conducted from October 2015 to February 2016 through questionnaire survey. The activities of the surveyed logistics centres were classified according to different criteria.

Studies conducted in the logistics centres allowed us to assess the impact of the system application on managing the logistics centres.

Table 1 shows that all examined logistics centres admitted that for the management of the logistics centre the IT system is essential. The information system provides quick access to databases, easy communication and a range of tools to improve the operation of logistics centres. The data obtained in the study allowed determining the class of information systems used by the logistics centres.

Table 2 shows that all the logistics centres surveyed used ERP and CRM systems. 79.5% of the respondents used WMS, while 31.8% used ERP II. The survey also made it possible to determine whether the

TABLE 2 Class of IT Systems Used in Logistics Centres

ERP	100,0
CRM	100,0
ERP II	31.8
WMS	79.5

FIGURE 1 Number of Systems Offered by Logistics Centres Used by Courier Companies

applied information system met the expectations of the centre. The data received in the survey is presented in table 1. As shown in table 1, 100% of logistics centres are satisfied with the systems they use. That means adjusting those systems to the needs of logistics centres and logistics services. Figure 1 contains information specifying the impact of information systems on improving the functioning of the centres.

Figure 1 shows that 63.64% of the respondents believe that the impact of information systems on improving the operation of logistics centres is big. 36.36% of the respondents think the impact is very big. All logistics centres admit that the role of information systems in improving their performance is big or very big. It was also examined whether logistics centres provided courier companies with the system. Table 1 shows that all logistics centres enable courier companies the use of their system. That means that the logistics centres provide courier companies with information systems in order to ensure proper handling of logistics processes. The study allowed determining how many systems offered by logistics centres were used by courier companies. The data obtained is presented in figure 2.

31.82% of courier companies declared that they used 1 system offered by the logistics centre, 50% of the respondents used 2 systems, and 18.18% of the courier companies surveyed used 3 systems. The questionnaire allowed examining the impact of the computer system used in logistics centres on increasing the efficiency of information flow in courier companies, as shown in figure 3.

Figure 3 shows that 72.7% of courier companies said that the use of information systems offered by logistics centres affected the efficiency of information flow in courier companies to an average degree, and 27.3% of the respondents thought the influence was big. Using the computer system offered by the logistics centre improves

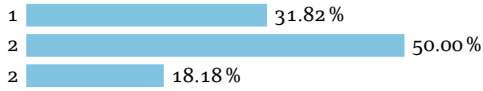

FIGURE 2 Number of systems offered by the Logistics Centre used by the courier company

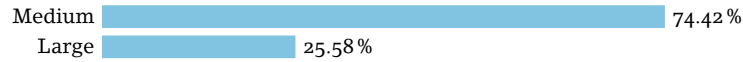

FIGURE 3 The Extent to Which the Use of the Information System of the Logistics Centre Affects the Efficiency of Information Flow in the Courier Company

the flow of information in the courier company allowing the efficient performance of courier services.

Summary

Conducted research shown that courier companies need increasingly advanced IT systems supporting the management processes. The application of IT systems in logistics centres contributes to improving business processes of courier companies (Mesjasz-Lech 2014, 94–103). The equipment of logistics centres and their infrastructure are the main elements to be taken into consideration when choosing the location of the courier company. Crucial for logistics centres and courier companies is the fact that the logistics centres are trying to tailor their services to courier companies should try to align as closely as possible based on mutual benefits. As a result, the development of courier companies depends on the logistics centres. The relationship between the logistics centre and the courier company relies in the effective implementation of logistics services. The current activity improves not only the flow of goods and information, but also the implementation of the financing strategy of logistics processes. Although a courier company is an economic entity for which logistics is the basis for action, the cooperation with the logistics centre is not a type of outsourced logistics service. It is a thought-out strategy aiming at providing courier services of high quality.

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Potential and Barriers to Adoption of B2B E-Commerce in SMEs in Transition Economies: Case of Albania

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Small- and Medium-sized Enterprises (SMEs) can benefit significantly from investments in e-commerce and e-business. However, the adoption of e-commerce has been quite slow and limited among SMEs, especially in transition economies. Interviews were conducted with senior managers from 30 medium-sized enterprises in a transition economy – Albania, three from each of the ten key sectors, namely, information and communication technology (ICT), tourism, banking, financial services, agriculture, healthcare, logistics, manufacturing, construction, and retailing. The qualitative data coded from the in-depth interviews was analysed using NVivo® for identifying key themes. Four key themes were identified along with ten subthemes. This study identified the four key themes that can guide the organizational leadership of medium-sized enterprises in transition economies in strategically leveraging e-commerce technology. The four key themes identified in this study include resource constraints, external environmental factors, organizational issues, and resistance to acceptance of new technology. The identification of the key barrier factors will help the organizational leadership in transition economies, such as Albania devise strategies to promote adoption of e-commerce in the SMEs. The findings of this study will help the organizational leadership of SMEs in transition economies identify measures to address and resolve the barriers to adoption of e-commerce. This study also adds value to the limited literature on barriers to e-commerce adoption in the context of SMEs in transition economies. The study offers insights on e-commerce adoption by SMEs, which can be applied to other transition and emerging economies attempting to understand the barriers that might hinder the adoption of e-commerce by the SMEs.

Key words: barriers, e-commerce, e-business, challenges, transition, Albania
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Introduction

The category of micro, small and medium-sized enterprises (SMEs) is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding 50 million euro, and/or an annual balance sheet total not exceeding 43 million euro (European Commission 2016b). E-Commerce is defined as the process of selling, buying, and exchanging products and services over the Internet (Turban, McLean, and Weatherbe 2004). E-Commerce can be a key source of competitive advantage to SMEs by reducing the cost of doing business, improving the quality of products, and creating new avenues for selling existing products (Sutanonpaiboon and Pearson 2006). Solaymani, Sohaili and Yazdinejad (2012) stated that adoption of e-commerce by SMEs in developing countries is one of the key indicators of economic growth. Some of the benefits of e-commerce for SMEs include reduced cycle time, increased market reach, reduced operational costs, reduced operational and marketing costs as well as improved customer service (Jahanshahi, Zhang, and Brem 2013).

However, to leverage these benefits, SMEs need to overcome and resolve the barriers to e-commerce adoption. Most of the earlier studies have explored either how e-commerce businesses have evolved over the last couple of decades or have explored how e-commerce adoption has benefitted firms in developed countries. There is limited literature exploring how SMEs, especially in transition economies, have adopted e-commerce. Although SMEs are increasingly adopting e-commerce, their use and exploitation is limited in scope and not up to the potential (Scupola 2009). There is also limited literature on the barriers to adoption of e-commerce in SMEs in transition economies, such as Albania.

Although the terms e-commerce and e-business are often used interchangeably, some of the researchers have differentiated between these two terms. According to Laudon and Traver (2016), e-business refers to the digital enabling of transactions and processes within a firm's organizational boundaries whereas e-commerce includes transactions involving the change of value transcending organizational boundaries (Laudon and Traver 2016). Several e-commerce business models have come up over the last few decades, often hybrids of the existing major models. The three major models of e-commerce, include B2B model (Business-to-Business), B2C model (Business-to-Consumer), and the C2C model (Consumer-to-Consumer). The B2B model is the largest model in the context of the mon-

etary value of exchanges with the total value of the exchanges exceeding $14 trillion in 2015 globally and around $6.3 trillion in the US (Laudon and Traver 2016). B2C is the next key model in the context of the monetary value of exchanges totalling around $530 billion in the US in 2015.

Laudon and Traver (2016) also state that only 10% of the dot-coms formed since 1995 have survived as of 2015 with a tiny percentage of them still serving as profitable ventures. Hence, understanding the factors that might be barriers to SMEs adopting e-commerce and e-business models is quite relevant as a failure in implementation might have catastrophic effects on the survival of these SMEs. Most of the SMEs, in particular, in developing and transition economies are often limited by financial and human resources. Any investment that these SMEs make in e-commerce and e-business adoption takes a significant chunk of their meagre resources; hence, any failure in implementation will have a significant negative effect on the survival of these firms. Understanding the factors that might inhibit the successful implementation of e-commerce and e-business operations will help the organizational leaders in planning and taking remedial measures before investing significant resources in the adoption of e-commerce.

Each of the three most important categories of e-commerce business models can be categorized into several other business models each of which may have one of more revenue models. The various categories of B2C business models include e-tailer, community provider, content provider, portal, transaction broker, and market creator, the service provider (Laudon and Traver 2016). The various categories of B2B business models include private industrial networks and net marketplaces, which can be further categorized as e-distributor, e-procurement, exchanges, and industry consortiums (Laudon and Traver 2016).

The two major models, namely B2B and B2C offer additional avenues to SMEs to streamline their existing business operations as well as processes and also explore new opportunities to reach global markets. In this study, the focus was on the B2B business model because B2C model is not suitable for all SMEs while B2B business model could be helpful for SMEs. The central research question driving this study is 'What are the key inhibitors of business-to-business e-commerce adoption and implementation in Albanian SMEs?' To answer this research question, empirical data was collection from SMEs in the capital city of Tirana where more than 70% of the SMEs are located (European Commission 2016c).

Literature Review

SMALL- AND MEDIUM-SIZED ENTERPRISES (SMES) IN TRANSITION ECONOMIES

Several benchmarks are used by international organizations and governments to define the categorized of firms as micro, small, medium, and large enterprises. In this article, the definition provided by European Commission (2016a) is used for categorizing a firm as an SME because the transition economy referred to in this country – Albania is a European Union candidate country aspiring for a full member status. As per the EU recommendation 2003/361, the two key factors based on which a firm is categorized as an SME are the staff headcount and either the turnover or the balance sheet total of the enterprise. A business is categorized as a micro-sized firm if the staff headcount of the company is less than ten members and if either the turnover or balance sheet total is less than 2 million Euros (European Commission 2016a). In this study, micro-sized firms are not included because of their relatively small size because of which they may not have adequate resources to benefit from investments in electronic commerce completely. A business can be categorized as a small-sized firm if the staff headcount is less than 50 members and if the turnover or the balance sheet total is less than 10 million Euros (European Commission 2016a). A firm can be categorized as a medium-sized firm if the staff headcount is less than 250 members and if the turnover is either less than 50 million Euros or the balance sheet total is less than 43 million Euros (European Commission 2016a). In this study, we have included both small- and medium-sized firms.

SMEs contribute significantly to the economic growth and employment generation in emerging economies (Subrahmanya 2015; Wonglimpiyarat 2015). SMEs accounted for 99.8% of all enterprises in the non-financial business sector in the European Union employing over 90 million people contributing to over 67% of total employment (European Commission 2016b). According to European Commission SBA report (2016c), SMEs constitute 99.8% of total businesses in Albania contributing to 79.9% of the total employment and 67.8% of total value added in the non-financial economy.

Researchers have used different criteria to categorize countries as transition economies. The categorization criteria used by Vasyechko (2012) is used in this study to categorize the transition economy into three categories, namely, Central and East European economies, emerging economies, and rent-seeking economies of Africa and the

Middle East. Albania is part of the first category of the transition economies that are gradually moving from a central planning system to a free market economy (Šliburytė and Masteikienė 2011; McKenzie and Merrilees 2008). International Monetary Fund (IMF) has listed out some of the key criteria for the process of transition, including liberalization, restructuring, privatization, and institutional reforms (Šliburytė and Masteikienė 2011). While some of the other Central and East European countries had a smooth transition process, Albania had a different experience as the communist regime in Albania, as in several other countries taken over by the communist revolution, suppressed individualism, personal freedom, and freedom of expression (Prasnikar, Pahor, and Svetlik 2008). The transition process in Albania was marred by brief episodes of social, political, and economic strife. As of the time of this study, Albania had achieved the candidate country status and is in the process of undertaking reforms needed for Albania to obtain full member status with the European Union.

BARRIERS TO E-COMMERCE ADOPTION FOR SMES

SMEs can benefit significantly from the adoption and use of e-commerce (Scupola 2009). Most of the SMEs only have a presence over the World Wide Web through their websites that are used for advertising their products and services, but a significant of these firms still do not conduct e-commerce (Sutanonpaiboon and Pearson 2006). SMEs can benefit from productivity gains at a firm level with e-commerce technologies as they can gain access to supply and distribution chains that were previously not connected (Jahanshahi, Zhang, and Brem 2013). E-Commerce also has the potential of improving the information flow and decreasing the inefficiency and transaction costs for SMEs (Jahanshahi, Zhang, and Brem 2013). Technological innovation is quite essential for SMEs to promote firm performance and growth. According to Subrahmanya (2015), successful innovation activity will help establish a positive competitive position leading to a sustainable competitive advantage and improved firm performance. SMEs that have not yet implemented e-commerce can demonstrate technological innovation through the adoption of electronic commerce technologies.

Several barriers influence the adoption of e-commerce by SMEs, including a slower technology adoption rate because of lack of staff in key areas, including information technology and small management teams (Sutanonpaiboon and Pearson 2006). Some of the key barriers to adoption of e-commerce by SMEs identified by re-

searchers include e-commerce infrastructure, market size, awareness, telecommunications infrastructure, legal systems, government regulations, limited knowledge of models, etc. (Zaied 2012). The most significant factors that influence the adoption of e-commerce in SMEs include top management support, employees' knowledge and attitude towards the use of information systems, and resource constraints in the firms (Mirchandani and Motwani 2001; Dholakia and Kshetri 2004; Scupola 2009).

Kaynak, Tatoglu, and Kula (2012) categorized the barriers into three categories, namely, economic barriers, cognitive barriers, and socio-political barriers. This categorization of the barrier factors allows for grouping of the various inhibiting factors acting as barriers to e-commerce adoption. The economic factors include the limited financial resources of most of the SMEs, especially in transition economies like Albania. Jahanshahi, Zhang, and Brem (2013) list out factors such as the high cost of user support as well as running and maintenance costs as some of the reasons why SMEs do not consider e-commerce as a viable financial investment. The lack of adequate funds impedes the ability of SMEs to invest in the infrastructure and technology required to establish B2B platforms and services. The cognitive barriers include the acceptance of new technology by the staff of these firms.

Several studies focused on the technology acceptance behaviour, especially in the context of SMEs. Zaied (2012) provided a comprehensive categorization of various barriers to adoption of e-commerce by SMEs in Egypt. These categories include social and cultural barriers, technical barriers, economic barriers, political barriers, organizational barriers, and legal as well as regulatory barriers (Zaied 2012). Some of the key barriers from each of these categories include lack of e-commerce infrastructure, competitive pressures, lack of management support, and lack of regulatory systems (Zaied 2012).

Methodology

In this qualitative study, data was gathered using interviews and observations. Interviews were conducted with senior managers from 30 medium-sized enterprises, three from each of the ten key sectors, namely, Information and Communication Technology (ICT), Tourism, Banking, Financial Services, Agriculture, Healthcare, Logistics, Manufacturing, Construction, and Retailing. The selection of the sectors of the SMEs was based on the SME performance review released by the European Commission in its annual report for 2015–6. Participants were on average 35 (SD = 8.42) years of age almost evenly

split between male (52%) and female (48%). More than half (56%) had completed an undergraduate degree, and 44% had completed a graduate degree. Participants had 10.5 (SD = 5.86) years of work experience.

The 30 small- and medium-sized firms chosen for the sample were from ten key economic sectors. These ten economic sectors represent more than 75% of the total number of SMEs in Albania. Yin (2009) recommended replication rather than sampling logic for multisite case studies. According to Eisenhardt (1989), using multiple cases within each category allows findings to be replicated within categories. As the study involved in-depth interviews, the data generated from the interviews with the 30 participants' generated significant data required for generating themes. The human resource managers from these 30 medium-sized companies were approached and based on their recommendations; three employees at medium and senior management levels were selected. The criteria for selection of the employees were fluency in English and, at least, three years of work experience. The level of experience was an essential criterion, as the employees need to have an understanding of strategic objectives of the firm. Informed consent was obtained from the employees before data collection. The participants were also provided with the key terms to be used in the interviews. The interviews were conducted over a one-year period. All interviews were audio-recorded, and the interviews were transcribed. Publically accessible documents, as well as field notes, were also included as data sources.

Quantitative methods were considered but were not chosen for this study because barrier factors cannot be examined through quantitative methods. This is because most of these factors were identified from the intrinsic knowledge available from prior experience of the managers. According to Gelo, Braakmann, and Benetka (2008), quantitative studies require the reduction of phenomena to numerical values to undertake statistical analysis. However, according to McDaniel and Gates (2007), Qualitative research is useful when findings are not subject to quantification or quantitative analysis. The central research purpose driving this study was to identify the key inhibitors of business-to-business e-commerce adoption and implementation in Albanian SMEs. As such, understanding, the experience and perspective of senior management were quite critical. Hence, the qualitative research methodology was used in this study.

Table 1 shows the demographic information of the respondents. Respondents with varied experience, age, and gender were chosen to alleviate any bias because of these demographic factors.

TABLE 1 Demographic Statistics

Category	Criteria	Percentage
Gender	Male	53
	Female	47
Age	20–30 years	26
	30–40 years	37
	40–50 years	23
	>50 years	14
Experience	1–5 years	25
	5–10 years	52
	>10 years	23

NVivo® 11 which is Computer-Assisted Qualitative Data Analysis Software (CAQDAS) software was used for this study. NVivo® software has several advanced features for analysing qualitative data, including in-vivo coding, case and theme coding, comparison diagrams, relationship coding, and matrix coding. An NVivo® project was created, and the interview data previously transcribed into word document was uploaded into the source section of the software. The first set of data analysis resulted in the creation of nine themes. Additional reading and thorough analysis of the data and using axial coding resulted in the nine themes further reduced into four themes with ten subthemes. The four key themes are resource constraints, external environmental factors, organizational issues, and resistance to acceptance of new technology. Using NVivo®, queries were run to discover patterns, relationships and different phenomena in the primary transcribed interviews from the respondents. Using the text search-analytical tool in NVivo® the repeated occurrence of words within the interviews was identified. This helped to identify the number of times certain words were used by subjects throughout the length of the interview.

Discussion

The four key themes are resource constraints, external environmental factors, lack of top management support, and resistance to acceptance of new technology. The themes and subthemes identified in this study are listed out in table 2. A total of 10 subthemes were identified in the study.

THEME 1: RESOURCE CONSTRAINTS

Nineteen out of 30 respondents (63%) agreed that SMEs face resource constraints considering their small size, especially in the

TABLE 2 Themes and Subthemes Identified in the Study

1. Resource constraints	• Lack of human resources • Lack of financial resources • Lack of technological resources
2. External environmental factors	• Government policies and initiatives • Security and privacy • Infrastructural issues
3. Organisational issues	• Support from top management • Organisational culture
4. Resistance to acceptance of new technology	• Perceived usefulness of new technology • Training workforce

context of transition economies like Albania. This theme was further divided into three subthemes, namely, lack of human resources, lack of financial resources, and lack of technological resources. As compared to other developed economies, the SMEs in transition economies as well as developing economies do not have to the similar level of resources.

Twenty-three of the 30 respondents (77%) indicated that will have major problems in allocating the already exhausted and strained resources for e-commerce adoption. Respondent R13 stated that 'My firm has limited financial and human resources to meet our operational requirements; we will struggle to find resources to allocate them for investing in e-commerce technologies.' Respondent R1 also expressed similar views by stating, 'My firm already has experienced tough times over the last few years with limited financial resources, we want to invest in e-commerce, but under the current circumstances I am not quite optimistic about investment in e-commerce.' Wonglimpiyarat (2015) stated that SMEs often face barriers in the context of low capitalization and insufficient assets. SMEs often face difficulties in accessing new capital required to implement technological investments.

Twenty-six out of 30 (87%) of the respondents agreed that finding appropriate human resources to manage the e-commerce operations was a major barrier to the adoption of e-commerce. Respondent R22 stated that 'We do not have adequate human resources i.e. employees with knowledge and experience in using e-commerce operations. We cannot invest in hiring such employees as this is not in our short-term plan.' Twenty-eight out of 30 respondents (93%) agreed that investment in human resources is essential for the successful adoption of e-commerce technologies but also emphasized on the problems their firms are facing with hiring an additional workforce.

Respondent R5 stated, 'We want to invest in hiring new staff members to handle the technological requirements of e-commerce, but the costs involved are quite high as we need qualified and highly skilled employees.' Esmaeilpour, Hoseini, and Jafarpour (2016) list lack of qualified and trained personnel as one of the key barriers to entrepreneurship in the field of e-commerce.

THEME 2: EXTERNAL ENVIRONMENTAL FACTORS

Eighteen out of the 30 respondents (60%) identified external environmental factors, which are out of the control of the firms as a key barrier to adoption of e-commerce by their firms. This theme also includes three subthemes, namely, government policies and initiatives, security and privacy, and infrastructural issues. Respondent R17 stated that 'Some of the problems that we have with the adoption of e-commerce are out of our control, we have problems with lack of clarity in regulations as there is no clear policy.' Respondent R11 also expressed similar view stating 'the government should help us understand the policies and also establish a government regulation in alignment with the European standards.'

Twenty-one out of the 30 respondents (70%) accepted that they were not aware of any precise governmental strategy or policy encouraging e-commerce for SMEs. Twenty-four out of the 30 respondents (80%) emphasized on the setting up of a clear policy outlining the legal guidelines and government assistance to encourage adoption of e-commerce by SMEs. According to Respondent R29, 'SMEs employ most of the people in the country, so there is a need for a dedicated governmental policy and assistance for SMEs to adopt e-commerce.' Respondent R14 also stated similar view by stating 'the European Union should include some assistance so that Albanian SMEs are encouraged to adopt e-commerce.' According to Ahmad (2012), some of the challenges that SMEs often face include bureaucratic procedures, complex taxation and registration system, poorly designed intellectual property rights, and the unfavourable business regulatory environment. The Albanian government has been taking several administrative and legal reforms as part of the process of joining the European Union. Hence, these potential barriers could be resolved over the next few years as Albanian government tries to synchronize its policies and regulations to meet European standards. These findings are consistent with those of Esmaeilpour, Hoseini, and Jafarpour (2016) who list out government support and presence of legal framework as key enablers for adoption of e-commerce by SMEs.

Nineteen out of 30 respondents (63%) were concerned about the security and privacy issues and indicated these issues as key barriers to adoption of e-commerce. Eighteen out of 30 respondents (60%) cited lack of proper infrastructure as a key barrier to adoption of e-commerce. Some of the small- and medium-sized firms were located at distant rural locations and did not have the same level of internet penetration as those in the urban areas. In addition, some of the operations of these firms were in locations where proper infrastructure required for e-commerce operations was not available.

THEME 3: ORGANIZATIONAL ISSUES

Twenty-four out of 30 respondents (80%) indicated that organizational issues were a key barrier to the adoption of e-commerce. This theme was further divided into two subthemes, namely, support from top management and organizational culture. Twenty-five of the 30 respondents (83%) emphasized the importance of top management support. According to Respondent R23 'Support from top management is crucial for success of any major initiative in SMEs and e-commerce adoption is not an exception' Respondent R15 also advocated the support from top management by stating 'Albanian culture is high on power distance and employees tend to accept new initiatives that are supported by top management.' Nineteen of the 30 respondents (63%) indicated that organizational culture of a firm has a bearing on the adoption of e-commerce. Respondent R1 stated that 'in some organizations the culture is to promote new ideas and innovation, in such organizations the chances of adoption of e-commerce are higher' Respondent R19 also expressed similar concerns stating 'top management should promote the establishment of organizational culture where new technological initiatives are promoted.'

THEME 4: RESISTANCE TO ACCEPTANCE OF NEW TECHNOLOGY

Twenty-three out of the 30 (77%) respondents expressed the view that a key barrier to adoption of e-commerce is likely to be the resistance to acceptance of new technologies in the firm. This theme is further subdivided into two subthemes namely, perceived usefulness of new technology and training workforce. Twenty out of the 30 respondents (67%) expressed the view that the perceived usefulness of new technology is likely to have an influence on the way the employees react to the changes in their work. Respondent R22 stated 'Management need to ensure that there is awareness and understanding among employees about e-commerce so that employees understand the need for the new changes.' Respondent R29 stated

that 'Resistance to new technology will be limited if employees are integrated into the change from the beginning and are considered as key stakeholders in the adoption process.' According to Rizzuto, Schwarz, and Schwarz (2014), psychological issues related to employee resistance to adoption of new technologies is a key barrier to the successful adoption of new technology in a firm. Hence, the organizational leadership of SMEs needs to take into consideration the influence of these factors and take measures to address this issue.

Twenty-seven out of the 30 respondents (90%) emphasized the importance of training employees about the new technology. Respondent R25 stated 'Training needs to start early and incentives should be provided to those employees who embrace the new technology' Respondent R28 stated that 'Staff training is a critical component for the introduction of new technology or processes otherwise employee resistance is likely to be higher.'

Limitations

This study has some limitations, primarily about generalizing the findings to all the Albanian SMEs as the data was collected from key sectors in the SMEs from the capital city. However, some of these might not apply to certain categories of SMEs where e-commerce might not yield the similar level of benefits as in other sectors. Similarly, the study is limited to just one transition economy – Albania – and might not necessarily be true for other transition economies, which might not share similar socio-political and economic conditions. The study is limited by the honesty of the participants' responses during interviews and the amount of time available to conduct the study. Validity of the study is limited to the reliability of the instruments used. The study is limited also by the lack of literature on e-commerce in Albania.

Conclusions, Limitations and Directions for Future Research

This study identified the four key themes that can guide the organizational leadership of medium-sized enterprises in transition economies in strategically leveraging e-commerce technology. The four key themes identified in this study include resource constraints, external environmental factors, organizational issues, and resistance to acceptance of new technology. The ten subthemes identified in this study include lack of human resources, lack of financial resources, lack of technological resources, government policies and initiatives, security and privacy, infrastructural issues, support from

top management, organizational culture, perceived usefulness of new technology, and training workforce. However, this study could provide the basis for further studies and provide a framework for researchers seeking to investigate potential barriers to adoption of e-commerce by SMEs in other transition economies. Future studies could explore other transition economies. Future research could include further investigation into factors, such as the influence of age and gender on adoption of e-commerce. Researchers could also investigate the extent of e-commerce adoption on a sector-wise basis as well as a location-wise basis.

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Micro-Enterprises' Digital Marketing Tools for Building Customer Relationships

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The digital marketing environment is changing rapidly, and, for micro-enterprises, digital marketing is currently a vitally important opportunity. Attracting customers, engaging customers' interest and participation, retaining customers, learning customers' preferences and relating to customers are key strategies in building strong customer relationships. However, many enterprises ignore longer-term aspects of managing customer relationships. The study sought to contribute to a more in-depth understanding of micro-enterprises' current strategies in terms of new digital marketing tools that foster stronger customer relationships. Based on interviews of two digital marketing service providers, this paper describes how their micro-enterprise clients use digital marketing tools through the five elements of building customer relationships. The findings highlight the importance of a practical understanding of digital marketing tools, as the digital marketing environment changes rapidly. The human capital and digital tool knowledge of micro-enterprises' owner-managers have a great impact on these firms' digital marketing and, ultimately, their success.

Key words: digital marketing, micro-enterprise, digital marketing tool, customer relationship
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Introduction

Digital marketing creates opportunities to develop successful businesses in a way that previously was not possible for small companies (Eid and El-Gohary 2013), and is becoming an increasingly important source of competitive advantage in both business-to-business and business-to-consumer markets (Leeflang et al. 2014). The existing literature shows that digitalisation in all its variations is connected to small businesses' growth, performance and competitiveness (Taiminen and Karjaluoto 2015). This study focuses on micro-enterprises, which are defined as 'enterprises which employ fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed two million Euros' (European Commission 2003). Micro-enterprises are an extremely heterogeneous group, so this concept can include, among other formats, start-up companies, family businesses and self-employed managers with one or more employees (Devins et al. 2005). Micro-enterprises are characterized by a paucity of resources and expertise (Barnes et al. 2012).

Gilmore, Gallagher, and Henry (2007) state that communication through the Internet provides an opportunity for companies that have limited capital to succeed as international marketers in the early stages of their development. According to Bordonaba-Juste, Lucia-Palacios, and Polo-Redondo (2012) and Lipiäinen (2014), the one of the main aspects that influence the use of e-business is size; micro-enterprises utilize digital tools less likely than larger firms do. Moreover, marketing in small companies is different than in larger organisations, and researchers assert that company size must be taken into account in marketing planning (Gilmore et al. 2007). For example, owner-managers' human capital is an important factor in small and medium-sized enterprises' digital marketing, including their marketing manager's knowledge of digital channel alternatives (Taiminen and Karjaluoto 2015). Clark and Douglas (2014) state that the role of human capital in the micro-enterprises' growth can be even greater than in small companies. Hereby micro-enterprises' owner-managers' or solo-entrepreneurs' personal objectives and characters are essential elements in utilizing digital marketing tools (Clark and Douglas 2014).

Given that micro-enterprises' significance to economic growth and employment is undisputed; the micro-enterprise sector appears to be a pivotal feature of successful economies (Sinisammal et al. 2014; *Yrityskatsaus* 2014). However, most digital marketing and e-

business adoption studies have focused on larger companies, and, thus, little research focused on micro-enterprises exists in this area (Donnelly et al. 2015; Bordonaba-Juste, Lucia-Palacios, and Polo-Redondo 2012). In addition, the digital marketing environment is changing rapidly, so earlier studies related to this topic might not be valid anymore. This study focuses on the utilisation of digital marketing tools from micro-enterprises' viewpoint and, in particular, practical aspects of this strategy. These tools were examined through key elements of building customer relationships, which are crucial to understanding digital marketing and its impacts on strong customer relationships. It is important for companies emphasize on digital customer relationships management, interaction and development (Sinisalo and Karjaluoto 2007; Tiago and Verissimo 2016; Kierzkowski et al. 1996) and it seems that research is lacking related to the phenomenon in the context of micro-enterprises. The aim of the paper is to get new understanding about micro-enterprises digital marketing tools for building customer relationships. Thus, the research question explored was as follows: How do micro-enterprises utilise digital marketing tools to build customer relationships?

New digital marketing tools can be examined through how they affect the five key aspects of customer relationship development that Kierzkowski et al. (1996) include in their digital marketing model. These elements are attracting customers, engaging customers' interest and participation, retaining customers, learning customers' preferences and relating to customers (Kierzkowski et al. 1996). These five strategies served as the basis of the preliminary framework (see figure 1) of the present digital marketing study. The digital marketing tools found to be potentially useful for micro-enterprises are presented in the centre of figure 1. These tools were examined individually from the perspective of each element. Thus, the present study sought to update and extend the above-cited digital marketing model developed by Kierzkowski et al. (1996) in order to reflect the micro-enterprise context.

Digital Marketing Tools That Build Customer Relationships

Competitive markets are becoming more complicated, including that customer interfaces are far broader than conventional marketing models assume (Grönroos 2009). The proposed model in figure 1 shows the distinct phases of building customer relationships through digital marketing, with each element containing many different factors that companies have to consider. In the present study, digital marketing refers to 'the practice of promoting products and services

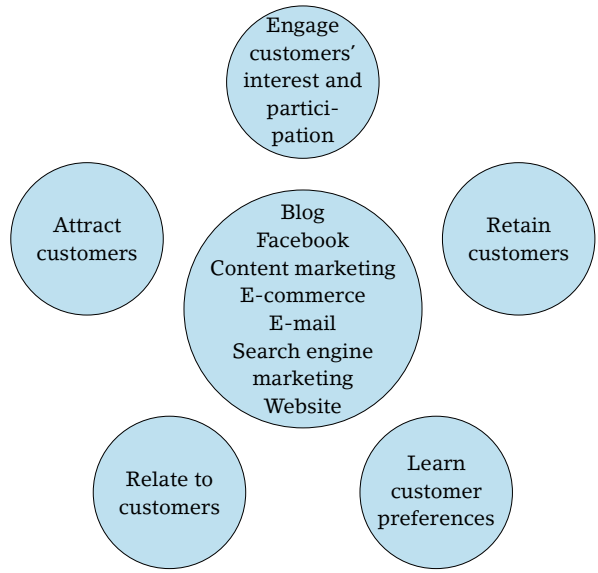

FIGURE 1

Digital Marketing Tools That Build Customer Relationships

using digital distribution channels via computers, mobile phones, smart phones or other digital devices' (Smith 2012, 86).

BUILDING CUSTOMER RELATIONSHIPS

The digital marketing model's first element, *attracting customers,* covers how companies can persuade customers to, for example, visit their website. One of the most beneficial tool in applying this strategy is search engine optimisation (Teo 2005). The next element, *engaging customers' interest and participation,* has the objective of promoting interactions and transactions after customers have been persuaded to visit the website. For example, content marketing and e-commerce can be used as instruments to create interest in engaging in sales transactions and newsletter subscriptions (Teo 2005).

The third element, *retaining customers,* focuses on getting customers to return to company websites. Constant maintenance of communication is necessary when building customer relationships, and continuous utilisation of resources is essential in digital marketing (Kierzkowski et al. 1996). *Learning customer preferences* involves collecting information on present and potential customers with, for example, online surveys. Providing customised products and services can generate unique feelings among customers. However, many companies still consider collecting information about customer preferences difficult and expensive (Teo 2005).

Relating to customers means individualised communication, which is a key strategy in providing superior value to customers. This fifth element is critical since, on many occasions, it is required as digital marketing's starting point to enhance existing business activities (Kierzkowski et al. 1996). However, companies may lack information on, and knowledge of, customer preferences – on which they could base their customised strategies. E-mail is an example of one of the fifth element's digital tools (Teo 2005). The digital marketing tools potentially appropriate for micro-enterprises are described in the next section in greater detail in relation to the above customer relationship elements.

DIGITAL MARKETING TOOLS

Creating an appropriate *website* is required for successful digital marketing (Rahimnia and Hassanzadeh 2013). Eid and El-Gohary (2013) state that websites as a digital tool contain opportunities to reach many markets rapidly and economically. *Content marketing* has also become one of the most crucial strategies for companies that want to maximise profit by advertising products and services in competitive and constricted markets (Rahimnia and Hassanzadeh 2013). Website and content marketing appear to influence two elements of building customer relationships: engaging customers' interest and participation and retaining customers. The active and constant renewal and dynamic development of website content are crucial strategies since consumers do not return to websites without a reason (Teo 2005).

Search engine marketing is an extremely beneficial tool for attracting customers to websites (Teo 2005). This tool exploits Internet search engines to lead consumers to selected websites (Rangaswamy, Giles, and Seres 2009). Search engine marketing can be divided into two different search engine strategies: optimisation and advertising. In search engine advertising, companies pay search engines to include links to their website. In search engine optimisation, companies work to raise their websites as high as possible in the search engine's organic results (Dou et al. 2010). Taiminen and Karjaluoto (2015) state that search engine marketing is one of the most useful tools for small and medium-sized companies, so this could also be assumed to be true for micro-enterprises.

Kaplan and Haenlein (2010) define *social media* as 'a group of Internet-based applications that are built on the ideological foundations of Web 2.0, which allows the creation and exchange of user-generated content.' Social media enables more effective direct con-

nection and communication at the right time at a relatively small expense, which is more effective than traditional tools are (Kaplan and Haenlein 2010). It can help small businesses to communicate cost effectively with customers on a global scale (Jones, Borgman, and Ulusoy 2015). McCann and Barlow (2015) noted that better communication and marketing of products/services is one of the main benefits identified from the use of social media among the small business. As an outcome, social media is perceived as performing a central role in current companies' marketing and business undertakings (Atanassova and Clark 2015; Kirtiş and Karahan 2011). Social media as a digital tool can be utilised to strengthen most of the five relationship elements. Blogging is a part of social media in which companies retain a relatively high level of control, as blogs are usually located on company websites. With blogs, companies can create meaningful content and influence two elements: engaging customers' interest and participation and retaining customers (Taiminen and Karjaluoto 2015). One great advantage of Facebook is customers' ability to communicate directly with companies about their needs. Via Facebook, companies can learn about their customers, which contributes to learning customer preferences, as well as relating to these customers (Hanson, Wrangmo, and Soilen 2013). Taiminen and Karjaluoto (2015) mention that Facebook is a useful tool in getting customers to commit, which refers to the third element, retaining customers. Facebook is also used in interactive communication with potential customers, which relates to the first element, attracting customers (Valos et al. 2016).

Successful *e-mail* marketing can help companies to collect customer feedback easily and create and introduce advertisements of new products and services, while increasing communication between companies and customers (Dehkordi et al. 2012). According to Simmons (2007), e-mails can facilitate brand encounters and deepen relationships with loyal customers. Companies seek to customise their communication according to individual preferences, and e-mail marketing offers opportunities to customise and individualise communication (Merisavo and Raulas 2004). With e-mails, companies can influence several elements: retaining customers, learning their preferences and relating to them (Dehkordi et al. 2012). This tool can also be used to guide customers to websites, which is a part of the first element (Simmons 2007).

Wilson and Abel (2002) define *e-commerce* as 'the use of electronic media such as the Internet to transact businesses. This tool enables companies to sell products, services and information online (Wil-

son and Abel 2002). The advantages of e-commerce are, for example, more fluent business processes, more developed customer services and decreased expenses in marketing and purchase transactions (Jahanshahi, Zhang, and Brem 2013). E-commerce is a crucial part of the second element of building customer relationships since the objective of attracting customers' interest and participation is to achieve interactions or business transactions after customers have been enticed to websites (Teo 2005).

Pelau and Zegreanu (2010) state that mobile marketing strengthens traditional communication tools by achieving better results. Mobile phone is a pivotal commodity nowadays and the increasing number of smart phones have created remarkably wider opportunities to companies to reach and serve consumers and to interact with them (Persaud and Azhar 2012). Mobile marketing is an interactive channel, which provides direct and personal communication, and thus, according to Xu, Liao, and Li (2008), allows companies to develop even deeper customer relationships. The channel is not reliant of time and place and hereby it creates an opportunity to target consumers accurately (Persaud and Azhar 2012).

The usage of social networks such as Facebook and YouTube creates a crucial opportunity to integrate and expand companies' marketing strategy with mobile marketing strategy. Smart phones have ability to combine for example Bluetooth, location based marketing and other technologies to provide superior customer experiences. Companies have opportunity to serve customers by using versatile media content such as text, voice and videos, but also various applications. Mobile marketing is relatively easy and inexpensive way to reach consumers (Persaud and Azhar 2012). Watson, McCarthy, and Rowley (2013) verify that mobile marketing as a channel supports many interactive activities in a cost-effective way.

Methodology

The present study sought to contribute to a more in-depth understanding of micro-enterprises' current utilisation of digital marketing tools when building customer relationships. To achieve this objective, the empirical study was conducted as a *case study* (Stake 1995; 2000; Yin 2003). More specifically, the research was based on a collective case study (Stake 1995) since case studies can integrate a deeper and more reflective understanding of organisations (Rendtorff 2015). This method involves theory construction and satisfies the need to understand real-life phenomena (Riege 2003). In the case selection, authors chose two digital marketing service providers

that have broad perspective about the phenomena. Study utilizes instrumental case study approach to provide insight into an issue. In instrumental case study, case serves to help to understand phenomena or relationships within it. Often an issue question is of more interest to the researcher than is the case. When use more than one instrumental cases, the work can call as collective case study (Stake 1995).

The data collection was conducted through explorative theme interviews. Interviews constitute a flexible research method that is justified when conversations are needed to address the research question in a broader context (Hirsjärvi and Hurme 2008, 35). Theme interviews require carefully prepared questions that are used consistently and systematically within the bounds of verified themes (Qu and Dumay 2011). The research goal necessarily determines the number of interviewees (Hirsjärvi and Hurme 2008, 58–9), so, in the present study, two interviews were conducted, and the questions and themes were developed based on the preliminary framework described previously. These themes were the five elements of building customer relationships, as well as micro-enterprises and their perspective on digital marketing.

The interviews were conducted in March and November 2016. One interviewee (Interviewee X) is a digital marketing expert of a company that provides digital marketing services for micro-enterprises, among other types of firms. Interviewee X has had broad experience in the current state of digital tool utilisation in micro-enterprises. The other interviewee (Interviewee Z) is a private corporate consultant who specialises in helping solo-entrepreneurs to increase sales and conduct digital marketing. A full 95 percent of Interviewee Z's customers are micro-enterprises, so this participant brought a particularly extensive knowledge of solo-entrepreneurs' current practices to this study. The in-depth interviews were conducted by the first author, and the recorded data was transcribed. The interview transcripts were analysed according to the themes, and the quotations in the results section below were directly extracted from the interviews.

Results

According to interviewee X, owner-manager's human capital is essential to micro-enterprises. If the entrepreneur has knowledge of the digital tool alternatives and how they can be utilized, positive impact can be accomplished. Interviewee Z mentions also flexibility as micro-enterprises' positive aspect. In addition both interviewees

state the resource problems and the lack of know-how in micro-enterprises' are negative factors and that most of the time is cantered in the core business.

According to interviewee X micro-enterprises understand the importance of the first element, *attracting customers,* and they invest in it with different weights. Interviewee Z notices that also smaller micro-enterprises, solo-entrepreneurs, invest in it relatively much compared to other elements. For example, Facebook is relatively well-known digital tool, which is exploited among micro-enterprises independently.

> Especially for example Facebook, they (micro-enterprises) have took it in their business more or less, either that they have with their own profiles pointed out, where they operate. [Interviewee X]

Search engine marketing and analytics tools are the most cost-efficient and applicable digital tools to micro-enterprises according to the interviews. Interviewee Z adds also blogs, videos and e-mail, but states that micro-enterprises do not utilize e-mail efficiently enough and the execution is generally done unsuccessfully,

In developing the second element, *engaging customer interest and participation,* the interviewees emphasized the significance of websites especially for micro-enterprises. According to the interviewee X, micro-companies recognize the importance of the element, but interviewee Z states that it is common that solo-entrepreneurs have only their contact information in their website.

The recognized tools in the preliminary framework for the second element were blogs, content marketing, website and e-commerce. According to the interviews, other tools utilized by micro-enterprises are videos, which are published in YouTube, search engine optimization and e-mail. Interviewees explained that e-commerce is not very common digital tool among micro-enterprises excluding companies, which businesses' focus purely on e-commerce.

At the third element, *retaining customers,* the interviewee X would separate micro-enterprises that have operated longer and younger companies, start-ups. Micro-enterprises that have operated longer understand the importance.

> We have to separate long-operated micro-enterprises and then this kind of start-ups, which do not have that much customer base. Especially those, who have history [...] are ready to put resources on it. [Interviewee X]

Potential tools recognized in the theoretical framework were blogs,

Facebook, content marketing, e-mail and website. Interviewee Z states that in many cases understanding content marketing as a whole is missing. According to the interviewee X, micro-enterprises also utilize intranet, where part of a website is not available for everyone.

As in the previous element, also in *learning customer preferences,* both interviewees suggested separation among micro-enterprises. Companies that have operated longer invest and understand the importance of the element more profound. The interviewee X added that micro-enterprises are all the time more interested of automatization in order to figure out, in which products the customers have been acquainted on the website. Hereby customers can be approached through specific product.

> All the time we are going towards that the companies try like to know customers secretly. [Interviewee X]

According to the interviewee X, companies cannot only utilize digital marketing in learning customers' preferences – the element goes deeper into personal level. Surveys through e-mails and Facebook in learning about customers are rarely utilized.

According to the interview the fifth element, *relating to customers,* is an element that is often left behind in micro-enterprises.

> Those (entrepreneurs) that have understood the situation, they try to give personal service, but in digital form too little; we are talking about 10 percent. There is not yet understanding that customers could be served there. It is not understood to utilize communication with the customers. [Interviewee Z]

Recognized tools in the theoretical framework were Facebook and e-mail. According to the interviewee X a used tool among micro-enterprises is also intranet. Interviewee Z points out also social media's power, particularly Facebook's.

The significance of mobile marketing is enormous for all companies, also for micro-enterprises, according to the interviewee X. Nowadays, companies do not perform marketing, which is not compatible to mobile marketing. According to interviewee, companies started to pay attention to mobile marketing in 2013 and the channel has had a great role ever since. Mobile marketing became popular, when making of a responsive website became cost effective.

Discussion

Our study's prior target was to increase knowledge of micro-enterprises' current utilization of new digital marketing tools in building

TABLE 1 Digital Marketing Tools for Micro-Enterprises in Building Customer Relationships

Category	Theoretically recognised digital tools	Utilised digital tools
Attract customers	Facebook Search engine Marketing E-mail	Facebook Search engine Marketing E-mail *Blog* *Video* *Analytics tools*
Engage customers' interest and participation	Blog Content marketing Website E-commerce	Blog Content marketing Website *Video* *Search engine optimisation* *E-mail*
Retain customers	Blog Facebook Content marketing E-mail Website	Blog Facebook Content marketing E-mail Website *Intranet*
Learn customer preferences	Facebook E-mail	*Analytics tools*
Relate to customers	Facebook E-mail	Facebook E-mail *Intranet*

their customer relationships. To answer research questions, the new digital marketing tools were examined through five elements of building customer relationships.

Our framework on micro-enterprises' digital marketing tools in building customer relationships is a new approach in discussion on digital marketing tools. Also micro-enterprises' owner-managers' human capital and its' effect on digital marketing is valuable viewpoint to scientific conversations. Micro-enterprises' digital marketing is managerially and societally current issue, which has been underexplored so far. Our case study offers perspective for micro-enterprises about practical digital marketing tools in different elements of building customer relationships. Empirical results showed that entrepreneur's personal features affect whether the enterprise will utilize digital tools and if the enterprise will co-operate with marketing companies.

In the theoretical framework (table 1), digital marketing tools for micro-enterprises are presented under the elements of build-

ing customer relationships. Empirical results showed that micro-enterprises invest relatively extensively to the first element, attracting customers. The interviews supported partly the earlier knowledge as Facebook, search engine marketing and e-mail were recognized as potential tools in developing the element. However, empirical results added also new digital tools such as blogs, videos and analytics tools to the element. Hauser (2007) emphasizes that analytics tools should became companies' standard tool in digital marketing as the tool demands companies to utilize data in order to understand customers in their every lifecycle phase. In 21st century, immediate interactive marketing demands utilization of customer information so that personal customer relationships can be built in acquiring new customers (Hauser 2007). According to Waters and Jones (2011) videos strengthen the idea of companies' products and services, give personality to the organization and most of all build brand. Feguson (2008) continues that wide spectrum of organizations are going towards social media, such as YouTube, in order to spread news and videos.

Also in the second element, engaging customers' interest and participation, earlier literature and empirical results partly support each other. Empirical results showed that in general, micro-enterprises understand the importance of the element and they invest in it, but especially solo-entrepreneurs lacking invest on it. Common tools between earlier knowledge and empirical results were blogs, content marketing and website, which indicate that these tools are still relevant. Empirical results showed that micro-enterprises also use currently videos, search engine optimization and e-mail. Nevertheless, e-commerce, which was recognized as applicable tool in theoretical framework, was not mentioned in empirical results. According to the interviewees one reason is that micro-enterprises' are lacking resources and Jahanshahi et al. (2013) write that one disadvantage of e-commerce is high costs of user support.

Blogs, Facebook, content marketing, e-mail and website were recognized earlier as potential tools for micro-enterprises in the third element, retaining customers, and digital tools are also utilized in the companies. The empirical material completed the earlier knowledge with intranet. Intranet can be defined as dynamic and personalized gate in network, which belongs exclusively to the company. With intranet companies have opportunity to face the customers' information needs (Neill and Richard 2010). According to the empirical results, long-operated micro-enterprises invest more and understand the importance of the element compared to start-ups.

In learning customer preferences, theoretically recognized digital tools for micro-enterprises were Facebook and e-mail. Contrary, empirical material showed that micro-enterprises utilize only analytics tools in the element. Micro-enterprises do not usually utilize analytics tools without external help because the tools require knowledge of developing the database and controlling the quality of information (Hauser 2007).

According to Dehkordi et al. (2012), e-mail marketing helps companies to get feedback from customers easily. However, empirical results showed that analytics tools have a greater role in learning customer preferences – e-mail is not no longer current tool in the element. Hauser (2007) says that analytics tools are crucial particularly in retaining current, the most profitable customers. Hanson, Wrangmo, and Soilen (2013) state that one of the greatest benefit in Facebook is customers' opportunity to communicate with companies of their need and wants. According to the empirical results, companies are trying to get information about customers without customers' knowledge. Generally, micro-enterprises utilize relatively little digital tools in the fourth element.

In theoretical part, e-mail and Facebook were recognized as applicable digital tools in relating to customers. Empirical results supported the theoretical part, as micro-enterprises utilize e-mail and Facebook in developing the element. Merisavo and Raulas (2004) have written earlier that e-mail marketing should concentrate to deepen the relationships with loyal customers and the e-mail communication should be built based on individual preferences. This can be achieved by using e-mail in development of the element. In addition, intranet was in empirical results the most cost-efficient and applicable tool for the element: intranet can be called as personalized tool (Neill and Richard 2010). Micro-enterprises do not invest much to the element in question. In addition, the quality of mobile sites affect greatly consumers' attitude towards the brand (Watson et al. 2013).

To conclude, micro-enterprises have a wide range of opportunities to utilise digital marketing tools, and companies that use marketing services exploit tools relatively extensively based on the present study's findings. Nevertheless, solo-entrepreneurs appear to neglect a long-term focus on digital marketing tools even though they have many opportunities to benefit from digitalisation. Micro-enterprises have to take into account that their owner-managers' human capital and knowledge of these tools have a great impact on digital marketing and its success. Different digital tools have different impacts on

companies' digital marketing objectives. Micro-enterprises need to consider how they can use different digital tools in order to build their customer relationships more efficiently. Micro-enterprises also should concentrate on ensuring that all their digital tools are integrated with each other and that their marketing strategy is systematic, persistent and compatible to mobile marketing.

One of the most important digital tools for micro-enterprises, based on the present research's results, is website, as micro-enterprises do not generally have a separate sales department. In addition, content marketing is cost-effective and valued highly, while e-mail appears to be the most commonly used tool in all five customer relationship elements. Thus, e-mail can be considered a versatile tool. Micro-enterprises need to emphasise learning customer preferences and relating to customers, as the significance of these elements is usually not adequately understood. In other words, micro-enterprises focus, in general, more on acquiring customers, and these firms do not put enough stress on committing to customers and retaining their loyalty.

We are acknowledged that study has some limitations, primarily about generalizing the findings of instrumental cases regarding the heterogeneous group of micro-enterprises. The small number of cases limits generalizations from this study's findings. Moreover, some of the findings may be case-specific or context-specific. Therefore, the findings of the study cannot be directly generalised to other micro-enterprises or business contexts and depend on the time of the data collection. Thus, in the future studies more empirical data should be collected to able to confirm the findings presented in this study. However, the results offer preliminary insights for facilitating future studies. We are aware that mobile strategy is a key aspect of digital marketing (Lamberton and Stephen 2016). In addition, responsive design of websites, addressing communities on social media (Kaplan and Haenlein 2011) and viral marketing (Kaplan and Haenlein 2011; Hinz et al. 2011) are all relevant aspects of digital marketing which we have not been discussed much in our study. Thus, in the future studies these aspects of digital marketing could be discussed in way that is more detailed. In addition, this study has not discussed newer state-of-the art platforms such as Snapchat, Instagram or Pinterest which have emerged in the situation when consumers are 'constantly connected' through their mobile phones and which has changed their roles from consumer to acting also advertiser and promoter (Lamberton and Stephen 2016). This changed situation offers new business potential for micro-enterprises and

should be investigated in the future studies. Moreover, studying the phenomenon in business-to-consumer and business-to-business contexts would bring new angle to the discussion of digital marketing tools for building customer relationships.

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Abstracts in Slovene

Kritični primeri rasti v nordijskih službah za e-zdravstvene storitve

Martti Saarela, Daniel Örtqvist, Anna-Mari Simunaniemi in Matti Muhos

Digitalizacija lahko revolucionalizira zdravstvene storitve in zagotovi nove poslovne priložnosti za ustanavljanje inovativnih novih podjetij. Na novo ustanovljena podjetja v sektorju zdravstvenih storitev so obetaven vir novih zaposlitev in inovacij. Začetna faza je najkritičnejše obdobje za preživetje podjetja, saj odločitve, sprejete v zgodnjih fazah, vplivajo na končni uspeh. Ta študija poskuša pojasniti zgodnji razvoj ustanovitev e-zdravstvenih storitev. Raziskovalni namen avtorji povzamejo z naslednjim vprašanjem: kateri so kritični dogodki, ki so povezani z zgodnjim razvojem ustanovitev storitev e-zdravja? V analizo je bilo zajetih 14 nordijskij podjetij, ustanovljenih na Švedskem in Finskem, ki se ukvarjajo z e-zdravstvenimi storitvami. Za zbiranje podatkov sta bila uporabljena tehnika kritičnega incidenta (CIT) in delno strukturiran intervju. Rezultati študije so zanimivi za javni sektor, ki igra pomembno vlogo pri zdravstvenem varstvu kot proizvajalec storitev pa tudi kot ustvarjalec poslovnih pogojev in priložnosti za mala podjetja. *Ključne besede:* e-zdravstvo, zagon, kritični incidenti, Finska, Švedska

Management 12 (2): 115–131

Potrošniške dejavnosti in reakcije na trženje družabnih omrežij

Bistra Vassileva

Name vodje v multinacionalni družbin prispevka je razumevanje vedenjskih vzorcev potrošnikov glede njihove reakcije na trženje družabnih omrežij. Teoretično ozadje se osredotoča na uporabo spletnega in družbenega omrežja, na motivacijo in vedenje. Raziskovalni cilj je raziskati reakcije potrošnikov na izpostavljenost trženja družabnih omrežij, ki temelji na naslednjih merilih: stopnja vključenosti blagovnih znamk, izročitev informacij od ust do ust in namen nakupa. Potrošnike se analizira na podlagi njihovega odnosa do trženja družbenih omrežij in osnovnih družbeno-demografskih kovariatov z uporabo podatkov, vzetih iz vzorca 700 bolgarskih anketirancev: starih od 21–54 let, uporabnikov interneta, mestnih prebivalcev. Uporabljajo se faktorske analize in analize skupin. Ugotovljeno je, da so potrošniki pripravljeni prejemati informacije o blagovnih znamkah in družbah preko družbenih omrežij. O teh blagovnih znamkah in podjetjih bi se radi pogovarjali ter izmenjavali informacije (dejavnik 2, sodelovanje z blagovnimi znamkami) na družbenih omrežjih. Uporabniki interneta so pripravljeni deliti informacije, ki jih prejmejo preko oglaševanja na družabnih omrežjih (dejavnik 1, WOM-vedenje), vendar določene blagovne

znamke ne bi kupili le zaradi njene dejavnosti na družbenih omrežjih (dejavnik 3, nakupni namen). Pripravi se več praktičnih implikacij v zvezi z marketinškimi aktivnostmi na družbenih omrežjih.

Ključne besede: trženje družbenih omrežij, vedenski modeli družbene mreže, vključevanje blagovnih znamk
Management 12 (2): 133–144

Uporaba računalniških sistemov v logističnih centrih in kurirskih podjetjih

Tomasz Szczepanik, Beata Skowron-Grabowska, Joanna Nowakowska-Grunt in Anna Brzozowska

V dobi razširjene informatizacije je potreba po hitrem in neprekinjenem prenosu ter sprejemanju informacijskih sistemov bistven element poslovanja. Uporaba informacijske tehnologije za polno zmogljivost sistemov, ki podpirajo izvajanje osnovnih procesov v logističnih centrih, zagotavlja pravilno izvajanje nalog. Zato imajo tista kurirska podjetja, ki sodelujejo z logističnimi centri, za izvedbo svojih kurirskih dejavnosti priložnost uporabe informacijskih sistemov, ki se uporabljajo v logističnih centrih. Namen članka je ugotoviti vpliv informacijskih sistemov, ki se uporabljajo v logističnih centrih, na storitve kurirskih podjetij. Prispevek predstavlja vrsto informacijskih sistemov, ki se uporabljajo v logističnih centrih, in število stistemov, ki jih uporabljajo kurirska podjetja. Karakteriziran je tudi vpliv informacijskih sistemov na izboljšanje delovanja logističnih centrov in ocenjeno, v kolikšni meri je uporaba informacijskega sistema logističnih centrov vplivala na pretok informacij v kurirskih podjetjih. Študija je pokazala, da uporaba informacijskih sistemov, ki jih ponujajo logistični centri, poenostavlja učinkovitost pretakanja informacij v kurirski službi. Raziskave so pokazale, katere logistične centre IT-sistemov uporabljajo in kako njihova uporaba vpliva na pretok informacij v kurirskih storitvah.

Ključne besede: logistični center, kurirska družba, računalniški sistemi, informacijska tehnologija
Management 12 (2): 145–153

Potencial in ovire za sprejem B2B-e-poslovanja v MSP v tranzicijskih gospodarstvih: primer Albanije

Narasimha Rao Vajjhala in Salu George Thandekkattu

Mala in srednje velika podjetja (MSP) lahko znatno izkoristijo naložbe v e-trgovino in e-poslovanje. Vendar je sprejetje e-poslovanja med MSP precej počasno in omejeno, zlasti v tranzicijskih gospodarskih državah. Intervjuji so potekali z višjimi managerji iz 30 srednje velikih podjetij v tranzicijskem gospodarstvu Albanije – s po tremi iz vsakega od desetih ključnih sektorjev, in sicer informacijske in komunikacijske tehnologije (IKT), turizma, bančništva, finančnih storitev, kmetijstva,

zdravstvenega varstva, logistike, proizvodnje, gradnje in maloprodaje. Kvalitativne podatke, kodirane iz poglobljenih intervjujev, smo analizirali s pomočjo tehnike NVivo® za prepoznavanje ključnih tem. Tako so bile opredeljene štiri ključne teme in deset podtem. V študiji so bili identificirane štiri ključne teme, ki lahko pomagajo organizacijskemu vodstvu srednje velikih podjetij v tranzicijskih gospodarstvih, v strateško prednostih tehnologijah e-trgovine; te vključujejo omejitve virov, zunanje dejavnike okolja, organizacijska vprašanja in odpornost na sprejemanje nove tehnologije. Opredelitev ključnih preprek in dejavnikov bo organizacijskim vodstvom v tranzicijskih gospodarstvih, kot je Albanija, pomagala pri oblikovanju strategij za spodbujanje e-trgovine v malih in srednje velikih podjetjih. Ugotovitve študije bodo pomagale organizacijskim vodstvom MSP v tranzicijskih gospodarstvih z opredelitvijo ukrepov za reševanje ovir, ki se lahko pojavijo pri sprejemanju e-poslovanja. Študija predstavlja tudi obogatitev omejene literature o ovirah pri sprejemanju e-poslovanja v okviru MSP v tranzicijskih gospodarstvih. Ponuja vpogled v e-poslovanje, katerega se lahko uporabi tudi v drugih tranzicijah in nastajajočih ekonomijah, ki poskušajo razumeti ovire, ki bi lahko ovirale sprejetje e-poslovanja v MSP.

Ključne besede: ovire, e-trgovina, e-poslovanje, izzivi, prehod, Albanija
Management 12 (2): 155–169

Mikropodjetniška ogrodja za digitalno trženje in vzpostavljanje odnosov s strankami

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Digitalno tržno okolje se hitro spreminja in za mikro podjetja je digitalno trženje trenutno zelo pomembna priložnost. Privabljanje strank, vključevanje njihovih interesov in udeležbe, ohranjanje strank, zavedanje o željah kupcev in povezovanje s strankami so ključne strategije za izgradnjo močnih odnosov s strankami; vendar pa mnoga podjetja ignorirajo dolgoročne vidike upravljanja odnosov s strankami. Študija skuša prispevati k poglobljenemu razumevanju trenutnih strategij mikro podjetij glede novih orodij digitalnega trženja, ki spodbujajo krepitev odnosov s strankami. Na podlagi intervjujev z dvemi ponudniki, ki nudita storitve digitalnega trženja, članek opisuje, kako njuni odjemalci uporabljajo digitalna tržna orodja skozi pet elementov grajenja odnosov s strankami. Ugotovitve poudarjajo pomen praktičnega razumevanja orodij za digitalno trženje, saj se okolje digitalnega trženja hitro spreminja. Človeški kapital in poznavanje digitalnega orodja s strani lastnikov-managerjev mikro podjetij imata velik vpliv na digitalno trženje teh podjetij in v končni fazi tudi na njihov uspeh.

Ključne besede: digitalno trženje, mikro podjetje, orodje za digitalno trženje, odnos s strankami
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