# International Journal of
# Management, Knowledge and Learning

# Contents

# Guest Editor's Foreword

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The role of knowledge in the process of value creation has been rather apparent for quite some time now. Nevertheless, its ever growing importance means that it is worth studying it in real-time and repeatedly. Paul M. Romer, one of the laurates of the 2018 Nobel Memorial Prize in Economics, stated as long ago as in 1986 that the endogenous accumulation of knowledge would yield economic growth (Romer 1986).

Europe belongs to the developed part of the world but there are some challenges the continent is facing in this respect. European economic actors are taking various positions in global value creation – not always the top ones, although there are positive examples as well. Also, Europe has lately been challenged by emerging economies that are quickly stepping upwards the knowledge, technology and innovation ladders.

This volume targets the wide topic of the knowledge-based economy in Europe, and discusses its selected issues from a multitude of aspects. All papers included in this special issue relate to the main topic in some way. We can first find a conceptualising paper on business intelligence, competitive intelligence and knowledge management that may help businesses and scholars to better understand their essence, relations, and impact on business success. The paper is then followed by three studies discussing various business-related aspects of the knowledge-based economy in Europe: firstly, one examines the networking of family businesses considered as an essential way of constant, quasi in-built knowledge-sharing. The next one focusses on the drivers of new product development in a comparative perspective (i.e. comparing Finland and China), while the last one analyses the growth management of service-oriented micro-enterprises in sparsely populated areas. The last two papers of this special issue focus on the higher education sector as an essential part of the knowledge-based economy: we can read about the components of effective knowledge management in higher education partnerships, as well as a case study on the cultural intelligence of students as one area of human intelligence.

All the papers included here were presented at the MakeLearn & TIIM 2018 international conference titled 'Integrated Economy and Society: Diversity, Creativity and Technology,' organised in Naples (Italy) on 16–18 May 2018. They have in fact been selected from a rather wide pool of submitted papers, and have undergone a double blind peer-review process before

publication. The guest editor hereby expresses her thanks and appreciation to the authors, the reviewers, and the journal editorship for the smooth and fruitful cooperation resulting in this volume. Lectori salutem!

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# Considerations for Successfully Investing in Commercial Intelligence and Knowledge Management

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Recognizing the need to acquire, process, analyze, store, share, and protect information used to support decision-making and awareness of the business environment, Information Age companies may consider investing in business intelligence, competitive intelligence, and knowledge management. However, inadequate understanding of the capabilities and limitations of these distinct disciplines can lead to unrealistic expectations; consequently, many such investments yield disappointing results. This paper provides background information, and identifies key variables that corporate leadership should take into account when contemplating an investment in one or more of these disciplines.

*Keywords:* business intelligence, competitive intelligence, knowledge management

## Introduction

The futurist Alvin Toffler (1980) famously described the transitions from Agricultural Age societies ('First Wave') to Industrial Age societies ('Second Wave'), and then to Information Age ('Third Wave') societies. Whereas the source of power in Agricultural Age societies was land ownership and in Industrial Age societies the means of production, in Information Age societies, the source of power is information itself.

Not all information is created equal, nor does all information have equal value. For that matter, not everything commonly referred to as information is even information at all. Ackoff (1989) proposed the DIKW hierarchy to distinguish between data, information, knowledge, and wisdom. In ascending order of value, *data* consists of observations that are devoid of meaning until organized and placed in context, creating *information; knowledge* results from combining information with experience; and *wisdom* results from insight (Rothberg & Erickson, 2017). As one popular aphorism states, 'Knowledge means knowing that a tomato is a fruit, and wisdom means knowing to not put tomatoes in a fruit salad.'

One commonly-used word not accounted for by Ackoff's DIKW hierarchy, and often used in both government and commercial circles, is *intelligence.* According to a declassified CIA document, intelligence is 'the product result-

ing from the collection, evaluation, analysis, integration, and interpretation of all available information' (Bimfort, 1958, p. 76) on a subject of interest to the recipient. One collects data and information, applies knowledge to determine its meaning and significance, and then on the basis of this intelligence determines how (or whether) to act in response. Hence the term *actionable* intelligence.

The good news for commercial firms in the Information Age is that, thanks to advances in technology, it is now possible to acquire more data and information, from more sources, faster, and in greater volume than ever before. Unfortunately, the bad news for commercial firms is that, thanks to advances in technology, it is now possible to acquire more data and information, from more sources, faster, and in greater volume than ever before. In order to derive actionable intelligence from this incoming flood, corporate leaders face the daunting prospect of wading through endless, deep, murky waters of data and information.

While intelligence is essential for making informed decisions, either in the government or commercial sector, resource-intensive intelligence activities must be both as efficient and targeted as possible. As Frederick the Great once said, 'He who defends everything, defends nothing.' Altering the Prussian leader's wording a bit gives his comment relevance for the current discussion: 'He who seeks to know everything, knows nothing.' The volume, variety and velocity of incoming information grows faster than our ability to acquire and process it. Resources (people, money, and time) are always limited, and data overload poses a serious challenge. Having more information can be more problematic than having less information; as Ackoff (1989) observed, management's most critical information need is not more relevant information, but *less irrelevant* information.

## A Universal Challenge

In the business world, there are seemingly endless sources of data and information, and multiple disciplines for acquiring information useful for enabling leaders to make informed decisions. But how does one know where to apply resources to get the best return on investment for intelligence? In order to gain and maintain a competitive edge, Information Age firms must have awareness of their industry, their competitors, the business environment, market trends, their suppliers and customers, as well as their own capabilities. The means to obtain such awareness is through commercial intelligence activities and knowledge management.

Knowing how to best apply scarce resources to acquire, process, store, and share intelligence in the most productive manner is a problem shared by large and small firms alike. Larger firms may have sizeable resources invested in intelligence and knowledge management (KM) systems, and employ teams of specialized, dedicated practitioners. However, theirs is a

problem of scale, because the larger and more multi-faceted a company is, the greater its intelligence and KM needs will be. On the other end of the spectrum there are small and medium enterprises (SMEs), which have fewer available resources to invest in intelligence, probably lack well-trained, dedicated practitioners, and may not even understand what the various intelligence disciplines can do for them, individually or collectively. In the case of both large and small companies, a clear understanding of what these disciplines have to offer is essential.

## The Triad of BI, CI, and KM

In the commercial world, *strategic intelligence* has been described as a triad consisting of business intelligence, competitive intelligence, and knowledge management (Liebowitz, 2006; Alnoukari & Hanano, 2017). Each of these three disciplines differ from each other in five key respects: (1) orientation; (2) data sources; (3) practitioner training, experience, and skill sets; (4) the role of IT; (5) techniques and tools. Despite these significant differences, the literature reveals considerable confusion as to what these disciplines are, what they do, and how they relate to and support one another.

## Business Intelligence

*Business intelligence* (BI) refers to the ability of a business to use the data generated by that business to support decision-making. The term BI has been around already for six decades; it was coined by Luhn in 1958 'to describe the abstracting, encoding, and archiving of internal documents and their dissemination using "data-processing machines"' (Kimble & Milol-idakis, 2015, p. 24). Since 1989, there has been increasing interest in BI in academic, business, and management circles (Sun, Sun, & Strang, 2016, p. 2). BI has been described as 'a framework that consists of a set of theories, methodologies, architectures, systems, and technologies that support business decision-making with valuable data, information, knowledge, and wisdom' (Sun et al., 2016, p. 4).

There are four types of BI systems (reporting, analysis, monitoring, and prediction), and each system serves a distinct purpose: Reporting systems inform management about *what* has happened, analysis systems provide insight as to *why* something has happened, monitoring systems keep management up-to-date *as* events occur, and prediction tools enable management to predict what *may* happen on the basis of trend analysis (Gauzelina & Bentza, 2017, p. 41). In other words, BI can be descriptive, predictive, or prescriptive. BI practitioners have educational backgrounds and experience in computer programming, mathematics, statistics, and data analytics. BI-related technology includes specialized software and databases optimized for BI, rather than for operational, purposes.

BI has evolved considerably over the past decade or so because of IT

developments that have exponentially increased the amount of data that could be gathered and stored, the steadily declining cost of data storage, and the development of BI 'tools for deep analytics, including data mining and prediction' (Rothberg & Erickson, 2017, p. 97). BI now encompasses software applications, IT infrastructure, tools, methodologies, and BI practitioners skilled in statistical analysis.

At first, BI was largely focused internally, upon data generated by the company itself. Common sources of information for BI include transaction data, inventory, accounts payable, order status, and customer data. However, thanks to the Internet, in recent years some of the focus of BI 'has shifted from internal to external data, such as that found in web platforms' (Kimble & Milolidakis, 2015, p. 26). Another boon to BI has been recent advances in technology that have 'allowed the capture and analysis of unstructured inputs (video, images and text)' (Rothberg & Erickson, 2017, p. 97). 'More recent developments – for example, context-aware applications that provide data about what users are doing, where they are located, whom they are with, and even, in the case of devices such as activity trackers, physiological data – have contributed to this trend' (Kimble & Milolidakis, 2015, p. 26).

Although BI has existed for decades, recent IT advances have brought about a BI sub-discipline known as *big data (BD) analytics.* 'Big Data refers to datasets whose size are beyond the ability of typical database software tools to capture, store, manage and analyze' (Nagar, Atriwal, Mehra, & Tayal, 2016, p. 3585). As for big data analytics, this has been described as 'the process of collecting, organizing, and analyzing big data to discover, visualize, and display patterns, knowledge, and intelligence as well as other information within the big data' (Sun et al., 2016, p. 2). The difference between BI and BD is not simply one of scale, but also granularity. Whereas traditional BI focuses on gathering and analyzing a firm's data to assess past performance and identify trends, BD 'excels in processing semi or unstructured data from various sources and exploring or predicting business questions humans might not consider' (Wu, Shi, & Yang, 2017, p. 2). 'While traditional BI presents historical information to users for analysis, real- time BI compares current business events with historical models to detect problems or opportunities automatically' (Langlois & Chauvel, 2015, p. 58).

BI and BD have some commonalities, such as the use of data mining. However, the differences between BI and BD are more than definitional; though related, BI and BD call for different skill sets. BI practitioners require skills in relational database and data warehouse manipulation, and use standardized software and tools to manipulate and analyze structured data within a firm. By contrast, BD practitioners take unstructured data from multiple data sources and employ advanced programming techniques

to manipulate and analyze this data. They require skills in 'distributed programming and architecture design, have internet domain knowledge and excel in python and linux' (Wu et al., 2017, p. 4). Three Chinese researchers found that in China, at least, the demand for BD competencies is almost six times higher than for BI competencies (Wu et al., 2017, p. 1). This is consistent with a prediction contained in a 2011 McKinsey Global Institute report, stating that by 2018 the US 'will face a shortage of 140,000 to 190,000 people with deep analytical skills, as well as a shortfall of 1.5 million data-savvy managers with the know-how to analyze big data to make effective decisions' (Chen, Chiang, & Storey, 2012, p. 1165).

Another term that appears to encompass both BI and Big Data is business intelligence and analytics (BI&A), which 'is often referred to as the techniques, technologies, systems, practices, methodologies, and applications that analyze critical business data to help an enterprise better understand its business and market and make timely business decisions' (Chen et al., 2012, p. 1166).

## Competitive Intelligence

Compared to BI, which has been around for more than half a century, *competitive intelligence* (CI) is a relative newcomer, tracing its roots as a profession to the late 1980s and early 1990s. Companies engage in CI 'to gather and analyze data, information, and knowledge with the ultimate objective of understanding and anticipating competitive strategies and actions' (Erickson & Rothberg, 2012, p. 37).

Whereas BI activities are focused on the company's *internal* environment and information, CI activities are focused on the environment and information *external* to a company (Alnoukari & Hanano, 2017, p. 9). Often mentioned during conversations about CI are such terms as market intelligence, marketing intelligence, and strategic intelligence. Although CI and these terms are sometimes (and inaccurately) used interchangeably, these activities, while different, 'are too close and overlapping to be separate disciplines' (Søilen, 2016, p. 28) What they all share, however, is an external orientation and common practitioner skills.

CI (which is legal) is not industrial espionage (which is illegal). CI practitioners follow the law and observe a professional code of ethics. According to the CI professional organization SCIP (Strategic and Competitive Intelligence Professionals), competitive intelligence is 'the legal and ethical collection and analysis of information regarding the capabilities, vulnerabilities, and intentions of business competitors' (see http://www.scip.org/?page=aboutscip). This is not to suggest that industrial espionage does not occur, because it certainly does. Precisely because of the industrial espionage threat, and in contrast to BI and KM, CI possesses both offensive and

defensive aspects: one of the roles performed by CI practitioners is help-ing a company identify vulnerabilities of its own sensitive information, and help protect that information by recommending policy changes and training employees to increase threat awareness.

CI practitioners assist corporate decision-makers through environmental scanning, competitive benchmarking, competitor analysis, and wargaming. CI practitioners engage in primary and secondary source research, conduct Internet searches, query paid subscription databases, and public records for such things as patent information, press releases, and news about merger and acquisition activity in the industry. In addition to accessing and exploiting publicly available information (PAI), more advanced CI practition-ers will also develop 'a human network of sources' (Erickson & Rothberg, 2012, p. 30). Acquiring competitor information at trade shows is a tradi-tional CI activity conducted by CI practitioners with the skills, methodolo-gies, techniques, and experience necessary to acquire competitor data in such an environment. Not surprisingly, then, the skills and experience of CI practitioners correspond to activities they perform in the discipline; CI prac-titioners often have backgrounds in library science or human intelligence.

Currently, there is a surprising lack of consensus in the professional literature as to what CI is, and how CI compares and relates to BI. One reason is the lack of agreement, even among professionals, as to what exactly constitutes CI (Søilen, 2016, p. 24). Throughout their 1994 arti-cle 'The Ethics of Business Intelligence,' Schultz, Collins, and McCullouch consistently use the term *business intelligence* to describe activities cur-rently associated with *competitive intelligence.* For example: 'The purpose of business intelligence is to help managers assess their competition, their vendors, their customers, and the business and technological environment' (Schultz et al., 1994, p. 306). Even more recent literature reflects continued confusion about CI and BI, and the relationship between them. Some au-thors wrongly refer to CI as a subset of BI. Zheng, Fader, and Padmanabhan (2012) refer to CI as 'an important area within business intelligence (BI)' (p. 698). Langlois and Chauvel (2015) describe CI 'as a special branch of the BI literature' (p. 51). Gauzelina and Bentza (2017) state that CI 'is part of business intelligence' (p. 43) and that BI 'can be used to gain competitive intelligence which is vital in shaping the strategy of a company,' and that a BI system 'leads to the accumulation of competitive intelligence' (Gauzelina & Bentza, 2017, p. 41).

Part of the reason for these differing definitions may be because BI and CI have some comparable processes and techniques, tools and products that appear similar to a layman, and because BI increasingly draws data from external sources. Like BI, CI 'has to do with collection, analysis and application of all kinds of inputs (data, information, knowledge and existing

intelligence) concerning competitors and related topics' (Rothberg & Erickson, 2017, p. 96). Terminology adds to the confusion: Although *mining* is a term frequently associated with BI, data mining, text mining, and web mining are also common CI techniques (Alnoukari & Hanano, 2017, p. 9). Data warehousing, which once drew historical or current data exclusively from internal databases, now draws from external open sources, as well (Sun et al., 2016, p. 2). Further adding to the confusion is the fact that both BI- and CI-derived data can be presented using comparable reporting tools and formats, such as SWOT analysis, balanced scorecards, dashboards, or through visualization software products. Automated systems and specialized software, commonly associated with BI, are now available for use by CI practitioners as well. One example is Cipher Systems' Knowledge360 software as a service (SaaS) offering, which automates CI searching and reporting, featuring also knowledge management functionality. An executive already familiar with seeing BI dashboards might assume that CI software is simply 'more of the same.' Nothing could be further from the truth. 'Current BI dashboards often fall short of providing CI capabilities, largely due to the fact that detailed information on competitors is hard to obtain' (Zheng, Fader, & Padmanabhan, 2012, p. 698).

As BI and CI have continued to mature as disciplines, with different orientations and data sources, and specialized tools, techniques, and practitioner backgrounds, there is growing recognition that these are distinct, parallel activities (Alnoukari & Hanano, 2017). BI demands specialized analytical skills, software, and access to reliable data. The good news, however, is that a company possessing these required components can look internally at its own data to conduct analysis and gain insight. CI becomes invaluable when the focus shifts from inside the company to outside.

## Knowledge Management

*Knowledge management* (KM) focuses on categorizing, cataloguing (storing for future retrieval), internally sharing, as well as protecting a company's knowledge assets. Unlike BI and CI, which involve the *acquisition* of knowledge, KM is 'more about managing what is already in place' (Erickson & Rothberg, 2012, p. 37).

Just as it was important to point out that CI is not industrial espionage, it is equally important to note that there is a significant difference between data management and knowledge management systems. Examples of data management systems include ERP (enterprise resource planning), SCM (supply chain management), and CRM (customer relations management) systems. Such systems are used to manage operations and send raw data around the network. Such systems are not necessarily used to support strategic decision-making, and are not generally considered part of

KM, since they involve data and information, what Erickson and Rothberg (2012) refer to as 'pre-knowledge' (p. 30).

Not only are there differences between data, information and knowledge; there are also different types of knowledge. 'At one extreme, there is tacit knowledge: individual, hard to define, hard to explain, and hard to codify or capture within the organization, particularly with digital means. At the other extreme is explicit knowledge, definable, explainable, subject to capture by the firm as it can be written down and/or stored in information technology systems' (Erickson & Rothberg, 2012, p. 36). Optimally, a company's KM system will be effectively used to capture both tacit and explicit knowledge.

By managing tacit and explicit knowledge, what KM does is manage *organizational intelligence,* which Liebowitz (2006) defines as 'the collective assemblage of value-added benefits derived from the organization's intangible assets (knowledge from employees, management, stakeholders, and customers)' (p. 7). Types of organizational intelligence, or capital, that a company can possess in its KM system is human capital (job-related knowledge), structural capital (organization-related knowledge), relational capital (knowledge-based on relationships with external parties, like partners, vendors, and clients), and competitive capital (knowledge derived from CI activities) (Erickson & Rothberg, 2012, p. 30).

One noteworthy aspect of KM is the importance of a company not only having KM technology and practitioners, but also a knowledge-sharing culture. Whereas BI and CI can be self-contained activities, KM, in order to be truly effective, requires a corporate culture of knowledge-sharing (Kulkarni, Robles-Flores, & Popovič, 2017, p. 519). This does not mean that everyone in an organization should have unfettered access to all information; rather, it means that different types of knowledge valuable to the company are systematically captured, stored, and made rapidly and easily accessible to those with a legitimate and authorized need for the information.

## A Naval Metaphor

A metaphor may be helpful in illustrating the differences between BI, CI, and KM, the distinct contributions of each discipline, and their complementary nature.

Imagine a company CEO as the captain of a naval vessel. The navy has many different types of ships, each of which is designed, built, equipped, and manned to perform certain types of missions. However, while naval ships may differ considerably in terms of size, function, and capabilities, the captain of each and every ship in the navy must adequately understand his external operating environment: water depth, shipping lane activity, tides, currents, underwater obstacles, and weather are just a few of the broad external factors of which a naval ship captain must be aware. A naval

ship possesses a variety of systems and intelligence specialists who gather and provide that information to the captain, enabling the captain to make informed decisions. In the business world, competitive intelligence practitioners and systems provide the CEO and senior management with external, environmental awareness. On board a naval ship, a critical activity for providing the captain with environmental awareness is *force tracking,* or identifying and monitoring the presence, capabilities, actions, and intentions of friendly forces, civilian shipping, plus a wide range of potentially adversarial forces or threats. In very similar fashion, the CEO of a company must have environmental awareness of a range of external entities whose presence, capabilities, actions, and intentions could positively or negatively impact the company's business. Although this is commonly referred to within the competitive intelligence field as *competitor tracking,* the truth is that a company must have ongoing awareness not only of competitors, but also of such important other entities as supply chain vendors, partners, contractors, and actual and prospective customers.

The captain is informed that another vessel is rapidly approaching from the east. After consulting an onboard 'order of battle' database, an intelligence specialist confirms that the approaching vessel belongs to an adversary's navy. Because of his past, personal experience interacting with ships of that adversary's navy in these particular waters, a chief petty officer suggests to the captain that it might be prudent to change course.

The ship's captain considers the situation and realizes there are implications associated with changing course and increasing speed. Does the ship have enough onboard fuel to allow for increased speed and a course change, but without necessitating at-sea refueling? This is where the navy's analogs to business intelligence systems come into play. The captain can turn to those sailors operating onboard systems capable of reviewing systems data *internal to the ship* that address ship operating parameters, resource usage, and resource availability. In similar fashion, a company CEO can turn to BI analysts who leverage internal databases and data sources to make comparable assessments about capabilities, costs, resources, and implications of different scenarios.

Soon after the course change has safely put his ship outside the path of the approaching vessel, the captain makes a notation in his logbook to reflect what has recently occurred, what decisions he made, and why he made them. These are all examples of knowledge management in action: drawing upon tacit knowledge based on personal experience, and effectively transferring that knowledge to someone who needs it. Rapidly accessing previously-stored knowledge (contained in the order of battle database) and leveraging it to support informed decision-making. Documenting new knowledge and storing it for later use.

## Unrealistic Expectations

Inaccurate or unrealistic expectations about BI, CI, or KM can have costly, and disappointing, consequences. In the case of investments in BI, for example, most companies fail to achieve the desired results. As Olszak (2016) noted, 'the case of BI successes described in the literature are still rare' (p. 112); fully 60–70% of BI applications fail 'due to the technology, organizational, cultural, and infrastructure issues' (p. 105). A 2017 article reporting the results of research conducted in 10 French small- or medium-sized enterprises stated that, while there was overwhelming acknowledgement of the value of implementing BI systems, barriers to their introduction included not only funding constraints, but also the lack of employees possessing the mathematical and IT skills necessary to employ BI tools and maintain databases (Gauzelina & Bentza, 2017, p. 47). Erickson and Rothberg (2012) argue against the notion that investing heavily in KM or CI is 'necessarily the optimal;' what they discovered through their research was that 'knowing what your key knowledge assets were like, where they were, and how they could best be employed (or not) given industry circumstances was better' (p. 1).

## Strategy Drives Intelligence Needs

Regardless of a company's size, its intelligence requirements, activities, and priorities should be determined by its business strategy. A company's strategy articulates where the company intends to go, and how it intends to get there. These two aspects of the company's strategy drive identification of the kinds of information that will be needed to achieve these identified strategic objectives. Once a strategy is developed, Key Intelligence Needs (KIN) can be identified and prioritized, and the discussion can then turn to how data and information responding to those prioritized KIN should best be acquired, processed, stored, and shared.

The relationship between strategy and intelligence is a symbiotic one: While strategy determines and prioritizes intelligence requirements, incoming intelligence information may cause management to modify or change its strategy. A company's intelligence requirements can be either standing (permanent) or *ad hoc* (time sensitive and short-term). An unexpected development could create an *ad hoc* intelligence need that takes temporary priority over all other standing requirements. While strategy drives intelligence, intelligence may result in changes in strategy. The process, by necessity, is iterative. As then-US Defense Secretary Donald Rumsfeld said, 'There are things we know that we know. There are known unknowns. That is to say there are things that we now know we don't know. But there are also unknown unknowns. There are things we do not know we don't know' (Rumsfeld, 2002). The acquisition of intelligence in support of a strategy

may result in modification of the strategy, or in some cases, of strategic goals.

## Industry Role in Determining Intelligence Investments

A company's long-term strategic plan should serve as the starting point for deliberations over where (and why) to invest in BI, CI, and/or KM capabilities. Another major consideration is the industry in which the company operates, or intends to operate in the future. Erickson and Rothberg (2012) examined the extent to which firms in different industries leveraged KM and CI. The authors found that the extent to which companies made use of KM and CI tended to be industry-specific; in some industries (such as pharmaceutical and software), companies tended to make extensive use of both KM and CI, while in others (such as commercial banking) they made extensive use of one but not the other, and in yet other industries (such as air transportation), little use was made of either KM or CI (Erickson & Rothberg, 2012).

The pharmaceutical industry is one that Erickson and Rothberg (2012) identify as having a very high need for both offensive and defensive CI because industry competitors are both numerous and dangerous. Companies patent to protect their intellectual property, and the pharmaceutical industry is one of the two most prolific industries in terms of patent generation, second only to the medical device industry (Grigoriou & Rothaermel, 2017). One common CI technique for pharmaceutical companies to maintain awareness of competitor activities, direction, and progress is by monitoring patents. Other techniques commonly employed by pharmaceutical firms to source new knowledge is through internal knowledge development, exploitation of human capital, strategic alliances with external entities, the acquisition of other firms, or some combination of these methods (Grigoriou & Rothaermel, 2017). Given these sources of knowledge, pharmaceutical companies would conceivably benefit from KM. However, a 2017 study revealed that only half of the pharmaceutical companies surveyed employed KM systems at all, and those that did tended to be the larger firms in the industry (Rathore, Garcia-Aponte, Golabgir, Vallejo-Diaz, & Herwig, 2017).

Even in such highly-competitive industries where the need for CI and KM is great, smaller firms appear to invest proportionately less than their larger counterparts. This is also true for BI systems (Gauzelina & Bentza, 2017). As with CI and KM, a company's decision to invest in BI should also be based, in part, on the industry in which the company exists. 'To the extent that analytics can be thought of as an innovative IT technology, research suggests that industry competitiveness might influence the investment decision' (Liberatore, Pollack-Johnson, & Clain, 2017, p. 366). Granted, larger

companies have more resources to invest in the highly-skilled, specialized staff and technologies needed to conduct BI. While it is true that larger enterprises have more resources to devote to more elaborate BI capabilities, the larger a firm is, the more complex and diverse its BI needs become. Smaller firms should assess their needs and employ a level of BI, CI, and KM suitable for their needs and appropriate for their budget. For example, a relatively low-cost BI system that smaller firms could employ would be 'spreadsheets for simple data' used for client information management, or to aid in more efficient budgeting (Gauzelina & Bentza, 2017, p. 43).

Not every industry makes extensive use of BI, CI, and/or KM. Understanding how these are employed in one's own industry is an essential step towards making sound intelligence investment decisions. 'Industries exist in which top firms have high levels of knowledge assets or IC and others where levels are very low and knowledge is apparently not necessary for competitive success. Similarly, industries exist in which CI activity is rife and firms ignore it at their own peril, while in other industries, it is absent, so firms generally need pay offensive or defensive CI no mind' (Erickson & Rothberg, 2012, p. 104).

### Getting the Mix Right

The differences between the terms BI and CI are more than simply semantic; understanding the differences between BI and CI, and the capabilities of each, is important for resource-constrained companies seeking to maximize their investments. BI and CI involve different skill sets, methodologies, technologies and tools, and access to data and individuals.

Company leadership should conduct a needs assessment to determine whether, and how, to employ BI, CI, and KM. Questions to be addressed include the following:

1. Given our industry and corporate strategy, what are our critical information needs?
2. Where does that needed information reside?
   - Externally (CI)?
   - Internally (BI)?
3. What information do we have internal to the company that could be better exploited (BI)?
4. How are we capturing, storing, and sharing knowledge in the company (KM)?
5. What information do I possess that might be sought by competitors (CI awareness)?

## Conclusions

Prior to investing in BI, CI, and/or KM, corporate leadership should assess how and why each of these disciplines are commonly employed in their industry. Leadership should conduct an internal needs assessment, based on the company's strategic objectives and strategic plan, to ensure that investments in intelligence capabilities map to prioritized information requirements. In order to maximize the prospect of a favorable return on investment in these capabilities, leadership must have a clear understanding of the capabilities and limitations of BI, CI, and KM, as well as realistic expectations as to what each can be reasonably expected to deliver. Prior to investing in BI, CI, and KM, corporate leaders should also take into account the associated human resources, technology, and financial implications of those investment decisions.

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# Exploring the Relevance of Knowledge-Based Networking (Social Media) Tools Among Family Businesses

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Behind the success of an organization can be found the ability to manage the constantly 'renewing' knowledge effectively. Knowledge sharing is a vital part of knowledge management. The recent remarkable growth in Internet-based business activities has proved that many different advantages can be derived from communication technology platforms. Internet has changed the way people communicate, collaborate, learn and conduct business. It has delivered to organizations a global market presence, and online marketing has become an essential part of business. Both organizations and customers are more and more involved in social media. Different knowledge-based (social) networking tools have experienced significant growth in recent years. In 2014, an exploratory survey investigated how social media tools were being used for knowledge sharing and whether their usage was supported by Hungarian organizations. As a continuation, a new research focuses on leading family businesses, as their economic and societal value creation is extremely important in the country. The aims of the research are to explore the relevance and usage of knowledge-based networking tools to ascertain the benefits and challenges, as well as to define the reasons and purposes of using social media technologies. In this research, qualitative methodology was used to collect data through semi-structured interviews in 2018. The results indicate that social media provides a great opportunity to reach potential customers. It was found that the most popular social media tools are Facebook, LinkedIn and Instagram. The findings also show that enterprises face some challenges, such as how to respond to customers in real-time.

*Keywords:* knowledge-based, social media, networking, marketing communication, family businesses

## Introduction

Organizations need to thrive, compete, and operate in an ever evolving environment, thus, the transfer of information and knowledge to the partners and customers is an essential part of their business. The Internet makes it possible for the companies to connect, collaborate and transfer knowledge and information. 'The Internet is a global network of interconnected

networks' including corporate, governmental, private and other organizational networks (Strauss & Frost, 2009). Nowadays a majority of the people uses social media tools in order to increase their networks, gather information, while enterprises are also finding the way to integrate them into the business processes. Khang, Eyun-Jung Ki, and Ye (2012) in their research indicated a definite increasing number of social media-related studies that shows huge growth of social media users and its impact on different aspects of individuals' lives and society. Social media are often associated with marketing. The reason is that initially social applications were focused on advertising and related to marketing issues, but later social media became a 'complimentary extension of all of marketing efforts' (Evans & McKee, 2012, p. 37). An exploratory survey in 2014 investigated how social media tools were being used for knowledge sharing and whether their usage was supported by organizations in Hungary (Gaál, Szabo, & Obermayer-Kovacs, 2014). As a continuation of this survey, a new research focuses on Hungarian leading family businesses (LFBs), as their economic and societal value creation is extremely important. The target group (LFBs) was chosen due to the author's own personal interest and contacts towards FBs Hungary. This paper is organized as follows. The theoretical background includes the description of main topics followed by the research framework and discussion of the research results. Conclusion and direction for future work is in the final part of this paper.

## Theoretical Background

This section is about the contribution of various researchers to the field of FBs, knowledge sharing and the description of social media landscape.

### *Family Business*

Family businesses (FBs) are being recognized by their significant economic presence throughout history, they are among the longest-lived, most prevalent organizations in the world (Astrachan, 2010). The study of FBs has evolved rapidly in recent decades (Villalonga & Amit, 2010; Short, Sharma, Lumpkin, & Pearson, 2016; Evert, Martin, McLeod, & Payne, 2016). One of them stands out: the action 'Statistics for family businesses,' conducted with the support of the Programme for the Competitiveness of Enterprises and Small- and Medium-Sized Enterprises (2014–2020) (COSME) (European Commission, 2015) by seven European countries and aimed to identify FBs in order to assess their relevance, scope and nature. FBs have a significant role to play in the strength and dynamism of the European economy. With more than 14 million FBs providing over 60 million private sector jobs (50% to 80% of jobs in a majority of countries) in Europe, their importance to the economy cannot be underestimated (KPMG, 2015). The field

of researching FBs starts in 1975 when the entrepreneur and consultant Leon Danco (1975) published his pioneering paper titled: 'Beyond Survival: A Business Owner's Guide for Success.' The past few decades' research related to FBs has predominantly struggled with defining FBs and their main characteristics. Sharma and Chrisman (1996) in their analysis found 21 different definitions in terms of the FBs in the survey of more than 250 papers. The uniqueness of the FBs is attributed to the different impact of the family on the part of the ownership, management, governance and participation through strategic guidance, direct involvement in the daily activities and/or retention of control of voting (Astrachan, 2010).

In the common European Commission (2015, p. 4) definition, 'a firm, of any size, is a family business, if:

- the majority of decision-making rights is in the possession of the natural person(s) who established the firm, or in the possession of the natural person(s) who has/have acquired the share capital of the firm, or in the possession of their spouses, parents, child or children's direct heirs;
- the majority of decision-making rights are indirect or direct;
- at least one representative of the family or kin is formally involved in the governance of the firm;
- listed companies meet the definition of family enterprises if the person who established or acquired the firm (share capital) or their families or descendants possesses 25 per cent of the decision-making rights mandated by their share capital.'

### *Marketing Communication*

Bovee and Thill (2010) defined communication as the process of transferring information and meaning between senders and receivers, using written, oral or online channels. The key factors of communication are to provide and share information. Communication benefits business in different ways; it supports stronger decision, it helps to solve problems faster, it increases productivity and sends clear messages. It is essential for the organizations to decide on relevant and interesting information, to choose the right time and place to deliver these messages, and to engage the customers with contents, comments or applications. The concept of integration of different communication channels in order to deliver clever messages about the organization and its products/services describes integrated marketing communication (Chaffey, Ellis-Chadwick, Mayer, & Johnston, 2009). Integration of online and offline communication channels to build brand together with value-added products are initial aspects in catching attention and establishing long-term relationship with customers. The integrated marketing commu-

nication is a cross-functional process for planning, executing and monitoring brand communications. Every case when customers get in touch with a corporate website, its advertising and a physical store, it leads to the formation of brand image (Strauss & Frost, 2009). According to Solomon, Marshall, and Stuart (2008) the role of marketing communication is to help to create and strengthen professional image, informs customers about new offers, reminds them about past transactions, and convinces them to use one product instead of other.

### Social Media Landscape

The term 'Web 2.0' was generated by O'Reilly (2005). It refers to technologies that allow individuals to interactively participate with information and with other individuals, and to build networks based on mutual personal or professional interest. Increasing use of Internet is obvious, the number of users visiting different websites, using web applications has had a colossal growth. People spend more and more time searching and communicating. According to Hootsuite (2017) survey, there were 3,77 billion Internet users and 2,79 active social media users all over the world. Organizations have an urgent need to pay specific attention to effective knowledge transfer, which is of vital importance for their success and to achieve a competitive advantage. One of the solutions for that is networking sites. They connect members of a community in different ways although the aim is to allow members to communicate and connect. By creating professional networks, the number of people that you can reach increases when it comes to share information, knowledge and experience about the organization and its product or services. Vuori (2011) characterizes social media by considering the extent to which they support communication, collaboration, connecting, completing and combining (5C).

1. Communication:
   - Blogs (Blogger), Microblogs (Twitter): managed by specified author(s), who publishes posts, that are dated and shown in reverse chronological order.
   - Video sharing (YouTube): allows users to upload, view and share videos.
   - Presentation sharing (SlideShare): users can upload presentations privately or publicly.
   - Instant messaging service (Skype, Viber, Messenger): online conference tool, which can promote communication and knowledge sharing between community members.

2. Collaboration:

- Wikis (Wikipedia): website that enables easy creation and editing of Web pages.
- Groupware/shared workspaces (GoogleDocs): supports collaborative creation of knowledge, used for sharing documents without sending them via e-mails.
- Communities of practices (MeetUp): online portals that facilitate group meetings worldwide.

3. Connecting;
   - Social networking services (Facebook, LinkedIn): enables a community to create a profile (groups) with the aim to share information to the followers (partners, customers).

4. Completing:
   - Visual bookmarking tool (Pinterest): process of adding keywords (tags) to pieces of different types of media (photos, videos, documents, links).
   - News aggregator (Digg): website that collects, collates, and organizes syndicated web content, creating a customized site where all desired content is centralized.

5. Combining:
   - Mash-Ups (Google Maps): combines data from one or more sources to create new services.

## Research Framework

The 'Knowledge-Based Networking Tools among Hungarian Leading Family Businesses' research 'Supported by the ÚNKP-17-4 New National Excellence Program of the Ministry of Human Capacities' for the period from September 2017 till June 2018 (totally 10 months). In order to understand deeper the fieldwork, a qualitative, interpretative and exploratory approach is used through the collection of primary and secondary data.

### Research Objectives

The major aims of this study are to examine the peculiarities of the knowledge-based networking tools used by LFBs, to explore the relevance and usage of social media tools, to ascertain their benefits and challenges, to define the reasons and purposes of the usage and to investigate what business networks these LFBs belong to and what their driving forces are.

### Data Collection

During the research, primary and secondary data were collected and analyzed. In order to have in-depth investigation, the author decided to use

multiple data gathering techniques, such as personal interviews, secondary sources and observations. As primary data collection, using the semi-structured interview, the researcher focuses on a specific subject matter to explore, has several prepared questions and is ready to ask questions that could assist in organizing received information. An interview question-naire guide was designed to support the research. In the short introduc-tion, it was stressed that the responses remains strictly confidential, no names or identifying information are included in the final report and is only used for the purpose of the study. The interview questionnaire was di-vided into seven sections: personal background; organizational background; social media tools; reasons and purposes; monitoring; benefits and chal-lenges; social networking. As secondary sources, observations were an im-portant approach to gather and analyze activities of different social media and LFBs' corporate websites. In this research, sampling was purposive and concentrated on relevant individuals to whom the investigated fieldwork was well-known. Due to the specific target group, the researcher chose a small sample and invited the owners of 8 leading family businesses via her so-cial relations to participate in this research. The author had called them by phone and then sent an e-mail with the questionnaire guide request-ing 15–20 minutes of their time to fill in it. In order to get a deeper view, a semi-structured interview was conducted on Skype/Mobile with some of the owners. The Internet interview was convenient due to different geo-graphic location of interviewer and interviewee. The interview was executed in Hungarian and sometimes in English, when using some specific words and phrases, and lasted almost 60 minutes.

### Data Analyses

In this paper practices and examples of 5 LFBs are involved (the rest of the interviews are in progress). LFBs operate in different industry sectors, such as retail, energy, agriculture, IT, food and beverages. All LFBs are in business more than 25 years, all of them are under the second generation (in two cases managing together with the first generation). Concerning the respondents' background, most of respondents belong to the 'Y' generation (born between 1980 and 2000), while only one leader belongs to the 'X' generation (born between 1965 and 1979). Four of the respondents are working as a CEO, one of them is a marketing manager, but all of them are members of the family.

#### A-LFB Case Study

A-LFB is the Middle-East European region's biggest plant trade company group. It naturalized the notion of garden center in Hungary, operating in a franchise system. They have the widest variety of indoor plants and asses-

sorial goods and a huge assortment of nursery trees. A-LFB is in business from 1989 with total number of 130 employees. The firm is in the second generation, the CEO belongs to the Y generation and joined the LFB in 2003. A-LFB has a corporate Facebook page, an Instagram page, an active YouTube channel with videos, a corporate website, online magazine (quarterly), and the followers can sign up for monthly newsletters. A-LFB uses 'instant messaging services' as a communication tool; 'groupware' as collaboration; 'social networking services' for connecting and 'mash-ups' as a combining application. They also use e-mails and events for networking and marketing purposes. The most comfortable tool is Facebook. While answering the question 'what social media tools do you want to learn more about?', the respondent indicated 'social media influencers.' A-LFB integrated social media in their business activities '10 years ago.' The reasons using social media tools are: 'useful networking tool,' 'help to improve effectiveness' and 'majority of their customers feel comfortable using them.' The main purposes of usage were to 'increase brand awareness and traffic to the website,' to 'reach new potential customers,' to 'improve the relationships with them' and to 'improve sales' activity. They defined a social media strategy, which is integrated into their marketing strategy and they also have a separate plan for its usage. A-LFB measures the effect of social media through the 'number of subscribers, followers' and their 'website traffic.' When asking what are the challenges, the respondent answered 'responding customers in real-time' and the 'difficulty of maintaining the communication with them.' Concerning the social media benefits, he agreed that 'it helps to increase brand awareness,' and to 'improve traffic to corporate website.' He believes that social media offer a 'great opportunity to attract new customers' and 'improve relationships and sales activity.' A-LFB belongs to the 'Family Business Network Hungary (FBN-H).' The purpose of being a member of this network is the 'exchange of ideas, cultures and practices,' 'sharing information and knowledge,' 'take part in conference and business events' and 'to be the member of a community.'

### B-LFB Case Study

B-LFB is an environmental enterprise, specialized in the bioenergy sector. The main profile of the company is providing a complex process of implementation of reverse logistics for collected waste. The collection of used cooking oil, as well as the procession and import of purified vegetable oils, provide raw material supplies for biodiesel plants in Hungary and neighboring countries also. B-LFB is in the business since 1990, with a total number of 100 employees. The firm is in the second generation, leading together with the first one. The CEO belongs to the 'Baby Boom' generation, but the respondent, a marketing manager, belongs to the 'Y' generation, and

is also a member of the family. She joined the LFB in 2013. B-LFB has a corporate Facebook page, a YouTube channel with only one video and a corporate website. The B-LFB uses 'blogs/microblogs' and 'video sharing' as communication tools; 'groupware' as collaboration; 'social networking services' for connecting and 'mash-ups' as a combining tool. The firm often uses 'e-mails' and 'press releases' for networking and marketing. The most comfortable tool for them is using Facebook and LinkedIn. She outlined that the company would learn about how to use 'Twitter' and 'G+' (Google+). B-LFB integrated social media in their business activities in '2012.' The reason why they use social media tools is to 'improve employer branding.' They focus on 'increasing brand awareness' and also 'employer branding.' Their social media strategy is integrated into their marketing strategy. B-LFB measures the effect of social media through the 'number of subscribers, followers.' They do not face significant challenges while using social media. The respondent agreed that social media 'helps to increase brand aware-ness,' and 'improve the employer engagement.' B-LFB belongs to the FBN-H, Business Council for Sustainable Development Hungary (BCSDH) and to the Association of Environmental Enterprises. The purpose of being a member of this network is the 'exchange of ideas, cultures and practices' and 'shar-ing information and knowledge.'

### C-LFB Case Study

C-LFB is one of Hungary's leading wine producers, with a hotel and restau-rant. Their winery produces include only quality wines, most of which are sold to Hungarian gastronomic and wine outlets. C-LFB's facilities are situ-ated in the south of Hungary. The family has been growing and producing wine in the Villány wine region. C-LFB operates as a family affair since 1981 and has 100 employees together in the 3 divisions. The 1st (baby-boom) and the 2nd (Y) generation run the company together. The respondent, who is the Chief winemaker (managing director), joined the business in 2002. C-LFB has a very attractive and active corporate Facebook page, a YouTube channel together with the hotel providing several videos, a Twitter site, In-stagram, a corporate website, an online magazine (twice a year), online prospectus and newsletters. The C-LFB uses 'blogs and microblogs' and 'video sharing' for communication; 'wikis' and 'groupware' for collabora-tion; 'social networking services' for connecting and 'mash-ups.' They use 'e-mails,' 'press releases' and organize 'events' for marketing. The most comfortable tool that C-LFB can use are Facebook and Instagram. The re-spondent highlighted that the family business should learn more about all kinds of social media tools. C-LFB integrated social media into their ac-tivities because it is a 'very useful networking tool,' which can support to 'improve effectiveness in their work' and the 'majority of the customers are

familiar with these tools.' He mentioned that there is a serious 'competitive pressure' from their competitors' side. They have several purposes of usage, such as the possibility of 'increase the brand awareness' and the 'traffic to their website.' They believe they can 'reach new potential customers,' have the possibility to 'improve the relationship' with them, can 'improve their sales' while 'reduce their expenses.' C-LFB's social media strategy is integrated into their marketing strategy. They try to measure the effect of using social media through the 'number of subscribers, followers' and count the 'website traffic.' The respondent expressed that they face some challenges while using these tools; for instance, they have to take care of 'responding customers in real-time' and it is 'difficult to maintain communication' with them. They have lots of benefits like 'increased brand awareness and traffic to their website,' 'new customers were attracted' and they could 'improve relationships' with them. They have successes in 'reducing expenses' and 'improving their sales' activity. C-LFB belongs to the Wine Route Association. The purpose of being a member of this network is the 'exchange of ideas, cultures and practices' and 'sharing information and knowledge.'

### D-LFB Case Study

D-LFB is a company with multiple divisions and brands in retail industry like bicycles, household appliances and IT-service delivery solutions. D-LFB operates from 1991 with a total number of 60 employees. Now only the second generation leads the business, the CEO belongs to the X generation and joined the LFB in 2001. D-LFB has a corporate Facebook page (all divisions have their own), LinkedIn page, Twitter, Google+, and corporate websites. D-LFB uses 'blogs and microblogs,' 'video sharing' and 'instant messaging services' as communication tools; 'groupware' as collaboration; 'social networking services' for connecting. They also use 'e-mails,' 'events' and 'webinars' for supporting their network and marketing activities. Regarding the most comfortable tool, the respondent mentioned Facebook, Viber, Google suite and LinkedIn. D-LFB integrated social media in their business activities in '2011.' They use these tools in order to 'help improving effectiveness in their work,' and because the 'majority of their customers feel comfortable using them.' The main purposes of usage are to 'increase brand awareness,' to 'reach new potential customers' and to 'improve the relationships with them' and 'improve sales.' They have not defined a social media strategy but they utilize them in different ways. D-LFB measures the effect of social media through the 'number of subscribers, followers' and counts 'video views, facebook post organic reach, share and interaction.' They do not face any challenges while using social media. Regarding to the benefits and advantages, the respondent agreed that these tools 'helped

to increase brand awareness,' 'attracted new customers,' 'improved the re-lationships' and 'improved sales.' D-LFB belongs to the FBN-H, because they can 'exchange ideas, cultures and practices,' 'share information and knowledge' and maintain 'networking.'

### E-LFB Case Study

E-LFB is one of the largest dietary supplement manufacturers for sports. They are on the market since 1993 offering high quality food supplements, like protein powders, dietary products and over 40 vitamin products, with a product variation consisting of over 600 products. It has 700 employ-ees, 130 franchise stores and a distribution network that covers about 70 countries. The business is under the first and second generation. One of the CEOs belongs to the 'Baby Boom,' the other one to the 'Y' generation. E-LFB has a corporate Facebook page, a very active YouTube channel, Instagram, Twitter, a corporate website and newsletter. E-LFB uses 'blogs/microblogs' and 'video sharing;' 'groupware' and 'social networking services.' They use other forms for networking like 'e-mails,' 'press releases,' 'TV, radio spots,' 'out-of-home advertising (OOH)' and 'below the line (BTL) advertising tools.' The most comfortable tools are Facebook and Instagram. The business should learn more about 'Twitter' and 'LinkedIn.' E-LFB started to use the different social media tools in '2011.' The main reasons why they use social media because 'it is a very useful networking tool' and 'the majority of their customers are familiar how to use these tools.' An important reason of us-age is that these are very 'effective communication tools.' The respondent listed all purposes why it is important for them to use social media, such as to 'increase brand awareness,' 'increase traffic to the website,' 'reach new potential customers,' 'improve relationships with customer,' 'develop business partnership,' 'reduce expenses' and 'improve sales.' They have a social media strategy, which is integrated into their marketing strategy. The primary measurement of the effectiveness of social media are counting 'number of subscribers, followers,' 'website traffic' and the 'income.' They face challenges in 'building brand awareness for export markets.' The ben-efits are the 'increased brand awareness and traffic to their website,' 'new customers were attracted' and 'improved relationships with them,' 'reduced expenses' while 'improved sales.' E-LFB is the member of FBN-H because it is a platform of 'exchange of ideas, cultures and practices' and 'sharing information and knowledge.'

### Findings

According to the answers, all respondents use 'groupware' for collabora-tion and 'social networking services' for connecting. From other forms they all mentioned 'email,' and most of them use 'press releases' or organize

'events.' One of them added to the list some other interesting platforms like: OOH and BTL advertising tools. OOH advertising is focused on marketing to customers when they are 'on the go' in public places, in transit, waiting (such as in a medical office), and/or in specific commercial locations (such as in a retail venue). OOH formats fall into six main categories: billboards, street, roads, highways, transit, and alternative. BTL advertising is a strategy in which a product is promoted in media other than radio, television, billboards, print and film. Types of BTL advertising commonly include direct mail campaigns, trade shows and catalogues, and targeted-search engine marketing. Regarding the most comfortable tool, all respondent agreed on 'Facebook,' the second popular tool was 'LinkedIn' and 'Instagram.' While answering the question 'what social media tools do you want to learn more about?', one of the interviewees indicated all social media tools, two of them highlighted 'Twitter.' One respondent mentioned G+/Google+, which is a social networking service from Google. It integrates all Google services and displays a new Google+ menu bar on other Google services when someone is logged into a Google account.

One of the LFBs was also interested in social media influencers. They have large followings on social networks, and are often hired by companies to promote their brands. This type of advertising, which is similar to a product placement in a show or movie, is considered more personal and less invasive than traditional advertising. Influencers use a wide variety of social platforms, but a recent survey by the influencer platform Zine (Williamson, 2018) found that Instagram was the favorite. Instagram, which has 800 million monthly active users, offers a simple and visual way for influencers to deliver messages via single photos and short videos. Traditional blogs remain surprisingly relevant, thanks to their dedicated followings. However, YouTube, Facebook and Pinterest are not attracting influencers. The reason can be that YouTube videos require more time to produce, Facebook's News Feed prioritizes family and friends, and Pinterest is more frequently used for pinning personal interests than following influencers.

The majority of the interviewees indicated that they have been using social media for more than 6 years. Overall, the participants highlighted practically the same reasons. The most common reasons using social media tools were: 'improvement of effectiveness in work' and 'the majority of their customers feel comfortable using these tools' and, of course, that these are 'useful networking tools.' One of them highlighted that social media provides his company an 'improvement in employer branding' and another mentioned that social media is an 'effective communication tool.' Only one of the respondents felt the 'pressure of the competitors.' The interesting fact was that only two respondents agreed that social media reduce expenses and only one could see the possibility to develop business

partnership. Four of the LFBs have already integrated their social media strategies into their marketing strategies, while two of them also defined a separate plan. Only one company has not created any social media strategy yet. All LFBs evaluate the effect of social media primarily through 'the number of subscribers and followers.' Overall, two of the LFBs did not face any challenges while using social media. For others, the answers showed that the most challenges were to 'respond to customers in real-time' and they felt 'difficult to maintain the communication' with them. Concerning the social media benefits, all strongly agreed that social media tools increased brand awareness. It is an interesting result that none of them believed that it grows business partnerships.

While answering the question 'does the business belong to any formal business network,' four of the respondents indicated the membership of the same network, the FBN-H. FBN is the world's leading family business organization. It is a safe, shared-learning space for enterprising families to flourish across generations, through the exchange of excellent, innovative and impactful practices. It was founded in 1989, it is headquartered in Lausanne, Switzerland. The community spanning across the world brings together over 3,400 business owning families covering 65 countries. FBN organizes annually 750 activities in its chapters, internationally, regionally or locally. It seems that for LFBs this network can be a possibility to communicate and cooperate. LFBs agreed that they can 'exchange ideas, cultures and practices' and 'sharing information and knowledge' in this network. One of them mentioned that this network can offer a good opportunity to participate in conferences and business events. For them it has an added value to be the member of a community and, of course, it is a good choice just for networking.

## Discussions and Conclusions

Analyzing the interviews, the researcher might conclude that social media plays an important role in LFBs. They are using social media tools by integrating them into their business and marketing activity. The results show that social media are an easy-to-use and effective tool. However, companies face different challenges by using these complex but accessible communication platforms. The social media landscape is split into operational groups: relationship building platforms, content, entertainment and monitoring. In order to increase online presence, it is better to include social media activities, for example, Facebook and Instagram. To have a better interaction with the customers, the company can choose social contents, such as YouTube (for product presentation) or blogs (for brand humanization).

According to Eurostat (2017), the statistical office of the European Union, almost half of all EU businesses (46 %) in 2016 used at least one

**Table 1**  Social Media Usage in Hungary (Numbers of Users)

| Facebook | Messenger | YouTube | Instagram | Pinterest | LinkedIn | Twitter |
|---|---|---|---|---|---|---|
| 5831,000 | 4671,000 | 3849,000 | 1139,000 | 946,000 | 715,000 | 582,000 |

**Notes** Adapted from MediaQ (2017).

social media channel: most common were social networks (such as Facebook, LinkedIn). For Hungary, this rate is only 37%, less than the average of EU. But on the other hand, from the survey of MediaQ (2017), the total number of active social media users in Hungary are 5,5 million people (the total population of Hungary is 9,8 million), so more than half of the population use social media. According to this survey, the most popular social media platforms and sites are Facebook, Messenger and YouTube (Table 1).

It means that, for the Hungarian LFBs, social media tools provide a great opportunity to engage and establish contact with customers at relatively low cost and with high levels of efficiency. However, using social media is not always as easy as it seems. It requires new ways of thinking, engagement and interaction.

Based on these findings, the author can conclude that social media bring knowledge and information sharing, communication and marketing to a new level and bring benefits to both business and customers. It gives a great opportunity of high exposure at low cost; it offers a possibility to set interactive communication with customers and to get more information on their needs. But in this ever-changing online environment and growing convergence, the LFBs face the challenge to follow the trends. There are some issues regarding how to measure social media performance, how to respond immediately to customers and how to incorporate transparency into their business operations. Measuring social media performance is time consuming, but it is crucial to take the time to collect necessary data and then to assess all found patterns of social media experience. These can help to identify the most important elements that can show potential results for company metrics. The research findings also show that Facebook is the most popular social media platform. It was also found that email is also widely used. Such sites as LinkedIn and Instagram are receiving more and more attention and wished to be more thoroughly explored. LFBs also have to consider using YouTube videos, as this is the third most favourite social media tool in Hungary. Today's online landscape is a connection point. Online participants create connections or keep it alive. The LFBs have a chance to create long-term relationships by engaging customers. Here they target specific audience, deliver exclusive offers, and important constant messages for their existing and potential customers.

During the research process, the author had several ideas for further study in this fieldwork. As almost all respondents belong to the same net-

work, FBN Hungary, it would also be useful to do such a research within this network, and analyse social media for all members.

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# Product Development Drivers: An Explorative Study in Finland and China

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New Product Development (NPD) is vital for companies that operate in international markets. Yet, NPD has become increasingly challenging to manage; products are becoming ever more complex and various customers and multiple stakeholders' needs must be satisfied. Additionally, NPD is often conducted in multiple locations around the world. Product development drivers can be defined as reasons for a company to initiate a product development project. These drivers affect decision-making, project outcome, and product strategy implementation. This study explores how product development drivers are perceived at the managerial level in technology companies based in Finland and China. The results indicate that managers' views on these drivers differ in short-, medium-, and long-term development projects. Marketing and customers related drivers are considered the most important in the short term; financial goals related drivers in the medium term, and strategy and business environment related drivers in the long term. Furthermore, differences are found between Finnish and Chinese managers' views. Finnish practitioners tend to be more focused on financial goals related drivers, whereas Chinese managers consider various factors important.

*Keywords:* new product development (NPD), driver, innovation, technology, Finland, China

## Introduction

Innovation and product development are vital for firms to achieve their objectives, as new products can enhance revenue, profitability, market position, and company's value (Chesbrough, 2003; Cooper, 2011). Authors, such as

Schumpeter (1939) and Pavitt (1990), have made significant contributions to the innovation and product development discussion over the decades. Product development and factors that affect its performance have been researched from various viewpoints (e.g. Hilletofth & Eriksson, 2011).

Currently, products often consist of physical and immaterial elements that are developed in global networks. Various types of new products exist, ranging between radically new products and small modifications of present products (Kotler & Keller, 2009). In addition, product development includes many types of activities, for example, research and development (R&D), platform, revolutionary, and derivative projects (Schilling & Hill, 1998). Product development is cross-functional in nature and therefore it involves most company functions. There are various stakeholders whose needs must be considered by utilising integrated development methods, for instance, concurrent engineering and Design for Excellence (DfX).

The driving factors for product development impact decision-making and the project outcome in organisations, and these factors must therefore be clarified. Cooper (2011) argues that there are four key drivers for new product development (NPD): changes in customer needs, technology advances, shorter product life cycles, and increasing globalisation. On the other hand, the overexpansion of product portfolio can also become an issue (Tolonen, Shahmarichatghieh, Harkonen, & Haapasalo, 2015). Previous literature that relates to the drivers for product development has included topics, such as strategy typology, originally presented by Ansoff (1957), the technology-push vs. market-pull debate (e.g., Rothwell, 1992), and product development and innovation drivers in certain industries (Bossink, 2004; Hassanien & Dale, 2012; Kinkel & Som, 2010). However, studies focusing solely on product development drivers are rare in the literature.

Majava, Haapasalo, Belt, and Mottonen (2013) found significant differences in individual product development drivers among project types, and the study also indicated differences in the drivers among companies. In this paper, we build upon the previous work and explore the differences in views on product development drivers among practitioners based in different countries and cultural settings, a topic that has not been sufficiently addressed in the literature. The objectives of this exploratory paper are to elaborate on why product development is carried out in companies, as well as to explore how the views on drivers differ between Finnish and Chinese managers. While both Finland and China are export-oriented countries, the differences include size, culture, and economic development phase making the countries interesting points of comparisons. Accordingly, the research questions in this paper are set as follows:

1. What are the main drivers for product development according to practitioners in Finland- and China-based technology firms?

2. Can differences in these drivers be found between the Finnish and Chinese managers?

This paper provides a literature review on product development drivers, and presents the main drivers that are used as the basis for an empirical survey. The aim has been to conduct a broad review of relevant titles to identify different type of product development drivers and synthesise a list of these drivers based on the past literature. The empirical study explores how managers in Finland- and China-based technology companies value the drivers in different project types. After the data analysis, conclusions are made.

## Literature Review

Product development transforms market opportunities into production, sale, and delivery of completely or partially new products (Krishnan & Ulrich, 2001; Ulrich & Eppinger, 2012). New product categories include, for example, new-to-the-world products, new product lines, additions to existing product lines, revisions and improvements of existing products, cost reductions, repositionings, market pull, technology push, process-intensive products, platform products, and customised products (Booz Allen Hamilton, 1982; Cooper, 2004; Ulrich & Eppinger, 2012). Most new products are not completely new, but simply replications that differ only a little from existing products (Ettlie, 2006; Trott, 2002).

Product development projects can also be categorised in several ways, such as pure R&D, breakthrough, platform, derivative projects (Schilling & Hill, 1998; Ulrich & Eppinger, 2012), incremental improvements, and fundamentally new products (Ulrich & Eppinger, 2012). Established companies often focus on incremental innovations, which enable them to enter new markets with product revisions (Kotler & Keller, 2009).

There are many reasons for firms to initiate product development. From a financial perspective, new products can have a positive impact on revenues, profits, share prices, and market shares (Cooper, 2011; Kahn, 2001; Lantos, Brady, & Mccaskey, 2009). Cooper (2011) claims that new products are the key to corporate prosperity: they drive revenues, market shares, net results, and share prices. Improved profitability and market share are one of the targets of providing the offering (Kahn, 2001). NPD is important to the organisation success due to its key role in enabling growth, and NPD can also positively impact profit margins and share price (Lantos et al., 2009). In certain industries, 100 % of revenues come from products introduced less than three years ago (Cooper, 2011).

One of the key drivers for product development is strategy (Acur, Kandemir, & Boer, 2012; Ansoff, 1957; Kahn, 2001; Trott, 2002). Product strategy can be seen as the basis of development initiatives (Ansoff, 1957). A

new product strategy is connected to and derived from other strategies such as corporate, technology, and marketing strategy, which provide the role, context, push, and scope for the new product strategy (Trott, 2002). For example, a competitive strategy can drive product planning on a long-term or short-term basis. A new product strategy, in turn, is implemented via product development programmes (Kahn, 2001).

External environment is strongly related to strategy (Trott, 2002). The external environment includes many product development drivers, such as competition (Hassanien & Dale, 2012; Kahn, 2001) and shorter product life cycles (Cooper, 2011). Competition is increasingly intense, and new product introductions have accelerated in recent years (Cooper, 2011). Competition also drives up consumer expectations (Trott, 2002). In addition to competition, changes in the marketplace make NPD important (Lantos et al., 2009). New trends, including sustainability and globalisation, affect product development (Cooper, 2011; Hassanien & Dale, 2012; Nidumolu, Prahalad, & Rangaswami, 2009). For example, globalisation enables a firm to enter new markets, and provides opportunities for locally-tailored global products (Cooper, 2011). The external environment also includes constraints and opportunities related to, for example, technology, legislation, and new regulations (Kahn, 2001; Trott, 2002).

In addition, various factors related to marketing and customers stimulate NPD, including the aim to enhance company image and awareness (Kahn, 2001; Lantos et al., 2009), leverage brand equity, and offer an appropriate product mix (Lantos et al., 2009). Customer orientation is part of market orientation (Narver & Slater, 1990), and changing customer needs are a key NPD driver (Cooper, 2011). Customer attitudes and needs are constantly changing, and consumers expect to get new offerings (Cooper, 2011; Kahn, 2001). Customers and their feedback provide a source for new opportunities and improvements (Hassanien & Dale, 2012; Trott, 2002).

Technology-push and market-pull are typically seen as alternative drivers for product development (Hart, Hultink, Tzokas, & Commandeur, 2003; Kahn, 2001; Rothwell, 1992). Market and customer desires are utilised in market-pull development, while technology is the driving force for technology-push products (Ulrich & Eppinger, 2012). Market-pull development is comparable to a strategy-directed approach, whereas technology-push development closely parallels an idea-directed approach. Typically, organisations are biased toward one of these (Kahn, 2001). Technology developments form an important NPD driver, as they enable the creation of new products and solutions (Cooper, 2011; Bossink, 2004; Kahn, 2001), and result in shorter product life cycles, as well (Lantos et al., 2009). New opportunities can also be found from existing products, technology, and unexploited patents (Trott, 2002).

In addition to external inputs, companies also need their own foresight when it comes to product development (Hamel & Phalahad, 1994). The idea sources include senior and top management, and even individuals (Kahn, 2001; Trott, 2002). On the other hand, development of really new products often involves exploring and learning (Song & Montoya-Weiss, 1998). New pioneering products can be utilised for developing new competences in technical, operations, and marketing areas (Trott, 2002). Underused and new resources, such as excess capacity or an acquisition, may also provide product development opportunities (Hassanien & Dale, 2012; Kahn, 2001).

Drivers for different products and projects differ considerably. Key drivers for radical projects include technology convergence, environment and contextual factors, as well as individuals with a strong vision, whereas incremental products benefit more from customer input (Veryzer, 1998). Existing production capability is often utilised in the development of process-intensive products, whereas a customer-specific order is typically the driver for customised products (Ulrich & Eppinger, 2012). Suppliers, distribution channel members, and partners are also sources for new opportunities or drivers for product modification (Kinkel & Som, 2010; Trott, 2002).

## Methodology

### Survey Design

The survey design followed Majava et al. (2013). Various product development drivers identified in the literature review were synthesised and categorised in the following six categories: financial goals, marketing and customers, strategy and business environment, technology, internal push and resources, and supply chain. Table 1 describes the survey questionnaire design, driver categories, and individual drivers included in the study.

In the survey questionnaire, the respondents were asked to assess the driver importance in three different scenarios: (A) in short-term, small change, development; (B) in medium-term, typical full-scale development; and (C) in long-term, radical development. The drivers were evaluated by the survey participants utilising the following scale: 0 (not important), 1 (somewhat important), 2 (important), and 3 (very important).

### Data Collection

The data collection among NPD-intensive companies was conducted in Finland and China. The informants were selected in close cooperation with the company representatives to ensure their knowledge of the studied issues. The Finnish data includes six firms operating in international markets in technology, IT, and electronics industries. The data includes a total of 41 valid responses from 65 managers at six different companies.

**Table 1**   Survey Questionnaire Design, Product Development Driver Categories, and Descriptions

How important are the following reasons for doing product development (PD)?
(1) In short-term (small change) development.
(2) In medium-term (typical full-scale) development.
(3) In long-term (radical) development.

| Category | Driver | Description (why PD is conducted) |
| --- | --- | --- |
| Financial goals | Revenue targets | To meet the revenue targets |
| | Profitability | To meet the profit targets |
| Marketing and customers | Brand and image | To enhance or leverage company brand and image |
| | Offering the right product mix | To create or maintain the right product portfolio to satisfy customers |
| | Customer request | Based on customer requirement, need, input, or idea |
| Strategy and business environment | Strategy | Due to company strategy |
| | Competition | To meet or exceed competition |
| | Ext. environment | Due to new trends, regulations or other changes |
| Technology | New technology | To exploit new technology |
| | Existing product or technology | Due to existing products or technology, such as unexploited patents |
| Internal push and resources | Underused resources | Due to available production capacity or development resources |
| | New resources | Because new resources are available, for example, through an acquisition |
| | Company's own foresight | Based on vision from management or individual champions |
| | Organisational learning | To acquire new competences that are needed in the future |
| Supply chain | Production process | To meet production process requirements |
| | Suppliers | Due to a supplier's new technology, idea, or change in the offering |
| | Partners | Due to a partner's new technology, idea, or change in the offering |
| | Distributors | Due to a distributor's need or change in the offering |

The data collection in China (Pearl River Delta region) included IT electronics companies operating in international markets. By contacting them via phone and emails, 80 managers from 6 firms were reached. After the preliminary screening, survey questionnaires were sent to the 60 respondents selected and 49 valid samples were returned. Table 2 presents the number of responses in terms of respondent functions and positions.

### *Reliability and Validity*

Due to the exploratory nature of the study, structural equation modelling (SEM) was not used. The reliability was tested based on the average inter-

**Table 2**  Respondents' Functions and Positions

| Function | (1) | (2) | Position | (1) | (2) |
|---|---|---|---|---|---|
| Research and development | 13 | 20 | Vice president | 5 | 2 |
| Product management | 12 | 15 | Director | 16 | 10 |
| Marketing and sales | 5 | 4 | Senior manager/head | 10 | 15 |
| Operations and logistics | 4 | 10 | Programme/project manager | 8 | 20 |
| Other function | 7 | 0 | Other position | 2 | 2 |
| Total | 41 | 49 | Total | 41 | 49 |

**Notes**  Column headings are as follows: (1) Finland, (2) China.

**Table 3**  Mean Scores for Product Development Driver Categories

| Term | Driver category | (1) | (2) | (3) |
|---|---|---|---|---|
| Short-term | Financial Goals | 2.39 | 1.83 | 2.08 |
| | Marketing and Customers | 2.04 | 2.38 | 2.23 |
| | Strategy and Business Environment | 1.71 | 2.15 | 1.95 |
| | Technology | 1.35 | 2.09 | 1.76 |
| | Internal Push and Resources | 1.04 | 1.90 | 1.51 |
| | Supply Chain | 1.32 | 2.03 | 1.71 |
| Medium-term | Financial Goals | 2.68 | 2.29 | 2.47 |
| | Marketing and Customers | 2.33 | 2.38 | 2.36 |
| | Strategy and Business Environment | 2.24 | 2.35 | 2.30 |
| | Technology | 1.74 | 2.24 | 2.01 |
| | Internal Push and Resources | 1.44 | 2.17 | 1.84 |
| | Supply Chain | 1.26 | 2.14 | 1.74 |
| Long-term | Financial Goals | 2.59 | 2.43 | 2.50 |
| | Marketing and Customers | 2.24 | 2.48 | 2.37 |
| | Strategy and Business Environment | 2.51 | 2.64 | 2.58 |
| | Technology | 1.89 | 2.48 | 2.21 |
| | Internal Push and Resources | 1.66 | 2.34 | 2.03 |
| | Supply Chain | 1.27 | 2.13 | 1.74 |

**Notes**  Column headings are as follows: (1) Finland ($N = 41$), (2) China ($N = 49$), (3) Overall ($N = 90$).

item correlation (i.e. Cronbach's alpha). Cronbach's alpha was used to assess the scale reliability of each construct in our model. The reliability of each construct was checked by using a multi-trait matrix presented in Tables 5, 6, and 7. The diagonal entries of the matrix are the reliability coefficients of individual constructs, whereas the off-diagonal entries are the correlation coefficients of pairs of constructs. In our model, the alpha of every factor was more than 0.70, which is a very good statistical result. The high value of suggests a high level of internal consistency of the data. The internal reliability of an individual construct is higher than the inter-construct

**Table 4**   Factor analysis

| Category | Driver | Factor loadings |
|---|---|---|
| Financial goals | Revenue targets | 0.915 |
| | Profitability | 0.915 |
| Marketing and customers | Brand and image | 0.801 |
| | Offering the right product mix | 0.662 |
| | Customer request | 0.847 |
| Strategy and business environment | Strategy | 0.696 |
| | Competition | 0.744 |
| | External environment | 0.648 |
| Technology | New technology | 0.825 |
| | Existing product or technology | 0.825 |
| Internal push and resources | Underused resources | 0.715 |
| | New resources | 0.844 |
| | Company's own foresight | 0.791 |
| | Organisational learning | 0.839 |
| Supply chain | Production process | 0.817 |
| | Suppliers | 0.837 |
| | Partners | 0.842 |
| | Distributors | 0.730 |

reliability (Churchill, 1979), which shows strong empirical support for dis-
criminant validity. To ensure the internal consistency of the items, validity
tests (i.e. factor analysis, Table 4) were done to ensure the items are con-
tributing to the measurement. Reviewing the items of each construct was
also performed prior to data collection to ensure items are not redundant.

## Results

### Product Development Drivers in Finland and China

Table 3 presents the mean scores of different driver categories given by all
survey respondents in Finland and China. The importance of each driver cat-
egory was calculated based on the scores of individual drivers. The scores
are for three different scenarios: (1) short-term, small-change development;
(2) medium-term, typical full-scale development; and (3) long-term, radical
development. As can be seen in Figures 1, 2, and 3, the mean scores
of some individual drivers including strategy, profitability, brand and image,
competition, external environment, and offering the right product mix were
quite similar between Finland and China, whereas greater differences can
be observed in the mean scores of other drivers. Overall, the results indi-
cate that marketing and customers is the most important product devel-
opment driver category in the short-term, followed by financial goals, strat-
egy and business environment, technology, supply chain, and internal push
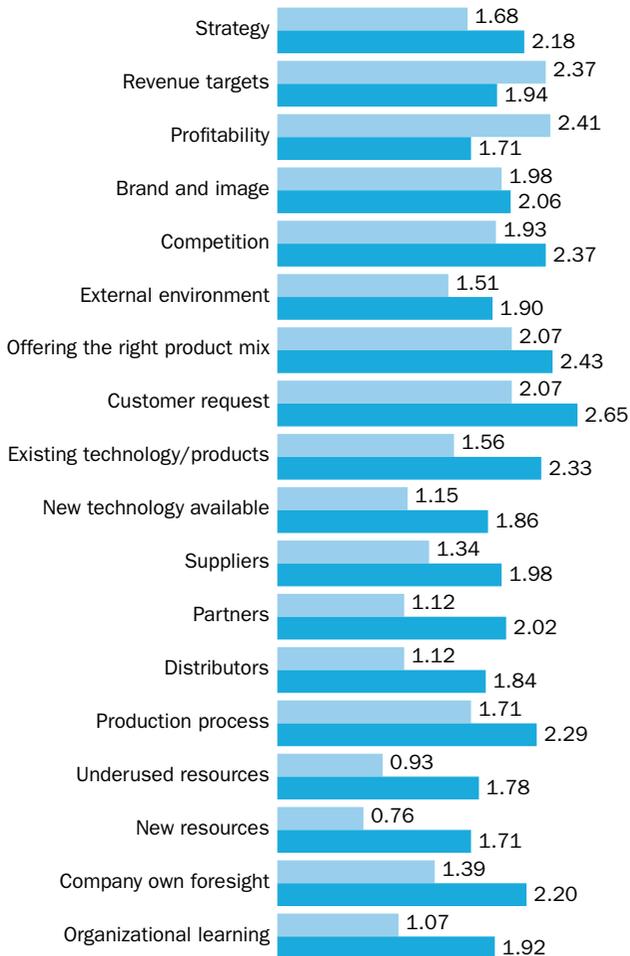
**Figure 1**  Product Development Drivers and Their Importance in Short-Term Development (light – Finland mean, dark – China mean)

and resources. On the other hand, in the medium-term financial goals was seen as the most important driver category, followed by marketing and customers, strategy and business environment, technology, internal push and resources, and supply chain. Finally, the overall results indicate that strategy and business environment is the most important product development driver category in the long-term, followed by financial goals, marketing and customers, technology, internal push and resources and supply chain.

Interestingly, the mean scores were noticed to differ among Finland- and China-based managers. These differences are further illustrated in Figures 4, 5, and 6. Figure 4 highlights financial goals as the most important short-term product development driver category among Finland-based managers,
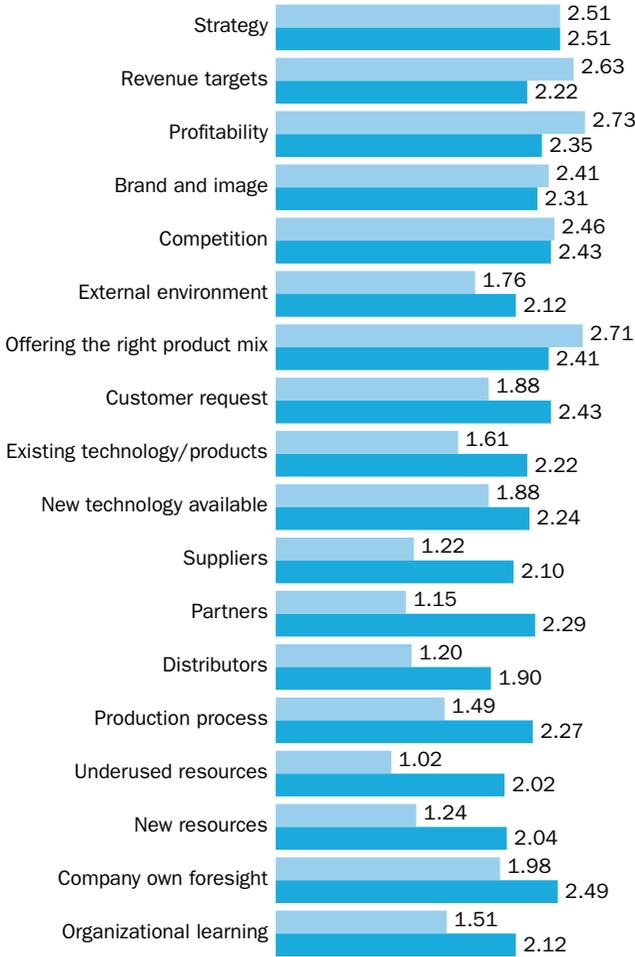
**Figure 2**   Product Development Drivers and Their Importance in Medium-Term Development
(light – Finland mean, dark – China mean)

whereas marketing- and customers-related drivers are the most important for Chinese managers. The respondents based in China also saw strategy and business environment, technology, internal push and resources, and supply chain-related drivers as more important in the short-term development compared to the Finnish respondents.

Figure 5 highlights financial goals as the most important medium-term product development driver category among Finland-based managers. Marketing and customers and strategy and business environment-related factors were seen as the most important drivers among China-based respondents. These two driver categories were also considered almost equally important in Finland. Finally, the Chinese respondents considered technol-
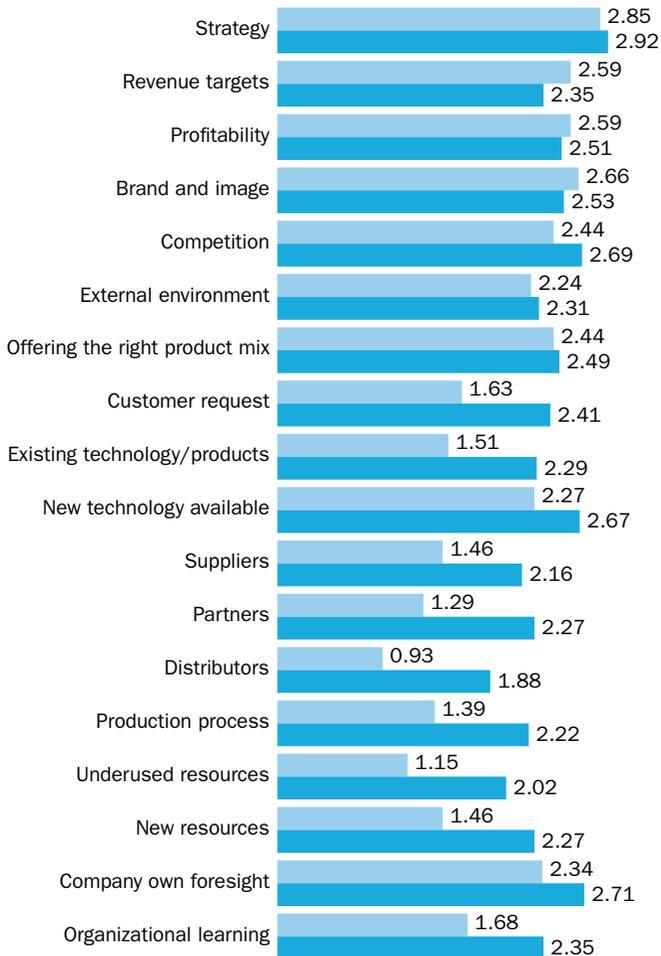
**Figure 3** Product Development Drivers and Their Importance in Long-Term Development (light – Finland mean, dark – China mean)

ogy, internal push and resources, and supply chain-related drivers to be far more important in the medium-term development compared to the Finnish respondents.

Figure 6 highlights the importance of strategy and business environment-related drivers in long-term product development, both in Finland and China. Financial goals were seen as almost equally important among Finnish and Chinese respondents, whereas marketing- and customers-related drivers were considered somewhat more important in China than in Finland. Finally, the respondents based in China perceived technology, internal push and resources, and supply chain-related drivers as far more important in the long-term development compared to the respondents based in Finland.

| | Finland | China |
|---|---|---|
| Financial goals | 2.39 | 1.83 |
| Marketing and customers | 2.04 | 2.38 |
| Strategy and business environment | 1.71 | 2.15 |
| Technology | 1.35 | 2.09 |
| Internal push and resources | 1.04 | 1.90 |
| Supply chain | 1.32 | 2.03 |
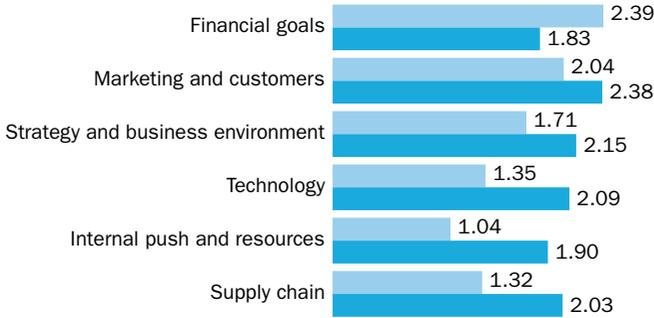
**Figure 4**   Driver Categories and Their Importance in Short-Term Development (light – Finland, dark – China)

| | Finland | China |
|---|---|---|
| Financial goals | 2.68 | 2.29 |
| Marketing and customers | 2.33 | 2.38 |
| Strategy and business environment | 2.24 | 2.35 |
| Technology | 1.74 | 2.23 |
| Internal push and resources | 1.44 | 2.17 |
| Supply chain | 1.26 | 2.14 |
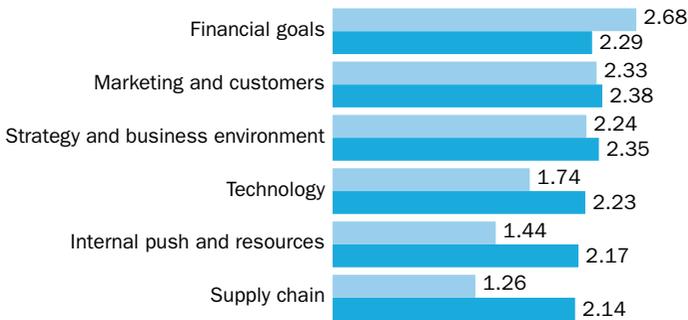
**Figure 5**   Driver Categories and Their Importance in Medium-Term Development (light – Finland, dark – China)

| | Finland | China |
|---|---|---|
| Financial goals | 2.59 | 2.43 |
| Marketing and customers | 2.24 | 2.48 |
| Strategy and business environment | 2.51 | 2.64 |
| Technology | 1.89 | 2.48 |
| Internal push and resources | 1.66 | 2.34 |
| Supply chain | 1.27 | 2.13 |
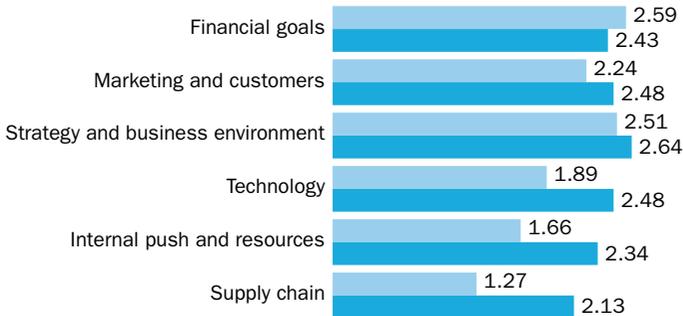
**Figure 6**   Driver Categories and Their Importance in Long-Term Development (light – Finland, dark – China)

## Correlations among the Driving Factors

In addition to mean score analysis, the correlations among the product development driver categories were calculated. The correlations are presented in Tables 5, 6, and 7.

**Table 5** Inter-Correlations of Variables (Short-Term)

| Variables | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| (1) Financial Goals | 0.93 | | | | | |
| (2) Marketing and Customers | –0.00 | 0.69 | | | | |
| (3) Strategy and BE | 0.01 | 0.48** | 0.73 | | | |
| (4) Technology | –0.05 | 0.35** | 0.39** | 0.84 | | |
| (5) Internal Push and Resources | –0.13 | 0.49** | 0.48** | 0.57** | 0.88 | |
| (6) Supply Chain | –0.06 | 0.36** | 0.35** | 0.53** | 0.68** | 0.89 |

**Notes** ** $p$-value significant at <0.01.

**Table 6** Inter-Correlations of Variables (Medium-Term)

| Variables | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| (1) Financial Goals | 0.92 | | | | | |
| (2) Marketing and Customers | 0.16 | 0.72 | | | | |
| (3) Strategy and BE | 0.33** | 0.38** | 0.72 | | | |
| (4) Technology | 0.04 | 0.40** | 0.28** | 0.84 | | |
| (5) Internal Push and Resources | –0.04 | 0.37** | 0.46** | 0.61** | 0.89 | |
| (6) Supply Chain | 0.02 | 0.37** | 0.43** | 0.54** | 0.78** | 0.90 |

**Notes** ** $p$-value significant at <0.01.

**Table 7** Inter-Correlations of Variables (Long-Term)

| Variables | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| (1) Financial Goals | 0.94 | | | | | |
| (2) Marketing and Customers | 0.29** | 0.79 | | | | |
| (3) Strategy and BE | 0.26* | 0.49** | 0.75 | | | |
| (4) Technology | 0.00 | 0.36** | 0.49** | 0.84 | | |
| (5) Internal Push and Resources | 0.09 | 0.49** | 0.47** | 0.63** | 0.85 | |
| (6) Supply Chain | 0.23* | 0.46** | 0.41** | 0.56** | 0.77** | 0.92 |

**Notes** * $p$-value significant at <0.05. ** $p$-value significant at <0.01.

Significant and strong correlations among the technology, internal push and resources, and supply chain can be found in the short term (Table 5). On the other hand, financial goals shows extremely insignificant and weak correlations with other factors, although it is the most dominant driver among Finnish managers and one of the strongest drivers among all surveyed respondents.

In Table 6, the correlations among factors in the medium term, supply chain is significantly and strongly correlated with internal push and resources ($r = 0.78**$), while technology and internal push resources are of high correlation ($r = 0.61**$). The result echoes the short-term results. Interestingly, financial goals is found to correlate with strategy and business environment.

Table 7 shows significant and strong correlations among the technology, internal push and resources, and supply chain in terms of long-term development. No correlation is found between financial goals and technology and financial goals and internal push and resources, whereas correlations exist among other factors.

## Discussion

Various drivers initiate product development efforts in firms. In this study, these drivers were analysed in the following categories: financial goals, marketing and customers, strategy and business environment, technology, internal push and resources, and supply chain. The main drivers of product development among Finnish and Chinese managers were found to differ in relation to short-, medium- and long-term development.

### Drivers for Short-, Medium, and Long-Term Development

Regardless of specific regional differences, managers generally perceive a higher level of importance in relation to marketing and customers for short- ($\mu = 2.23$) and medium-term ($\mu = 2.36$) situations, while the financial goals and strategy and business environment aspects are perceived as more important for medium- and long-term situations. This may imply that managers are more concerned with their business strategy and financial performance in the long run, whereas product development in the short term is mainly driven by the market demands and customers. This can be well explained, as customers in the market generally demand very fast response times. For the medium- to long-term situation, companies would pose their visions of targeting financial goals and business sustainability. In addition, customers' long-term needs and requirements are difficult to identify and, therefore, these do not typically drive the long-term development.

Significant correlations among the technology, internal push and resources, and supply chain were found in the short-, medium-, and long-term development (Tables 5–7). This implies that these driving factors are viewed as highly related, although they are not seen as the dominating factors driving product development. For example, improving the reliability of supply chain can be important (Puurunen, Majava, & Kess, 2014). On the other hand, the weakest correlation with other factors was found for financial goals. It was found to have a correlation with strategy and business environment in medium-term development, which implies that the managers included in the survey incorporate financial goals with medium-term strategic issues. In the long-term development, financial goals was found to have correlation with strategy and business environment, marketing and customers, and supply chain.

### *Differences between Finland- and China-Based Managers*

Notable differences can be identified between Finland- and China-based managers. For short-term development, Finnish managers perceive financial goals ($\mu = 2.39$) as the most important driving factor, while Chinese practitioners perceive this to be marketing and customers ($\mu = 2.38$). However, when comparing the factors on the low side, respondents from China generally perceived they are of higher importance levels. The least important factor perceived by Chinese managers was financial goals ($\mu = 1.83$), while for Finns it was internal push and resources ($\mu = 1.04$).

For medium-term development, Finnish managers perceive financial goals ($\mu = 2.68$) and marketing and customers ($\mu = 2.33$) to be the most important drivers, while Chinese managers identify marketing and customers ($\mu = 2.38$) and strategy and business environment ($\mu = 2.35$).

For long-term development, Finnish practitioners perceive financial goals ($\mu = 2.59$) and strategy and business environment ($\mu = 2.51$) as the most important drivers, whereas Chinese managers see strategy and business environment ($\mu = 2.64$), marketing and customers ($\mu = 2.48$), and technology ($\mu = 2.48$) as the most important driving factors.

Finnish and Chinese managers show obvious discrepancies in viewing the driving factors, especially for the short-term development. Financial goals was considered the most important short-term product development driver category among Finland-based respondents, whereas marketing and customers-related factors were the most important drivers according to China-based respondents. In addition, technology, internal push and resources, and supply chain were seen as more important among Chinese than Finnish managers in all development scenarios. Furthermore, some individual drivers were viewed rather inconsistently among Finnish and Chinese practitioners. For example, Chinese managers saw suppliers, partners, and distributors much more important than Finnish managers. The results may indicate that Finnish and Chinese managers have different management mentalities: Finnish managers generally perceive a few specific factors driving product development, while Chinese managers take more factors into consideration. Finnish practitioners tend to be more focused on financial goals compared to Chinese, especially in short- and medium-term development.

### *Implications*

Several product development drivers have been described in the literature (e.g. Cooper, 2011; Hassanien & Dale, 2012; Trott, 2012), and these drivers have been argued to differ between project types (e.g. Veryzer, 1998). This study analyses the product development drivers in the following categories: financial goals, marketing and customers, strategy and

business environment, technology, internal push and resources, and supply chain. Dividing product development into technology-push and market-pull categories (Hart et al., 2003; Rothwell, 1992) is commonly used in contemporary literature, but the results of this study support the findings by Hassanien and Dale (2012) and Majava et al. (2013) by indicating also many other important drivers.

This study contributes to the existing body of knowledge by indicating that the main drivers of product development among Finnish and Chinese managers differ in relation to short-, medium- and long-term development (Table 3). In spite of regional differences, managers generally perceive a higher level of importance in relation to marketing and customers for short- and medium-term situations, whereas financial goals and strategy and business environment are perceived as more important for medium- and long-term situations. The importance of strategy as a driving factor for product development has been stressed in the literature (e.g. Trott, 2012), but in this study marketing and customers and financial goals were seen as more important than strategy in short- and medium-term development.

This study indicates that views on product development drivers can vary greatly among project types and managers based in different countries. While the differences can be due to many reasons, aligning product development drivers properly could positively impact decision-making and project results. Thus, product development intensive organisations, especially those with international operations, should systematically clarify their project drivers and take cultural differences into account, especially when location-decisions for product development sites are made.

The results indicate differences in views on product development drivers between Finnish and Chinese managers. Finnish managers tend to be more focused on financial goals compared to Chinese managers, especially in short- and medium-term development. In addition, technology, internal push and resources, and supply chain were seen as considerably more important by Chinese than Finnish managers in all development scenarios. Companies should acknowledge that the drivers are situation-specific and that differences exist between different cultures. Product development organisations should invest in finding out their key drivers and ensure that the views are internally aligned. Clarifying product development drivers could be used as a tool for strategy implementation, and for building the right motivation and commitment in different type of projects. The drivers should also affect project objective setting and success criteria.

## Conclusions

Product development is vital for many businesses today. In addition, products are becoming ever more complex, and various customers and multi-

ple stakeholders' needs must be met. The management of product development in international development networks is increasingly challenging. Thus, the original drivers for product development projects are important to clarify, as they influence decision-making and the development results.

This paper presented an exploratory study on how practicing managers perceive product development drivers in NPD-intensive organisations in two export-oriented yet significantly different countries: Finland and China. The study analysed drivers in different types of development, and described the differences between Finland- and China-based managers. The overall results indicate that marketing and customers is the most important product development driver category in the short-term; financial goals in the medium-term; and strategy and business environment in long-term development. Moreover, the study indicates important differences between Finnish and Chinese managers.

Finally, the exploratory nature of this study should be stressed. The key limitations include low number of studied firms and respondents, which makes statistically reliable comparisons difficult. The authors propose to validate the results by conducting further studies with larger sample sizes.

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# Growth Management Priorities of Service-Based Micro-Enterprises in a Sparsely Populated Area

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Micro-enterprises, which refer to a subset of small and medium enterprises, represent over 95% of European enterprises. Nevertheless, little is known about micro-enterprises. Location is one of the key factors concerning the development of business, and several studies have indicated the differences between urban and sparsely populated areas. However, there is a lack of literature concerning the growth management priorities of micro-enterprises, especially of micro-enterprises in sparsely populated areas. To address this gap in the literature, this multiple-case study aims to answer the following research question: What are the critical managerial incidents that occur during the growth of service-based micro-enterprises in a sparsely populated area? The results of the case study showed that the highest priority of the owners-managers of the service-based micro-enterprises was related to human resources.

*Keywords:* micro-enterprises, micro-companies, management priorities, sparsely populated area, growth management

## Introduction

Micro-enterprises, which refer to a subset of small and medium enterprises (SMEs), represent over 95% of European enterprises (European Commission, 2016) and are considered a driver of the European Union (EU) economy. According to the EU's definition, a micro-enterprise is defined as an enterprise that employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million (Commission of the European Communities, 2003). Micro-enterprises are a typical type of firm (Reid, 1995). In 2015, micro-enterprises accounted for 92.8% of enterprises and 37% of the growth in total employment in the

EU (European Commission, 2016), and these trends are increasing (Young, 2013). However, there is little academic research that focuses on micro-enterprises (Kelliher & Reinl, 2009), and thus there is a considerable gap in the literature regarding the reality of micro-enterprises (Samujh, 2011). Specifically, micro-enterprises remain under-researched regarding growth challenges (Gherhes, Williams, Vorley, & Vasconcelos, 2016; Perren, 1999; Heshmati, 2001), management development (Devins, Gold, Johnson, & Holden, 2005), innovation practices (Faherty & Stephens, 2016), and the determinants of profitability (Salman & Yazdanfar, 2012).

Micro-enterprises are neglected in academic research because data are not readily available (Reid, 1995). The larger the company, the more likely its operations will be covered by legislation regarding the public disclosure of operations. Greenbank (2000) explained that academics and policy-makers have neglected micro-enterprises because their focus has been on growth firms. Given the importance of micro-enterprises to economies, this area requires more directed and theoretically-grounded research (Macpherson & Holt, 2007). The purpose of this study is to identify the management focus areas of growing micro-enterprises in a sparsely populated context. Using multiple case studies, this research examines the management priorities of five owner-managers who have experienced growth. More specifically, this study focuses on the critical management-related incidents that the owner-managers experienced during the growth of their respective micro-enterprises.

Compared to larger businesses, micro-enterprises are intrinsically different in terms of their organisational characteristics and approach to business challenges and obstacles (Kelliher & Henderson, 2006; O'Dwyer & Ryan, 2000). It is widely acknowledged that micro-enterprises experience resource scarcity, which forces them to operate under financial and expertise constraints (Kelliher & Reinl, 2009). In this context, micro-enterprises are largely influenced by their owners-managers (Burns, 2010). Predominantly, micro-enterprise culture is an extension of the owner's personality, as the owner plays a pivotal role in the organisation's focus and success (Kelliher & Reinl, 2009; Burns, 2010). A micro-enterprise is managed in an informal and personalised way (Burns, 2010), and decision-making relies on the owner's intuition; thus, there is pressure on the owner-manager to be an expert in all fields of management (Kelliher & Henderson, 2006).

The management processes of micro-enterprises are unique, and their behavioural responses to issues that influence them are fundamentally different from those of larger firms (Kelliher & Henderson, 2006). Micro-enterprises' focus is on day-to-day issues to ensure survival (Faherty & Stephens, 2016). Due to their resource constraints, minimal environmental power and owner-centred culture, it is vital for micro-enterprises to embed

valuable resources into a core business strategy (Kelliher & Reinl, 2009). An intuitive, informal, and flexible strategic process offers micro-enterprises a competitive advantage. Moreover, direct contacts with customers, suppliers, and employees, as well as the ability to respond quickly to market signals are distinct advantages of micro-enterprises (Kelliher & Reinl, 2009; Greenbank, 2000).

According to Wynarczyk, Watson, Storey, Short, and Keasey (1993), the characteristics of a small business are uncertainty, innovation, and firm evolution. Firm evolution refers to how the nature, style, and functions of management change significantly as the business grows and develops. In micro-enterprises, owners-managers often work at both the management and operational levels (Greenbank, 2000), and the owners-managers' life is consumed by their business. However, as the business grows, this may become a problem (Burns, 2010). Perren (1999) posits that the development of micro-enterprises is a process of slow, incremental, iterative adaptation to emerging situations, rather than a sequence of clear, radical steps or decision points. The growth of micro-enterprises is important in terms of the evolution of firms, but their survival and growth are also vital from the regional development point of view (Heshmati, 2001; Rae, 2007), as micro-enterprises often provide key services and products to local economies (Greenbank, 2000).

Storey (1994) posits that location is one of the key influences, together with a firm's age, sector, size, and ownership structure, concerning the development of a business. Particularly, location plays a critical role in providing SMEs with access to important resources and capabilities (Freeman, Styles, & Lawley, 2012). Several studies have indicated the differences between urban businesses and sparsely populated area (SPA) businesses in terms of the business constraints they face (Anderson, Tyler, & McCallion, 2005; Smallbone, North, Baldock, & Ekanem, 2002). Porter (1994) argues that dynamic improvement is the basis of a business's competitive advantage. Dynamic improvement refers to the ability to relentlessly innovate and upgrade skills and technology in market competition. This capacity to innovate and upgrade is heavily based on the business's environment and location.

In sparsely populated areas, businesses face particular challenges in terms of market size, access to larger markets, and infrastructure gaps (Siemens, 2010). Businesses may be less inclined to innovate due to the relative absence of local competition markets. The low population density is reflected in the scarcity of potential partnerships, as well as more sparsely distributed research and development, business support agencies, educational actors, and training providers (North & Smallbone, 2000). The small size and occupational composition of labour markets may im-

pose constraints on rapidly growing enterprises (Smallbone et al., 2002). Furthermore, areas with a lack of entrepreneurial networks are burdened with knowledge filters and impediments to knowledge spill-overs (Audretsch, 2012).

Micro-enterprises are heterogeneous, and hence not all of them strive for growth. Rather, micro-enterprises aim to sustaining themselves in terms of the competition and challenges of business (FSB, 2012; Faherty & Stephens, 2016), and their business is often based on the desire to be independent and support a preferred lifestyle rather than growth (Gray, 1998). Because only a minority of micro-enterprises appear to generate substantial employment growth (Storey, 1994), it is important to investigate the processes of growing micro-enterprises.

Business incidents and events reveal managers' priorities, and researchers can measure these priorities by focusing on how managers pay attention to, weigh, and use available information to solve problems (Smith, Mitchel, & Summer, 1985). Evidence suggests that a firm's size is an important determinant of the nature of managerial work (O'Gorman, Bourke, & Murray, 2005). According to the results of a recent meta-analysis (Muhos, Simunaniemi, Saarela, Foit, & Rasochova, 2017), management priorities of growing service-based business are typically related to focus, power, structure, decision-making systems, strategic management, service development and delivery, marketing, human resources, and growth management. These findings provide a useful frame for in-depth studies on service-based businesses.

There is a lack of literature that examines the growth management priorities of micro-enterprises, especially those located in sparsely populated areas. To address this gap in the literature, this study aims to answer the following research question: What are critical managerial incidents that occur during the growth of service-based micro-enterprises in a sparsely populated area?

## Method

This study is designed as a multiple-case study (Yin, 1989; Saunders, Lewis, Thornhill, Saunders, Philip, & Thornhill, 2009). Examining multiple cases allows for examining an issue from different perspectives. Compared to single-case studies, multiple-case studies yield more reliable results (Miles & Huberman, 1994; Baxter & Jack, 2008). Multiple-case studies are considered more robust and helpful in both generating explanations and testing them (Herriot & Firestone, 1983). Moreover, multiple-case studies provide a stronger basis for theory-building than single case studies (Yin, 1989).

Five cases in sparsely populated areas were analysed using the critical

**Table 1** The Main Characteristics of the Case Companies in 2015

| Case | Founded (year) | Number of employees | Revenue (€) | Service description |
|---|---|---|---|---|
| Case A | 2009 | 12 | 1400,000 | Logistics company focused on early morning deliveries |
| Case B | 2003 | 2 | 950,000 | Bioenergy production services |
| Case C | 2010 | 7 | 450,000 | Construction consultancy and engineering office |
| Case D | 2009 | 4 | 900,000 | Imports and sales industry products and supplies |
| Case E | 2012 | 5 | 670,000 | Fireplace construct services |

incident technique (CIT) and semi-structured interviews, which were conducted during 2016. Cases were selected based on their service focus, strong revenue growth during the micro-enterprise size phase, and sparsely populated location. This study uses the definition of a sparsely populated area described by Gløersen, Dubois, Copus, and Schurmann (2006). According to the definition, a sparsely populated area in Europe has a maximum population density of 12.5 inhabitants/km$^2$.

According to Chell and Pittaway (1998), CIT facilitates the investigation of significant occurrences (e.g., events, incidents, processes, and issues) identified by the owner-manager, as well as the way these occurrences are managed and the perceived outcomes. CIT may be used to identify the factors that lead to successful or unsuccessful performances in divergent phases of business growth. Although the cases may be unique, the types of incidents, contexts, strategies, and outcomes may be applicable to other businesses (Chell, 2014).

In this study, the case reports are based on separate case studies. Cases were selected based on service focus, strong revenue growth during the micro-enterprise size phase, and sparsely populated location. The results were drawn from interview data on the critical incidents during the micro-enterprise size phase that were recalled by the owner-manager of the selected service-based enterprise. The interview frame consisted of two sections: the managers' open-ended stories of the business's growth and detailed descriptions of the positive and negative incidents experienced during the growth of the micro-enterprise. The main characteristics of the case companies that were analysed are summarised in Table 1.

## Results

In this section, case-by-case analyses of the service-based micro-companies are presented. Through analysing the critical managerial incidents, this study seeks to clarify the management priorities that the micro-enterprises
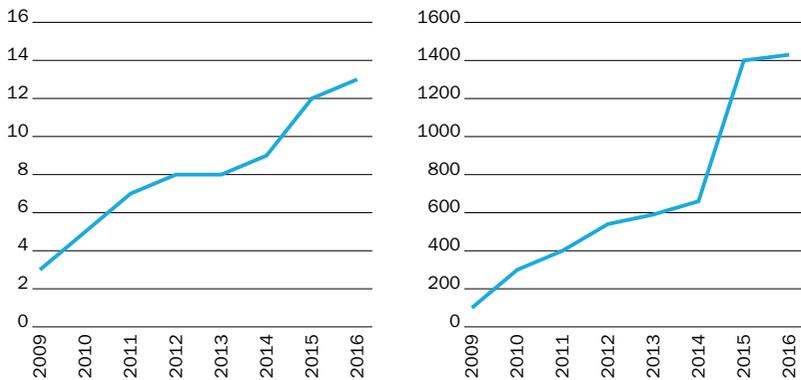
**Figure 1**  Workforce (left, staff in person-years) and Revenue (right, in 1000 €) Development in Case A

in a sparsely populated area in Finland had during the growth process. The results were drawn from interview data on the critical incidents recalled by the owner-managers.

### Case A

Case A operates in the logistics industry, and their business idea is to provide early morning automobile postal services in sparsely populated areas. In Finland, postal services operate in a closed market, and regulation plays a central role in the market. However, extensive outsourcing processes of public sector provide business opportunities also for private companies.

### The Critical Managerial Incidents of Case A

Positive incidents:

- The founder emphasised the role of public procurement; accesses to public contracts have been vital steps to the growth of business. The area of operation has expanded via winning several tendering processes.
- The company has expanded to the logistics sector: '[M]uch work was done with a contract with the municipality for food transportation.'
- The owner manager highlighted the importance of the scalability of the service. 'When there is a full scalable service that meets the growing demand, so it is possible, with the same well-approved operation model, to utilize this to expand business to neighbouring areas, so thus growth was easy in itself. When it works in one place, it works elsewhere.'
- The organisational structure is still thin, but the supervisors of the

teams take part in the distribution tasks and handle payroll and billing as part of their work.

- A positive management decision for growth was the utilisation of digital tools. 'Electronic tablet-based distribution books have been good things. They have facilitated, accelerated and ensured quality.' Work teams live in and work in different locations; thus, remote negotiation and conferencing tools are used.

- Personnel was perceived as a significant factor regarding the growth of the business. Low employee turnover rate and the division of responsibilities are considered keys to success. 'Perhaps the best of these good recalls is that we have always found the right people to work in different places [...] We still have the same employees who have been from the start [...] Self-directed and responsible. It has been nice to note that every one of them has found its own role.'

- According to the founder, it is positive that the business has been economically profitable. 'Profitability has probably given the inspiration to continue business. Moreover, the continuity of work has occurred and there was no such fear that this would end suddenly. Continuity and economy.'

- Capital expenditures and the unity of the vehicle fleet were highlighted as important for the development of the business. The company tried to use profits to purchase equipment and ensure continuity. 'Every car is similar, so we can operate different areas with the same maintenance services, and so it never causes staff to learn new equipment.'

- The company has used web-based electronic systems for document and financial management since the business's inception. 'Everything is electronic nowadays so that it can be handled. That is a top priority, of course.'

Negative incidents:

- As the company grows, the employer will become subject to different legislation, such as the Act on Co-Operation within Undertakings. The manager-owner must control and cope with issues related to legislation.

- Due to the strong regulation of the industry, the government plans for changing the Postal Act caused strong uncertainty in the company.

- The company has perceived challenges in growing and decentralising its operations. 'Organising activities is always getting more and more burdensome, the more people there are, the more different local teams are in charge of [...] remote management was also difficult at the beginning.'
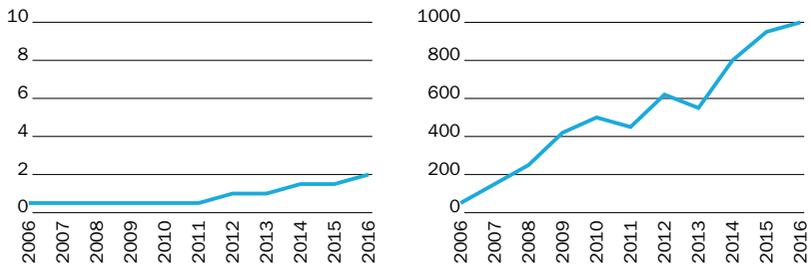
**Figure 2**   Workforce (left, staff in person-years) and Revenue (right, in 1000 €) Development in Case B

- Case A experienced tightened competition. 'Other players have come to the market. In this race, you have to be awake. This system works elsewhere, so big companies are coming from the big growth centres. Those can expand if desired, even to small localities.'

- In a growing company, taking care of the economy and keeping the economy afloat is perceived as challenging. 'Maybe it was related to this kind of growth pressure that made it more stressful.'

- The management of human resources was emphasised as a critical challenge. Working with an increasing amount of people always requires vigilance. In addition, the nature of this particular service, night work, creates challenges related to leadership. 'It is so unworthy of this working time, as we go out to work at night [. . .] things as childcare, the staff backgrounds will always influence what kind of family backgrounds there is.'

- The time that staff spent on holiday was perceived as challenging. 'When that amount of workforce is leaving for a holiday, then finding summer deputies may be difficult. In university towns, it would probably be easier to get such temporary people.'

- Negotiations with significant service subscribers, such as journal houses, presented a critical challenge. 'When distribution of paper magazines by journal houses is falling, they are lazy to negotiate price increases with us, they would rather talk about price discounts, and so we have also faced that price discounts have realized.'

### *Case B*

In Case B, the business idea is to provide construction solutions and services to small and local bioenergy facilities.

*The Critical Managerial Incidents of Case B*
Positive incidents:

- The most positive incidents involved major assignments with public sector investments. Public contracts have presented significant individual opportunities to the company, and success has been associated with positive coincidences (formal errors of competitors' bids in tendering). '(The municipality) outsourced heat production and then, after the tendering, we managed to build a heating plant. It was such a major investment and effort for the company.'

- The success of large projects implemented by the company increased the company's credibility. 'It was just like a kind of victory that they (municipality) could gain something through this trust.'

- The growth of the business was associated with expansions to new business and product areas. The company expanded from heat production to energy production, and, more widely, to real estate services.

- A major positive milestone was that one of the founders was hired as the CEO of the company. This enabled significant time investment for business development.

- The company's internal ownership arrangements were perceived as a positive decision. 'A significant change was made in the company's ownership. I wanted the majority of this company and then bought these minority shareholders.' On the other hand, the number of company shareholders has also grown, which has expanded the company's field of expertise.

- The founder was successful with regard to the acquisition of human resources. 'We have happened to get such good guys in our company, all of them.'

- An open operative culture and openness among personnel within the company were viewed as positive. 'I have experienced a duty to have such an open-minded business culture where workers gather around this table. There are no business secrets, and if we have a problem, I'll tell it to employees that we have such a problem that we should solve [...] I've noticed it will further commit people together.'

- The founder identified his ability to constantly develop himself as a positive influence on the growth of the company. 'Latest funding we got was for such a huge project with a reasonable big risk. I was really happy that I was able to get such funding.'

- Shared ownership, flat organisation and ownership-oriented business were found to be very positive. 'It has been a very positive thing that to the organisation id led by an owner who works on a daily basis.'

- External support, such as an accounting firm and experienced consult-

ing, were perceived as important in terms of financial management and strategic planning.

Negative incidents:

- At its inception, the company faced challenges because bioenergy was still an unfamiliar sector for stakeholders as holders of raw materials. 'Wood acquisition, its provision and its dissemination of awareness to the forest owners was hard when the whole energy wood concept was quite strange. In this area, energy wood was never actually collected before.' Moreover, difficulties in obtaining raw materials and vicissitudes due to poor quality were significant, negative events.

- In addition to success in public contracts, Case B also experienced disappointments with public procurement despite substantial inputs. 'It has been really difficult to get new works.'

- A knowledgeable employee leaving the company was regarded as a negative incident. 'He had a huge network and know-how, financial views, and now [he/she] has left us without that expertise. It was quite a bit risk from us to take this big new project without him/her.'

- In a growing company, taking care of the economy and keeping the economy afloat is perceived as challenging. 'Maybe it was related to this kind of growth pressure that made it more stressful.'

- A negative experience was when one of the projects took longer than the time allotted on a pre-determined timetable, as this caused economic challenges.

- A negative incident was the exchange of an accounting firm. 'That was a bad setback then, it really was.'

- Being located in a sparsely populated area also presented some challenges to the company. 'Support services are really scarcely available here. Those are far from us and then if we think about our potential customers, they are at a difficult distance from here.'

## Case C
Case C is a construction consultancy and engineering office.

### The Critical Managerial Incidents of Case C
Positive incidents:

- The company experimented with market acceptance after two years of operation. 'It roughly took a couple of years before it was in some way pushed itself on the market. Customers began to believe in the company. It was such a positive message that our professionalism
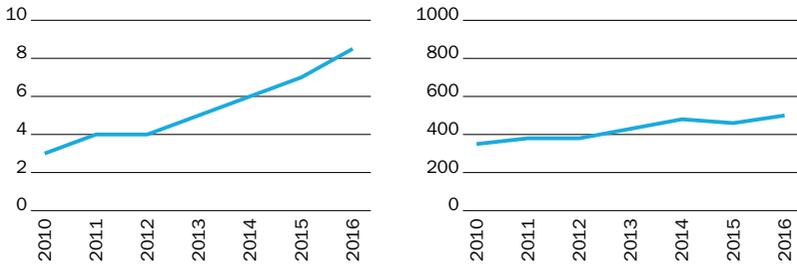
**Figure 3** Workforce (left, staff in person-years) and Revenue (right, in 1000 €) Development in Case C

was so good that the market approved it and the customers started coming in.'

- As the customer base began to grow, the company also began to hire more employees. 'A positive thing was that the company was able to hire people.'

- A very positive incident was the achievement of business success. 'We have begun to notice that now we have the market position that we aimed. We thought that we could be the number one in particular services. Once this position is achieved, the firm is able to profile itself as an active company; it is no longer such a small kiosk.'

- A positive experience was the owner-manager's own development in terms of management abilities. 'Although I have no entrepreneurial background, I have noticed that I have been able to do this task, with enough energy. Note that I have got this business to roll, to be able to carry responsibility and control the situation.'

- Conducting the business as a family business was regarded as positive. 'We, family-run companies, used to work harder than many others. The organisation does its own job. They have a bit of entrepreneurial spirit in the sense that things are pushed forward.'

- Successful recruiting was regarded as a positive incident. 'When we got some good persons hired, we started to feel great experiences when those persons were successful in this job.'

- The implementation of an electronic accounting system represented a positive incident. 'It also allows to tackle management issues.'

Negative incidents:

- Employer responsibilities regarding employees' jobs and livelihood were perceived as challenging. 'As the number of staff increases, so comes the stress to ensure that there is work for everyone.'
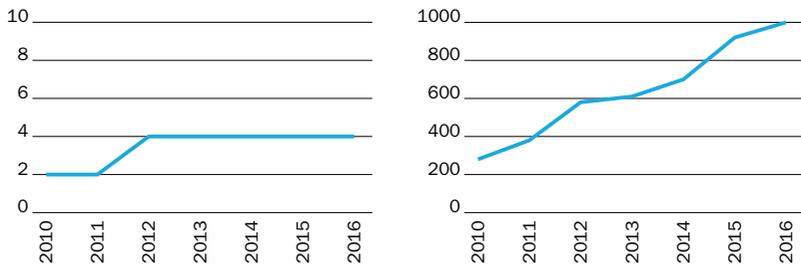
**Figure 4**   Workforce (left, staff in person-years) and Revenue (right, in 1000 €) Development in Case D

- Negative experiences include efforts to spread business into new business sectors (services for prefabricated home factories) and new areas (urban). 'Pricing was so hard [...] They do the job too cheaply. It makes no sense.'
- Negative experiences included worrying about making a living and one's own well-being. 'At the beginning, there was a fear to gain family's livelihood from this business. Later on, time management started to cause stress, and it has been stressful since then.'
- The manager's shortage of time, specifically during the summer season, was regarded as a negative experience. 'It's kind of a negative thing when you do not have enough time to be present. In fact, feedback was given about inadequacy of time and sharing of work, namely that there is no time to do anything and some task might left undone.'
- There were some negative incidents related to mass marketing. 'The negative experience is that it has burned lots of money on the marketing with a shotgun, in a way. It was unnecessary to spend money on advertising [press advertising] that did not get that much benefit.'
- Negative experiences regarding decentralised organisation and remote work occurred. 'Even though you work over the net, it is not the same thing as being physically present. It was not good at all.'
- Good employees leaving the company was perceived as a negative incident. 'It was kind of a loss. These are always this sort of crisis.'

### Case D

Case D imports and sells industry products and supplies to industry sectors and private consumers. The owner-manager's entrepreneurial stake began from the acquisition of Case D in 2009.

*The Critical Managerial Incidents of Case D*
Positive incidents:

- Right after acquisition, the company began to explore the needs of customers and obtain a larger customer base than the company had previously. Moreover, the company sought to grow inventory. 'I had a clear idea: that there would be more sales through a larger inventory. I wanted to distinguish myself from others as being a local actor and a local storehouse.'

- The owner-manager perceived it as positive that the company had a couple of key customers in the beginning. Due to those customers, awareness of the company increased. 'Our name is kind of established nowadays, maybe not every sales trade is with a new customer but with a regular one.'

- From the outset, the company obtained good suppliers of goods. 'It must be of good quality what we sell, so we found suppliers. During the growth, the supplier base expanded, and now it is not the case that we are depending on some suppliers. We are big enough to get approval and response from different suppliers.'

- Even though the customer base is wide, the company has deliberately remained in a narrow range of products and supplies. 'I am very careful about what take to sell, so the concept stays in the package.'

- After seven years of stable growth, a new office was established in a different town. Special equipment was purchased in order to make the company's specialisation even stronger. 'All the time we have taken little steps forward. However, we have always been trying to keep in mind where we are good at and to be able to keep what we promise.'

- A positive incident was associated with human resources. Specifically, recent recruits have been successful. In addition, the organisational structure has deliberately tried to remain flat. 'I have dared to recruit a variety of human types [. . .] I have tried to see the human potential there [. . .] All [recent recruits] have entrepreneurial backgrounds [. . .] and because they all have been financially responsible for their own work, it feels like they understand better than someone who has always been in paid work.'

- Due to growth, the company has been able to expand the service concept and provide larger product unities to better serve customers.

- Setbacks of business are perceived as a source of growth in Case D. 'So even though I am speaking very negatively, I feel that those negative experiences, however, have reinforced us.'

Negative incidents:

- Right after acquisition, there was some sort of burden on the company's earlier business policies and practices.
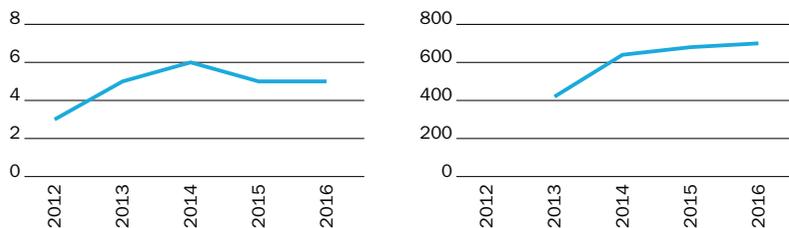
**Figure 5**   Workforce (left, staff in person-years) and Revenue (right, in 1000 €)
Development in Case E

- Negative incidents regarding business growth occurred when differences of opinion between owners led to new ownership and organisation arrangements. '[Business] took steps backwards.'
- Human resources mistakes led to negative experiences. 'Entrepreneurs are blamed to be afraid to give responsibility to the employees, but I have never experienced that to be a problem, but those who want to take responsibility have not really appeared.'
- There was a negative incident associated with leadership. 'Perhaps it is negative that you give people too much freedom and then, in a way, rely too much on them, and believe that we should have had stricter management for things to work.'
- The funding of investments was too tight, which limited the company's resources and caused slow growth. 'The economic side, it's a negative one, we would have to think of funding of the growth phase in a whole different way [. . .] the negative thing is that we were not able to [. . .] use external support to do that.'

### *Case E*

Case E is a specialised construction company that provides different fireplace solutions. In recent years, Case E has achieved sales growth even though the number of employees has decreased.

### *The Critical Managerial Incidents of Case E*

Positive incidents:

- The single-most positive incident involved service development. The company's aim is to refine continuously its service processes. '[We] continued to develop work and work efficiency and tried to reduce those idle times [. . .] That is why it has been possible to grow, even though the number of employees have decreased.'
- In the beginning, an important marketing event was an exposition at a mall. The company received several invitations to tender and became

more convinced that their business idea was working. In addition to regular trade fairs, digital marketing is considered useful.

- The company's technical construction solution was innovation, which accelerated the construction process. 'It [technical construction solution] was a real big step and development.'
- A positive incident occurred at the business's inception, when successful negotiation results with a finance company enabled good payment terms.
- The owner-manager perceived the fact that human resources take responsibility for services as positive. Part ownership has furthered the commitment of personnel. 'It insisted that they are somehow committed to it.'
- The extension of the expertise of the team and investments in new equipment led to the extension of the service concept and productisation. Thus, the company was better able to serve prefabricated home factories. 'It has not increased a lot of cash flow, but it is much easier to sell.'
- Services are produced by separate construct teams. Because of these small teams, different work sites are running at the same time, which has increased the efficiency of services.

Negative incidents:

- The lack of a track record presented a critical challenge at the company's inception. 'So it was really difficult to buy stuff first when they wanted to see all the history information and stuff. So, the credibility problem.'
- Employees' absences from work were perceived as a critical challenge. 'All the influenza seasons. You can't do anything with those, but those look like a rough way.'
- The role of the employer and the manager is not limited to work regarding employees. 'At times, you might be a relationship therapist, supporter and sparrer. A whole book of life.'
- Negative experiences related to human resources occurred as employees, who are trained by the company, tend to conduct competing activities. Thus, the company has made its regulations clearer.

## Discussion and Implications

This multiple-case study examined the management focus areas of five case companies. The research question concerned the critical management-related incidents that occurred during the growth of the five service-based micro-enterprises in a sparsely populated area. The question was answered

**Table 2** Managerial Priorities in the Analysed Cases

| Managerial priority | Case A | Case B | Case C | Case D | Case E |
|---|---|---|---|---|---|
| Focus | ++ | +++− | − | ++ | − |
| Power | | ++ | + | − | + |
| Structure | + | + | − | | + |
| Decision-making systems | ++ | | + | | |
| Strategic management | | | + | − | |
| Service dev. and delivery | +− | − | | ++− | ++ |
| Marketing | | | +− | + | + |
| Human resources | +−− | ++− | +++−−− | +−− | ++−−− |
| Growth management | ++− | +− | | +− | + |

by analysing the positive and negative incidents experienced and recalled by the managers of the case companies. The distribution of the context-specific critical incidents was condensed, as shown in Table 2 (see Muhos et al., 2017):

Table 2 illustrates that the highest priority of the managers of the service-based micro-enterprises was related to human resources. The findings are consistent with existing literature; for example, Hess (1987) showed that owner-managers consider human resource practices as one of the most important management activities, and Marlow and Patton (1993) demonstrated that the effective management of human resources is a good predictor of small business survival. Mazzarol (2003) stated that finding, motivating, and retaining good staff is a critical bottleneck of small business growth, and Barrett and Mayson (2007) noted that small firms seeking growth should ensure that their human resources practices are in good 'fit.' In addition to positive incidents, all the case managers recalled negative incidents related to human resources. However, these adversities were often seen as necessary for the further development of the micro-enterprises.

In addition to critical human resources management issues such as leadership, the commitment of employees, and the significance of recruiting, the findings reveal the importance of owner-managers' self-management. Their self-development, self-care, and time management are issues that emerged from the data. As aforementioned, the development of the owner-manager is synonymous with the development of the business (O'Dwyer & Ryan, 2000). However, Achtenhagen, Ekberg, and Melander (2017) showed that it is challenging for owner-managers to develop new managerial skills while running their daily business, which requires all the owner-managers' attention and resources.

The owner-managers of these cases faced multiple focus issues caused by highly relevant service agreements, such as big projects and public contracts. These critical incidents have significantly changed the focus of the

business during growth. However, changes in focus that were forced by unexpected external changes were challenging. As Merz and Sauber (1995) indicated that small firms are rather sensitive to changes in operating environments, our findings also suggest the critical significance of external issues. The critical incidents involved with service development and delivery included developing service processes, expanding to new business sectors and locations and improving the service concept, or servitisation.

The results showed that the key positive incidents regarding power were related to shared ownership. According to the managers, when employees own a piece of company, this tends to significantly influence employees' commitment and the growth of the business. Past research regarding the effect of employee ownership on performance is unclear, possibly due to differences in institutional and cultural factors, period-effects, industry differences, and firm-specific heterogeneity (Kim & Patel, 2017). However, some evidence suggests that shared ownership is linked to worker behaviour in that shared ownership is likely to increase productivity and profits, reduce workforce turnover, and increase employees' willingness to work hard (Kruse, Freeman, & Blasi, 2010). Regarding growth management, a typical positive incident was that the business was economically profitable and successfully obtained external funding.

The findings also revealed critical incidents that did not explicitly fit the framework of management priorities outlined by Muhos et al. (2017). For example, in Cases A, B, and D, the owner-manager perceived that external issues such as regulation, competition, and relations with supply chain actors or external supporters generated critical incidents during the growth of the micro-enterprise. This is consistent with prior research that has indicated that service-based micro-enterprises struggle with understanding and complying with regulations related to the workforce (Achtenhagen et al., 2017). Networks are important and provide potential resources to support the growth of small firms (Macpherson & Holt, 2007), and forming and managing external relationships is an important strategy for small business development (Street & Cameron, 2007). Moreover, the findings show that key relations with subscribers and suppliers or accounting personnel are prioritised management issues in terms of the growth of micro-enterprises.

Based on our findings, we advance recommendations for growth-seeking owner-managers and public business advisors. Overall, the findings of this study highlight the role of human resource management in the growth of service-based micro-enterprises. The results suggest that micro-enterprises seeking growth should pay attention to human resource practices as their main area of development. Developing the firm's human resources policies is critical to the long-term success of the small firm (Mazzarol, 2003), and

each recruitment is an important strategic decision with a major effect on how the micro-enterprises' business will develop (Achtenhagen et al., 2017).

Moreover, public support for micro-enterprises, such as training, coaching, and advisory services, should focus on human resources management issues, such as recruiting, reward systems, and shared ownership. Because the owners-managers of a small business often handles the business's human resource functions alone, external legal and practical support may partly tackle these challenges. In addition, the well-being and self-management of owners-managers should be an essential part of the design of public support activities for micro-enterprises, such as management development programmes.

## Conclusion

Although growth in small businesses is rare (Orser, Hogarth-Scott, & Riding, 2000), the development of the small business sector is vital. Successful growth management is an essential element of the development of micro-enterprises into small and medium-sized-enterprises. This paper identifies the management priorities of service-based micro-enterprises located in a sparsely populated area. The results highlight the role of human resource management in micro-enterprises' growth and suggest that service-based micro-enterprises seeking growth should pay attention to human resource practices as a critical managerial area. This conclusion is in line with prior empirical work in the small business research field.

The findings should be interpreted within the context of their limitations, and case studies of this kind are not without their shortcomings. Micro-enterprises are an extremely heterogeneous group of businesses, and the scope of this study was limited to service-based businesses without industry-specific investigation. Thus, the results of this multiple case study may not be generalised to other contexts; however, analytic generalisation (generalisation to a theory) is possible. Although these limitations are important and must be considered, we are nevertheless convinced that this study can contribute to a better understanding of the management priorities of growing micro-enterprises located in sparsely populated areas. However, further research is needed to clarify the growth management of micro-enterprises.

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# Identifying the Components Required Supporting the Application of Effective Knowledge Management Activities in Higher Education Partnerships

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The purpose of this research is to use the conceptual model presented by Elezi (2017) and examine what are the requirements needed to apply successful Knowledge Management (KM) Activities in Higher Education (HE) partnerships. This research follows a subjective ontology, which leads towards an interpretivistic epistemological stance through the application of three semi-structured interview questions. Questions were posed to nine elite interviewees (EI) who have been involved in initiating, developing and managing partnerships of Higher Education Institutions (HEIs). The results of this research show that currently HEIs involved in partnerships apply KM Activities although not constantly or very effectively. Answers gathered from the EI infer that shared vision and values amongst partners, leadership and management, communication protocol and development of a KM strategy are essential in designing and applying effective KM Activities that allow HEIs to attain the institutional and partnership objectives.

*Keywords:* higher education partnerships, KM activities, shared vision and values, leadership and management, communication protocol, KM strategy

## Introduction

The Higher Education (HE) sector is becoming more competitive, thus posing pressure on Higher Education Institutions (HEIs) to seek opportunities that minimise risk and strengthen competitive advantage in the long run (Beesley & Cooper, 2008; Larner, 2015; Gibb, Haskins, & Robertson 2012). As a response to the competitiveness of the sector, many HEIs have developed partnerships. Collaborations between partners rely on the extent and quality of knowledge being communicated amongst partners thus making Knowledge Management (KM) an important component in the development of partnerships. Studies show (Whelan & Carcary, 2011; Kim, Lee, Chun, &

Benbasat 2014; Gibb et al., 2012) that KM has a positive role in facilitating the development of HEI partnerships as it allows knowledge-based institutions (KBI) to develop intellectual capacities and to enhance institutional performance. Studies have shown that application of KM in HEIs has had a constructive impact on developing intellectual properties (Jandaghi, Irani, Mousavi, & Davoodavabi, 2014), students' skills and employability (Schmitt & Butchart, 2014), as well as on promoting new curricula and academic programmes (Larner, 2015). Tong, Tak, and Wong (2015) advise that a decent understanding of KM principles allows KBI, particularly HEIs, to demonstrate a proactive behaviour and seek to be innovative and strengthen their market position by exploring opportunities more effectively through collaborations. KM is a relatively multifaceted area of research and its complexity increases when discussed and analysed in the context of partnerships due to the nature of collaborative projects. A study presented by Elezi (2017) has identified a list of KM Activities needed to facilitate the development of HEI partnerships. Therefore, authors of this paper focus on identifying what is required to design and establish effective KM Activities for HEI partnerships.

### Research Context

The research published by Elezi (2017) presents a conceptual model developed (named 'KM partnership tree,' see Figure 1) as a result of a critical review of literature. The model is presented using the tree analogy in order to demonstrate the connectivity between different parts of the model. For instance, the roots of the tree present the 'Behavioural KM Constructs' category and include elements of culture, trust, communication and absorptive capacities. The KM partnership tree has three branches with first on the left hand side being the branch of 'Partnership Factors,' followed by the second branch of 'KM Activities' and ending with 'Institutional Factors' as the third branch. The purpose of presenting the 'KM Activities' in the middle of the tree is to illustrate its role in allowing HEIs to consider, negotiate, develop and manage collaborative opportunities. Therefore, this paper seeks to understand what drives forward the application of 'KM Activities' and allow HEIs to perform and reach institutional and partnership objectives.

This research makes sole use of a conceptual model developed by Elezi (2017), as a result of literature related to KM and HEI partnership development. The author acknowledges the limitations that derive respectively of a conceptual model that is based only on the literature and has not been tested or assessed in the context of UK HE industry. However, the conceptual model seeks to inform the reader with the fundamental KM concepts, themes and activities identified as important and necessary for a successful HEI partnership. Although, the conceptual model is literature-based, it
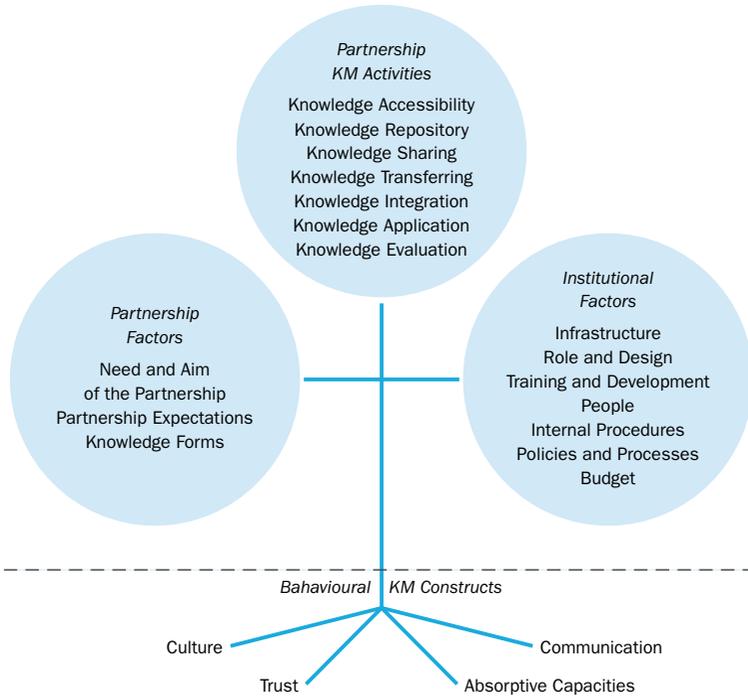
**Figure 1**    Conceptual Model of KM Partnership Tree

seeks to elaborate on the role of KM by embracing a holistic stance and explaining the affects of KM activities in supporting the integration of HE institutions in developing a HEI partnership. Nevertheless, the conceptual model can be further developed through additional research of a qualitative and/or quantitative nature. Further research is required to examine and/or test the identified KM construct behaviour, partnership and institutional factors, as well as KM activities following the literature review in order to enhance and strengthen the relevance and applicability of the model in a real life scenario.

## Literature Review

This literature review focuses on presenting studies related to the middle branch of the KM Partnership Tree presented as 'KM Activities' in the conceptual model designed by Elezi (2017), who identified a set of KM Activities that should take place for an adequate application of KM. According to Elezi (2017) 'KM Activities' branch includes seven stages and consist of knowledge accessibility, repository, sharing, transferring, application, integration and evaluation.

Knowledge accessibility focuses on providing the required logistic support to members of the partnership to access the required knowledge that initially starts by identifying the sources where knowledge is stored. Knowledge is very dynamic in nature (Jandaghi et al., 2014) and is transformed continuously and resides in individuals, departments and institutional levels. It is vital to not only identify the type of knowledge individuals need and where they can find it but also how should it be extracted to bring attention to quality-related issues.

Research published by Basque, Paquette, Pudelko, and Leonard (2014), Brewer and Brewer (2011) and Elezi and Bamber (2016) emphasise the importance of gathering and storing new and relevant knowledge within an institutio's system that allows accessibility. Lane (2011) and Hemsley-Brown and Oplatka (2010) explain that technology has had a significant impact in the gathering, storing and accessibility of knowledge within institutional context. Developing knowledge repositories allow HEIs not only to enhance their performance but also to protect the intellectual capacities that can define the competitive advantage of the institution. A knowledge repository that is continually developed and altered in response to market changes increases the opportunities for further institutional development and risk minimisation, Beesley and Cooper (2008) argue. Knowledge sharing has been subject of several studies (Foskett & Maringe, 2010; Larner, 2015; Reich, Gemino, & Sauer, 2014), which have explained its role in encouraging the exchange of knowledge and information related to partnership objectives, as well as in facilitating the integration of partners and their tasks and actions. The sharing of knowledge is not always at the expected intensity and depth studies suggest (Wang & Noe, 2010; Schmitt & Butchart, 2014). However, when knowledge sharing practices are conducted adequately, it is a representation of a positive work environment, development of trust and desire to assist and grow individually and institutionally (Fidalgo-Blanco, Sein-Echaluce, & García-Peñalvo, 2015).

In addition, knowledge transfer has been another subtopic that has received considerable attention in KM studies and, contrary to knowledge sharing, it is an activity that deals with transferability of specific knowledge upon which members of a partnership are expected to take action and reflect it within institution's policies, practices and processes. In other words, knowledge transferring is instigated with a clear purpose and target, and is used by HEIs to develop their intellectual capacities and institutional strategies, some scholars argue (Natek & Zwilling, 2014; Liebowitz & Frank, 2016). The transferability of knowledge between partners is expected to develop new knowledge, thus it is important to ensure that institutional systems are functioning properly and allow the integration of new knowledge as a way to attain the desirable outcome(s).

**Table 1** The Three Semi-Structured Interview Questions

| |
|---|
| 1 In what way do you think KM can assist HEI in formulating a sustainable partnership? |
| 2 At what extent does your current institutional infrastructure support the KM initiatives? |
| 3 Can you recall any knowledge leveraging practices applied by a HEI when operating in partnerships? |

As discussed by Natek and Zwilling (2014) and Liebowitz and Frank (2016), the transferability of knowledge is designed at a strategic level. However, its integration relies with what Patriotta, Castellano, and Wright (2013) define as knowledge brokers or senior members of staff, who have an adequate comprehension of HEI strategic intensions. Therefore, assigning individuals in charge of KM practices aids with new knowledge absorption and sharing within the institution, thus helping with knowledge storage and accessibility. Knowledge integration allows an HE institution to alter and adjust its current knowledge capacities in the face of competition and recent sector development.

Elezi (2017) explains that application of knowledge is seen as an indicator that can be used to assess the effectiveness of knowledge transfer and knowledge integration between HE partners. Nevertheless, it should be noted that the application of newly integrated knowledge is very influenced by the leadership and management, institutional infrastructure, and training and development programmes in place to support the application of new knowledge. As pointed out in the literature (Holsapple, 2013; Lane, 2011), knowledge application activity might require institutions to remodel and reorganise institutional managerial structures.

The last activity of the model proposed by Elezi (2017) consists of knowledge evaluation, whose purpose is to appraise the processes of allowing HEI to attain the desired outcomes as a result of knowledge exchange and development. Incorporating activities of a knowledge evaluation nature allows HEI to have continuous checks, whike assessing if the applied activities and undertaken actions are leading the partnership towards the desirable outcomes and if alterations are needed. As explained by Elezi (2017), the application of evaluative practices provides opportunities to address issues related to financial management, market share and institutional performance.

## Research Methodology

The ontology of this research relies on a subjective approach and epistemologically makes use of an interpretivistic stance. The researchers designed and applied a qualitative methodology using elite interviews and posed three semi-structured in-depth interview questions (Table 1) to nine elite interviewees (EIs) of British HEIs, all based within the UK. The inter-

views were conducted between June 2017 and October 2017 in four HEIs located in the Northwest and Southeast of England. In terms of demographics, the sample consisted of two females of an age group of 55–65 who had been working within the British HE sector for a minimum of 18 and 25 years, including operational and strategic positions while working in HE partnerships. The other seven EIs were males aged 45–75 with a minimum experience in the HE sector of 9 years and a maximum of 32 years. The extensive and multidimensional experience gathered from the EIs was of particular importance, as it allowed the researchers to understand the challenges experienced by HEIs when entering and operating in partnerships, as well as to understand the role that KM can have in facilitating collaborative undertakings.

The development of questions aimed to gather information from three different perspectives related to the role of KM in developing HEI partnerships, the institutional infrastructure in supporting KM initiatives and the application of knowledge-leveraging practices from HEIs when working in partnerships. The average time for each interview was 16 minutes and respondents were voice-recorded. Afterwards, interviews were fully transcribed to proceed with the analysis of results through the application of thematic analysis. According to Casell and Symon (2004), thematic analysis allow the researcher to identify and pinpoint common patterns among the answers collected and to be able to respond the questions and phenomena being investigated. Therefore, the application of thematic analysis allowed the researchers to extract common themes, concepts and key phrases gathered from EIs, which were later discussed and analysed in the context of this research.

## Results

The elite interviewees where asked three semi-structured questions in order to gather professional insights regarding the application and effectiveness of KM Activities within HEIs when working in partnerships.

The first question asked was 'In what way do you think KM can assist HEIs in formulating a sustainable partnership?' The purpose of this question was to extract information in regards to the usefulness of KM in the development of HE partnerships. There was a common understanding between respondents that KM supports the development of partnerships particularly through knowledge sharing and knowledge transferring. However, respondents noticed that the challenges lay on knowledge integration and knowledge evaluation. As indicated by respondents', the challenges with knowledge integration and evaluation are mainly related to the desire and commitment to share, departmental and institutional change and communication. Respondents discussed the importance of KM from a strate-

gic and operational level, emphasising that establishing institutional systems strategically does not necessarily guarantee that new knowledge is absorbed and used effectively for partnership opportunities. For instance, EI 3 stated that:

> We have a CRM but it's not used effectively. We have held lots of conversations with clients for potential opportunities and there is a lot of information and knowledge we can extract from these conversations but no one has really looked at them with the aim to understand and maximise the potential. This demonstrates lots of inefficiencies and a lack of absorbing knowledge needed to develop partnerships.

Whereas EI 3 examined the KM at a strategic level, EI 6 offered an operational perspective and highlited the importance of solid internal operational processes and systems that would allow the HE institution to perform and meet partners' expectations and enhance its institutional capacities through knowledge creation and knowledge application activities. EI 6 stated that:

> I insist in having robust systems in place to document the created knowledge that will help you in understanding the partnership better and that could be about managing a course, managing a delivery, managing legalities or contracts and all of these things. So starting with knowledge creation, followed by knowledge organisation, which is the documentation of processes and procedures, and the application of that knowledge . . . and that goes back to the knowledge creation cycle again. And, by knowledge application, I mean enhancing the delivery of the programmes and modules and bring that knowledge to the new modules and pass over that knowledge to the next batch of students, while there might be the same programmes in different countries and to make it better by reflecting on it as a result of knowledge creation.

Respondents argued that knowledge evaluation is a KM activity that does not occur very often and is limited to informal conversations between colleagues or standardised feedback forms that may be applied for certain processes or experiences within the partnership operations. Answers indicate that lack of KM evaluation might be due to institutional culture and lack of commitment from leadership and management of a HE institution.

The second question asked was 'At what extent does your current institutional infrastructure support the KM initiatives?' that sought to understand if the current infrastructure of HEI supports KM initiatives. The overall understanding was that HEIs aim to support KM through a range of KM initiatives that encourage individuals and departments to work collaboratively with rep-

resentatives of other HEIs. Respondents noticed that the encouragement of collaborations between different HEIs, mainly in England, comes as a response of measurements such as Higher Education Funding Council for England (HEFCE) through the application of the Research Excellence Framework (REF) and the Teaching Excellence Framework (TEF). For instance, universities going through the REF and TEF assessments receive higher scores when demonstrating collaborative publications or knowledge-based projects with colleagues of other universities.

Furthermore, according to respondents, HEIs make use of skills sharing sessions, CPD days and departmental meetings involving representatives of the HE partner as an approach that aids application of KM Activities. For instance, EI 2 stated that her HEI applied a very effective KM initiative called '10 minutes with the senior leaders' and stated that 'she gave 10 minutes to each of the senior leadership team, 10 minutes to outline something they saw as a challenge since the previous meeting.' The '10 minutes with the senior leaders' practice provided an opportunity for the leader to become aware of issues and challenges faced at departmental level, as well to make use of an extensive level of strategic and operational knowledge found amongst senior leaders in order to tackle the identified problems. However, one of the respondents explained that skills sharing sessions not always work particularly as academics tend to demonstrate a protective behaviour and seek reassurance that their contribution will be acknowledged through any sort of publication or social status.

Other responses gathered indicated that HEIs tend to use KM initiatives, although it was noted that the staff of these institutions do not particularly use KM terminology, as pointed out by EI 6, who has earned a PhD within the area of KM and has been directly involved in managing HE partnerships in his institution. EI 6 stated therefore that:

> I don't think we explicitly say here are our KM initiatives. We do have pretty robust systems built in to make sure knowledge about the partnerships in respect to market demand analysis and financial performance, together with partners' expertise, is captured. I believe we do have quite robust systems that allow us to capture knowledge from our partners, or from the partnerships we are in, and use it to the benefit of the stakeholders involved in.

The understanding from the responses was that the creation of designated teams between HE partners and the establishment of clear and effective communication channels have a very significant impact on the effectiveness of KM initiatives. Communication allows the HE partners to understand if the partnership is developing but, more importantly, it helps to assess if the KM initiatives applied have been effective or not. The qual-

ity of knowledge being shared and transferred when evaluated can examine the effectiveness of KM initiatives and activities.

The third question posed was 'Can you recall any knowledge leveraging practices applied by a HEI when operating in partnerships?' and aimed to understand the nature of knowledge leveraging practices implemented by HEIs when involved in collaborative projects. Respondents highlighted that KM leveraging practices are mainly reflected through the preparation of new learning materials developed between partnering HEIs, academic conferences and workshops, research publications and meetings where partners report and discuss on the development of the partnership and potential alterations to further enhance the collaborative performance. Respondents explained that the intensity and effectiveness of applying knowledge leveraging practices is related with the involvement of lecturers, heads of departments and high executives. Interestingly, EI 1 discussed the importance of knowledge evaluation within his institution and stated:

> We also have a procedure in place where at the end of the project we have not only to prepare a report, usually known as 'evaluation report,' but also to disseminate the knowledge gained in terms of collaborative projects with other departments. Like this, they were also aware of what was going on but also of issues that they could maybe face in future collaborative projects or partnerships.

Similarly to the response of EI 1, EI 9 pointed out that the application of evaluation reports appeared to be an effective practice as it permits the distribution and absorption of as much relevant knowledge as possible at no extra cost. The newly attained knowledge, shared through written reports and formal and informal discussions or presentations amongst HE members of staff, allowed experienced and less experienced staff to gather together and use their knowledge and expertise to tackle departmental and institutional partnership issues and challenges. EI 9 also discussed the role of teaching and learning forums and committees as very effective KM leveraging practices, when applied rigorously. The common understanding amongst the EIs was that the application of knowledge-leveraging practices related to teaching and learning practices is crucial and is reflected on HEIs' performance audit reports conducted by governmental bodies. Such audit reports are accessible for the public and will affect a HEI institution's reputation when it comes to brand image, reputation and possible future collaborations. Nonetheless, EI 8 noted that, due to lack of institutional culture, strategy and clear communication channels, the application of knowledge-leveraging practices by HE partners is not always supporting or encouraging knowledge sharing, and negatively impacts the element of trust amongst partners. EI 8 explained that:

[...] often leverage is used badly because leverage tends to suggest that one of the partners feels more powerful, superior [...] But if the other partner is open and clear, and agrees to operate under certain circumstances to some extent. But you don't want to constantly feel that you are being asked to do certain things in order to be able to receive something new or additional, because the usage of leverage erodes the trust and that is how it worked in my experience.

Generally speaking, the results indicate that HEIs seek to employ knowledge-leveraging practices that help with knowledge sharing, transferring, absorption and integration. However, this research shows that, if HEIs enter into partnerships with a superiority behaviour or attitude towards the other HE partner, then knowledge-leveraging practices might not work effectively. Therefore, not benefiting from the knowledge-leveraging practices amongst the partners raises barriers in terms of sharing and communicating the required knowledge and, as a consequence, frustration and misunderstanding levels increase, leading towards a discontinuation of the partnership.

## Discussion and Analysis

The research shows that overall British HEIs tend to apply KM Activities internally but also externally, namely, when working in partnerships. However, as results show, the applicability of KM Activities is not always conducted appropriately and effectively, which raises many issues related to management of knowledge. As explained by Holsapple (2013), knowledge is fluid and dynamic, changing shape and context very often and, if an institution cannot control that adequately, it can then become even more challenging to manage knowledge at a partnership level. Therefore, it is essential for a HE institution to realise that the lack of knowledge and the potential for growth and development of the required knowledge is accumulated and used correctly.

Results show that, first and foremost, the effectiveness of the 'KM Activities' branch in HE partnerships is influenced and driven by the establishment of shared vision and values of participating institutions. It is of a paramount importance for HEIs involved in partnerships to understand each other's visions and values, as this aids the understanding of expectations, the institutional contributions and the benefits of the partnership. The establishment of shared visions and values between HE partners allows for the cultivation of trust, which in return can facilitate the integration of the partnership and supports institutions to explore further other potential collaborative opportunities.

As results display, it is the responsibility of the HE institution's lead-
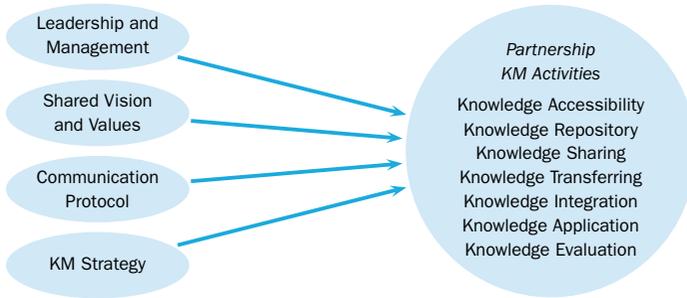
**Figure 2** Requirements for Establishing a Successful Application of 'KM Activities' in HE Partnerships

ership and management to establish and nurture an institutional culture where individuals and departments are encouraged to share knowledge, by making it accessible and available to the interested stakeholders. Operating under a centralised culture or demonstrating micromanagement behaviour will have a negative effect on employee engagement and involvement. Lack of employee engagement and involvement causes issues with knowledge sharing, integration and application, as employees feel restricted, ignored, not part of the team and, more importantly, do not have any rewarding incentives for channelling and storing knowledge.

Results infer that developing a communication protocol and strictly complying with is essential in achieving effective application of 'KM Activities' in HE partnerships. The results of this research tie well with previous studies (Natek & Zwilling, 2014; Liebowitz & Frank, 2016; Cranfield & Taylor, 2008) where scholars have discussed the importance of communication in collaborative projects. However, when comparing results of this research to existing studies, it must be pointed out that development of a communication protocol is as important as the partnership itself and should be formally discussed and agreed at a strategic level, once the partners have decided to collaborate.

Lastly, results indicate that the HE institution should formulate a KM strategy that reflects a collaboration based on shared visions and values. That means HEIs should have the support of a leadership and management seeking to nurture and develop individuals and teams participating in the partnership, and more importantly they should present a clear guidance and structure regarding communication in terms of content, depth of information and frequency.

Figure 2 represents the requirements for successful application of 'KM Activities' that will yield institutional results and allow a HEI to achieve outcomes that would not be able to attain if working independently.

The development of knowledge is an ongoing process and includes several actions and processes between human beings and social entities, as explained by Fidalgo-Blanco et al. (2015), Larner (2015), and Reich et al. (2014). The complexity of developing knowledge increases with the involvement of stakeholders, of different interests and expectations in a given project or enterprise. Therefore, it is necessary to design and implement 'KM Activities' that will actually allow individuals and institutions to grow and develop as a result of knowledge exchange. Figure 2 illustrates that establishing a common ground between HE partners in terms of vision and values is essential for allowing institutions to consider collaborative projects. Once the establishment of shared visions and values is demonstrated through actions, it is the responsibility of the leadership and management of a HE institution to support and assist the development of the partnership from the strategic to the operational level.

Nevertheless, a decent leadership and management not always yields positive results regardless of the good intentions and level of support, due to lack of communication at an institutional and partnership level. Therefore, this research points out that it is mandatory for the partners to establish and agree on a clear and formal communication protocol that is regularly controlled and evaluated in order to ensure a progressive development of the partnership. The last step is to launch a strategy that is based on a shared vision and values, supported through a constructive leadership and management, that operates under a clear and effective communication protocol and, more importantly, that identifies list of actions, resources, expertise and knowledge required to achieve the agreed institutional and partnership outcomes.

## Conclusions

The results of this research demonstrate that KM Activities are essential in facilitating the composition and progression of HEI partnerships. Answers collected through EI semi-structured interviews explained that the identified KM Activities are not always conducted effectively and four important elements are required to be considered from the HEIs when operating in partnerships. Firstly, the establishment of a common shared vision and values among partners. Secondly, support and nurturing from the leadership and management of the HEI at a strategic and operational level, allowing individuals, teams and departments to perform against the expected outcomes. Thirdly, it is of a paramount significance to formulate and institutionalise a communication protocol at a partnership level, in order to allow HEIs to develop institutional synergies and demonstrate synchronised actions. Fourthly, HEIs need to avoid taking *ad hoc* actions or simply responding to requests and challenges, but rather they should exchange each others'

expertise and institutional infrastructures in order to produce a KM strategy that clearly explains the involvement and expectations of individuals and departments at an institutional and partnership level when working in collaborative projects.

### *Future Work*

Further research could be conducted quantitatively to examine statistical relationships between the four identified elements (shared vision and values, leadership and management, communication protocol and KM strategy) and KM Activities needed to facilitate the development of HEI partnerships.

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# A Comparison of the Cultural Intelligence of Hungarian and International Business Students

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In today's globalised marketplace the difference between the concepts of local and global is disappearing, because of the interdependence of nations. Higher education has to take notice of these realities since the employability of graduates rests on the extent to which business education can focus on the development of the skills necessary to manage across cultures. Education needs to take it upon itself to design courses that will help students acquire intercultural competence. Cultural intelligence comprises similar competences as intercultural competence so, by measuring its level, we can formulate assumptions regarding the intercultural competence of individuals, pinpointing the gaps where development is necessary. In our study, we used the Earley and Mosakowski (2004) questionnaire to measure the cultural intelligence of Hungarian and international business students at the Budapest Business School. The results showed higher scores for Hungarian students in cognitive and physical intelligence, while international students scored higher in emotional/motivational intelligence. The survey also looks at the impact of the Erasmus experience on students' cultural intelligence.

*Keywords:* intercultural competence, cultural intelligence, globalisation, internationalisation, business students, higher education

## Introduction

Our 21st century can be called the 'global' century, bringing with it a certain homogenisation of cultures. At the same time, however, the importance of recognising and dealing with cultural diversity is increasing. Even though business practices and organisational cultures across the world show similarities, they need to be adapted, in varying degrees, to local conditions. Consequently, business people can never be completely certain that their skills can be transferred to various business environments without any change. 'When cultures come into contact, they may converge on some aspects, but their idiosyncrasies will likely amplify' (Javidan & House, 2002, p. 1). As a former CEO of Coca Cola Corporation pointed out, 'the fact that the business world is becoming increasingly global does not mean that cultural

differences are disappearing or diminishing. On the contrary, as economic borders come down, cultural barriers go up, presenting new challenges and opportunities in business' (Javidan & House, 2001, p. 291). This statement is especially valid for Europe. There is no other part of the world with so many diverse cultures as in Europe, which is also reflected in the fact that, out of the GLOBE study regarding ten culture clusters for the whole world, four are European (Eastern Europe, Germanic Europe, Latin Europe, Nordic Europe) while one, the Anglo Cluster, is partly European (Falk Bano, 2014).

In view of the above, it is obvious that in our age there is an urgent need to increase the awareness of how to overcome those hidden cultural assumptions that interfere with effective intercultural cooperation in international organisations. We need to understand how cultural factors impact job performance and how our repertoire of culturally appropriate behaviours can be expanded. When people in general demonstrate respect for and knowledge of their foreign counterparts' social behaviour, they can gain a distinctive competitive advantage, whether in business or education or any other field. The sooner such training starts the better. However, for genuinely good results, a multicultural environment is necessary. In Hungary today, higher education is one of the contexts where students can engage in multicultural teams, so here there is a need to rely on cultural intelligence. Indeed, as these students are one step closer to the world of work, the development of cultural intelligence will assist them as leaders or members of multicultural teams (French, 2010).

In this study, our aim is to measure the cultural competence of students at the Budapest Business School in order to make use of the results in the design of materials for training purposes. Our objective is to help our students become successful global managers. In the first part of the study, we will discuss the importance of intercultural competence, and we will then briefly introduce the survey and discuss its results.

## Why (Intercultural) Competence?

There are several definitions of the concept of cultural or intercultural competence. Some specify the most important parts of the concept focusing on cultural competence as a developmental process that evolves over an extended period. Nguyen (2009) summarizes the most important elements of intercultural competence on the basis of an 80–100 per cent agreement of the leading international experts in the field as follows: Ability to

- communicate effectively and in an appropriate way in intercultural situations on the basis of the individual's intercultural knowledge, skills and attitudes;

- identify culture-guided behaviour,
- initiate a new form of behaviour even when such behaviour is not familiar based on one's own socialisation;
- appropriately switch among the frames of reference and adjust to the cultural context;
- exercise adjustment skills and flexibility;
- extend the cultural frame of reference.

In other words, intercultural competence can be defined as the ability to understand each other's viewpoints; to look at ourselves from the outside, to exercise self-assessment; to adapt to a new cultural environment through listening and observation; to demonstrate a general openness to intercultural learning and to learn from other cultures, as well as to adjust to changing intercultural communication and learning styles (Nguyen, 2009; Falk Bano, 2012).

The importance of intercultural competence has been emphasized by companies looking to implement global strategies. Gregersen, Morrison, and Black (1998) conducted a survey of companies in the US and they found that there was a serious shortage of globally competent executives. More than three quarters of the Fortune 500 companies participating in the survey complained of not having the adequate number of global leaders, while more than half were of the opinion that their existing executives should undergo further training to acquire the needed competences.

Falk Bano (1999; 2008), in a study spanning 20 years, interviewed some 500 Hungarian and foreign top and middle managers in international (mostly American-Hungarian and British-Hungarian) organisations in Hungary. The focus of the study was intercultural miscommunication and its ensuing problems. The findings show that misunderstandings between Hungarian employees and foreign managers abound.

In one part of the interview, the participants were asked to give examples of problems caused by intercultural miscommunication. Hungarians, in several cases, reported feeling like second rate employees, since the foreign managers rarely listened to what they had to say, or would ever admit that they were right in conflicts with other foreign employees; their pay was also still significantly lower than that of expatriates. Language skills were also mentioned as an important source of intercultural conflict. Hungarian managers felt they were disadvantaged by their poorer language skills, especially when they had to communicate with native speakers (Falk Bano & Kollath, 2014).

Many foreign managers think Hungarians are slow, inefficient, fail to keep deadlines and are averse to taking responsibility for their work. They fail to plan their work, they are formal, insist on using academic titles and, in

several cases, rely on their network of personal relationships to get things done. The complaints of the Western managers typically reflected a low context, with monochronic and small power-distance attitudes, as opposed to a higher context, with more polychronic and higher power-distance attitudes of the Hungarians. As often commented by participants at the Society of Intercultural Education, Training and Research (SIETAR) Europa congresses, this is not only true for the Hungarians but also for the Mediterranean (e.g. the French or the Spanish) employees. With more focus on intercultural coaching, these problems to some extent diminish with time, but they do not seem to disappear altogether (Falk Bano, 2008; Falk Bano & Kollath, 2014).

The roots of these problems in Hungary go back to higher, or even as far as secondary education, where intercultural training has for so long been neglected. Nowadays, however, we find a growing concern with intercultural education mainly at higher educational level. For instance, it is a positive development that by now intercultural studies have been introduced into the curriculum in higher educational institutions practically all over the world, with Hungary following suit. This provides excellent opportunities for the present and future generations in terms of learning more about their own culture, becoming aware of the similarities they share with other cultures, and the differences that need to be overcome for a successful collaboration with members of different cultures (Falk Bano & Kollath, 2014). A sound theoretical grounding in intercultural communication is necessary. Nonetheless, it is important to learn how to put theoretical knowledge into practice, as it is from these experiences that students can come to understand the role of culture in business. Simulation and role-plays, as well as working in mixed culture groups, can be used to induce changes in students' thinking, instilling in them a willingness to entertain more complex points of view, to reject stereotypes and, in problematic encounters, learn to put themselves in the place of individuals from other cultures. These changes in their attitudes can bring about a decrease in the anxiety and uncertainty brought on by intercultural encounters (Sandor Kriszt & Kollath, 2009).

Gatenby and McLaren (1993, cited in Verckens, De Rycker, & Davis, 1998, p. 249) give the outline of what the elements of a course in intercultural communication for business people should be:

- *Language and translation pitfalls.* Not knowing the appropriate terminology used in business transactions and organisational management can lead to costly misunderstandings. In order to learn to communicate expertly in another language, speakers must change and expand their identity as they learn the cultural, social and even political factors that are present in language choices, and the knowledge

of which is necessary for speakers if they want to speak appropriately with a new 'voice.'

- *Cultural variables.* Familiarity with these variables is particularly important in terms of global leadership characteristics, competencies, and developmental strategies. Global managers need to understand how to act in different surroundings, but they should also be aware of the fact that being open-minded or putting oneself in somebody else's shoes will mean different behaviours in different countries (Javidan, Dorfman, Sully de Kuque, & House, 2006). The underlying force of this knowledge is inquisitiveness, i.e. constant attention to their surroundings and the ability to learn (Gregersen et al., 1998).

- *Negotiation in international settings.* Social and economic changes focus on the need to master the skills of negotiation. The workforce has become more mobile not only within a given country, but also across borders. Employees change jobs more frequently; these new models of employment require employees to be able to actively negotiate, often with people from a different culture and regarding their position within an organisation. Since the rules of negotiation tend to vary from culture to culture, negotiators have to pay attention to this as well, as this may cost them their job. Globalisation means a diversified workforce where people with very different goals, motivations and cultural backgrounds have to work together (Bazerman & Neale, 1992);

- *Training for overseas assignments.* Javidan et al. (2006, p. 84) propose a two-step process to facilitate cultural understanding and adaptability. Global managers need to 'share information about [their] own as well as the host country's culture,' i.e. they need to talk about the culturally similar or different organisational practices and about how they view each other's culture. The second step is deciding 'how to bridge the gap between the two cultures.' This does not imply automatic adaptation, rather a process of finding which approach suits both the leader and the employees best;

- Other, e.g. international trade practices, organisational management, social psychology of intercultural relations.

Most of these elements can be incorporated into materials for business students with a view to develop their intercultural competence/cultural intelligence.

## Methodology

The body of international students studying in Hungarian institutions of higher education in general and in the Budapest Business School, Univer-

sity of Applied Sciences in particular, is increasing year by year and the range of countries involved is significantly widening. In order to provide a beneficial learning experience for both the Hungarian and the international students, it is important to develop their intercultural competence, cultural intelligence. This is especially important in cases where cultures are significantly different from each other, such as Northern and Southern European ones. Learning the roots of the various behaviours and mastering the skill of handling communication with members of disparate cultures will allow international students to acknowledge their stay as useful and rewarding, while Hungarian students will be able to learn from the experience of working in mixed-culture groups (Falk Bano & Kollath, 2016).

The concept of cultural intelligence is relatively new but, as it was earlier pointed out, the definition comprises similar competences as the definitions of cultural/intercultural competence. Cultural intelligence (CQ) can be defined as 'an outsider's seemingly natural ability to interpret someone's unfamiliar and ambiguous gestures the way that person's compatriots would' (Earley & Mosakowski, 2004, p. 139).

According to Earley and Mosakowski (2004), although some aspects of CQ are innate, anyone reasonably alert and motivated can attain an acceptable level of cultural intelligence. The three sources of CQ or its three components are:

- the cognitive, i.e. the head, or rather our mind, with which we consciously observe behaviour;
- the physical, i.e. the body, which refers to the copying of behaviour;
- the emotional/motivational, i.e. the heart, which refers to the ability to step inside a foreign culture.

An individual with high cognitive CQ devises learning strategies to notice clues to a culture's shared understandings. High physical CQ indicates the ability to mirror the customs and gestures of the people around you. This is the evidence of your esteem for them and shows your wish to be liked by them. By adopting people's habits and mannerisms, you eventually come to understand in the most elemental way what it is like to be a member of the other culture. Your actions and demeanour must prove that you have already, to some extent, entered their world. (E.g. How you shake hands, how you order coffee, etc.) The level of people's emotional/motivational CQ indicates to what extent they wish to adapt to a new culture. This involves overcoming obstacles; people need to believe in their own ability to handle in the face of challenging situations, as this gives them confidence to deal with any task or resolve problematic situations. People who do not believe themselves capable of understanding others from unfamiliar cultures will often give up after their efforts meet with incomprehension.

By contrast, people with high motivation will, upon confronting obstacles, setbacks, or even failure, reengage with even greater energy and vigour (Earley & Mosakowski, 2004). Cultural intelligence links the emotional, cognitive and practical dimensions of intercultural interactions and enables people to engage in more effective intercultural cooperation (Borgulya Vető, 2010).

The participants of the investigation were 59 students. 30 Hungarian students, 18 of whom had just returned from spending an Erasmus semester abroad at one of our partner institutions, and 12 students who were planning to apply for an Erasmus scholarship to study abroad. Also taking part were 29 students from our partner institutions in Western Europe who were studying at BBS. To measure the cultural intelligence of the students, we used the Earley and Mosakowski (2004) questionnaire with some additions of our own. The original questionnaire sets out to measure cognitive (CCQ), physical (PCQ) and emotional/motivational (ECQ) cultural intelligence. There are four statements in each part, which reflect different parts of cultural intelligence.

The participants are asked to rate each statement along a scale from 1 to 5 where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree. The mean of each set of statements is calculated. When analysing the data, it is most useful to think about the three scores in comparison to one another since CQ is a combination of the three (Earley & Mosakowski, 2004, p. 143).

Besides the original questions, we asked students to give us information on their age, nationality, gender and whether or not they had had any previous intercultural training. The age of the students can be used to see whether or not age influences the CQ results, and if it does, to what extent.

As we think the CQ scores may be influenced by intercultural training, we also asked our respondents if they had undergone such instruction. We assume the students who have had some kind of intercultural training may have higher scores than the ones who have not. Balogh and Gaál (2010) tested the cultural intelligence of students studying at Hungarian provincial universities and their results proved that the cognitive component can clearly be developed through learning. In two multinational longitudinal studies, scholars assessed the effects of Cross-Cultural Management courses on students' CQ. They found that, after the courses, students' overall CQ was significantly higher and that the courses had stronger effects on cognitive CQ than on motivational and behavioural CQ (Eisenberg et al., 2013). To be able to measure to what extent previous intercultural training influences the CQ scores, it is necessary to investigate the kind of training students had. This is not easy to do via the questionnaire but needs to be explored by conducting in-depth interviews with the participants. This will be our next

step in fine-tuning the results. The questionnaires were administered in classes taken by the participants.

## Discussion of the Findings

The first set of questions are on CCQ, namely, the extent to which participants think consciously about the aim of the interaction before they interact with a person from a different culture (Q1) and whether they plan how they will relate to this person, i.e. what kind of attitude they adopt during the interaction (Q3). The other two statements in this set aim to collect data on how observant the participants are in the interaction with people from a different culture. Are they able to sense if the communication is wrong or going well (Q4), are they able to pick up on behaviour that is unfamiliar to them, and then transfer this to other situations (Q2).
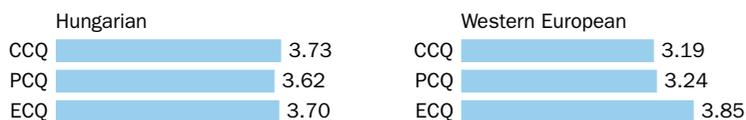
The second set of questions are on PCQ focussing on the physical aspects of communication. More specifically, how participants are able to notice these aspects and apply them in cross-cultural encounters. The participants have to evaluate their own ability to change their body language to suit people from a different culture (Q1), to alter their expression (Q2), to modify their speech style, i.e. accent or tone (Q3), and to change the way they act if necessary (Q4).

The third set of questions are on ECQ. Here the participants are asked to assess how confident they are when dealing with people from a different culture (Q1), and how well can they handle unfamiliar cultural situations (Q4). They also have to assess how easy it is for them to befriend people whose cultural background is different from theirs (Q2) and whether or not they can adapt to the lifestyle of a different culture with ease (Q3).

We compared the average scores of the Hungarian (HU) and the Western European (WE) students. The responses given to the 12 questions on the cultural intelligence questionnaire show that the Hungarian students have higher scores on the cognitive and physical cultural intelligence part of the questionnaire, while the Western European students have slightly higher scores on the emotional intelligence questions (Figure 1).

The higher scores on the cognitive cultural intelligence questions show that the Hungarian students are more likely to plan consciously how they interact with people from different cultures, as well as the attitude they will adopt. They are better at observing behaviour and transferring it to situations involving members of another culture and when in contact with members of a different culture, they are better able to recognise which way the communication is going.

The difference between the Hungarian and the Western European students regarding the physical cultural intelligence scores is not too big: the slightly higher scores of the Hungarian students show they are more able

| Hungarian | | | Western European | | |
|---|---|---|---|---|---|
| CCQ | | 3.73 | CCQ | | 3.19 |
| PCQ | | 3.62 | PCQ | | 3.24 |
| ECQ | | 3.70 | ECQ | | 3.85 |

**Figure 1**   Average of the Scores of Hungarian and Western European students

to adapt to the customs and to mirror the gestures of the people around them. They are also better able to pick up the tone and style of the person they are communicating with. By adopting the behaviour of other people, it is possible to understand in the most elemental way what these people are like. Furthermore, it is a good practice to establish rapport because people feel more favourably disposed towards those who act and behave in the same manner. These actions and gestures prove that people who strive to mirror behaviour that is initially foreign to them have already embarked on the road to entering the world of the foreign culture.

An explanation for the high scores of the Hungarian students on the CCQ and the PCQ questions may be that Hungarian is often termed a 'survival' culture, because (despite ill-sought friends, treacherous allies, the vicissitudes of centuries, a long occupation during which some two-thirds of the population was killed off and many towns destroyed) it is a culture that still exists. Since Hungary lies at the crossroads of East and West, it presents an ideal ground for occupation by troops moving mostly from the East towards the West. Often these troops would station in the country for a longer or shorter period of time, living alongside the population in a friendly or aggressive manner. In order to survive, out of self-defence and self-preservation, Hungarians had to master the skill of living together with these people from various unknown cultures. They did this to protect themselves and their interests; the motivation of the majority was simply to survive, though there were some who used this situation to achieve personal ambitions and to move up in the social hierarchy (Terey, 2014). As a result, it has become an ingrained feature of the Hungarian national character to consciously observe how people in a new culture behave and then to transfer this knowledge to various other situations. In view of this cultural heritage, it is not surprising that the majority of Hungarian participants said they consciously took note of the behaviour of members of a new culture and used this knowledge to attune themselves to a new cultural situation.

We will look at the emotional/motivational CQ responses in more detail, because we are of the opinion that it is one of the elements of cultural intelligence that can be best developed in the educational process. Several authors point out the vital importance of this component of CQ. E.g. according to Earley and Ang (2003) motivational CQ is a critical CQ compo-

nent and a key element in adjusting to new cultural environments. Brancu, Munteanu, and Golet (2016) find motivational CQ one of the most important factors when examining intercultural intelligence among business students in Romania. Templer, Tay, and Chandrasekar (2006, cited in Brancu et al., 2016) also believe that motivational CQ is a vital element that is strongly linked to cross-cultural adjustment.

The emotional/motivational CQ is a strong indicator of the extent to which people wish to adapt to a different culture. In order to overcome the obstacles, people need to believe themselves capable of meeting the challenges they face when encountering an unfamiliar culture. On these questions, Hungarian students score lower than the Western European students. The difference is slight, but it indicates that Hungarians are less willing to fully integrate into a foreign culture. The Hungarian ECQ scores are slightly higher than the PCQ scores, which can be an indication of how the perceptions of young people are changing. Today they are more open to various cultural influences and it is not such a problem for them to identify with these. This is the generation born in Hungary after the political changes that opened up the borders and enabled a freer movement of people, goods and services. As a result, people could experience a host of different cultures. Hungary's joining the European Union in 2004 further facilitated this process.

If we look at the answers of the Hungarian students in more detail (Figure 2), we can see that 60% of the students said they could deal with people from a different culture and 73% felt certain they could befriend people from a culture that was unfamiliar to them. Although they were willing to establish relationships with people from different cultures, a little less than 50% felt able to deal with unfamiliar cultural situations. Nevertheless, they felt capable of adapting to the lifestyle of a foreign culture; some 63% of the respondents said it would not present difficulties for them.

Compared to the Hungarian (HU) scores on the individual ECQ questions (Figure 3), those of the Western European (WE) students were consistently higher. Their lowest score (67%) was on the fourth question where a little over one third of the students said they were not sure whether they would be able to deal with an unfamiliar cultural situation. The responses to the other questions showed students felt sure they could deal with people from a different culture (85%), they could easily befriend people from an unfamiliar culture (95%), and adapting to the lifestyle would not be a problem for 76% of the participants.

The fact that the WE students when filling in the questionnaire were in a foreign country, some of them for the duration of two semesters, may indicate that they are faced with various cultural challenges that have to be solved in order for their lives to run smoothly. Thus, these students are
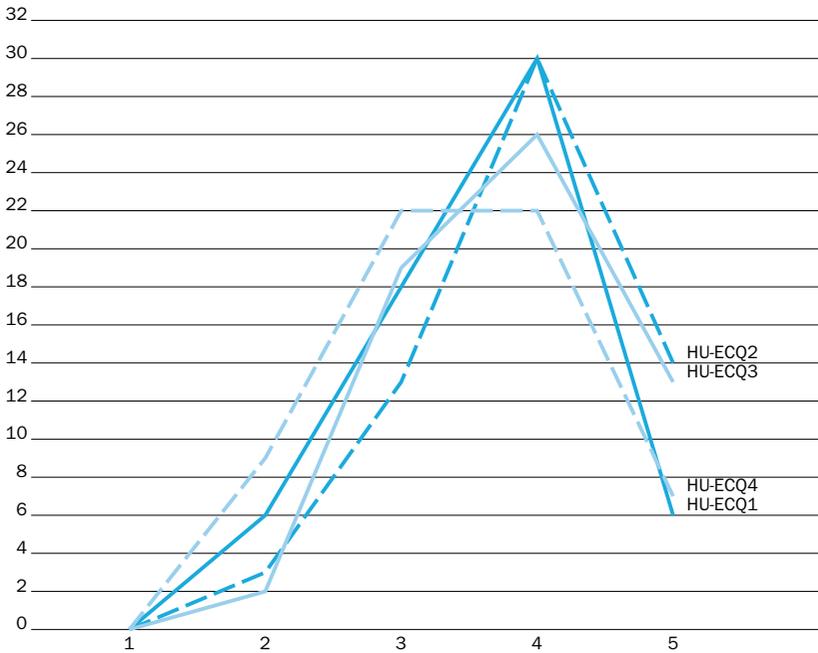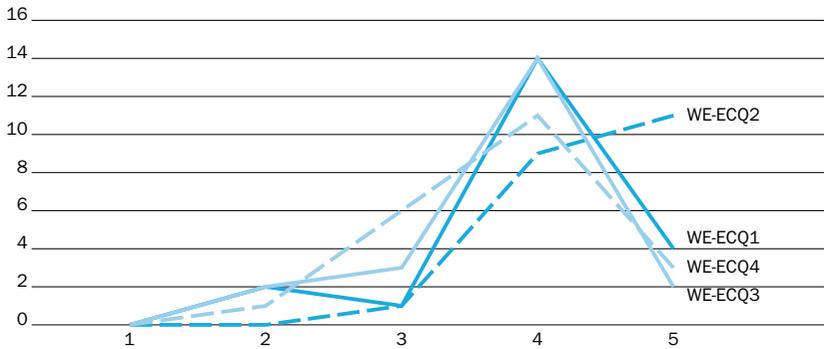
**Figure 2**   Frequency of the Values in Responses on ECQ (Hungarian Students)

more motivated to understand the Hungarian culture. Indeed, in an attempt to facilitate this process, we, at BBS, have introduced a special session focussing on Hungarian culture for foreign students. The purpose is to show these students how the history of the nation has contributed to the values and beliefs of Hungarians today. Through the historical lens, it is possible to understand better the processes that can be observed currently in the Hungarian society.

It is to be noted that both groups of students felt they would have difficulties in dealing with unfamiliar cultural situations. This is a problem that can be specifically addressed in the cross-cultural communication and intercultural management sessions by giving students case studies to analyse. Additionally, we can ask students to give us examples of experiences they have had in the foreign culture, and we could collectively analyse these situations. It would be a good idea to involve students from the local culture to help interpret the experiences and offer solutions as to how it is best to act, especially in conflict situations.

We ask foreign students about their experiences in Hungary and then at various points in their studies we return to these and discuss them, giving the necessary background information to understand the roots of the particular behaviour. For instance, we explore why Hungarian people are strict and disciplined; why it is difficult to do errands in Hungary; why people

**Figure 3**   Frequency of the Values in Responses on ECQ (Western European Students)
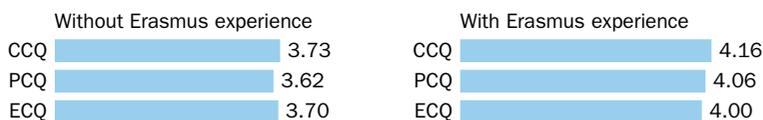
seem indifferent to each other; and why, as many students have mentioned to us, some Hungarian people do not like foreigners.

In the questionnaire, we asked students whether they had undergone intercultural training or had attended a course to this end. Since spending time abroad can be construed as a form of intercultural training, we included in our investigation Hungarian students who had been studying abroad under the Erasmus scholarship scheme. Their responses were contrasted with those of the Hungarian students in the original survey who were students from Year 1 and from the first semester of year 2, and have not yet had the opportunity to study abroad, but most of whom were planning to do so in their fourth, fifth and/or sixth semester. We put these students in the group called 'students without Erasmus experience,' while the first group of students were 'students with Erasmus experience.'

We can see that the scores of the students with Erasmus experience are higher in all three components of cultural intelligence (Figure 4). The results in the bar chart show how much higher the values are for the students who had spent at least five months in a foreign country. The results show that the most significant advantage for students with Erasmus experience is in CCQ, with an average score of 4.16, second is PCQ, with an average score of 4.06 and finally ECQ where the average score is 4.00. As regards CCQ and PCQ, the result is understandable because living in a different culture requires people to consciously plan their interactions and the attitude they will adopt. Furthermore, they have to be more attentive to the way the interaction is developing so as to be able to react appropriately.

The knowledge acquired can be used later in other interactions with people from different cultures, enabling communication to be more efficient. The copying of behaviour (PCQ scores) is an important step in establishing rapport with members of the unfamiliar culture. Success in the first two elements enhances motivation to step inside the other culture.

The consistently higher scores of the group with Erasmus experience in-

| Without Erasmus experience | | With Erasmus experience | |
| --- | --- | --- | --- |
| CCQ | 3.73 | CCQ | 4.16 |
| PCQ | 3.62 | PCQ | 4.06 |
| ECQ | 3.70 | ECQ | 4.00 |

**Figure 4**   Average of the Scores of Students without/with Erasmus Experience

dicates that these students feel more confident, they have tried themselves out in an unfamiliar culture and have been successful in facing the challenges. The higher scores show optimism and satisfaction with the achievement. The lower scores of the group without Erasmus experience show their uncertainty regarding what to expect in a different, unknown culture and, to a certain extent, unfamiliarity with their own abilities as to how they would be able to manage.

Learning the roots of the various behaviours and mastering the skill of handling communication with members of disparate cultures will allow students to perceive their stay in the host culture as useful and rewarding (Falk Bano & Kollath, 2016). It is possible to prepare students in advance to face and cope with such challenges but, for a better understanding of various cultures, it is of utmost importance for them to spend some time in countries whose cultures, values and behaviour may be quite different from theirs. The Erasmus programme helps a great deal in making this possible for European countries. Since its launch in Hungary in 1997, it has enabled more than 45,000 students and 11,500 academic staff to widen their professional knowledge (Falk Bano & Kollath, 2014).

Comparing the frequency of the values of the responses given to the ECQ questions by the students with Erasmus experience with those of the students without Erasmus experience, we can see a difference in the results. The students with Erasmus experience gave the highest values in the ability to deal with unfamiliar cultural situations. More than two thirds of the students (88%) felt confident about coping in culturally new situations. Another interesting result was the lower value given to ease of adapting to the lifestyle of a different culture. The reality and the mental picture do not always correspond. People may have illusions about what life in a different culture may be like and, when faced with reality, resistance to the different culture may come forth.

## Conclusion, Contributions, Limitations

Intercultural competence/cultural intelligence is an important asset in our 21st century globalised world, so developing students' and academic staff's intercultural competence is of special importance. Measuring the cultural intelligence of students can help identify areas of cultural intelligence that need to be developed in study programmes. Using the slightly amended Ear-
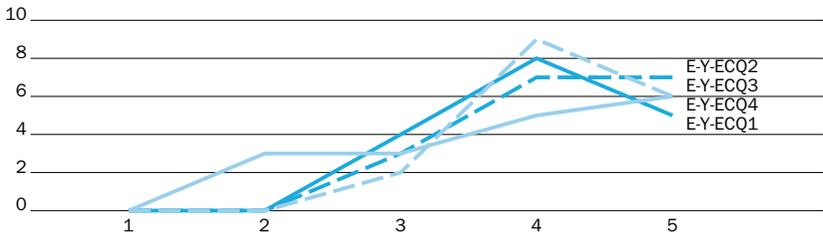
**Figure 5**  Frequency of the Values in Responses on ECQ (with Erasmus Experience)

ley and Mosakowski self-assessment questionnaire, we measured and compared the cognitive, physical and emotional/motivational CQ of Hungarian and Western European students. Included in the survey were 59 students, a small group of Hungarian students who had just returned from a period of study abroad and a group of students who were planning to embark on a period of study in a European country. In the case of the Hungarian and Western European students, we looked at emotional/motivational cultural competence more closely, since many authors emphasize the importance of this CQ component, and we felt this was the area that could be developed easily in a classroom setting. What we found was that both groups of students felt they would have difficulties in handling unfamiliar cultural situations. So it is this area of emotional cultural intelligence that the classroom should focus on. In the case of the students with and without Erasmus experience, we found that the trend of the scores for both groups were the same, but those of the students without Erasmus experience were consistently lower than those of the other group. Both groups had high scores in CCQ, lower scores in PCQ and still lower scores in ECQ. The explanation of the high CCQ scores can be sought in Hungarian history, during the course of which Hungarians found that adaptation to given circumstances is key to survival, hence the term 'survival culture.' On the other hand, the low ECQ scores indicate that the period spent in the host culture is too short for them to feel any motivation to get inside the culture.

The study aims to contrast and compare the cultural intelligence of Hungarian and Western European students. As such, it is a novel attempt to measure attitudes and behaviours of students working in multicultural groups in Hungarian business higher education. Further research still needs to be undertaken to extend and complement the quantitative findings with qualitative data in order to fine-tune these preliminary results. The present low number of participants needs to be increased because, as yet, the sample is small and does not permit generalisation of the results. The higher number of participants would increase the possibility of introducing statistical analysis into the investigation enabling us to see more marked trends in the behaviours and attitudes of the students.

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# Abstracts in Slovene

## Ključne vsebine za uspešno investiranje v trgovske podatke in upravljanje znanja

*Fred P. Hoffman*

Zavedajoč se potreb po nakupu, procesiranju, analizi, shranjevanju, izmenjavi in zaščiti informacij, s pomočjo katerih sprejemajo odločitve in spoznavamo poslovno okolje, se podjetja informacijske dobe velikokrat znajdejo pred odločitvijo o investiranju v trgovske podatke, konkurenčno obveščanje in upravljanje znanja. Treba pa je vedeti, da napačno razumevanje dejanske zmogljivosti in omejitev zgoraj navedenih vsebin lahko pripelje do nerealnih pričakovanj in posledično lahko tovrstne investicije obrodijo slabe rezultate. Ta dokument prinaša osnovne informacije, hkrati pa definira ključne spremenljivke, ki bi jih vodstvo podjetij moralo upoštevati, ko razmišlja o investiranju v eno ali več zgoraj navedenih disciplin.

*Ključne besede:* trgovski podatki, konkurenčno obveščanje, upravljanje znanja

IJMKL, 7(1), 5–18

## Pomen na znanju temelječih mrežnih orodij (socialnih medijev) za družinska podjetja

*Nóra Obermayer*

Za uspehom neke organizacije se skriva sposobnost dobrega upravljanja neprestano »obnavljajočega se« znanja. Izmenjava znanj je vitalni del dobrega upravljanja znanja. V zadnjem času je izjemna rast na Internetu temelječih poslovnih dejavnosti potrdila, da lahko prinese uporaba komunikacijskih tehnoloških platform številne prednosti. Internet je spremenil način medosebne komunikacije, sodelovanja, učenja in vodenja podjetij. S pomočjo Interneta so podjetja postala del globalnega tržišča, spletni marketing pa je dandanes bistveni sestavni del vsakega posla. Tako organizacije kot potrošniki se vse bolj poslužujejo socialnih omrežij. Različna, na znanju temelječa (socialna) mrežna orodja so v zadnjih letih v velikem porastu. V letu 2014 so na osnovi raziskovalne ankete ugotavljali, v kakšni meri podjetja uporabljajo socialna omrežja za izmenjavo znanja in, ali so tudi madžarske organizacije vključene v uporabo teh medijev. Sledila je nova raziskava, osredinščena na vodenje družinskih podjetij, saj je ustvarjanje njihove ekonomske in družbene vrednosti velikega pomena za državo. Cilji raziskave so ugotoviti kako pomembna in pogosta je uporaba na znanju temelječih mrežnih orodij, preveriti koristi in izzive ter definirati smisel in namen uporabe tehnologije socialnih medijev. Pri raziskavi smo uporabili kvalitativno metodologijo, na osnovi katere smo v letu 2018 zbirali podatke s pomočjo polstrukturiranih razgovorov. Rezultati raziskave so pokazali, da nudijo socialni mediji odlične priložnosti za stike s

potencialnimi kupci. Ugotovili smo, da so najbolj priljubljena socialna omrežja Facebook, LinkedIn in Instagram, ter da se podjetja ukvarjajo z izzivi, kakor na primer, kako odgovoriti stranki v realnem času.

*Ključne besede:* na znanju temelječi socialni mediji, mreženje, tržna komunikacija, družinska podjetja

IJMKL, 7(1), 19–33

### Gonila razvoja izdelkov: raziskovalna študija na Kitajskem in Finskem

*Jukka Majava, Kris M. Y. Law, Harri Haapasalo, Y. C. Chau in Osmo Kauppila*

Razvoj novega izdelka (NPD) je ključnega pomena za podjetja, ki delujejo na mednarodnem trgu. NPD pa predstavlja dandanes izreden upravljavski izziv; izdelki postajajo namreč vse kompleksnejši, zadovoljiti pa morejo potrebe različnih strank in deležnikov. Poleg tega se NPD pogosto izvaja na različnih lokacijah širom sveta. Gonila razvoja izdelka lahko enačimo z razlogi podjetja, ki se loti projekta razvoja izdelka. Ta gonila lahko vplivajo na postopke odločanja, na rezultate projekta in na izvedbeno strategijo izdelka. V okviru pričujoče študije smo raziskovali, kako vodstvo tehnoloških družb na Kitajskem in na Finskem dojema gonila razvoja določenega izdelka. Rezultati študije so pokazali, da se pogledi vodstva na ta gonila razlikujejo glede na kratkoročnost, srednjeročnost oziroma dolgoročnost razvojnih projektov. Gonila v povezavi s trženjem in strankami se izkazujejo kot najbolj pomembna na kratki rok, gonila povezana s finančnimi cilji so tehtna za srednji rok, gonila v smislu strategije in poslovnega okolja pa na dolgi rok. Nadalje smo opazili tudi razlike med pogledi finskih in kitajskih poslovnežev. Finski strokovnjaki so načelno boj osredotočeni na gonila povezana s finančnimi cilji, medtem ko se kitajskim menedžerjem zdijo pomembni različni dejavniki.

*Ključne besede:* razvoj novega izdelka (NPD), gonila, inovacije, tehnologija, Finska, Kitajska

IJMKL, 7(1), 35–53

### Prioritete pri upravljanju rasti v mikro podjetjih s storitvenimi dejavnostmi na redko poseljenih območjih

*Martti Saarela, Matti Muhos, Kai Hänninen in Harri Jokela*

Mikro podjetja, ki spadajo v podskupino malih in srednjih podjetij, predstavljajo več kot 95 % vseh evropskih podjetij. Kljub temu pa o mikro podjetjih vemo zelo malo. Eden od ključnih dejavnikov v zvezi s poslovnim razvojem je lokacija. V tem smislu so različne študije pokazale razlike med urbanimi in redko poseljenimi območji. Kljub temu pa primanjkuje literature na temo prioritet pri upravljanju rasti v mikro podjetjih, posebej v mikro podjetjih, ki so locirana na redko poseljenih območjih. Za izpolnitev te vrzeli v literaturi ima pričujoča študija primerov cilj odgovoriti na sledeče raziskovalno vprašanje: Katere so kritične vodstvene napake, do katerih pride med procesom rasti mikro podjetij s storitvenimi dejavnostmi na redko poseljenih območjih?

Rezultati študije primerov so pokazali, da so najvišja prioriteta lastnikov oz. vodstva mikro podjetij s storitvenimi dejavnostmi človeški viri.

*Ključne besede:* mikro podjetja, mikro družbe, prioritete upravljanja in vodenja, redko poseljena območja, upravljanje rasti

IJMKL, 7(1), 55–76

## Identifikacija komponent za spodbujanje uporabe aktivnosti učinkovitega upravljanja znanja v partnerstvih na področju visokošolskega izobraževanja

*Enis Elezi in Christopher Bamber*

Namen te raziskave je uporaba Elezijevega (2017) konceptualnega modela in proučevanje zahtev za uspešno uporabo aktivnosti upravljanja znanja (UZ) v partnerstvih na področju visokošolskega izobraževanja (VI). Raziskava sledi ontološki subjektivnosti, ki z uporabo treh polstrukturiranih vprašanj vodi k interpretativni epistemološki drži. Vprašanja smo zastavili devetim elitnim intervjuvancem (EI), ki so sodelovali pri začetku, razvoju in upravljanju partnerstev med visokošolskimi inštitucijami (VIn). Rezultati raziskave kažejo, da se VIn, ki trenutno nastopajo v partnerstvih, poslužujejo aktivnosti UZ, vendar ne nenehno in ne najbolj učinkovito. Na osnovi izbranih odgovorov EI lahko sklepamo, da so skupna vizija in vrednote v partnerstvu, vodenje in upravljanje, komunikacijski protokol in razvoj strategij upravljanja znanja bistvenega pomena pri snovanju in uporabi aktivnosti upravljanja znanja, ki VIn omogočijo uresničevanje institucionalnih in partnerskih ciljev.

*Ključne besede:* visokošolska partnerstva, dejavnosti upravljanja znanja (UZ), skupna vizija in vrednote, vodenje in upravljanje, komunikacijski protokol, strategija UZ

IJMKL, 7(1), 77–91

## Primerjava kulturne inteligence med madžarskimi in mednarodnimi študenti poslovnih ved

*Klara Falk Bano in Katalin Kollath*

Zaradi medsebojne odvisnosti narodov v se v današnjem globaliziranem trgu izgublja pojem razlikovanja med lokalnim in globalnim. Visoko šolstvo se mora teh dejstev zavedati, saj je zaposljivost diplomantov odvisna od osredotočenosti študijskega programa na razvoj spretnosti, ki so potrebne za učinkovito delovanje v medkulturnem prostoru. Visoko šolstvo mora samovoljno pripraviti programe, s pomočjo katerih bodo študentje opremljeni z medkulturno zmožnostjo. Kulturna inteligenca obsega podobne zmožnosti kot medkulturna zmožnost, zato lahko z merjenjem njene stopnje oblikujemo predpostavke glede medkulturne zmožnosti posameznikov ter natančneje določimo vrzeli, ki jih je treba zapolniti. V pričujoči študiji smo uporabili Earleyev in Mosakowskijev (2004) vprašalnik ter z njim merili kulturno inteligenco madžarskih in mednarodnih študentov poslovnih ved na budimpeški Šoli za poslovne vede. Madžarski študentje so dosegli boljše rezultate na področju kognitivne in fizične

inteligence, mednarodni študentje pa na področju čustvene/motivacijske in-teligence. Vprašalnik preverja tudi učinek Erasmus izkušnje na kulturno inte-ligenco študentov.

*Ključne besede:* medkulturna zmožnost, kulturna inteligenca, globalizacija, in-ternacionalizacija, študentje poslovnih ved, visokošolsko izobraževanje

IJMKL, 7(1), 93–108

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