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THE SPECIFICS OF SUPPLY CHAIN INTEGRATION WITH SMALL AND MEDIUM-SIZED ENTERPRISES

Posebnosti integriranja dobavne verige z malimi in srednje velikimi podjetji

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Abstract

Although larger organizations have invested significant amounts of money to integrate their supply chains, the development of supply chain integration with small and medium-sized enterprises (SMEs) is slow-moving. For SMEs, integration is a significant problem due to high costs and technology requirements. Hence, they follow a different approach to integrate their supply chains. Full integration of supply chains from the procurement of raw material to the distribution of finished goods is considered to be a crucial issue as nowadays the competition among enterprises is about supply chain efficiency, which is based on tighter cooperation of all partners in the supply chain process. This paper attempts to explore this topic by exploring how SMEs integrate their supply chains and by identifying the benefits of integrating supply chains.

Keywords: supply chain, integration, SMEs, e-business

Izvleček

Čeprav so velika podjetja investirala znatne vsote denarja v integracijo svojih dobavnih verig, se integracija dobavnih verig z malimi in srednje velikimi podjetji (MSP) razvija zelo počasi. Za MSP je integracija velika težava zaradi visokih stroškov in tehnoloških zahtev. Prav zato pri integraciji svojih dobavnih verig uporabljajo drugačne pristope.

Popolna integracija dobavne verige, od nabave surovin do dostave končnih izdelkov, je v današnjem času ključnega pomena, saj temelji konkurenca med podjetji na učinkovitosti dobavne verige, kar zahteva tesnejše sodelovanje vseh partnerjev v njej. V prispevku skušamo raziskati, kako MSP integrirajo svoje dobavne verige in katere so koristi, ki izvirajo iz te integracije.

Ključne besede: dobavna veriga, integracija, mala in srednje velika podjetja, e-poslovanje

1 Introduction

In an increasingly international marketplace, many companies are finding that prosperity is best achieved from specialization, as opposed to diversification. Although the majority of the world's largest companies continue to provide multiple services to numerous markets, they now purchase many components and goods from smaller companies that serve one particular niche. As the global marketplace continues to develop, SMEs provide an effective tool for economic growth through participation in global supply chains.

SMEs drive economic development by creating a valuable source of employment; they account for 60% to 70% of employment in OECD countries. Unfortunately, SMEs fail much more frequently in these economies. They repeatedly encounter barriers to internationalization, although several of these obstacles could be eliminated through successful integration into the international supply chain.



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Supply chain management (SCM) has increasingly become an important way to enhance competitive strength, and it is commonly argued that present-day competition is between integrated supply chains rather than among individual organizations. Studies of companies exploiting the benefits of SCM have indicated that improvements such as reduced software costs, industry-wide learning of best practices, and increased probability of having to compete against rivals enjoying the advantages of SCM are driving forces behind the adoption of the SCM concept (Arend & Wisner, 2005). The integration of key business processes among the partners in a supply chain aims at adding value for the customers. This integration is achieved by connecting suppliers, through manufacturing and assembly companies, to distributors, retailers, and customers to make the process more efficient and the product and services more differentiated.

The potential benefits of SCM include product and delivery process quality such as shorter delivery times, more reliable delivery promises, fewer schedule disruptions, significant reductions in inventories, and risk reductions (Bask & Juga, 2001). Furthermore, the integration of processes in the supply chain can also enhance the ability to leverage its scalable competences, such as the enforcement of innovative product design and radical process innovation, and to access complementary partner assets (Arend & Wisner, 2005).

Despite the lack of an agreed-upon definition, SCM is generally intended to cover all business processes between vertically linked organizations. Our understanding of SCM as discussed in this paper defines SCM as the integration of key business processes from end user to original suppliers that provide products and services and information that add value to customers and other stakeholders (Lambert, Cooper, & Pagh, 1998).

The ability to develop and maintain sound business relationships across company boundaries is an important issue when managing a supply chain. It is therefore essential to recognize the power structures that exist between buyer and seller—or what Cox, Watson, Lonsdale, and Sanderson (2004) refer to as the “power resources” in the transactions. Only by understanding the existing power regime can buyers and suppliers manage relationships in an appropriate manner. Dominant players are able to direct or gain access to all crucial resources in a supply chain structure of dominance and dependency. A supply chain includes several focal organizations. In other words, the customer (with the exception of the end user) is also a supplier, and any supplier—except for the very first link in the chain—is also a customer. Every focal organization has its own supply chain and, hence, represents a complex network rather than a conventional chain. From this perspective, it is highly relevant to focus on cooperation among several parties in the network.

Over the past years, many large and medium-sized companies have made major efforts to create electronic con-

nections with their major suppliers. Despite considerable success with suppliers that can afford the up-front investments in computer systems and business applications, these buying organizations face a series of technical difficulties together with an expanding set of day-to-day operational challenges. They need to eliminate paper-based business processes while also addressing the requirements of small and medium-sized suppliers that do not have the resources to manage their own electronic supply chain. Many large and medium-sized manufacturers have yet to launch an electronic supply chain initiative and continue to rely on paper-driven business processes. With the broad use of the web and integration technologies in business environments, manufacturers now have a viable set of options for substantially reducing paper-driven business processes from its supply chain and for incorporating all of its suppliers into an electronic supply chain network to increase efficiency. Despite the substantial benefits of SCM, it is also evident that SCM implementation has its costs, hazards, and challenges. Furthermore, there are indications that small and medium-sized enterprises (SMEs) are less able to harness the benefits of SCM or encounter greater obstacles when trying to introduce SCM practices.

Integration is frequently cited as being an important issue for organizations (Daniel 2003). Integration problems affect all types of organizations, including SMEs, as enterprises are trying to integrate their applications at both the intra- and inter-organizational levels. Large organizations are turning to the adoption of integrated systems as a strategy to improve their competitiveness. For SMEs, integration is a significant problem due to its high cost, technical requirement, limited financial resources, and lack of technical knowledge. Hence, SMEs have different approaches toward integration (Chen, Themistocleous, & Chiu, 2003). Although some SMEs are moving to the adoption of integrated systems, the rate of integration technology adoption is generally low among SMEs (Buonanno et al., 2005; Hughes, Golden, & Powell, 2003; Pigni, Ravarini, Buonanno, & Sciuto, 2011).

SMEs are not only seeking ways to integrate the disparate systems within the organization, but have also moved to extend the whole domain beyond the boundaries of the organization to include their suppliers, trading partners, and customers (Butler et al., 2002; IDB, 2010). This has also affected the supply chain. SMEs might need to integrate their IT infrastructure so as to support the efficiency of their supply chains. Integrating SMEs' systems with their customers and trading partners will give them even greater competitive advantages to compete with their competitors, including larger companies (Chen et al., 2003). The emergence of supply chain integration is therefore undoubtedly a critical component to strengthen the competitive advantage of both suppliers and their customers. It is believed that, in today's world of competitive business, it is no longer companies that compete, but supply chains.

2 Supply Chain Integration through E-Collaboration

The goal of supply chain integration is to improve the efficiency with which a company buys, sells, and produces materials or services, inherently reducing the costs associated with these activities (and thus increasing profits). Various studies have been conducted to understand the reasons why organizations adopt or do not adopt information technologies in their supply chain. Kaynak, Tatoglu, and Kula (2005) found that the perceived benefits, such as market development, efficiency of sales and promotion, ease of accessibility, and cost reduction, are able to influence organizations' e-business adoption decisions. Grandon and Pearson (2004) found that organizational readiness, external pressure, perceived ease of use, and perceived usefulness affect the adoption of e-commerce. According to Thatcher, Foster, and Zhu (2006), organizational, industrial, governmental, and cultural factors play key roles in organizations' e-commerce adoption decisions. Joo and Kim (2004) demonstrated that external pressure and organizational size both have positive relationships with organizational adoption of e-marketplaces. These studies showed that the majority of the e-commerce adoption factors determined in past research can be summarized into technological, environmental, and organizational factors. These results are consistent with the technology-organization-environment (TOE) model proposed by Tornatzky and Fleischer (1990).

However, as the web becomes increasingly common in organizations, the TOE model by itself might no longer be able to explain organizations' e-collaboration tool-adoption decisions fully. For example, technological attributes such as compatibility might not be an issue for organizations, as the internet is based on consistent standards. Instead, Chong, Ooi, Lin, and Raman (2009a) and Huang, Janz, and Frolick (2008) all proposed that factors such as inter-organizational relationships (IOR) play a prominent role in affecting the inter-organizational system adoption decisions of organizations. Supply chain members will only benefit from e-collaboration tool implementation if they are integrating important business processes in the supply chain. Such integrations will allow them to have an agile, seamless supply chain that can respond to the fast-changing and unpredictable market. The implementation of e-collaboration tools to facilitate these supply chain integrations will also involve the sharing of key supply chain information. This might be a challenge for organizations, especially SMEs who are protective of their business information. Another issue to consider is that, although adoption is an organization's decision, ultimately the users of the system will play a crucial role in determining the success of e-collaboration diffusion.

In addition to TOE and IOR, an important area of research that has been discarded by most e-collaboration tool and SCM researchers is the users' perceptions of the technology. This is an important gap that has been high-

lighted by Jeyaraj, Rottma, and Lacity's (2006) studies. Jeyaraj et al. (2006) stated that it is important to include the characteristics of users as they play a decisive role on whether the organization can successfully assimilate e-collaboration tools. Studies on technology adoptions from the users' perspectives are common among standalone internet technologies such as e-mail (Straub, Keil, & Brenner, 1997), short messaging service (Brown, Dennis, & Venkatesh, 2010), and online shopping (Gefen, Karahanna, & Straub, 2003). Most of these studies have adopted the technology acceptance model (TAM) (Davis, 1989). TAM posits that perceived usefulness and perceived ease of use of the technology will influence the users' adoption decisions. Although a popular model, TAM is sometimes criticized for being too simple to explain a wide range of technologies or adoption situations (Bagozzi, 2007).

An alternate model built on TAM's foundation is the UTAUT model (Venkatesh, Morris, Davis, & Davis, 2003). UTAUT examines both the users' intentions to use a technology and the subsequent actual usage. By combining eight models that earlier research had employed to study technology adoption (e.g., theory of reasoned action, TAM, motivational model), Venkatesh et al. (2003) consolidated four main constructs that have significant influence on the adoption and usage of technology: performance expectancy, effort expectancy, social influence, and facilitating conditions. The UTAUT model was employed by Brown et al. (2010) in their study on collaboration technology usage.

The three models discussed thus far complement each other as they cover the environmental factors faced by organizations in a supply chain environment (e.g., competitive pressure), the IOR among supply chain members (e.g., partner's power, willingness to share information), and the diffusion decisions by the organizations' users (e.g., social influence).

Another area that has attracted the attention of researchers is the study of collaborative SCM (Chong, Ooi, Lin, & Tang, 2009; Kioses, Pramartari, Doukidis, & Bardaki, 2007). Cohen and Roussel (2005) defined collaboration as the means by which supply chain members work together to achieve mutual objectives by sharing ideas, information, knowledge, risks, and rewards. Supply chain members in the collaborative SCM environment will therefore work together, have common objectives, share important information, and collaborate on supply chain activities (Chong, Ooi, Lin, et al., 2009; Serve, Yen, Wang, & Lin, 2002). Although the concept of collaboration in SCM has long existed, its practicality in terms of its abilities to integrate supply chain members was much easier to achieve with the emergence of internet technologies (Frohlich & Westbrook, 2002). With the internet, organizations are able to integrate their inter- and intra-organizational business processes within functional departments and supply chain members via e-collaboration tools. Chong, Ooi, Lin, et al. (2009) defined e-collaboration as business-to-business interactions facilitated by the use of internet technologies.

Unlike existing technologies, such as the electronic data interchange (EDI), the interactions in e-collaboration moved from buying and selling transactions to relationship building based on activities such as information sharing and integration, shared decision making, and process and resource sharing (Chong, Ooi, Lin, et al., 2009).

E-collaboration is defined as electronically enabled collaborative tools that facilitate interactions between an organization and its suppliers, trading partners, customers, and employees. E-collaboration tools leverage the internet to create and maintain an interactive business community of employees, trading partners, suppliers, and customers (Chong, Ooi, & Sohal, 2009). Unlike B2B, e-collaboration tools do not focus on monetary transactions in B2B; instead, they cover the exchanges of information and ideas between the trading organizations and within organizations, which allows them to collaboratively design, develop, build, and manage products through their life cycle. With e-collaboration, supply chain partners are able to automate information flows within a multi-channel distribution network (Chong, Ooi, & Sohal, 2009).

Cassivi (2006) identified eight e-collaboration tools used to exchange critical information among supply chain partners. These supply chain e-collaboration tools are categorized as supply chain planning or supply chain execution tools (Table 1). Supply chain planning tools are supply chain forecasting, capacity planning, and business strategy tools, while supply chain execution tools are direct procurement, replenishment, projected shortages, delivery and tracking, and design.

3 Specifics of Supply Chain Integration with SMEs

SCM is perceived by SMEs differently. Several studies have shown that SMEs do not perceive their suppliers to be their partners, as big firms do; rather, they perceive them to be a process that protects them against a lack of production (Udomleartpresert, Jungthirapanich, & Sommechai, 2003). SMEs do not have bargaining power against big enterprises. In order to increase SMEs' bargaining power and relationships with customers, a vertical supply chain

is proposed to SMEs to be able to implement a win-win strategy. In the vertical chain model, the aim is to maximize bilateral benefits with suppliers in the chain and gain bargaining power over suppliers through the establishment of a union by SMEs operating in the same sector. SCM provides benefits of vertical integration without reflecting them in the costs.

As the size of the enterprise is not taken into consideration in most of the studies on supply chain management, there is no sufficient research on to what extent SCM fits SMEs and whether it is right to implement exactly the same SCM implemented on larger enterprises on SMEs. Arend and Wisner (2005) investigated to what extent small enterprises fit supply chains' application. They found that SMEs do not implement SCM correctly, use SCM strategies fully, or select SCM freely. In fact, there is a weak harmony between SMEs and SCM. It was concluded that SMEs are more willing to use supply chains after they begin using their suppliers' EDI system.

The use of technologies helps organizations better manage their supply chains, as supply chain management applications built on technology platforms have enhanced the ability of organizations to integrate their processes through collaborative information sharing and planning (Chan, Chung, & Zhou, 2012; Hafeez, Keoy, Zairi, Hanneman, & Koh, 2010). With supply chain integration, companies anticipate customers' desires and meet their demands. Having too many goods in stock creates unnecessary expenses and risks, especially when goods do not sell as quickly as expected. When the goods are held in inventory for too long, they age and will be easily replaced by newer goods. As a result, those aged goods will be sold at comparatively low prices and the companies will possibly end up with losses. However, having too few goods in stock also drags down profits as impatient customers will prefer to take their business elsewhere rather than wait for orders to arrive. For retailers and manufacturers alike, a company's competitive advantage depends in large measure on the adaptability and agility of its supply chain (Iyer, Germain, & Claycomb, 2009; Lu, Zhao, & Chi, 2012).

Table 1: Supply Chain E-Collaboration Tools

Supply chain planning	
Forecasting	Exchanges the forecast information provided by both the buyer and supplier
Capacity planning	Determines the amount of capacity required to produce
Business strategy	Collects and shares the actions that need to be taken to support the objectives and mission of the supply chain
Supply chain execution	
Direct procurement	Forwards purchase orders to pre-qualified suppliers
Replenishment	Orders directly from the shop floor to either replenish a production line or a stockroom
Shortages	Scans the buyer's production plan to project expected component shortages
Delivery and tracking	Generates a payment and a delivery request to track components
Design	Enables the use of interactive engineering drawing and storage of CAD designs by all key stakeholders

Source: Cassivi, 2006

A competitive company has to have the ability to acquire the goods and services it needs exactly when and where it needs them, at a favorable price, and with acceptable payment and delivery terms. It needs to directly manage the flow of goods through its distribution networks in a cost-effective manner. Not only large companies, but also SMEs have come to realize that they can achieve this by integrating their supply chains. Implementing supply chain integration can be a cost-saving step for the company in many ways. It can lower the costs of labor, increase flexibility, achieve faster response times and cut down the occurrence of errors on paper based operation, reduce unauthorized buying outside preferred supplier agreements, and reduce inventory, thereby achieving a competitive advantage (Chang & Wong, 2010; Essig & Arnold, 2001; Lee & Whang, 2004). Automation processes can also shorten the cycle time from ordering to distribution, thereby resulting in enhanced production ability and increased efficiency. Suppliers can also benefit from supply chain integration as this will shorten the business transaction cycle, lower tied capital in inventory, lower labor costs, increase efficiency, enhance accuracy, and make handling time and delivery speed faster (Chen et al., 2003; Khang, Arumugam, Chong, & Chan, 2010).

Although many efforts have been made by large companies to use integration technologies to support their supply chain integration strategy, there are still problems. As most organizations' suppliers are SMEs whose abilities and resources are limited, they might want to protect their proprietary process knowledge and competitive advantages from larger companies; they also might wish to have unrestricted control of their own assets. Therefore, integrating systems with their buying organizations seems to be a significant problem for them. The supply chain cannot be efficiently integrated without the support of and cooperation from the suppliers. Using new technology to support the integration of the supply chains is much harder for SMEs due to their characteristic weaknesses from the larger organizations (e.g., lack of financial resources and technological ability). The maturity of integration technologies and the lack of cases in integration technologies adoption in SMEs have made the problem even worse for them and, therefore, the rate of adoption among SMEs is understandably low.

Vaaland and Heide (2007) found a considerable technology gap between large and small companies as virtually all methods for planning and control are electronically based. The indifference of SMEs with regard to technological issues might provide a competitive advantage to large enterprises, which tend to give higher priority to employing technology-based methods to reduce transactional costs and introduce new and more effective material and process technologies. The result might be that SMEs will lose their competitive strength. SMEs might be more flexible than larger companies, but can easily be outdistanced by larger companies with efficient transaction systems (e.g., e-business) and state-of-the-art production technology. A

company's willingness to integrate advances in information and communication technologies will largely determine, for example, its ability to develop direct deliveries. Consequently, it is difficult to see how SMEs can survive if they continue to underestimate the importance of e-commerce.

Despite these observations, it is possible to overstate the importance of technology for SMEs. A final point on the question of the importance of technology is that stressing the need for technological awareness does not necessarily imply that SMEs must control or own access to that technology. Through network collaboration and the sharing of resources, the cost of acquiring new technology can be minimized.

The main barriers to supply chain information integration are the lack of strategic alignment of information strategies in the chain, firm size of some supply chain actors, the lack of awareness of potential benefits of e-business, the lack of motivation, and a less developed industry or regional context (Harland, Caldwell, Powell, & Zheng, 2007). Bask and Juga (2001) proposed that the polarization of strategies in supply chains can lead to separation and give rise to semi-integration rather than the full integration of information. There are challenges in cooperation among firms to achieve the necessary changes in business culture, in part stemming from the diverse goals of the parties involved and unequal risk and rewards (Boddy, Cahill, Charles, Fraser-Kraus, & Macbeth, 1998).

Fisher (1997) suggested that supply chains can be managed according the nature of the product being supplied, such as "innovative" products and "functional" products. As this suggests differences in management according to product type, it is reasonable to conclude this might explain differences in management through the adoption of information technologies. Functional products include the staples that people buy in a wide range of retail outlets, such as grocery stores and gas stations. Because such products satisfy basic needs, which do not change much over time, they have a stable, predictable demand and long life cycles. But their stability invites competition, which often leads to low profit margins. To avoid low margins, many companies introduce innovations in fashion or technology to give customers an additional reason to buy their offerings. Fashion apparel and personal computers are obvious examples, but we also see successful product innovation where we least expect it. Although innovation can enable a company to achieve higher profit margins, the very newness of innovative products makes demand for them unpredictable. In addition, their life cycle is short, usually just a few months, because as imitators erode the competitive advantage that innovative products enjoy, companies are forced to introduce a steady stream of newer innovations. The short life cycles and the great variety typical of these products further increase unpredictability.

Harland, Lamming, Zheng, and Johnsen (2001) identified two dimensions that have substantial impact on how

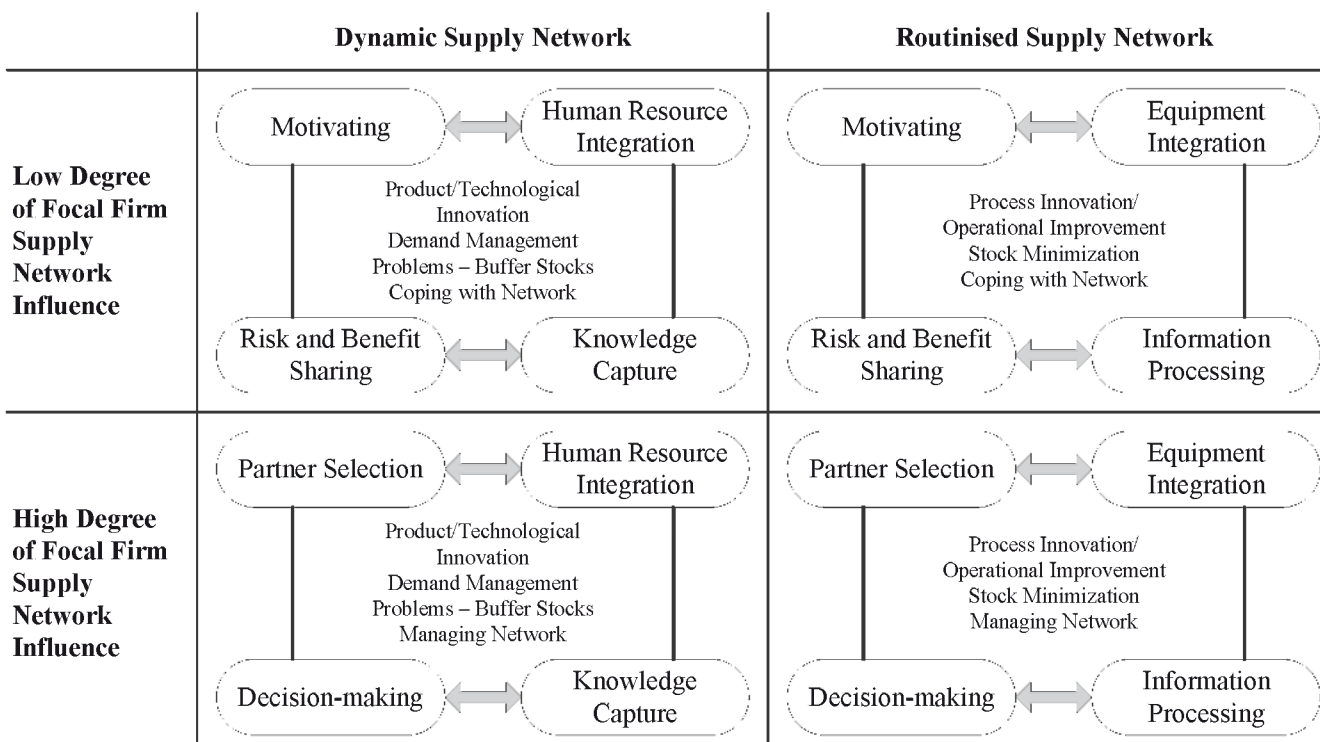
firms have attempted to manage the process of creation and the operation of supply networks: the degree of dynamics and the degree of focal firm supply network influence. The combination of the two dimensions provides four types of supply networks (Figure 1), each containing different problems, priorities, and core activities as well as showing differences in the focus on information integration according to type: Highly routinized supply networks highly influenced by a focal firm are more likely to integrate information into the network.

The literature review shows that most authors claim that benefits exist to achieving and utilizing supply chain integration through information integration. It is also stressed that the greatest benefits of e-business occur when its application is fully integrated throughout the chain. However, the empirical evidence to support this one-size-fits-all assertion is insufficient. Even large organizations, some with reputations for advanced supply chain management, appear not to be concerned with the integration of information into their supply chains (Harland, Caldwell, et al., 2007). This finding raises a real doubt as to the strength and reliability of some of the more advanced claims for supply chain management or, more cautiously, speculation that supply chain approaches are still limited largely to their logistical roots, rather than IT development; it could be that integrated information systems might only be appropriate in certain types of supply chains or within certain parts of supply chains. Customer dominance and pressure are key drivers for SMEs to adopt e-business; if customers are not pressur-

ing the organization, then this acts as an inhibitor to SMEs pursuing e-business. Therefore, the “e-isolation” of e-business strategy development in the larger downstream firms in the supply chains does not motivate the upstream SMEs to join in. If downstream, more powerful customers forced them to do so, they would implement e-business technologies; however, they will not in the absence of this pressure.

Das, Narasimhan, and Talluri (2006) stated that optimum supply chain performance will only be achieved through appropriate supply chain integration. They suggested that it is possible to overinvest in supply chain integration, giving rise to suboptimal performance. Rather, they propose a “balanced approach” to supplier integration, with a mid-range position. They suggested that different shapes of configuration of information integration might be appropriate to specific industry and market environments. E-business should be adopted in a manner contingent to the specific organization—namely, that large and small firms will have different objectives and different strategies. Koh and Maguire (2004) extended this thinking into specific e-business applications, highlighting that ERP is less appropriate for SMEs who wish to integrate tacit and cultural knowledge than for larger firms that integrate volumes of explicit knowledge. Some parts of supply chains dealing with routinized, high volume requirements might usefully employ e-business based information integration, whereas others dealing with more dynamic, innovative activities might seek integration of a richer sort of information in more tacit forms.

Figure 1: A taxonomy of supply networks



Source: Harland, Lamming, et al., 2001

It appears that larger firms have to be smarter in their e-business initiatives, differentiating between chains and within chains on the type of information they wish to integrate and how they achieve this (Harland, Caldwell, et al., 2007). Within chains, if SMEs are to remain strongly connected, this cannot easily be devolved to intermediaries such as e-exchanges as SME engagement with them is low. It also cannot be easily passed over as a black box technology without support. Rather, larger firms need to build appropriate information integration bridges to smaller supply chain members, which might require using different technologies that enhance the flows and capture of tacit, informal information. Strong bridges to SMEs would carry mutual trust. Trust toward the trading partner is a major factor leading firms to share knowledge with partners (Ke & Wei, 2006).

4 Conclusion

Conflict exists over how SCM affects SMEs. On one hand, SCM can provide quality, cost, customer service, leverage, and even risk reduction benefits for the SME. On the other hand, SCM exposes the SME to greater management and control hazards while reducing its private differentiation advantages. True vertical integration is generally not an option for the SME; SMEs are unlikely to need to consider antitrust implications in their alliances; SMEs are more vulnerable to holding specific assets and more sensitive to contract costs; SMEs are usually in a worse bargaining position; SMEs have less reputation, instilling less trust, due to newness; SMEs face greater spillover problems as their advantages are more knowledge and product based and there are likely to be cultural differences between SMEs and larger enterprises.

Different authors have demonstrated that a considerable gap exists between larger enterprises and SMEs in nearly all aspects of current and future SCM-related methods. If this gap is not reduced, SMEs are likely to lose transaction efficiency compared to their larger counterparts. Compared with larger enterprises, SMEs are less satisfied with the methods applied today and less optimistic about the future requirement fit. They are less concerned with methods supporting SCM on product quality, rationalization of operations, and capital cost rationalization. SMEs are also less focused on system integration with other actors in the supply chain; and less centered on EDI and e-based solutions both upstream and downstream the supply chain. Generally, larger companies expect their business to be more technology driven in the years to come whereas SMEs expect less change. In conclusion, SMEs appear to be far behind in the technology and system adoption that is considered vital to sustain SCM implementation. Thus, SMEs face a significant risk of losing competitive power. SMEs seem to be lagging far behind larger companies in terms of competing by means of effective supply chains.

Many developing countries are plagued by an insufficient business infrastructure. Telecommunications systems

are outdated or cost-prohibitive to most SMEs, technologies are antiquated, and access to the internet is often non-existent. Developing a stronger, modernized infrastructure dramatically improves the capability of SMEs within these countries to trade internationally. Moreover, specific development of an internet-capable landscape, which offers instant access to a global network of consumers and producers, can enhance SME participation in international supply chains and the global marketplace. The presence of transnational corporations (TNCs) provides a critical means through which SMEs can specialize and carve out a niche in the international supply chain (also known as a backward linkage). Integrating with TNCs will help SMEs when joining international supply chains.

However, the technology is only one part of the story. Those who wish to create e-business-enabled supply chains must appreciate and support the business models of chain actors and participants, which vary by size of chain actor and position in the supply chain. A traditional operations management focus on the component parts of the supply process will fail to deliver supply chain integration if strategies in the chain are not aligned. It is likely that some information integration bridges to and within supply chains should carry education, training, and investment support to strengthen ties with critical smaller firms.

SMEs have a reputation as boosters of employment, economic growth, and economic dynamics. One of the most important means through which SMEs are able to make these contributions is their ability to realize innovations. Therefore, in both developed and developing countries, many efforts have been made during the last few decades to stimulate SMEs to realize innovations. SMEs have been encouraged to make use of funding schemes and to utilize the services of knowledge centers. However, despite these efforts, knowledge is lacking about the nature and extent of SME support needs and the mechanisms for delivering it effectively. This holds true for supply chain integration needs as well.

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FLOW OF GOODS ACROSS CUSTOMS TERRITORIES

Pretok blaga preko meja carinsko- administrativnih območij

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Abstract

Purpose – The purpose of this paper is to explore systemic relationships within supply chains, which are created as a result of passing goods between customs territories. Specifically, this research focuses on how business entities can reduce the time consumed for the execution of mandatory customs controls at border crossings by applying the voluntary implementation of certain legally standardized institutes—in this case, the status of authorized economic operator (AEO).

Design/methodology/approach – The study hypotheses were tested at two levels. The fundamental hypothesis was tested using a survey of participants' subjective perceptions. To verify the supporting hypothesis, the survey was carried out using numerical techniques (i.e., an analysis of the queuing systems).

Findings – The research results show that acquisition of an AEO certificate can facilitate the acceleration of the flow of goods across customs territories. To achieve the optimum reduction of time delays caused by interruptions in the flow of goods resulting from controls conducted by authorities, it would be necessary to adapt the road infrastructure at the border crossings.

Keywords: authorized economic operator (AEO), customs clearance, road transportation, flow of goods, supply chain management, meta-system

Izvleček

Namen. Članek je rezultat raziskovanja medsystemskih odnosov v oskrbovalnih verigah, ki nastanejo kot posledica prestopa blaga prek meja carinsko-administrativnih območij. Konkretno se raziskava nanaša na proučevanje vprašanja, ali lahko poslovni subjekti s prostovoljnim uvajanjem določenih zakonsko standardiziranih institutov, npr. statusa pooblaščenega gospodarskega subjekta (AEO), skrajšajo čas izvajanja obveznih carinskih kontrol na mejnih prehodih.

Načrt, metodologija, pristop. Raziskovalne hipoteze smo preverjali na dveh ravneh. Pri preverjanju temeljne raziskovalne hipoteze smo na osnovi metode anketiranja s stališča subjektivne percepcije vseh sodelujočih deležnikov ugotavljali, ali imetništvo instituta AEO resnično vpliva na višjo hitrost procesnega pretoka blaga. Za preverjanje podporne hipoteze pa je bila opravljena raziskava na osnovi numerične tehnike, tj. analiza množične strežbe, pri čemer je bil predmet analize prikaz vpliva infrastrukturnega omrežja na delovanje carinskih postopkov in s tem povezanega procesa cestnega pretoka blaga.

Ugotovitve. Rezultati raziskave kažejo, da pridobitev potrdila AEO pripomore k pospešitvi pretoka blaga prek meja carinsko-administrativnih območij. Za doseganje optimalnega skrajšanja zamud zaradi prekinitve blagovnega toka kot posledice kontrol, ki jih opravljajo oblastni organi, pa bi bilo treba prilagoditi cestno infrastrukturo na mejnih prehodih.

Ključne besede: pooblaščen gospodarski subjekt (AEO), carinski postopek, transport, pretok blaga, upravljanje oskrbovalnih verig, metasisstem



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1 Introduction

Increases in the volume of international trade as a result of globalization present a serious threat to the smooth flow of goods crossing state-administrative borders and, thus, indirectly affects the operation of supply chains. Congestion at border crossings represents a problem to both economic operators and customs authorities.

More than 20 years ago, Stalk (1988) noted the importance of time in the context of supply systems and its impact on competitive advantage. In today's global environment, time delays present even more complex problems in terms of logistics, economy, sustainable development, and many other aspects. A recent study conducted under the auspices of the Organisation for Economic Co-operation and Development (OECD) to examine the trading policy directly related the importance of time to the export and import of goods. The authors of the study (Nordas, Pinali, & Geloso Groso, 2006) revealed their findings about the growing importance of time in export and import activities in a document entitled "Logistics and Time as a Trade Barrier." They stated that delays can cause reduced volume of international trade. They also noted an increase in the amount of time-sensitive goods in the market and that modern and integrated supply chains manage these items on exact pre-planned time frames (Nordas et al., 2006). In addition, the authors stated that the countries must reduce lengthy procedures for exports and imports, thereby decreasing the waiting time within the supply chain, in order to remain competitive. Therefore, exploring solutions to the time consumption problem during the crossing of customs-administration borders and the reduction of lengthy procedures associated with the crossing in the context of international supply chains would be of great value.

From a logistical point of view, the flow of goods is disrupted every time the goods are stopped. Every stop results in a period of waiting. Waiting presents delays in the supply process, which affects the ability of the supply chain to be competitive. Yet modern globalized society demands that business systems continually improve their efficiency and, at the same time, unconditionally requires them to comply with all the obligations prescribed by law (and justified with the need to meet the broader needs of society). Thus, the cooperation between customs authorities and economic operators has led to the development of the concept of an authorized economic operator. The authorized economic operator represents a new concept in customs control from which both parties can benefit. It also ensures the appropriate level of security, which, in turn, does not inhibit international trade. The collaborative relationship between customs and the authorized economic operator represents a change from the traditional government-to-business (G2B) supervisory relationship to a collaboration based on trust (den Butter, Groot, & Lazrak, 2007).

The requirement for obtaining the status of an authorized economic operator by the customs administration is

that the economic operator must prove to customs that it can control the customs operations through its own business activities (den Butter et al. 2007) and that it is reliable in terms of its own customs operations and consequently receives certain benefits.

The fundamental goal of researching the time needed for crossing customs-administrative areas is to establish whether the adjustment in the organization of economic operators (in accordance with requirements and conditions of other key participants—in our case, customs) affects the reduction of customs complexity and enhances their performance. In particular, we want to examine the benefits of the authorized economic operator in relation to the shortened time spent for crossing borders in the process of the movement of goods by road.

First, we wanted to confirm the fundamental hypothesis that the authorized economic operator (AEO) status is one of the conditions for accelerating the process of the movement of goods by road and that the following equation is correct:

$$v(E+AEO) > v(E) \quad (1)$$

where v is the speed of process flow of goods, E is the economic operator, and AEO is the status of the authorized economic operator.

Second, we tried to confirm the supporting hypothesis that, for the optimal acceleration of the flow of goods by road in accordance with the AEO status, adjustment of the network infrastructure on the road border crossing is needed. We used the case of the Schengen border crossing at Obrežje.

The remainder of this paper is structured as follows: In the following section, we review the literature, with an emphasis on customs organizations as an active factor of supply chains. We then present the research design used and findings associated with the movement of goods through the road border crossings. The final section draws conclusions from the research and presents a discussion of the results obtained in the study as well as the discovered principles. Due to the novelty of the phenomenon, we present some directions and opportunities for further research.

2 Literature Review

2.1 Customs Organizations as an Active Factor of Supply Chains

Various participants are more or less actively engaged in the operation of supply chains, regardless of their objective in the collaboration. One of the participants in the international supply chains is customs, which is responsible for the control of goods entering or leaving each country. In doing so, the customs administration and other governmental authorities are trying to cope with the challenges posed by global changes in the field of supply chain functioning. Whereas safety, health, financial, and other threats

require a higher level of control, the enormous amount of goods prevents the full implementation of controls at the borders (Crone, 2006). The role of customs is manifested in providing a higher level of safety in the operation of international supply chains as well as in promoting social and economic development, based on the collection of various contributions, taxes, and fees (World Customs Organization [WCO], 2007).

Because of the dynamic and rapidly changing environment in which the customs authorities operate, they have to identify and understand the key international, regional, and national strategic drivers of change in order to prepare and respond to them accordingly. Gordhan (2007) stresses the following key strategic drivers that require changes in the operation of both sides—namely, the customs authorities and the economic operators:

- Growing scope of international trade: In practice, this represents a greater number of transactions and consequently increased workload for customs, usually with the same or even reduced resources. On the other hand, this significantly impacts the economic operators in terms of waiting times and prolonged processing, which can lead to congestion and delays in the shipment of goods.
- The liberalization of trade: Measures to facilitate and promote trade are being implemented, such as the reduction in the scope of border control. However, at the same time, these measures inadvertently create opportunities for illegal trade, which is in conflict with the interests of both customs and the economy.
- Changed traditional trade patterns and an increase in the number of participants—namely, the increased rate of the representation of developing countries in international trade and a significant change in the structure of trade.
- New models of supply chains: New innovative methods focus on the processes of the movement of goods. The role of customs is to handle shipments efficiently and accurately and, at the same time, as quickly as possible because any delays in movement result in increased costs and undermine the competitiveness of the participants.
- The emergence of international criminal groups: The consequences of the criminal activities of a transnational nature and their damage are serious and long term for both the state apparatus and the economy.
- Concern for the public health and environment: Regulations on these sensitive areas strongly affect the functioning of customs services as they have (or at least should have) an overview of the international transport of dangerous and harmful substances.

Based on the described drivers, we can assert that the role of the customs service has changed over time, shifting from the original role of the collection of duties into the operator of various systems at national borders. However,

the basic function remains the same: controlling the movement of goods and accompanying documents across borders. With this, customs protect legitimate trade and society against the illegal importation of prohibited goods that could pose risks to people's lives and health.

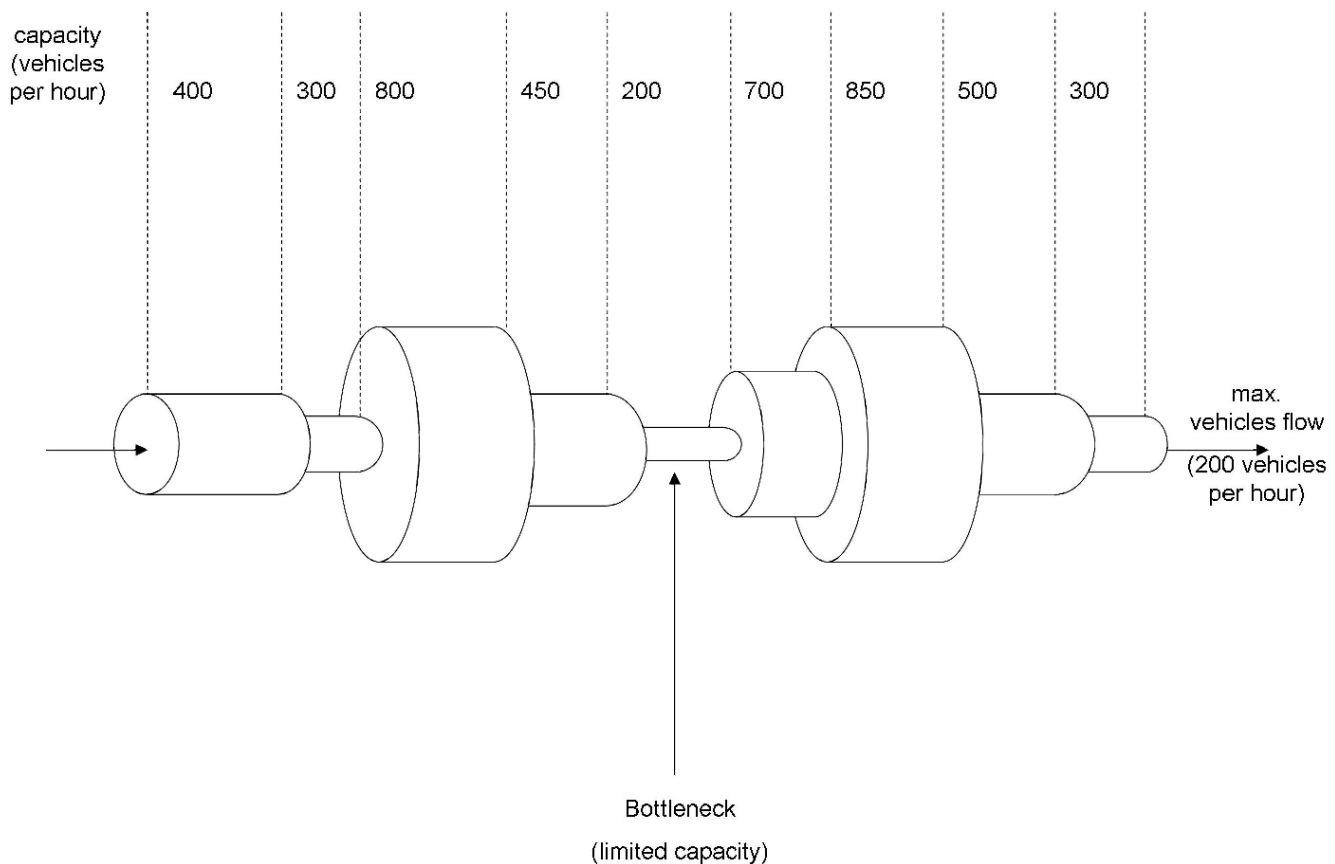
Experts have increasingly understood that customs have an important impact on the economy, as they promote or impede international trade. The borders of the European Union (and of the world) all deal with the passage of large volumes of diverse goods, where each additional inspection due to customs or security procedures results in time delays and significantly impacts the speed of movement of goods and, consequently, their quality and price. Each time delay is also an additional burden in terms of logistics, infrastructure, personnel, finances, and other resources.

The speed of the movement of goods is predominantly determined by the most time-consuming part of the process. This part of the process inhibits rapid performance by all other participants and thus presents a bottleneck at the border crossing point (Nordas et al., 2006). For example, in the border crossing system depicted in Figure 1, the capacity of customs procedures enables the inspection of 200 heavy goods vehicles in one hour, whereas other processes within the border system operate at much higher capacities. As a result, the customs activities impede the course of other processes. The line of vehicles at the border crossing moves at the pace of the slowest participant—in this case, customs.

Waters (2009) says that certain activities, such as removing the obstacles (unnecessary documentation, fees and taxes) at border crossing activities for ongoing improvements in the communication network and logistics infrastructure and activities of specialized support for routine tasks (freight forwarders and shipping agents), can greatly contribute to making the management of customs procedures more transparent. In order to improve the process of the movement of goods and increase fluidity of the customs system, the key objective of the customs organizations is to maintain effective control without inhibiting legitimate trade. Customs administrations can achieve this control in terms of their cooperation with economic institutions in the form of partnerships, where the interests of both sides are represented to the greatest extent possible (Mikuriya, 2007). Thus, we can identify related structures of the two systems with certain common and individual interests: the economic operator and customs. As previously mentioned, the collaboration between the participants and an effective management of the meta-system will significantly impact the improvement of overall international business activities.

Approaches based on the principles of cooperation and voluntary compliance with requirements, which also bring benefits, are more likely to support the improvement of the movement of goods and an increase in fluidity of the customs system than approaches that depend on enforced compliance and interfere with the work processes (Widdowson & Holloway, 2009).

Figure 1: Bottleneck at the border crossing point.



Adapted from Supply Chain Management: An Introduction to Logistics, 2nd ed. (p. 120) by D. Waters, 2009, New York, Palgrave Macmillan.

2.2 Studies Related to AEO

The status of an authorized economic operator (AEO) provides a good example of establishing trust and control in a collaborative G2B relationship with the intention of minimizing operating costs and the costs linked with bureaucratic procedures.

The AEO concept is based on information support, such as various tracking systems, exchanges of information, and surveillance cameras. The European Union determines this approach as the management and accounting system, which covers the financial aspects, flow management, information and communication systems, and legal control in the performance of transactions to ensure that the supply system can manage the risks (*Pilotno poročilo o pooblaščenih gospodarskih subjektih*, 2006).

The idea of this concept is reflected in the possibility of establishing a partnership between customs administrations and business organizations to maintain a high level of security in international trade (den Butter et al., 2007). The AEO represents a new concept of customs control-based benefits for both parties, which is attributed to the implementation of the “win-win” philosophy. Here, we refer to collaborative and trusted cooperation, where each party is

involved in the winning outcome or benefits resulting from the collaboration.

An authorized economic operator can be defined as an economic operator which is reliable within the European Union in terms of its own customs operations and can therefore receive certain benefits in the European Union (European Commission Directorate-general Taxation and Customs Union, 2007). Based on this cooperation, the benefits of the economic operator are primarily indicated in the implementation of fewer physical checks of consignments and faster dealings with customs procedures. On the other hand, customs administrations’ simplified procedures result in certain benefits that lower the level of administrative obstacles. Customs organizations thus benefit from more precise identification and evaluation of threats present in the everyday movement of goods across the customs borders.

Those economic operators who meet the criteria and conditions of the AEO status create certain benefits in the area of customs controls and simplification in accordance with customs regulations (Jere & Podbregar, 2009).

AEO status can, based on its application, be granted by a member state of the European Union to any economic operator involved in any way in the international movement

of goods and that meets the “common criteria for control systems, financial solvency and compliance with the provisions” (Regulation (EC) No 648/2005). Legal aspects of the certification, including the explanation of benefits, are systematically presented in the article “The Authorised Economic Operator in the European Union,” in which special attention is given to the definition of the practical effects in the implementation of customs procedures (Wolfgang & Natzel, 2011). The introduction of the report of the National Board of Trade of Sweden states that the procedures for obtaining the certificate are transparent and allow all companies to gain advantages in terms of reducing the scope of controls (Kommerskollegium National Board of Trade, 2010). They even wrote that the system of authorized import companies enables the operation of supply chains without the need to stop. In light of trade promotion, it is important that the processes not be burdened by complicated customs procedures or non-transparent rules and procedures (Kommerskollegium National Board of Trade, 2010).

The customs authorities can, following an application by an economic operator and in accordance with Article 14 of the Regulation (EC) 1875/2006, issue the following authorized economic operators’ certificates:

- (a) AEO certificate AEOC: Customs simplifications in terms of economic operators requesting benefits from simplifications provided for under the customs rules;
- (b) AEO certificate AEOS: Security and safety with respect to economic operators requesting benefits from the facilitation of customs controls relating to security and safety when the goods enter or leave the customs territory of the community;
- (c) AEO certificate AEOF: Customs simplifications/ security and safety with respect to economic operators requesting benefits from the simplifications described in point (a) and the facilitations described in point (b).

Considering the fact that the mentioned types of certificates are different, the benefits of the individual partners are not uniformly defined for each type of AEO certificate (Gellert, 2011). The objective of the supply chain is to discover the most effective and competitive manner of delivery of the right product at the right place and agreed-upon time (Kavcic & Bratina, 2008); thus, the receipt of AEO status is, for the company, one of the ways of introducing improvements in the movement of goods.

The benefits provided to economic operators after obtaining AEO status influence the acceleration and simplification of the movement of goods and the related procedures, thereby enabling the reduction of the complexity of processes in the supply chain. Consequently, it is also possible to minimize physical stops due to administrative requirements, which—according to the results of certain studies (Hausman et al., 2005; Subramanian et al., 2005; Bolhöfer, 2008)—largely impact the success of logistics processes.

G2B interactions and AEO status definitely help in promoting international trade and maintaining security in the movement of goods and ultimately contribute to higher gross domestic product. The status of AEO is therefore directed to establishing a trusted partnership, in which the economic operators prove to be capable of managing their own customs control procedures.

The AEO status is relatively new and was approved in the European Union as recently as 2008. However, from the perspective of the rapid expansion and intensification of international trade as well as the development of new technologies, products, and services as a result of globalization, it is no longer a new phenomenon. Despite this, there are no specific studies or literature dealing directly with the time-related impacts of the obtained AEO certificate on the flow of goods. As noted, the majority of studies that deal with the concept of AEO are limited to indicating the legal basis for obtaining a certificate and to stating the benefits for the economic operator after receiving the certificate. In addition, all sources almost invariably indicate that the AEO certificate enables the provision of a greater level of security in the operation of supply chains.

3 Research Design

Testing of the study hypotheses was carried out on two levels. To check the fundamental hypothesis, we used a survey method that examines the subjective perceptions of all participants to determine whether the AEO status really speeds up the process of the movement of goods. To verify this approach, the exploration was carried out using numerical techniques, where the subject of the analysis illustrated the impact of the network infrastructure of customs procedures and related processes for the movement of goods by road.

Different techniques and methods were used to test the study hypotheses. One of them is the triangulation method, which provides complex insights into the problem studied by combining different sources of data, theories, methods, techniques, and disciplines (Jick, 1979). As the empirical part of the study was carried out on two different levels, we used the multi-method researching principle to confirm the fundamental and supporting study hypothesis. This principle is particularly suitable for exploring more complex and interdisciplinary problems (Collier & Elman, 2008; Tos & Hafner-Fink, 1998), which we have seen in the course of the present study.

3.1 Survey

We used questionnaires to elicit respondents’ subjective assessments of whether the AEO status actually speeds up the movement of goods by road, as claimed by most studies conducted thus far (den Butter, Liu, & Tan, 2012; Wolfgang & Natzel, 2011). As the AEO status facilitates the performance of activities for both the economic operator and the customs authorities, the survey was conducted among representatives of both types of entity.

The invitation to participate in an online survey was sent to all the customs office representatives in the Republic of Slovenia (a total of 10 offices) and to the General Customs Directorate of the Republic of Slovenia. The invitation for the online survey was also sent to all Slovenian economic operators who are holders of the AEO certificate. As the purpose of the study was to find the actual realization of all benefits related to the ownership of the AEO status, AEOC and AEOS certificate holders were not considered in the target population; only holders of AEOF certificates were. As the invitation for the online survey was sent at the end of November 2011, we considered only those operators in the entire population of the AEOF certificate holders that had acquired the status by 22 November 2011. The website of the European Commission states that 36 AEOF certificates had been issued by 22 November 2012 in the Slovenian territory. Thus, we considered 36 AEOF certified economic operators and all 11 customs offices. The online survey received 20 responses from economic operators, representing a 56% response rate, and 10 from customs offices, constituting a response rate of 91%.

As the entire population of both economic operators and customs offices includes only a small number of respondents, sampling was not performed in the present study. In this way, we preserved the features of the entire population and ensured the validity of the given analysis (Zamani-Gallagher, 2011).

The survey was conducted using the Survey Monkey web application. The two survey questionnaires (one to economic operators holding the AEOF certificate and one to the representatives of the customs offices) comprised a self-completing survey with closed-ended questions. The two questionnaires have the same structure, which is based on providing the 10 benefits of the AEO status as identified by the European Commission (European Commission Directorate-general Taxation and Customs Union, 2007). Both questionnaires contained 27 identical questions and 2 unique questions. The two survey questionnaires were composed so that the analysis enables the verification of the actual realization of the individual benefit supposedly guaranteed by the AEO status. Although the results obtained in the study are subjective, their power is evident in the numerical evaluation of an individual subjective perspective. The respondents had to evaluate their own agreement with an individual statement. For this purpose, a 5-point Likert scale was used. According to de Velis, Neuman, and Shnell, a Likert scale is most commonly used for measuring factors such as opinions, beliefs, and behaviors (as cited in Bizjak, 2008, p. 54). Its specific feature is, according to Supek, that it directly addresses the respondents, who must answer all the statements (as cited in Bizjak, 2008, p. 54). A quantitative survey method was used to verify the fundamental hypothesis, while for the interpretation of the results and findings of the study, causal and descriptive methods were primarily used.

3.2 Analysis of the Queuing Systems

The numerical technique (i.e., the analysis of the queuing systems) was used to verify the supporting study hypothesis. Such techniques are most commonly used in the design and analysis of various communication and information networks and in the analysis of the broad field of logistics and other queuing problems. The main purpose behind the analysis of queuing systems is the collection of data, the mutual comparison of different systems, and the design of completely new systems (Hudoklin-Božič, 1999).

In the selected case of the Schengen border crossing Bregana (Croatia)–Obrežje (Slovenia), specifically at the point of entry into the territory of the European Union, we analyzed the utilization of the border-crossing system based on the changes in the points where queues occur. One-week measurements of flow times in the freight transportation by road were made at the Schengen border crossing Obrežje from 29 June 2009 to 7 July 2009 (Ministrstvo za infrastrukturo in prostor Republike Slovenije, 2010). We focused primarily on the impact of changes in the infrastructure network in relation to the pacing of procedures for crossing the border. The potential time savings in relation to the performance of these procedures result in a better utilization of the entire system—a finding made possible because we deal with the sequential dependence between successive procedures in the context of border crossings. Statistical methods, multivariate analyses, mathematical methods, and methods for the graphical display of data were used in the analysis of the border system utilization.

4 Findings

4.1 Survey Research Findings

Average evaluations of the answers from all the respondents are listed in two tables. Table 1 deals with the answers given by the economic operators, and Table 2 refers to the answers given by the customs office representatives.

Table 1: *Economic Operators' Evaluations of Listed AEO Benefits (average)*

AEO Benefits	Score (1-5) ^a
1. Fewer physical and document-based controls	4.00
2. Priority treatment of consignments if selected for control	4.10
3. Choice of the place of controls	4.36
4. Easier admittance to customs simplifications	4.25
5. Reduced data set for entry and exit summary declarations	3.25
6. Prior notification	3.33
7. Indirect benefits	3.22
8. Improved relations with customs	4.11
9. Recognized as a secure and safe business partner	3.69
10. Improved relations and acknowledgement by other government authorities	3.50

^a 1 = strongly disagree, 5 = strongly agree

Table 2: *Customs Office Representatives' Evaluations of Listed AEO Benefits (average)*

AEO Benefits	Score (1-5) ^a
1. Fewer physical and document-based controls	4.38
2. Priority treatment of consignments if selected for control	2.75
3. Choice of the place of controls	3.89
4. Easier admittance to customs simplifications	4.67
5. Reduced data set for entry and exit summary declarations	3.25
6. Prior notification	3.50
7. Indirect benefits	3.50
8. Improved relations with customs	4.38
9. Recognized as a secure and safe business partner	4.00
10. Improved relations and acknowledgement by other government authorities	4.00

^a 1 = strongly disagree, 5 = strongly agree

The tables indicate that both participants perceive easier admittance to customs simplifications to be the greatest benefit as 70% of economic operators believe that easier access and simplifications in customs significantly (score 4.25) speed up the process of movement of goods by road, while 30% of customs authorities think that this benefit has an even more significant impact (score 4.67).

The tables also demonstrate that both participants perceive the lowest benefit from reduced data set for entry and exit summary declarations as both the economic operators and the customs authorities rated this benefit as having a medium (score 3.25) impact on speeding up the movement of goods by road. At this point we should stress that medium impact on the speeding up the movement

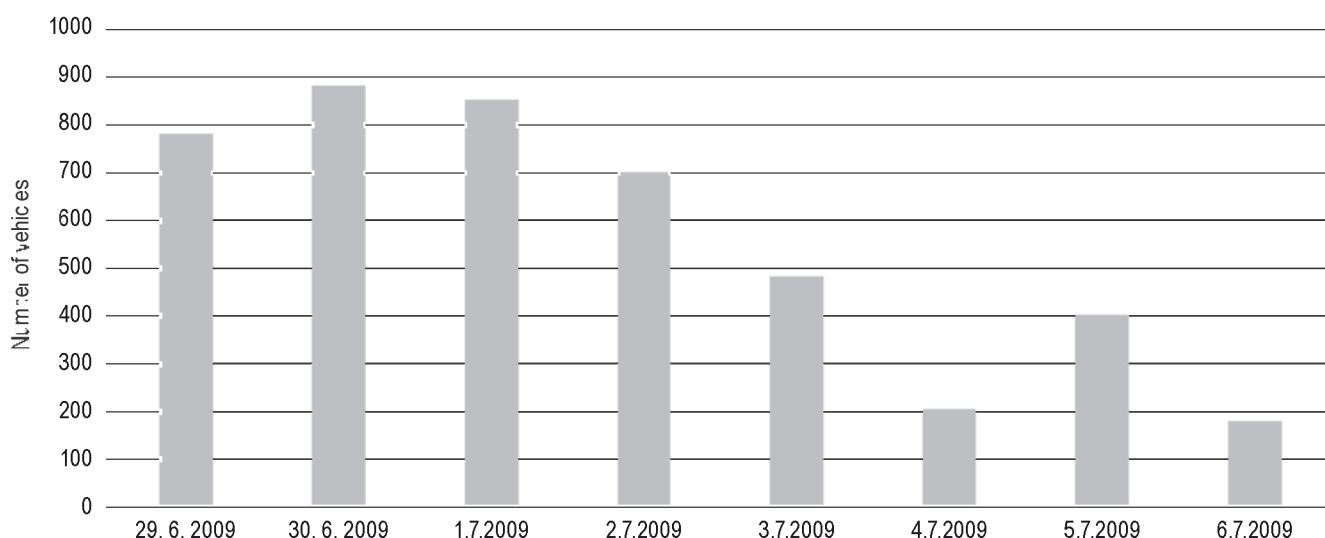
of goods by road is still a positive situation, especially compared with a low or no rate of speeding up.

Thus, the analysis confirms the fundamental hypothesis of the study. We did not find any explicitly negative responses from the participants in the present study. We also noted that all of the 10 studied benefits of the AEO status have a medium to significant impact on speeding up the process of the movement of goods by road. Despite the fact that some of the questions are not equally represented in the context of individual benefits, the result of the study remains the same. This can be substantiated by an additional question, in which the population of economic operators (average score 3.22) as well as the population of customs authorities (average score 3.20) believe that having the AEO certificate has a higher-than-medium impact on speeding up the movement of goods by road. This finding further confirms the fundamental study hypothesis as the responses of all participants in the customs system confirm that the AEO status speeds up the movement of goods by road.

4.2 Analysis of the Queuing Systems Findings

The measurements at the Schengen border crossing Obrežje registered 4462 heavy goods vehicles (HGVs) entering the territory of the European Union.

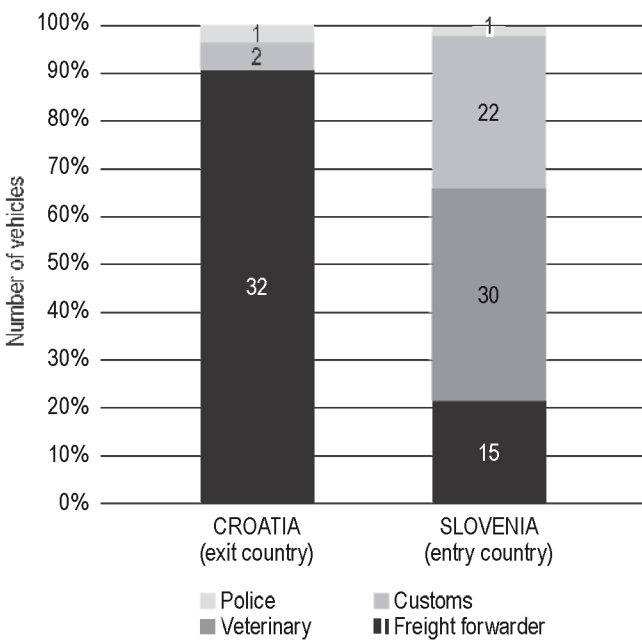
In addition to the basic characteristics of transportation and the frequency of crossing the border, the recorded data obtained for all 4462 HGVs also included measurements of flow times related to performing various administrative and other activities. Border crossing by HGVs from Croatia to Slovenia includes freight forwarding, veterinary and phytosanitary inspection, customs, and police on both

Figure 2: *Number of HGVs crossing the Schengen border crossing Obrežje.*


Adapted from Pilotni projekt merjenja pretočnih časov tovornega prometa na mejnem prehodu Obrežje, by Ministrstvo za infrastrukturo in prostor Republike Slovenije, 2010, Ljubljana, Ministrstvo za infrastrukturo in prostor Republike Slovenije.

the Croatian and Slovenian sides of the border. This activity comprises eight procedures, some of which significantly impact the flow times and delays of certain vehicles within the border area, while other procedures have a minor impact on flow times. At this point we need to emphasize the fact that not all HGVs are required to perform all eight procedures within the border area; the number varies depending on the transported cargo.

Figure 3: The ratio between the average queuing times in the performance of individual activities.



Adapted from Pilotni projekt merjenja pretočnih časov tovornega prometa na mejnem prehodu Obrežje, by Ministrstvo za infrastrukturo in prostor Republike Slovenije, 2010, Ljubljana, Ministrstvo za infrastrukturo in prostor Republike Slovenije.

Based on available data for crossing the Croatian–Slovenian border in the present study, we consider the unique data for all eight consecutive procedures within the border system. However, as we are analyzing the single-channel queuing system, we assume that both loaded and empty vehicles (either with or without the AEO status) are placed in one queue and will carry out the procedures sequentially.

In the analysis of the observed system, we used the basic version of the queuing system marked M/M/c, which presupposes that the distribution of the input movement and the time of queuing are distributed in accordance with the exponential rule (Hudoklin-Božič, 1999). First, we calculated the probability that servers are already occupied when each vehicle arrives, which means that the newly arrived vehicles have to wait. The probability that the servers are busy ($C(c, \rho)$) in the M/M/c system can be calculated using the following expression, which is defined as a function

of the number of servers and their utilization (Cloud & Rainey, 1998):

$$C(c, \rho) = \frac{(c \cdot \rho)^c \cdot 1}{c! \cdot 1 - \rho} \cdot \frac{1}{\sum_{n=0}^{c-1} \frac{(c \cdot \rho)^n}{n!} + \frac{(c \cdot \rho)^c}{c!} \cdot \frac{1}{1 - \rho}} \quad (2)$$

where c is the number of servers while ρ presents their utilization. Furthermore, the utilization (ρ) can be expressed as a multiplication between arrivals intensity (λ) and averaged serving time (Ws) divided by the number of servers c .

$$\rho = \frac{\lambda \cdot Ws}{c} \quad (3)$$

Once the utilization measure and the probability that the servers are busy were obtained, we calculated the average number of vehicles waiting to be served (L_q) using the following expression (Cloud & Rainey, 1998):

$$L_q = \frac{\rho \cdot C(c, \rho)}{1 - \rho} \quad (4)$$

Within the illustration of the system performance, we calculated the average waiting time (E) in the line for each HGV using the expression from Cloud and Rainey (1998):

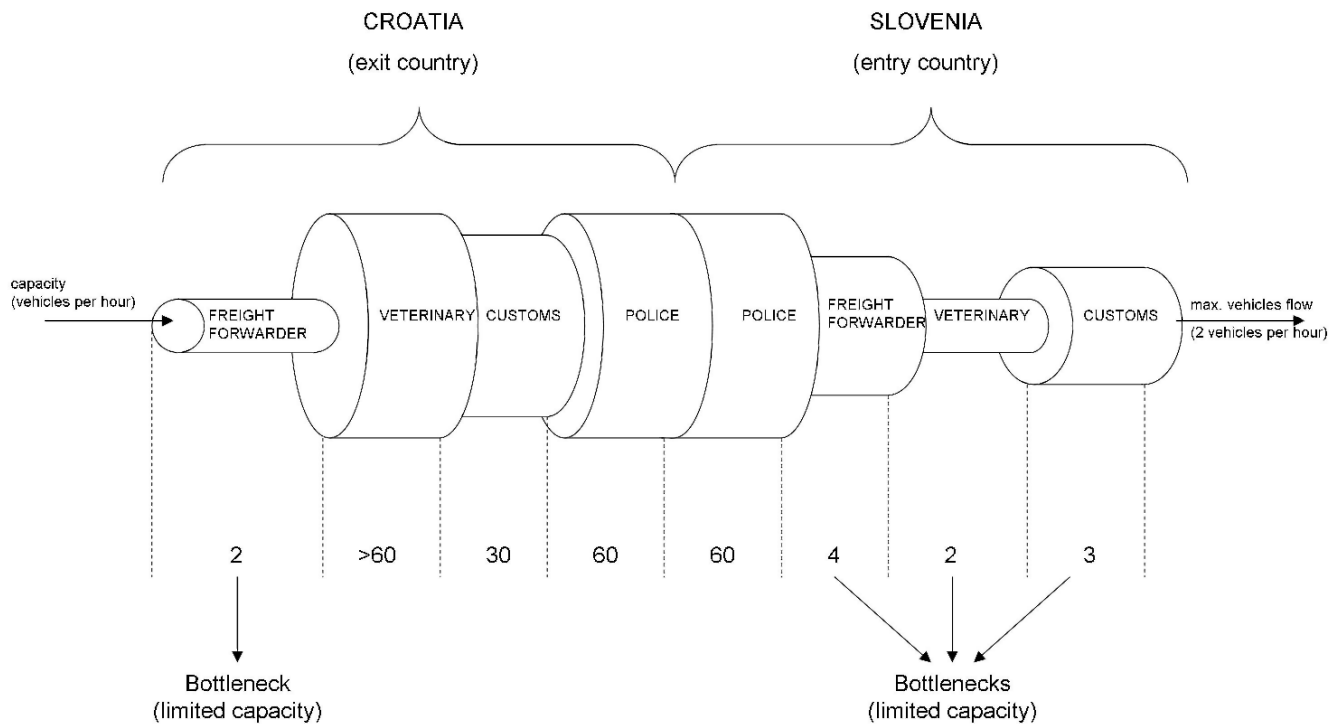
$$E = \frac{Ws}{c \cdot (1 - \rho)} \quad (5)$$

The analysis shows that four service points present a sufficient number of servers to enable a balanced operation of the system.

Based on the performed analysis, in which we took into account four service points, we established that we can improve the actual state by 36% based on the 30% reduction of the time spent for the customs procedure. In fact, given an average queuing time of 23 minutes, the HGVs wait for an average 138 minutes (86% of the time is spent waiting, and only 14% of the time is spent performing their duties). Thus, a 30% reduction of time spent for the customs procedure would shorten the average queuing time to 18 minutes. In addition, the time spent waiting within the system could be reduced to 18 minutes if the customs procedure were reduced by 30%. Vehicles would spend 50% of their time waiting, while the other half would be devoted to performing duties after passing through the border system.

Based on the performed analysis, we also found that the analyzed system of border crossing requires synchronous adjustments in the infrastructure at border crossings. Thus, the increased intensity of the arrived vehicles opens up additional service points in the context of those tasks known to be the most time-consuming within the border crossing system.

Figure 4: Bottlenecks and limited capacity for crossing the Obrežje border crossing.



The results of the analysis carried out in the case of the Obrežje border crossing show the principles of the set supporting the hypothesis of the study. As established herein, the infrastructure at road border crossings must be adjusted in order to optimize the speed at which goods move by road in accordance with the AEO status. The present border system often uses only a single-channel queuing system, which our study has shown to be ineffective. Based on the calculations, we ascertained that the four-channel system proves to work quite well at a low input flow. We also note that it would be reasonable to establish special lines for empty vehicles and vehicles with the AEO status in the analyzed border system. In fact, if all vehicles are placed in the same line, the time needed for processing all the vehicles would depend on the weakest link in the line.

5 Conclusion

On their way from source to consumption, goods are—among other more or less necessary steps—also delayed by customs. Due to customs controls, the same movement of goods entails both economic operators and customs administrations. To perform its control function, customs must stop goods. On the other hand, the flow of goods, or the “trade river,” is increasing every day due to globalization (Rushton et al., 2010; Waters, 2009), and stopping it presents a growing problem for customs.

The most burning issue refers to the traditional control systems as the growing movement of goods makes it impossible to perform a strict physical inspection of each consignment—an issue that creates inefficiency for all participants

in the customs system. All participants in the movement of goods are aware of this and acknowledge that, without exception, conventional customs control impedes the processing speed of the movement of goods.

This situation led to the need to find an appropriate arrangement. A special case of unburdening the supply chains at the point of movement of goods from one customs administration to another can be found in the status of an AEO, which is the result of the customs initiatives of the European Union to allow the safe operation of supply chains according to established self-control while eliminating administrative barriers at the crossing of international borders (Burgermeestre, Hulstijn, & Ton, 2010). Despite the fact that membership in the AEO program is voluntary, effective self-control is compulsory. An economic operator must prove to be a safe and secure partner even during the process of acquiring AEO status, and this status must be properly maintained in all future operations.

The quantitative survey conducted in this study demonstrated that the participants in the customs system believe that having AEO status speeds up the process of movement of goods by road. Based on respondents’ answers, we can conclude that the benefits arising from the AEO certificate have a significant impact on speeding up as well as a positive impact on the functioning of economic operators in the context of international trade. On the other hand, in the second part of the empirical study of the hypothetical case, we established that the infrastructure at border crossings does not permit full exploitation of all the benefits offered by the AEO status. The Obrežje border crossing mostly

functions on the principle of establishing a single-channel queuing system; only in the case of a high intensity of arrivals would another channel for empty vehicles be implemented. Thus, in this case, having the AEO status does not present any benefits as the queuing system treats those vehicles that are or are not AEO certified equally.

Figure 5 shows the correlation matrix between the degree of the organization of customs procedures and the degree of business organization of the economic operators. Based on the matrix presented in the context of traditional customs controls, we can say that the customs authorities have a high level of organization whereas the economic operators have a low level of organization. Rarely, especially in the context of customs controls in less developed countries, would we say that the customs authorities have a low level of organization while the economic operators have a relatively high low level of organization (especially those who export to more developed and demanding markets). However, the key target of the study is a high degree of organization of both participants in the customs system or the studied meta-system.

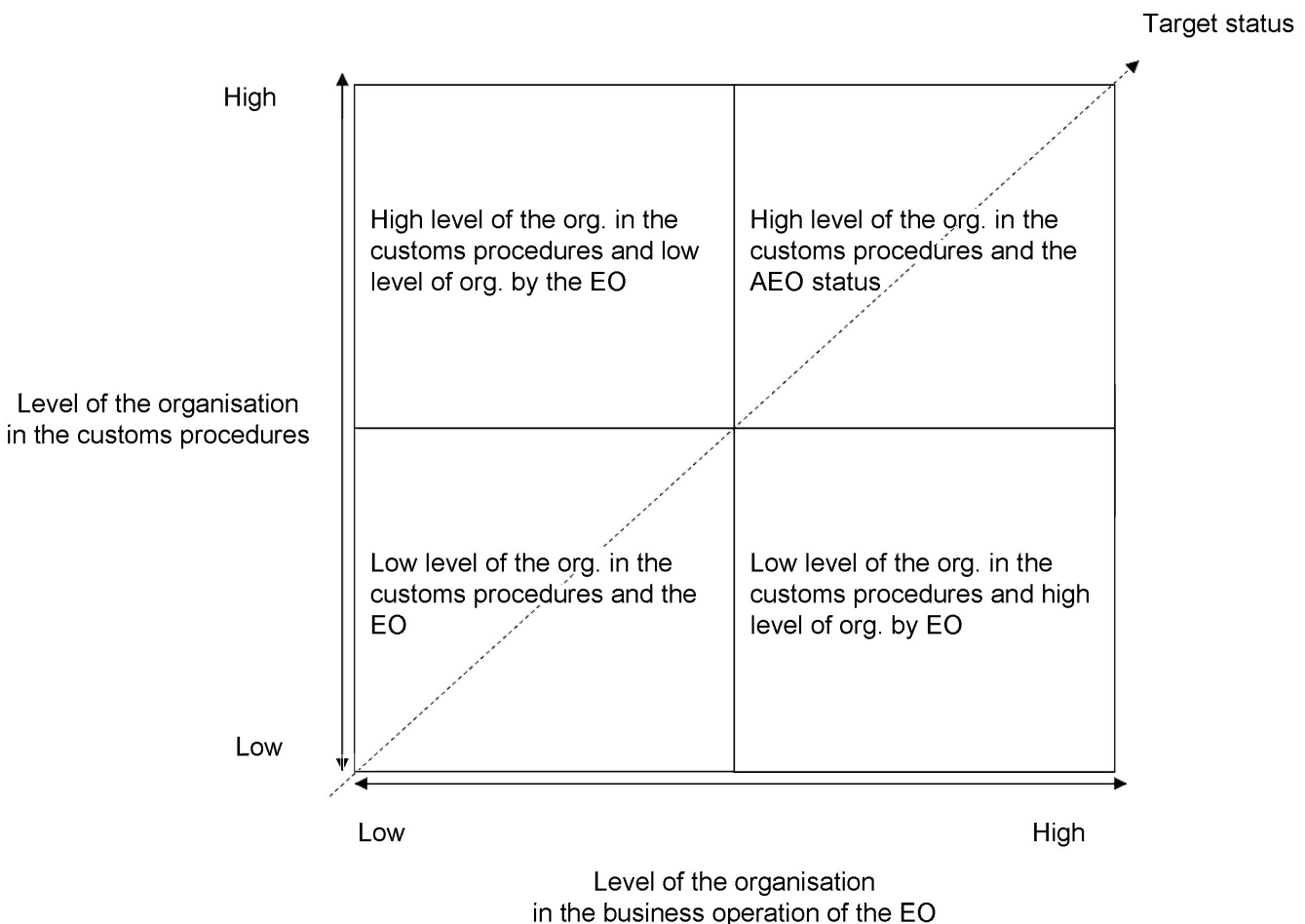
We noticed that two systems that regulate their relations by means of the resulting meta-system meet at the crossing

of goods through the administrative customs territory. The inter-system or meta-system relations are formed according to the principles of cybernetics. The latter “deals with the abstract principles of the organization within complex systems” (Heylighen & Joslyn, 2001) and does not focus on the construction of the system, but only on its performance. Even François (1999) attributes the original meaning of cybernetics to the organization and coordination of the individual elements; regarding the relationship between the volume of information and the level of organization, he summarized Wiener’s (1948) views, who believes that the amount of information in the system represents its own level of organization while the entropy in the system means a degree of disorganization.

In referring to the adjustments needed in the organization of the economic operator to acquire the AEO status, we do not consider only the indirect impacts on its own system, but also the impacts on the customs system. The customs system, while providing certain benefits to the holders of the AEO status, affects the business systems and at the same time its own system.

In the further exploration of the AEO phenomenon, it will be necessary to determine whether the introduction of

Figure 5: Correlation of the level of organization in two systems: customs and the economic operator.



this status actually delivers all of the promised benefits. It would be interesting to see whether the systems that have not been or will not be included in the meta-system of the AEO program achieve a lower level of efficiency and performance in terms of time consumption in the operation of supply chains in comparison to the economic operators with the AEO certificate. Wasting time is determined as an economic failure. Economic performance presents a mandatory requirement in the survival of business systems and, thus, the entire modern society.

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PROTIPRAVNA PREMOŽENJSKA KORIST PRI STORITVI GOSPODARSKIH KAZNIVIH DEJANJ

Proceeds of Criminal Offense according to Article 240 of the Criminal Code

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Izvleček

Avtorja v prispevku analizirata elemente kaznivega dejanja v gospodarstvu iz 240. člena Kazenskega zakonika (KZ-1), predvsem s korporacijskega vidika. Pri tem se tematika nanaša na (ne)pridobitev premoženjske koristi kot temeljne predpostavke pri storitvi gospodarskih kaznivih dejanj. Hkrati so v prispevku navedena in utemeljena izpostavljena pravna vprašanja z obsežno sodno prakso tujih sodišč. Predstavljene so tudi nekateri primeri legalnega ravnanja znotraj korporacijskega prava, kjer so se v zadnjem času pojavile tendence za storitev kaznivih dejanj pri članih organov vodenja in nadzora v gospodarskih družbah.

Ključne besede: gospodarska družba, premoženjska korist, kaznivo dejanje, koncentracija, združevanje finančnih sredstev

Abstract

In the article, the authors analyze the elements of a criminal offense according to Article 240 of the Criminal Code (KZ-1) from the corporate point of view. They focus on the proceeds of the criminal offense according to the aforementioned article, which are its core element. The article also states and substantiates the exposed legal questions connected to the extensive case law of foreign courts. Some practical examples are provided of legal proceedings within corporate law, where lately some tendencies for supervisory and management board members to commit criminal offenses have appeared.

Keywords: Company, cash pooling, proceeds of offenses, criminal offense, concern of companies, concentration of financial resources

1 Uvod

V zadnjem času se v Republiki Sloveniji spričo slabših globalnih in lokalnih gospodarskih razmer pospešeno iščejo dejurni krivci za nastale razmere v državi in v gospodarskih družbah. Pri tem je veliko truda vložena predvsem v kazenske pregone članov organov vodenja in nadzora v gospodarskih družbah, nekoliko manj pa v civilne odškodninske zahtevke. Osnovno dejanje, ki se preganja po uradni dolžnosti, temelji na 240. členu Kazenskega zakonika (Kazenski zakonik, 2012).

Zloraba položaja ali zaupanja pri gospodarski dejavnosti

(1) *Kdor pri opravljanju gospodarske dejavnosti, zato da bi sebi ali komu drugemu pridobil protipravno premoženjsko korist ali povzročil premoženjsko škodo, zlorabi svoj položaj ali dano zaupanje, prekorači pravice ali opusti dolžnosti,*

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ki jih ima na podlagi zakona, drugega predpisa, akta pravne osebe ali pravnega posla glede razpolaganja s tujim premoženjem ali koristmi, njihovega upravljanja ali zastopanja, se kaznuje z zaporom do petih let.

- (2) Če je bila z dejanjem iz prejšnjega odstavka pridobljena velika premoženjska korist ali povzročena velika premoženjska škoda in je storilec hotel sebi ali komu drugemu pridobiti tako premoženjsko korist ali drugemu povzročiti tako premoženjsko škodo, se kaznuje z zaporom od enega do osmih let.
- (3) Če je bilo dejanje iz prvega odstavka tega člena storjeno zato, da storilec sebi ali komu drugemu pridobi nepremoženjsko korist, se storilec kaznuje z zaporom do dveh let.

Navedeno kaznivo dejanje temelji na premoženjski koristi oz. premoženjski škodi, ki naj bi bila storjena pri opravljanju gospodarske dejavnosti, namenjena pa je lahko samemu storilcu kaznivega dejanja ali komu tretjemu. V nadaljevanju se bomo zato podrobneje ukvarjali s protipravno premoženjsko koristjo.

Prispevek temelji deloma na določbah Kazenskega zakonika. Dodatno je za odgovore na vprašanja (ne) obstoja premoženjske koristi pri fizični osebi ali gospodarski družbi treba razumeti predvsem osnovne postulate korporacijskega prava. Zaradi slednjega je treba upoštevati določbe ZGD-1 (Zakon o gospodarskih družbah, 2009), ki je matični zakon in ureja gospodarske družbe. Z uporabo vsega navedenega je nato treba odgovoriti na vprašanje, kaj premoženjska korist v smislu protipravno pridobljene premoženjske koristi sploh je, kaj so njene predpostavke in ali so izpolnjene v konkretnem primeru. Decidirano pa je torej treba jasno ločiti civilno-pravno odškodninsko odgovornost članov organov vodenja in nadzora ter posledično povzročitev škode in nastalo škodo od kazensko-pravno protipravne premoženjske koristi v povezavi s storitvijo kaznivega dejanja. Zato so v drugem delu prispevka opredeljeni nekateri tipični korporacijsko-pravni (civilni) posli, katerih kršitev ali morebitni obstoj elementa protipravnosti še ne pomeni nujno (avtomatsko) obstoja elementov kaznivega dejanja ter protipravne premoženjske koristi.

Zaradi narave protipravne premoženjske koristi, ki kot takšna predstavlja splošno znan pravni institut, je pri interpretaciji treba upoštevati tudi tujo pravno teorijo, zaradi sorodnosti predvsem nemško. Prav tako pa je treba pogled usmeriti tako v domačo kot tujo sodno prakso.

2 Splošno o protipravno pridobljeni premoženjski koristi

Kot protipravno pridobljeno premoženjsko korist je treba obravnavati vsako povečanje premoženja storilca, ki ima svoj vzrok v storitvi kaznivega dejanja (Bele, 2001). Pri tem je treba ločevati situacijo, ko se premoženjska korist pridobi s kaznivim dejanjem, kdaj se pridobi zaradi kaznivega dejanja in v kakšni obliki se pridobi. S kaznivim dejanjem je pridobljena takrat, ko storilec z izvršitvijo kaznivega dejanja

sebi ali komu drugemu neposredno omogoči razpolaganje s premoženjsko koristjo (Bele, 2001). Kot pridobitev premoženjske koristi zaradi kaznivega dejanja se po eni strani kaže posredno razpolaganje s koristjo, ki jo je omogočila storitev kaznivega dejanja, poleg tega pa vse prejete nagrade za storjeno kaznivo dejanje. Kazenski zakonik se omejuje na premoženjsko korist, ki je bila pridobljena s storjenim kaznivim dejanjem ali zaradi že storjenega kaznivega dejanja.

Za premoženjsko korist se šteje čisti presežek premoženja, pridobljen s kaznivim dejanjem ali zaradi njega ter izhaja iz kriminalne dejavnosti in je s kaznivim dejanjem v vzročni zvezi (Bavcon in Šelih, 2003). Kot premoženjska korist se praviloma upošteva tisto premoženje, s katerim storilec lahko razpolaga ob dokončanju kaznivega dejanja (Bele, 2001). Po drugi strani pa tudi poznejša izguba protipravno pridobljenega premoženja ne more vplivati na to, da se storilcu ne bi vzela premoženjska korist v vrednosti ob storitvi kaznivega dejanja (Bele, 2001). Toda logični pogoj za slednje je, da je premoženjska korist na strani storilca kaznivega dejanja dejansko obstajala, kar pomeni, da je obstajal čisti presežek premoženja, pridobljen s kaznivim dejanjem ali zaradi njega, s katerim je storilec lahko razpolagal ob dokončanju kaznivega dejanja.

Iz navedenega in s pomočjo nemške teorije in sodne prakse lahko izluščimo nekatere predpostavke, ki morajo biti podane, da lahko govorimo o obstoju protipravno pridobljene premoženjske koristi. Bistveni predpostavki sta tako:

(dejanski) čisti presežek premoženja, ki se kaže v neposredni koristi, ki je v vzročni zvezi s kaznivim dejanjem, ter možnost (posrednega) razpolaganja s tem premoženjem ob storitvi kaznivega dejanja.

Oboje izhaja tudi iz številnih sodb nemškega vrhovnega sodišča, ki zadnje poimenuje kot »faktische Verfügungsgewalt«.² Enakega stališča je ob navedeni slovenski teoriji tudi nemška (Bittmann, 2004; Nestler, 2010).

¹ Tako npr. izhaja iz sodbe Vrhovnega sodišča Zvezne republike Nemčije z dne 12. 8. 2003, opr. št. 1 StR 127/03, kjer izrecno poudari, da mora iti za neposredno korist.

² Glej sodbo Vrhovnega sodišča Zvezne republike Nemčije z dne 22. 7. 2010, opr. št. 3 StR 147/10, kjer sodišče pravi: »'Erlangt' im Sinne der § 73 Abs. 1 Satz 1, § 73a Satz 1 StGB ist ein Vermögensvorteil nur dann, wenn der Tatbeteiligte die faktische Verfügungsgewalt über den Gegenstand erworben hat (vgl. BGH NSTZ 2003, 198 f.). Mit der pauschalen Angabe, aus den Betätigungsmittelgeschäften sei ein Umsatz von mindestens 135.000 € erzielt worden, wird dieser Umstand nicht belegt.« Z drugimi besedami to pomeni, da golo dejstvo, da je iz kaznivega dejanja nastal neki presežek, ne zadostuje za kvalifikacijo protipravno pridobljene premoženjske koristi, temveč mora nad takšno koristjo obstajati dejanska razpolagalna oblast. Zanimiva je tudi odločitev Ustavnega sodišča Zvezne republike Nemčije z dne 9. 6. 2006, opr. št. 50/06, ki pri opredelitvi protipravno pridobljene premoženjske koristi s strani direktorja družbe, njenega pooblaščenca ali drugega organa sodišče izrecno ločuje premoženje družbe od premoženja omenjenih oseb in jasno določi, da morajo biti kumulativno izpolnjene vse predpostavke, in sicer čisti presežek premoženja, dejanska razpolagalna oblast in tudi dejanska korist za konkretno osebo.

3 Nekateri inkriminirani primeri iz korporacijske prakse

3.1 Cash pooling kot predmet kaznivega dejanja?!

T. i. »cash pooling« ali združevanje finančnih sredstev (effective pooling) pomeni avtomatizirane prenose denarnih sredstev s sodelujočih transakcijskih računov skupine podjetij na izbrani, glavni račun matičnega podjetja. Sredstva na vseh računih, razen glavnega računa, se ob koncu dne prenesejo v celoti oz. nad določenim limitom na glavni račun. Po drugi strani pa se lahko s sredstev na glavnem računu pokrivajo morebitni primanjkljaja

Druge sodbe, v katerih sodišče zavzema podobno stališče, so npr.: sodba Vrhovnega sodišča Zvezne republike Nemčije z dne 28. 10. 2010, opr. št. 4 StR 215/10; sklep Vrhovnega sodišča Zvezne republike Nemčije z dne 10. 1. 2008, opr. št. 5 StR 365/07; sklep Vrhovnega sodišča Zvezne republike Nemčije z dne 27. 5. 2008, opr. št. 3 StR 50/08 (v tej odločitvi sodišče npr. izrecno razsodi: »Damit bleibt offen, in welcher Höhe der Angeklagte neben den Mittätern Verkaufserlöse tatsächlich 'erlangt' hat im Sinne des §§ 73 Abs. 1 S. 1, 73a S. 1 StGB. 'Erlangt' ist ein Vermögensvorteil nur dann, wenn der Tatbeteiligte die faktische Verfügungsgewalt über den Gegenstand erworben hat (vgl. BGH NStZ 2003, 198 f.)«, od koder izhaja prav ločevanje sodišča med samim izkupičkom določenih poslov oz. dejanj in dejanskim dobičkom oz. presežkom premoženja, ki ga je iz tega imela fizična oseba; BGH, sklep z dne 8. 12. 2010 - 2 StR 372/10; izredno pomembna odločitev v konkretnem primeru pa je tudi odločitev Ustavnega sodišča Zvezne republike Nemčije z dne 3. 5. 2005, opr. št. 2 BvR 1378/04, kjer je med drugim sodišče odločilo naslednje: »b) Das Amtsgericht übergeht die Frage einer Trennung der Vermögenssphären der Beschwerdeführerin und der von ihr vertretenen und durch die vermeintliche Tat begünstigten GmbH, die für die korrekte Zuordnung des erlangten Etwas und damit für die Anwendung des § 73 Abs. 3 StGB von herausragender Bedeutung ist. Auch das Landgericht wird diesem zentralen Gesichtspunkt mit seinen oberflächlich bleibenden Wendungen nicht gerecht. Es stellt maßgeblich auf die Stellung der Beschwerdeführerin als Gesellschafterin ab. Aber weder dieser Umstand noch die faktische Zugriffsmöglichkeit auf das Vermögen der Gesellschaft erlauben ohne weiteres eine Zuordnung der an die GmbH gezahlten Geldbeträge zum Vermögen der Beschwerdeführerin. Das Landgericht teilt nur mit, es bestehe der Verdacht, "dass der Geldvorteil an die Beschuldigte als wirtschaftliche Mitinhaberin weitergegeben worden ist, so dass diese im Ergebnis die Begünstigte war". Das ist für einen Zugriff auf das Vermögen der Beschwerdeführerin, nicht der Gesellschaft, unzureichend, denn es bleibt offen, was für eine "Weitergabe" des "Geldvorteils" an die Beschwerdeführerin sprechen könnte und wie sie durchgeführt worden sein könnte. Das ist gerade für den Vorteil von Belang, den die GmbH durch die vermeintlich betrügerisch erwirkte Abweisung einer Klage erlangt haben könnte. Hier kann noch weniger als bei einer Zahlung an die Gesellschaft mit pauschalen Wendungen begründet werden, dass die Vermögensmehrung der Gesellschaft zugleich eine Vermögensmehrung der Gesellschafter bedeutet. Das Landgericht hätte eingehend darlegen müssen, weshalb es von dem nahe liegenden Verweis auf eine Sicherungsmaßnahme, die gegen das Vermögen der Gesellschaft zu richten wäre, abgesehen hat.« Prav iz te odločitve izhaja izrecno ločevanje med premoženjem družbe in družbenikov, pri čemer sodišče zavrne možnost posega v premoženje fizične osebe, družbenika zgolj zaradi tega, ker je družbenik/ca družbe, ki naj bi takšno korist pridobila. Pri tem je pa treba poudariti, da to velja še toliko bolj, če koristi ni bilo niti na ravni družbe, kar je primer prav v zadevi IV Kpr 59294/2010, na kateri temelji predmetno mnenje.

ji na računih udeležencev. Obresti so obračunane glede na stanje na glavnem računu. Običajno združevanje denarnih sredstev poteka v evrih, možne pa so tudi druge valute.

Cash pooling se najpogosteje opravi na način, da se izvede t. i. »up-stream-loan« (up-stream posojilo oz. posojilo navzgor). S pojmom *upstream* posojil razumemo posojila družb hčera (torej odvisnih družb) družbam materam (torej obvladujočim družbam) oz. posojila družbenikov njihovim družbenikom. Ker je naša korporacijska zakonodaja v bistvenem vsebinskem delu enaka kot nemška, je treba zaradi bogatejše sodne prakse v Zvezni republiki Nemčiji za pravilno razlago nekaterih določb in pravnih institutov, ki so pri nas še relativno nerazviti, poseči po tuji, predvsem nemški sodni praksi in teoriji, ki jo navajamo v nadaljevanju.

V Zvezni republiki Nemčiji so takšna posojila med drugim urejena z Zakonom o družbah z omejeno odgovornostjo (GmbHG) (Gesetz betreffend die Gesellschaften mit beschränkter Haftung, 2010), natančneje v 30. členu GmbHG, ki na začetku v 1. odstavku določa, da se premoženje družbe, ki je potrebno za ohranitev njenega osnovnega kapitala, ne sme izplačevati družbenikom.³

V nemški ureditvi je bila sprva v veljavi t. i. bilančna presoja.⁴ Po tej presoji se dopustnost izplačila likvidnostnih sredstev družbe v breme osnovnega kapitala te družbe presoja predvsem po tem, ali je obstajala s tem v zvezi tudi izplačilo/posojilo enakovredna odmena (npr. terjatev za vračilo posojila zoper posojilojemalca) (Schmidt, 2002). Če je tako, gre le za zamenjavo na strani aktive, ki pa ne pomeni kršitve določb, ki urejajo ohranjanje osnovnega kapitala. Če je odmena ogrožena, torej ne izpolnjuje več pogoja enakovrednosti izplačilo/posojilo, gre za kršitev, če gre ta primanjkljaj v breme premoženja, ki je potrebno za ohranjanje osnovnega kapitala (Pentz, 2005).

V tem okviru je ključnega pomena »nepričakovana« sodba Zveznega sodišča Zvezne republike Nemčije⁵ (t. i. »novembrska sodba«), ki »negativno« zaznamuje staro ureditev glede dajanja *up-stream* posojil,⁶ saj pravi, da so posojila družbenikom, ki ne izhajajo iz rezerv ali dobička, temveč iz vezanega kapitala d. o. o., prepovedana tudi takrat, ko za izplačilo obstaja odmena oz. terjatev zoper družbenika kot posojilojemalca, tudi če je ta popolnoma enakovredna. Vendar dejstvo, da sodišče to posebej omenja v sodbi, pomeni tudi, da to iz samega zakona ne izhaja (sploh ob upoštevanju dejstva, da je pred to sodbo veljalo

³ Identično določilo vsebuje 1. odstavek 495. člena ZGD-1, ki prepoveduje, da se družbenikom izplača premoženje, ki je potrebno za ohranitev osnovnega kapitala.

⁴ Za presojanje dopustnosti izplačila je bistveno, da je odmena za izplačilo družbe bilančno ustrezna. Pri tem pa se seveda ne sme zanemariti tudi ustreznost odmene z gospodarskega vidika.

⁵ Glej sodbo Vrhovnega sodišča Zvezne republike Nemčije z dne 24. 11. 2003, opr. št. II ZR 171/01 ali t. i. »novembrska sodba«.

⁶ Kot je že bilo omenjeno, se slovenska ureditev predmetne tematike bistveno ne razlikuje od nemške.

drugačno stališče; kot je že bilo omenjeno, je najprej prevladovala t. i. bilančna presoja) in zato po sklepanju v skladu z načelom »in claris non fit interpretatio« (Pavčnik, 2004) lahko trdimo, da določba ni jasna in zahteva razlago.

Glede na dejstvo, da je uporabljeni 30. člen GmbHG, ki ga sodišče interpretira, identičen 495. členu ZGD-1, je popolnoma na mestu sklepanje, da tudi 495. člen ZGD-1 tega izrecno ne prepoveduje, ampak je stvar sodne prakse, da ga razloži in umesti v prakso.

V Nemčiji so uvideli potrebe poslovne prakse, zaradi česar so jim sledili tudi zakonodajno. Ker je stroka »novembrsko sodbo« imela za »nepravilno« oz. je spodbujala spremembo sodne prakse (Ittenbach in Eckstein, 2007), se je s spremembo oz. dopolnitvijo zakonodaje zadeva razjasnila v nasprotno smer, kot je izhajalo iz te sodbe, in so se izrecno kot dopustna določila tudi izplačila/posojila družbenikom, ki jih je sodišče z »novembrsko sodbo« izrekel za nedopustna.

Z logičnim sklepanjem, da člen ni bil jasen in je potreboval interpretacijo sodišča, da je določena izplačila označilo kot dopustna ali nedopustna, lahko ugotovimo, da tudi iz določb našega ZGD-1 ne izhaja jasno, katera posojila so dovoljena in katera ne. Zato so v Nemčiji 30. člen GmbHG dopolnili tako, da ukinja dvome o razlagi te določbe in je sedaj jasno, kaj je dopustno in kaj ne, kar lahko uporabimo tudi za razjasnitev in interpretacijo 495. člena ZGD-1. Dopolnitev je sledila konec leta 2008, ko je izšla tudi prva sodba na to tematiko, t. i. »decembrska sodba«, kar je natančneje predstavljeno nekoliko kasneje.

Z »novembrsko sodbo« je sodišče zavzelo stališče, da ni skladno s cilji in namenom te določbe, da bi se družbenikom dala izplačila/posojila iz premoženja, ki je potrebno za ohranitev osnovnega kapitala, in bi kot odmeno za to dobila »le« terjatev zoper posojilojemalca (naj ponovno opozorimo, da je bilo od sodišča zavzeto stališče v »novembrski sodbi« presenetljivo in nepričakovano ter tudi v stroki deležno precejšnje kritike). Na podlagi »novembrske sodbe« so torej izplačila/posojila d. o. o.-jev svojim družbenikom dovoljena le, če tudi brez uveljavljanja terjatve zoper družbenika na vračilo posojila ne posega v osnovni kapital družbe v skladu s 30. členom GmbHG.

Na kratko povedano, sodišče meni, da je strogo bilančna presoja (po tej so takšna posojila dovoljena, saj dobi družba za to odmeno in gre dejansko samo za menjavo v aktivih) neustrezna z vidika ohranjanja osnovnega kapitala, zaradi česar, kot pravi sodišče, se lahko posojila dajejo le iz prostih sredstev/premoženja (rezerv).

Menimo, da je stališče sodišča, da strogo bilančna presoja ni primerna, pravilno, vendar pa popolna izključitev te presoje tudi ni primerna, odstop od nje mora namreč biti izjema in ne pravilo (Zabel, 2007). Pri tem sodišče ne daje prav nobenega pomena odmeni za izplačilo/posojilo (terjatev do posojilojemalca, zastava, bančna garancija ...). Glede mnenja sodišča, da z vidika družbe ni popolnoma

enako, ali ima v aktivih likvidna sredstva ali »zgolj« terjatev zoper družbenika, načeloma vlada soglasje. Tako pa ni pri odločitvi, da to takoj pomeni tudi nedopustnost izplačil/posojil družbe, ki povzročijo takšno spremembo v aktivih, sploh če je odmena za to v obliki terjatve, ki je gospodarsko enakovredna posojilu. Glede tega stališča obstaja v stroki precej kritik (Pentz, 2005;).

V zvezi z »novembrsko sodbo« pa je pomembno dejstvo, da je sodišče zavzelo negativno stališče do mnenja nekaterih, da bi se 43. člen GmbHG, ki pravi, da so izplačila/posojila iz vezanega premoženja družbe, dana poslovodstvu, prepovedana, analogno uporabil tudi za izplačila/posojila družbenikom in povezanim družbam.

Posledica kršitve noveliranega 30. člena GmbHG je zahtevek za vračilo po 31. členu GmbHG. V skladu s tem je treba izplačila/posojila, ki so bila izvršena v nasprotju s 30. členom GmbHG, vrniti. Če je bila posojena stvar in je ta morebiti še pri posojilojemalcu, jo mora vrniti. Tak posel, ki je v nasprotju s prepovedjo, se mora torej razveljaviti in vzpostaviti prejšnje stanje. Če to ni mogoče, lahko posojilodajalka zahteva denarno povračilo.

Tudi znotraj ureditve v času po »novembrski« sodbi, ko je veljala precej restriktivna ureditev dajanja *up-stream* posojil, pa so takšna posojila obstajala. Konkretni primer takšnih posojil pri prevzemih oz. pripojitvah so obravnavali tudi nekateri nemški strokovnjaki (Streit, 2005).

V enem izmed primerov, ki jih avtorja navajata, posojilo vzame ciljna družba in ga v celoti prenese na prevzemno družbo, ki nato s tem poravnava kupnino. Ciljna družba seveda dobi posojilo načeloma ob dovolj visokem zavarovanju (vendar je to stvar pogajanj z banko (prvo posojilodajalko v verigi)). Ciljna družba v takem primeru nato sklene s prevzemno družbo posojilno pogodbo. Zavarovanja v tem razmerju se ne zahtevajo; zadostuje že sama terjatev nasproti posojilojemalki. Na podlagi pogodbe se nato posojilo prenese na prevzemno družbo, ki s tem plača nakup ciljne družbe. V primeru t. i. *cash-management* sistema se tekoča sredstva družb v koncernu združujejo, da s tem zagotavljajo likvidnost koncerna ter zmanjšujejo stroške financiranja. Na ta način se poskuša preprečiti, da bi bilo v okviru koncerna treba imeti na razpolago več tekočih sredstev, kot če bi obstajala zgolj ena družba. Če se v *cash-management* sistem vplača posojilo, ki ga je vzela ciljna družba (hči), in se nato s tem posojilom poravnava kupnina za nakup hčere, gre pravno za kredit ciljne družbe prevzemni družbi oz. za ta namen ustanovljeni družbi (Engert, 2005).

Zanimivo je tudi vprašanje, kako je z zahtevki zoper družbenike prevzemne družbe. GmbHG pod določenimi pogoji dopušča zahtevek neposredno zoper tretje. Če ciljna družba da določeno posojilo oz. izvrši izplačilo družbi materi, obstoji iz tega naslova zahtevek ciljne družbe do družbe matere. Če bi družba mati nato navedeno posojilo posredovala neposredno družbeniku družbe matere, pa se zahtevek lahko glasi tudi zoper njega.

Ob tem avtorja v prispevku omenjata tudi nekaj modelov, ki prav tako izhajajo iz časa »novembrske« sodbe, ko je veljala nekoliko bolj restriktivna razlaga 30. člena GmbHG, ki se uporablja kot sredstvo za izognitev morebitni kršitvi določb o ohranjanju osnovnega kapitala. Eden izmed njih je na kratko predstavljen tudi v nadaljevanju.

Nazadnje velja omeniti še pomembno sodbo nemškega Vrhovnega sodišča (BGH),⁷ v kateri se slednje opredeljuje prav do zakonskih znakov kaznivega pri izvrševanju *cash poolinga*. Predmetna sodba sicer ne izključuje verjetnosti obstoja zakonskih znakov kaznivega dejanja v *cash-poolingu*, vendar v sodbi izrecno navede možnost zgolj kaznivega dejanja povzročitve škode s škodljivim upravljanjem premoženja drugega (glej člen 266 nemškega kazenskega zakonika), kjer pa gre za povzročitev škode in ne pridobitve protipravne premoženjske koristi. Sledne pa je prav tisto, kar se pogosto zanemari in česar BGH ni storil, in sicer ločevanje med povzročitvijo škode in protipravno pridobitvijo premoženjske koristi. Seveda je slednja tudi mogoča, vendar mora dejansko nastati, ob tem pa morajo biti izpolnjene še vse druge predpostavke, ki jih navaja predmetni prispevek.

3.2 Poprevzemni modeli preoblikovanja

Pri tem modelu se ciljna družba pripoji prevzemni družbi. Aktiva prej ciljne družbe se nato uporabi za zavarovanje posojila, ki je namenjeno financiranju pripojitve. Po opravljenem postopku pripojitve prej ciljna družba preneha obstajati. Prevzemna družba je kot polnopravna naslednica dolžnica nekdanjih upnikov ciljne družbe. Načelo ohranjanja osnovnega kapitala zato po opravljenem postopku pripojitve ne velja več za ciljno družbo, saj ta ne obstaja več. Vsekakor pa je treba paziti na ohranjanje osnovnega kapitala prevzemne družbe. Cilj te konstrukcije – zavarovanje posojila, ki ga je sprejela prevzemna družba za financiranje pripojitve, in sicer z aktivo ciljne družbe – se lahko torej izvede brez kolizije z načelom ohranjanja osnovnega kapitala.

Konec leta 2008 je nato v veljavo stopil Zakon o modernizaciji prava družb z omejeno odgovornostjo in preprečevanju zlorab (MoMiG) (Das Gesetz zur Modernisierung des GmbH-Rechts und zur Bekämpfung von Missbräuchen, 2008). Zakon je GmbHG med drugim spremenil tudi v delu, ki ureja *up-stream* posojila. Novela je pomenila spremembo 30. člena GmbHG ter prvemu odstavku dodala še dva; prvi pravi, da ta prepoved izplačila ne velja za primer, ko je sklenjena pogodba o obvladovanju (torej obstaja pogodbeni koncern) ali pogodba o prenosu dobička oz. če je za izplačilo/posojilo dana ustrezna odmena (npr. terjatev na vračilo posojila nasproti posojilojemalcu).

Stališče dveh uglednih nemških strokovnjakov na področju gospodarskega prava glede prenovljenega prava družb z omejeno odgovornostjo je (Ittenbach in Eckstein, 2007), da novi 30. člen GmbHG ne omenja kršitev zoper

načelo ohranjanja osnovnega kapitala, dokler je za posojilo/izplačilo družbe njenemu družbeniku ali *pool-partnerju* v koncernu dana ustrezna odmena, enakovredna višini posojila (terjatev zoper posojilojemalca, protistoritev ...). To bi pomenilo, da lahko tudi podkapitalizirana družba z omejeno odgovornostjo da posojilo svojemu družbeniku, seveda pod pogojem, da v tem trenutku obstaja terjatev za vračilo posojila, ki po višini ustreza celotnemu danemu posojilu. Ureditve temelji na prepričanju, da obstoj takšne terjatve zoper družbo posojilojemalko pomeni, da ima le-ta premoženje, ki zagotavlja odplačilo dolga in zato upniki niso bolj ogroženi, kot bi bili, če bi se posojilo dalo tretjemu. Z ozirom na to, da ne obstaja poseben predpis, ki bi določal, da je lahko odmena za dano posojilo enakovredna le-temu zgolj pri zagotovitvi zavarovanja, ki je običajno pri najemu posojila pri bankah, to pomeni, da pri izpolnitvi pogoja enakovrednosti odmene niso taksativno našeta zavarovanja, ki bi pomenila enakovrednost. Poenostavljeno rečeno, zakon ne določa taksativno, kaj mora biti dano kot odmena, da bo zagotovljeno, da ima družba premoženje za povračilo posojila. Trenutek, ki je pomemben in ključen za določanje enakovrednosti odmene (ki je v večini primerov zgolj terjatev posojilodajalke do posojilojemalke), je tisti, v katerem se posojilo daje. Kasnejši dogodki danega posojila ne morejo retroaktivno določiti kot prepovedanega; če torej odmena, dana za prejeto posojilo/izplačilo, oslabi in s tem ne ponuja več tolikšnega zavarovanja posojilodajalki, to ne spremeni dejstva, da je dano posojilo oz. izplačilo bilo in še vedno velja za pravno dopustno. Bistven za to presojo je namreč trenutek, ko je bilo posojilo dano oz. izplačilo izvršeno. Takšna razlaga izhaja tudi iz uradnega komentarja novele zakona, ki ga je podala Vlada ZRN (Heerstraßen in Nebe, 2009). Vendar je poslovodja v tem primeru dolžan poskrbeti, da se terjatev (dana odmena) čim prej uveljavi. V nasprotnem primeru odškodninsko odgovarja.

Nova ureditev 30. člena GmbHG si na izrecno željo zakonodajalca prizadeva bolje urediti in omogočiti financiranje znotraj koncerna na temelju t. i. *cash-poola* in znotraj slednjega omogočiti delitev oz. združenje zmogljivosti podjetji. V skladu z novim GmbHG pa je mogoče tudi financiranje prevzemov, slednje seveda pod pogojem, da je terjatev družbe posojilodajalke do družbe posojilojemalke enakovredna (da je odmena enakovredna danemu posojilu). Avtorja podata naslednji praktični primer:

Družba mati M, d. o. o., želi kupiti družbo hčer H, d. o. o. Kupnino bo družba M, d. o. o., plačala deloma iz lastnega premoženja, deloma iz najetega bančnega posojila. Na zahtevo M, d. o. o., prejme družba H, d. o. o., od banke posojilo, ki ga prenese na M, d. o. o., ki bo nato predmetno posojilo porabila za plačilo kupnine za prevzem H, d. o. o. Če ima družba M, d. o. o., po poplačilu vseh drugih zapadlih zahtevkov upnikov še dovolj premoženja za poplačilo zahtevka družbe H, d. o. o., je takšno financiranje popolnoma korektno in družbi H, d. o. o., pripada enakovredna terjatev zoper družbo M, d. o. o., ki se lahko upošteva v bilanci.

⁷ Glej sodbo Vrhovnega sodišča zvezne republike Nemčije z dne 13.07.2009, opr. št. 2 StR 95/09.

Pred začetkom veljave novele GmbHG (MoMiG) so bile možnosti oz. okviri internega financiranja znotraj koncerna precej omejeni, predvsem zaradi znamenite »novembrske sodbe«, in na tem področju je vladala precejšnja negotovost. Po tej sodbi so bila posojila družbenikom, ki niso izhajala iz rezerv ali dobička, temveč iz vezanega premoženja družbe z omejeno odgovornostjo, nedovoljena tudi, če je bila dana odmena za posojila enakovredna danemu posojilu, kar je bilo razdelano že prej. Z novelo GmbHG (MoMiG) pa se je zakonodajalec vrnil k bilančni presoji. Spremenil se je tudi AktG (57. člen), in sicer na enak način kot GmbHG. Sledila je tudi sodna praksa: sodišče se je distanciralo od t. i. »novembrske sodbe« in odločilo v duhu nove ureditve ter v enem izmed sodnih primerov izdalo t. i. »decembrsko sodbo«.⁸

V predmetnem primeru je družba hči svoji materi izdala več nezavarovanih posojil (v višini več deset milijonov). Pri posojilodajalki se je začel postopek zaradi insolventnosti. Upravitelj je najprej prijavil terjatev nasproti prav tako insolventni posojilojemalki. Zaradi nezmožnosti popolnega poplačila je vložil še odškodninsko tožbo zoper nadzorni svet, ker naj ne bi opravljal dolžnosti preverjanja sposobnosti vračanja posojila (314 AktG). V nasprotju s predhodno instanco je zvezno sodišče odločilo, da posojilo hčere družbi materi ni »per se« oškodovalni pravni posel oz. škodljivo navodilo po 311. členu AktG (sploh pa nemška stroka in sodna praksa zavzemata stališče, da se 311. člen AktG ne uporablja za dejanski d. o. o.-koncern, pri katerem obstajajo druge varovalke) (Pentz, 2005), če je bila terjatev hčere do matere v času, ko je bilo posojilo dano, enakovredna danemu posojilu.

Sodišče pa opozarja, da je obveznost organov vodenja in nadzora, da preverjajo in kontrolirajo tveganje posojila, pri čemer morajo, če se to tveganje poveča, dano posojilo razveljaviti oz. zahtevati boljše zavarovanje. Opustitev teh obveznosti lahko ima za posledico odškodninske zahtevke (Kobelt, 2009).

Sodišče je v tem primeru ob ugotavljanju morebitne odškodninske odgovornosti po 2. odstavku 318. člena AktG (v povezavi s 311, 317) najprej preverilo, ali nezavarovano *up-stream* posojilo pomeni »per se« oškodovanje družbe po 1. odstavku 311. člena AktG. Ugotovilo je, da le takrat, ko do konca poslovnega leta ni poravnani minus pri posojilodajalki oz. do konca poslovnega leta ni dana pravica do zahtevka po izravnavi izgube, obstoji odškodninski zahtevke zoper člane organov vodenja in nadzora. Kajti zgolj sklenitev posojilnih pogodb oz. dana posojila ne pomenijo oškodovanja, saj je bila v času danega posojila posojilojemalka popolnoma solventna in zoper njo je obstajala enakovredna terjatev. Sodišče šteje to le kot neke vrste zamenjavo aktive in se tako oprime bilančne presoje *up-stream* posojil. Dejstvo, da za posojilo niso bila naročena zavarovanja in da pogoji zanj niso bili primerljivi s tistimi, ki bi bili dani

tretjemu, in skrben poslovođa takšnega posojila ne bi dal, še tudi ne pomeni, da je posojilo »per se« oškodovalo družbo, če ni bilo konkretnega ogrožanja premoženja ali donosa posojilodajalke. Dajanje nezavarovanih *up-stream* posojil kot takšno torej ni oškodovalno pravno dejanje, če so terjatve posojilodajalke do posojilojemalke enakovredne in primerno obrestovane. Sodišče se je torej izrecno distanciralo od »novembrske sodbe«. Sicer gre v omenjeni sodbi za delniški koncern, vendar teorija zastopa stališče, da to še toliko bolj velja tudi za d.o.o.-koncern (Waclawik, 2009).

Sploh pa nedavna sprememba zakonodaje in ureditve t. i. *up-stream* posojil v Nemčiji nedvomno kaže na to, kako je treba tudi v naši zakonodaji razlagati predmetne določbe zakona ter jih uporabljati v poslovnih in sodnih praksah.

3.3 Škodljiva navodila v koncernsko povezanih družbah

Pojem škodljivo navodilo razlaga nemška teorija zelo široko in ne zahteva prav nobene obličnosti (Kuhlmann in Ahnis, 2007). Bistveno pri tem je, ali je odvisna družba vpliv obvladujoče družbe upravičeno razumela kot navodilo za določeno ravnanje. Prav tako prevladuje stališče, da lahko navodilo izhaja od nepooblaščenih osebe obvladujoče družbe, pri čemer je spet bistveno, kot kakšno in čigavo je navodilo razumela odvisna družba (Hüffer, 2012). Navodilo namreč nujno ne predstavlja pravno zavezujočega izraza volje in zaradi tega ni potrebno, da ga da za to pooblaščen oseb (Hüffer, 2012).

Prav tako je lahko naslovnik navodila kdo drug kot poslovodstvo odvisne družbe, npr. zaposleni ali drugi na podrejenih mestih odvisne družbe (Hüffer, 2012).

Izvor škodljivega navodila, decentralizirano vodeni koncern

V hipotetičnem primeru je treba biti pozoren predvsem na naslednje: pri večstopenjskih dejanskih koncernih je treba ob upoštevanju konkretnih okoliščin posebno pozornost posvetiti vprašanju, ali je vpliv (škodljivo navodilo družbi hčeri, vnukinji ...) treba pripisati družbi materi (obvladujoča družba) ali je družba hči (odvisna družba) ravnala samostojno (Hüffer, 2012). Načeloma je najpomembnejše, koga je kot dajalca navodila »videla« odvisna družba (Hüffer, 2012). Kot kakšnega bi ga morala, pa je odvisno od konkretne strukture koncerna (Hüffer, 2012). Zaradi slednjega je za prenos odgovornosti oz. obveznosti izravnavne škode iz škodljivega navodila na družbo mater prostor predvsem v centralno vodenih koncernih (Wimmer, 2004). Zgolj koncernska povezanost kot takšna pa še ne pomeni, da je navodilo družbe hčere vnukinji dejansko navodilo družbe matere (Kuhlmann in Ahnis, 2007). Takšno sklepanje bi bilo preširoko, sploh za decentralizirano vodene koncerne (Wimmer, 2004). Sicer bi to lahko sledilo iz načela enotnega vodenja, vendar se tudi tega ne sme razumeti absolutno, ampak bolj v smislu skupne politike, znotraj katere pa družbe ravnajo tudi samoiniciativno in samostojno. Družba mati (v dejanskem koncernu)

⁸ Glej sodbo Vrhovnega sodišča zvezne republike Nemčije z dne 1. 12. 2009, opr. št. II ZR 102/07.

odvisnim družbam namreč lahko daje zgolj smernice, v okviru katerih pa odvisne družbe ravnajo pravno samostojno (navodilu niso dolžne slediti) (Meyer, 2000). Družba mati zato ni seznanjena z vsakim navodilom, ki ga družba hči da družbi vnukinji, in zaradi tega za to tudi ne nosi odgovornosti (Kuhlmann in Ahnis, 2007). Pomembno je torej, kdo je realni nosilec vpliva oz. tisti, v čigar interesu je bila pobuda za škodljiv posel dana, ter odgovornost za posledice pripisati le tisti družbi, od katere navodilo neposredno izhaja (Kocbek, 2010).

Koncern v koncernu je treba razumeti drugače kot decentralizirano vodeni koncern, v katerem še vedno velja enotno vodenje iz vrha koncerna, ki pa je v decentralizirano vodenem koncernu le bolj široko zastavljeno in zato dopušča več samostojnosti posameznim delom koncerna. Pri koncernu v koncernu pa dejansko obstaja znotraj koncerna t. i. podkoncern. Če bi to priznavali, bi bila razdelitev odgovornosti veliko lažja. Vendar naj bi nemška literatura to v večinskem delu zavračala, kar se tiče področja prava družb oz. korporacijskega prava (Roder, Powietzka, 2004).

3.4 Stanje in stališča v slovenski praksi

Dajanje posojil v koncernsko povezanih družbah (hči - vnukinja materi v večstopenjskem dejanskem koncernu), imenovano *cash pooling*, ne predstavlja samo po sebi protipravnega ali celo kaznivega dejanja. Osnovno vprašanje je torej: Kdo, če sploh kdo, je imel korist od posojil, danih družbam v konkretnem primeru?

Menimo, da nekatera stališča slovenske prakse, da je posojilo, dano družbi, mogoče dejansko šteti kot posojilo fizični osebi zgolj zaradi tega, ker je morebiti imela posredno namen iz takšnega posojila na koncu profitirati kot fizična oseba, ne upoštevajo že temeljev prava kapitalskih družb, katerega osnovno načelo je ločevanje premoženja družbe od premoženja njenih družbenikov (teorija namembnega premoženja). Zaradi tega je dostop družbenikov do kapitala družbe urejen skrajno restriktivno, kar je posebej očitno v pravu delniških družb. S tem seveda ne trdimo, da niso mogoče zlorabe, a vendar zgolj želja ali namen, ravnati s premoženjem družbe kot s svojim lastnim, ne zadostuje za sklepanje, ki ga pogosto uporabi tožilstvo. Še manj pa bi držalo, da se z najetim kreditom poveča premoženje posameznega družbenika oz. delničarja, saj najprej povečanje premoženja družbe ne pomeni povečanja premoženja posameznega družbenika in dalje s tem nastane tudi terjatev dajalca kredita do kreditjemalca, zaradi česar najem kredita pod normalnimi pogoji ne pomeni povečanja premoženja družbe (Miller, 2004).

V nemški teoriji so takšna posojila (upstream loans) nekaj vsakdanjega in dopustnega (Georg, 2011).⁹ Tudi iz sodne prakse, omenjene v prejšnji opombi, izhaja, da

posojilo, dano družbi materi od družbe hčere, ne pomeni niti zmanjšanja niti povečanja premoženja, temveč zgolj t. i. »Aktivtausch«, torej zamenjavo aktive, saj namesto zneska kredita nastopi terjatev do posojilojemalca in obratno na strani posojilojemalca. Družba, ki je prejela posojilo, s tem ni ustvarila čistega presežka premoženja v smislu Kazenskega zakonika. Sploh pa »povečanje« premoženja na eni strani nosi terjatev posojilodajalca do posojilojemalca na drugi strani. Kredit kot tak torej sploh ne predstavlja povečanja premoženja družbe. Na podlagi logičnega sklepanja torej težko pridemo do ugotovitve, da je lahko matična družba, ki se ji premoženje sploh ni povečalo oz. posojilo ni rezultiralo v čistem presežku premoženja, predstavlja izvor povečanja premoženja družbam, ki so imetnice njenih delnic, in še manj fizičnim osebam, ki so imetniki deležev družb, ki so zgolj posredne imetnice delnic družbe, iz katere naj bi to povečanje premoženja izhajalo.

Nekoliko lahkomišlno se zato v praksi izpeljuje sklep, da je z vsakim posojilom, ki so ga na neposredno ali posredno zahtevo članov organa vodenja morale družbe iz skupine matice (večstopenjski dejanski koncern) odobriti družbi materi, obogatela v končni fazi družba, ki je bila krovna koncernska družba že omenjenega večstopenjskega koncerna. V praksi se prav tako nepotrebno zatrjuje, da za vsako gospodarsko družbo stoji vsaj ena fizična oseba, ki pa naj bi pridobila zato protipravno premoženjsko korist.

Takšno sklepanje seveda ni na mestu, saj se pozablja najprej na ločevanje premoženja družbe od premoženja njenih družbenikov, zaradi česar povečanje premoženja družbe še ne pomeni povečanja premoženja njenih družbenikov oz. delničarjev. Menimo, da takšno pavšalno zatrjevanje brez argumentov in zgolj z domnevami, da je z vsakim posojilom družbam znotraj koncerna obogatela končna krovna družba, ki je njihova posredna »lastnica«, in s tem tudi fizična oseba kot imetnica deležev te družbe, z ničimer ni pojasnjeno, na kakšen način je ta presežek prišel do posamezne fizične osebe in kdaj je bil viden na njegovem transakcijskem računu oz. v njegovem zasebnem premoženju in ne zgolj premoženju družbe.

Ponovno namreč poudarjamo ločevanje premoženja družbe od premoženja njenih družbenikov, kar je treba upoštevati na vseh ravneh konkretnega koncerna. Dodatno pa je treba upoštevati tudi dejstvo, da določena fizična oseba v družbi lahko nastopa kot direktor in tudi družbenik. Za prvega so predpostavke za očitanje protipravno pridobljene premoženjske koristi še strožje, saj je v primeru čistega presežka premoženja jasno, da ima direktor dejansko oblast nad tem denarjem, saj vodi posle družbe, zaradi česar mora biti dodatno izkazana tudi dejanska korist. Pri družbeniku se pojavi vprašanje že pri dejanski oblasti, če je podana, saj seveda spet pridemo do vprašanja o dejanski koristi. Ker fizična oseba nastopa v obeh vlogah hkrati, je seveda bistveno vprašanje, ali je od posojil podrejenih družb družbam materam imela fizična oseba in družbenik kakršno koli korist. Pri tem ne zadošča, da je prednost pri premoženju pridobila krovna družba, saj ne zadostuje zgolj možnost,

⁹ Glej sodbo Vrhovnega sodišča Zvezne republike Nemčije z dne 24.11.2003, opr. št. II ZR 171/01 in z dne 1.12.2008, opr. št. II ZR 102/07.

da si bi družbenik dobiček lahko izplačal.¹⁰ Slednje je predpostavka, da lahko sploh govorimo o možnosti protipravno pridobljene premoženjske koristi. Takšnega mnenja je tudi nemško vrhovno sodišče v več odločitvah.¹¹

Dodatna težava pa nastane, če so posamezne družbe, ki so bile prejemnice posojil, zašle v insolventno stanje. Ker je mogoče ugotoviti, da se nobeni izmed družb s prejetim posojilom v nobenem trenutku ni ustvaril čisti presežek premoženja, ampak sta družbi postali insolventni, iz takšnega posojila težko izhaja tudi povečanje premoženja krovne družbe, kar seveda »per se« izključuje tudi možnost povečanja premoženja fizične osebe kot imetnika deležev krovne družbe na podlagi teh posojil. Morebiti je bil namen posojil takšen, a protipravno pridobljena premoženjska korist mora biti dejansko izkazana v čistem presežku premoženja, ki pa ga v konkretnem primeru nedvomno ni bilo oz. ga niti ni moglo biti.

Dvomi se pojavljajo tudi pri vprašanju dejanske oblasti fizične osebe nad premoženjem družb obvladujočih družb. Ne glede na to, da gre za dejanski koncern, v katerem poznamo t. i. koncernski privilegij, ki omogoča dajanje škodljivih navodil, le-tem poslovodstvo odvisnih družb ni dolžno slepo slediti. Vendar je to vprašanje v posameznem primeru nerelevantno, saj je pomembno, ali je sploh nastal čisti presežek premoženja. Če bi, bi bila tudi na tem nivoju potrebna temeljita analiza upravljaljskih odnosov znotraj

koncerna, da bi se ugotovila dejanska oblast nad premoženjem družb v koncernu. Hkrati pa je treba z gotovostjo ugotoviti, ali je bila izkazana neposredna premoženjska korist potencialnega storilca.

4 Namesto sklepa

Iz vsega navedenega v prispevku jasno sledi, da mora tožilstvo domnevemu storilcu kaznivega dejanja dokazati čisti presežek premoženja (neposredno korist), pri tem pa slednje ne sme temeljiti zgolj na domnevah (poleg vseh drugih elementov za obstoj kaznivega dejanja). To seveda ne zadostuje, saj mora biti presežek dejansko razviden in na voljo predmetnemu subjektu.

Hkrati s tem je pomembna ugotovitev, da je nujno treba ločevati med vprašanjem o civilni povzročitvi škode (do katerega se v tem prispevku ne opredeljujemo) in protipravno pridobljeni premoženjski koristi, pri katerem mora korist dejansko in neposredno nastati. Tako v analiziranih primerih s prejetimi posojili dejansko v nobenem trenutku sploh ni nastal čisti presežek premoženja družb posojiljemalk. Slednje pa je seveda pogoj, da lahko sploh govorimo o čistem presežku premoženja njenih družbenikov in posledično protipravno pridobljeni premoženjski koristi. Če zaradi tega seveda o slednji sploh ni mogoče govoriti. Popolnoma drugačno težo pa bi lahko imelo morebitno uveljavljanje odškodninskih zahtevkov zoper domnevne povzročitelje škodnega dogodka. Zgolj dejstvo o obstoju škodnega dogodka ali protipravnem ravnanju v civilno-pravnem pomenu pa »per se« še ne more predstavljati obstoja kakršnega koli kaznivega dejanja, temveč je treba zadevo v vseh pogledih tudi ustrezno argumentirati in dokazati. Pri tem zgolj sklicevanje na kršitev civilnih predpisov ni zadosten dokaz za obstoj kaznivega dejanja, temveč zgolj element protipravnosti v smislu odškodninske (civilne) odgovornosti.

Pa vendar, če (napačno) predpostavljamo, da je takšna korist na strani družb posojiljemalk v nekem trenutku dejansko obstajala, to zaradi temeljnega načela ločevanja premoženja družbe od premoženja njenih družbenikov še ne pomeni povečanja čistega presežka premoženja njenih družbenikov (teorija namembnega premoženja). Drugačno sklepanje je napačno, kar izrecno potrjujeta tudi nemška teorija in sodna praksa, ki ju je nujno treba upoštevati, saj gre za osnovne postulate korporacijskega prava, ki veljajo tudi pri nas, in še več, izhajajo med drugim iz nemške korporacijskopravne ureditve. Za takšno povečanje bi morali omenjeni družbi na neki način izplačati domnevni čisti presežek premoženja svojim družbenikom oz. družbeniku.

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¹¹ Glej sodbo Vrhovnega sodišča Zvezne republike Nemčije z dne 28. 10. 2010, opr. št. 4 StR 215/10, v kateri sodišče izrecno razsodi sledeče: »Nach der Rechtsprechung des Bundesgerichtshofs ist ein Vermögenswert aus der Tat erlangt im Sinne des § 73 Abs. 1 Satz 1 StGB, wenn er dem Täter oder Teilnehmer unmittelbar aus der Verwirklichung des Tatbestands in irgendeiner Phase des Tatablaufs zugeflossen ist (BGH, Urteile vom 30. Mai 2008 - 1 StR 166/07, BGHSt 52, 227, 246; vom 29. Juni 2010 - 1 StR 245/09), er an ihm also unmittelbar aus der Tat (tatsächliche, aber nicht notwendig rechtliche) Verfügungsmacht gewonnen und dadurch einen Vermögenszuwachs erzielt hat (vgl. BGH, Urteil vom 16. Mai 2006 - 1 StR 46/06, BGHSt 51, 65, 68; Beschluss vom 21. Oktober 2008 - 4 StR 437/08, NSZ 2010, 85; Urteil vom 4. Februar 2009 - 2 StR 504/08, JZ 2009, 1124 m. Anm. Rönnau m. w. N.);

BVerfG, odločitev z dne 9. 6. 2006 - 50/06: Der Vermögenszuwachs muss dem Täter auf irgendeine Weise wirtschaftlich zu Gute kommen. Das kann nicht ohne weiteres vorausgesetzt werden, wenn der Täter als Beauftragter, Vertreter oder Organ einer juristischen Person gehandelt hat und der Vorteil aus der Straftat in deren Vermögen fließt. Regelmäßig ist vielmehr davon auszugehen, dass die juristische Person über eine eigene Vermögensmasse verfügt, die von dem Privatvermögen des Beauftragten, Vertreters oder Organs zu trennen ist.

Zur Begründung einer Verfallsanordnung gegen den als Organ einer Gesellschaft handelnden Täter bedarf es der Feststellung, ob dieser selbst etwas erlangt hat, das zu einer Änderung seiner Vermögensbilanz geführt hat. Wird der Vermögensvorteil von der Gesellschaft vereinnahmt, kann nicht ohne weiteres vorausgesetzt werden, dass der wirtschaftliche Wert der Geschäftsanteile im Privatvermögen des Täters steigt oder dass sich der Zufluss auf die Höhe einer späteren Entnahme aus dem Gesellschaftsvermögen auswirkt.)

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UPORABA ORODIJ MENEDŽMENTA IN DODANA VREDNOST V SLOVENSКИH INVALIDSKIH PODJETJIH

The Use of Management Tools and Added Value in Slovenian Disabled Enterprises

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Izvleček

Namen raziskave je ugotoviti stanje pri načrtovanju in uporabi menedžerskih orodij v invalidskih podjetjih, ki poslujejo v Republiki Sloveniji. Ugotavljali smo, ali obstaja statistično značilna korelacija med načrtovanjem uporabe in uporabo menedžerskih orodij ter dodano vrednostjo. Ugotovili smo, da z načrtovanjem in uporabo menedžerskih orodij podjetja ne dosegajo višje dodane vrednosti. Menedžersko orodje, katerega uporaba je povezana s povečanjem dodane vrednosti, je EFQM. Bistvene prednosti uporabe menedžerskih orodij so izboljšanje preglednosti procesov, višja kakovost proizvodov, večje zadovoljstvo odjemalcev in izboljšanje ugleda podjetja. Izidi iz raziskave bodo koristni za vse, ki si prizadevajo za nenehno izboljšanje uspešnosti poslovanja.

Ključne besede: anketa, dodana vrednost, invalidsko podjetje, menedžment, menedžerska orodja, uspešnost

Abstract

The purpose of the survey is to establish the state in planning and use of management tools in disabled enterprises operating in the Republic of Slovenia. We investigated if a statistically significant correlation exists between planning and using the management tools and the added value. We found that disabled enterprises that are planning and implementing management tools do not achieve higher added value. The management tool connected to the increase of the added value is the EFQM. The essential advantages of using the management tools are: improved transparency of the processes, better quality of products, greater customer satisfaction, and improved reputation of the company. The conclusions of the survey will be useful to those who strive for continuous improvement of business efficiency.

Keywords: survey, added value, disabled enterprise, management, management tools, efficiency

1 Uvod

Spremembe so v času burnih preobratov postale pravilo. Vsako podjetje, ki hoče preživeti, jih mora celo spodbujati in iz njih ustvariti priložnosti, prepoznati mora koristne spremembe, ki bodo učinkovite tako znotraj kot tudi zunaj podjetja. Izpeljava in usmerjanje sprememb je zahtevna in naporna naloga, ki je za menedžerje postala eden glavnih izzivov (Pettigrew idr. 2001). Usmerjevalci sprememb bodo edini, ki bodo preživeli, zato pa morajo slediti vodilom za oblikovanje priložnosti, razvijati načrtne metode za iskanje in predvidevanje sprememb, nenehno preizkušati, kateri je pravi način za uvajanje sprememb znotraj in zunaj podjetja, ter znati vzdrževati ravnovesje med spreminjanjem

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in kontinuiteto (Drucker 1999). Za pomoč menedžerjem pri uvajanju sprememb je bil predvsem v preteklih petdesetih letih razvit širok nabor različnih menedžerskih orodij, ki je nastal iz potrebe po uspešnem vodenju in prilagajanju vse hitreje rastočemu trgu (Pascale 1991, Daft 2000). Izbrana menedžerska orodja naj bi jim omogočala boljše poslovne odločitve in učinkovito doseganje smotrov in ciljev za kar največ udeležencev (Biloslavo 2008). Pogoj za uspešno uporabo teh orodij je razumevanje vsakega izmed njih z vsemi njegovimi prednostmi in slabostmi. Zato samo eno popolno menedžersko orodje ne obstaja, ključno je razumevanje menedžerjev, katero izbrati ter kako in kdaj ga uporabiti (Rigby 2001).

Po raziskavi o konkurenčnosti slovenskih podjetij je bilo v primerjavi z vodilnimi svetovnimi podjetji ugotovljeno, da menedžment v slovenskih podjetjih ocenjuje, da je njihov največji zaostanek za tujimi podjetji prav pri uporabi sodobnih menedžerskih orodij, kar ima tudi neposredne gospodarske učinke, saj ustvarjajo preizkzo dodano vrednost (Ložar 2009). V raziskavi, ki jo je Ložar izvedel v 300 največjih slovenskih podjetjih, je avtor ugotovil, da imajo slovenska podjetja največje zaostanke za primerljivimi svetovnimi multinacionalkami pri produktivnosti, pri stroških dela (tvoja podjetja imajo za 14,1 % nižje stroške dela v dodani vrednosti od slovenskih) in pri dodani vrednosti, ki je pri tujih podjetjih kar za 118 % višja od primerljivih slovenskih. Bukovec in Markič (2008) sta raziskovala stopnjo integracije različnih menedžerskih modelov v slovenskih organizacijah. Ugotovila sta, da so najbolj integrirani modeli sitem vodenja kakovosti (ISO 9001), model odličnosti (EFQM), 20 ključev, reinženiring (BPR), uravnoteženi sistem kazalnikov BSC in six sigma. Najbolj prepoznan je model ISO 9001, stopnja integracije EFQM je nizka. Ugodno je stanje pri modelu 20 ključev, BPR, BSC in six sigma se malo uporabljajo. V neprofitnih organizacijah več uporabljajo BSC kot BPR, v neprofitnih in storitvenih organizacijah pa je opazno odklonilno stališče do 20 ključev, BSC, six sigma in BPR.

V raziskavi o uporabi menedžerskih orodij v svetovnem merilu (Rigby in Bilodeau 2007) ugotavljajo, da v večjih podjetjih uporabljajo več orodij kot v majhnih. Menedžerji so najbolj zadovoljni z uporabo orodij strateškega načrtovanja, zaznan pa je bil velik padec pri uporabi zunanjega izvajanja dejavnosti (predvsem v Severni Ameriki). Najbolj uporabljani menedžerski orodji sta primerjalno presojanje (benchmarking) in strateško načrtovanje.

V Sloveniji obstaja zakonska možnost, da gospodarska družba pridobi status invalidskega podjetja (v nadaljevanju IP), če izpolnjuje določene zahteve na področju zaposlovanja in usposabljanja invalidov. IP tako predstavljajo pomembno možnost zagotavljanja delovnih mest za invalide, saj jim omogočajo socialno varnost in vključenost. Zaradi tega so to gospodarske družbe posebnega pomena. Nastop teh podjetij na trgu se ne razlikuje od nastopa drugih gospodarskih družb, tudi njihov namen je, da dolgoročno povečujejo svojo uspešnost. Zaznani problem je po našem mnenju

v tem, da slovenski IP niso dovolj uspešni. Kljub državni pomoči jih četrtnina posluje z izgubo (MDDSZ 2009).

Predvidevamo, da je pomemben razlog za takšno stanje ta, da menedžment v IP menedžerskih orodij ne pozna dovolj, jih premalo uporablja ali ne načrtuje njihove uporabe. Smiselno je raziskati obseg poznavanja in razširjenost uporabe menedžerskih orodij v IP in njihovo povezavo z uspešnostjo, izraženo z ustvarjeno dodano vrednostjo. Dodana vrednost na zaposlenega ni v neposredni in popolni korelaciji z izidom poslovanja, je pa pomembno sredstvo za merjenje izidov podjetij (Ghalayini 1996).

Kazalniki uspeha so lahko tudi odlična kakovost proizvodov, absentizem (v IP izražen v veliki meri), fluktuacija, zadovoljstvo pri delu, inoviranje, motivacija, morala, nadzor, konflikti, kohezija, prilagodljivost in adaptacija, poškodbe pri delu, izobrazba in razvoj, človeške zmogljivosti, etično ravnanje in verodostojnost organizacije, dobavna in servisna pripravljenost, odnos do naravnega in družbenega okolja, humanizacija dela in odnosov, rentabilnost, akumulativnost itd. (Ferreira in Otley 2009). De Waal (2003) je še konkretnje raziskoval dejavnike uspešnosti v organizacijah in ugotovil, da poleg finančnih kazalnikov (kot so npr. rast dohodka, dobičkonosnost, rast prodaje, povrnitev investicije ipd.) obstajajo tudi nefinančni (npr. zadovoljstvo odjemalcev, njihova lojalnost, lojalnost sodelavcev ter kakovost proizvoda in procesa).

Na podlagi ugotovitev iz pregleda domače in tuje strokovne literature smo se odločili, da bomo iz nabora menedžerskih orodij preverjali načrtovanje in uporabo naslednjih: standarde serije ISO 9000: enotni, mednarodni standardi menedžmenta kakovosti kot vodilo za vodenje procesov, s katerimi naj bi zagotavljali, da proizvodi in procesi ustrezajo zahtevam odjemalcev (Bernus 2003, Piskar in Dolinšek 2006); EFQM: poslovno-organizacijski model spodbujanja nenehnega izboljševanja, temelječega na učenju in inovativnosti, ki so ga oblikovali v European Foundation for Quality Management (Samuelsson in Nilsson 2002); sistem 20 ključev: edinstven in praktičen sistem za dolgoročno uspešen in celovit razvoj podjetij in orodje za ocenjevanje kakovosti delovnega okolja z 20 med seboj povezanimi tehnikami in izboljšavami oz. ključi (Kobayashi 1995); uravnoteženi sistem kazalnikov (balanced scorecard, BSC): menedžerski poslovno-organizacijski model strateškega načrtovanja in uravnoteženih kazalnikov (Kaplan in Norton 1992); six sigma: poslovno-organizacijski sistem nenehnih izboljšav, s pomočjo katerega se v organizacijah osredotočajo na zmanjšanje števila napak in na razvoj proizvodnje, temelji pa na statistični kontroli procesov (Pande idr. 2000); BPR (business process reengineering): radikalna preureditev poslovnih procesov, ki dramatično izboljša kakovost, zniža stroške in poveča hitrost proizvodnje (Hammer in Champy 1993); strateško načrtovanje: obsežen in sistematičen proces, s katerim opredelimo predvidevanja v prihodnjem obdobju na načine, kako bomo dosegli zastavljene cilje (Hamel in Prahalad 1994); primerjalno presojanje (benchmarking): stalen proces

merjenja proizvodov in procesov ter njihovo primerjanje z najboljšimi konkurenti oz. najboljšimi organizacijami (Daft 2008); segmentiranje odjemalcev (customer segmentation): proces ločevanja odjemalcev ali potencialnih odjemalcev na različne skupine ali segmente z namenom prepoznavanja potreb odjemalcev in pridobitve konkurenčne prednosti (McDonald in Dunbar 2004); CRM (customer relationship management): koncept sodobnega trženja kot celovitega procesa izgradnje in vzdrževanja dobičkonosnih odnosov z odjemalci (Kotler in Armstrong 2006); zunanje izvajanje dejavnosti (outsourcing): oddana, izločena, predstavljena izbrana poslovna funkcija, dejavnost, storitev ali program, ki jo ali ga za naročnika izvajajo zunanji izvajalci (Kavčič in Tavčar 2008); prebojne inovacije: z njimi izpodrinemo obstoječe poslovne modele z ustvarjanjem enostavnejših, cenejših in prijaznejših izdelkov, storitev ali procesov, ki se kažejo včasih kot radikalen preboj, včasih pa kot prednost v poslovnem modelu podjetja (Burns in Stalker 2001).

Namen raziskave je ugotoviti stanje pri načrtovanju in uporabi menedžerskih orodij v invalidskih podjetjih, ki poslujejo v Republiki Sloveniji. Raziskali bomo tudi, ali obstaja statistično značilna korelacija med načrtovanjem uporabe in uporabo menedžerskih orodij in dodano vrednostjo ter katere so ključne prednosti uporabe teh orodij.

Iz teoretičnih izhodišč in opisa problematike smo oblikovali naslednje hipoteze:

- H1: Med načrtovanjem in uporabo menedžerskih orodij ter dodano vrednostjo invalidskih podjetij obstaja povezava.
- H2: Med vzroki za spodbudo k uporabi menedžerskih orodij in razširjenostjo njihove uporabe ter med vzroki za spodbudo k uporabi teh orodij in dodano vrednostjo invalidskih podjetij obstajata povezavi.
- H3: Povečanje uspešnosti poslovanja IP ni ključna prednost uporabe menedžerskih orodij.

V nadaljevanju prispevka bomo predstavili uporabljeno metodologijo, podali ključne izide iz raziskave ter opravili razpravo.

2 Metodologija

V osnovi je šlo za kvantitativno metodo raziskovanja, kot jo opredeljujejo Easterby-Smith, Thorpe in Jackson (2009). Kot pripomoček za pridobivanje podatkov in informacij smo uporabili vprašalnik. Zaradi večje veljavnosti in zanesljivosti raziskave smo ga testirali pri desetih direktorjih IP in njihove pripombe smiselno upoštevali pri končnem oblikovanju anketnega vprašalnika. Pri testiranju vprašalnika smo ugotovili, da direktorji prepoznajo dodano vrednost kot primeren kazalnik uspešnosti poslovanja podjetja, znana pa jim je bila tudi višina dodane vrednosti v dejavnosti, v kateri IP delujejo.

Anketni vprašalnik

Za zbiranje podatkov in informacij smo oblikovali vprašalnik, na katerem smo zasnovali kvantitativno raziskavo. Prvi del vprašalnika je splošni del. Z njim smo pridobili splošne podatke o podjetju, med drugim tudi o ustvarjeni dodani vrednosti na zaposlenega, s katerimi bomo primerjali informacije, prejete z odgovori na vprašanja o uporabi menedžerskih orodij, ki so zasnovana v naslednjih treh sklopih. Drugi del vprašalnika smo povzeli po raziskavi, v kateri so proučevali pristop k obvladovanju organizacijskih sprememb v slovenskih podjetjih (Bukovec in Markič 2008). V tem delu vprašalnika smo spraševali po dejanskem in želenem stanju pri obvladovanju organizacijskih sprememb v IP. V tretjem delu vprašalnika smo direktorje spraševali po poznavanju menedžerskih orodij, po smiselnosti uvajanja posameznega orodja, po zadovoljstvu z uporabo in po tem, katero orodje je najbolj povečalo konkurenčnost oz. uspešnost podjetja. Menedžerska orodja smo izbrali glede na raziskave, ki so jih opravili Bukovec in Markič (2008), Rigby in Bilodeaujeva (2007) ter Ložar (2009). Menedžerska orodja, katerih uporabo smo proučevali, smo izbrali po predhodnih raziskavah: prvih šest (standard ISO 9001, EFQM, model 20 ključev, BSC, six sigma, BPR) po Bukovec-Markičevi raziskavi (2008), naslednja (strateško načrtovanje, primerjalno presojanje, segmentacija odjemalcev, CRM, zunanje izvajanje dejavnosti) po raziskavi Bain company (Rigby in Bilodeau, 2007) in zadnji dve orodji (prebojne inovacije, diferencirana kadrovska strategija) po Ložarjevi (2009). Četrti del vprašalnika se nanaša na vzroke za spodbudo k uporabi oz. načrtovanju uporabe menedžerskih orodij. Od direktorjev se pričakuje, da ocenijo glavne ovire pri vzpostavljanju uporabe menedžerskih orodij in bistvene prednosti, ki so jih z njihovo uvedbo pridobili. Vzroke in spodbude smo povzeli po Piskarjevi in Dolinšku (2006).

Populacija in vzorec

Vprašalnik so izpolnjevali direktorji IP ali člani uprave. Proučevali smo vseh 164 invalidskih podjetij v Republiki Sloveniji, ki so imela status IP kot gospodarske družbe. Izločili smo 13 tistih, ki jim je prenehal status, so bila v stečaju ali njihovo poslovanje še ni trajalo vsaj tri leta. Poslanih je bilo 151 anketnih vprašalnikov; prejeli smo 95 izpolnjenih vprašalnikov, od tega je bilo šest neveljavnih oz. nepopolnih. V analizo je bilo zajetih 89 IP ali 59 % od poslanih vprašalnikov, kar je zadostna in pričakovana odzivnost pri tovrstni izvedbi raziskave (Flere 2000).

Izpolnjene anketne vprašalnike smo obdelali in statistično analizirali s pomočjo aplikacije Statsoft Statistica 7.0. Uporabili smo elementarne statistične metode pri podatkih številčnega tipa, linearno in multivariantno regresijsko analizo, analizo variance po enojni klasifikaciji, t-test, F-test, test c^2 ter klustersko in faktorsko analizo.

3 Rezultati

Odgovore smo prejeli iz vseh statističnih regij v Sloveniji, od podjetij vseh velikosti (mikro, majhna, srednja in velika), vseh dejavnosti in različnih starosti. Največ anketnih vprašalnikov so izpolnili IP, ki dosegajo nad 50 % do 80 % dodane vrednosti na zaposlenega glede na povprečje osnovne klasifikacije dejavnosti podjetja (29 IP oz. 33 %), najmanj pa tisti v razponu do 50 % (12 IP). Primerjava s celotnim vzorcem IP pokaže, daje zastopanost po deležih vrnjenih anketnih vprašalnikov največja (65 %) v razredu z razponom dodane vrednosti na zaposlenega glede na povprečje osnovne klasifikacije dejavnosti podjetja »nad 80 % do 100 %«, razreda »nad 100 %« in »nad 50 % do 80 %« sta zastopana približno 60 %, najmanjši delež (43 %) pa je pri podjetjih, ki so uvrščena v razred »do 50 %«.

Vsi IP so bili ustanovljeni med letoma 1956 in 2003, najvišja dokončana stopnja izobrazbe direktorjev je visokošolska (60,7 %), podiplomska pa se pojavlja kar v 14,6 %. Po dejavnosti podjetja jih je 33 % iz storitvene dejavnosti, 21 % iz večinoma storitvene, 12 % iz storitvene in izdelovalne, 8 % iz izdelovalne in 26 % iz večinoma izdelovalne. Po številu zaposlenih je največja skupina IP tistih, ki zaposlujejo med 50 do vključno 250 zaposlenih (61 %), sledijo IP, ki imajo med 10 do vključno 50 zaposlenih (34 %), nato podjetja z več kot 250 zaposlenimi (3 %), najmanj pa je IP, ki zaposlujejo do vključno 10 zaposlenih (2 %).

Podjetja najpogosteje (letno) uvajajo spremembe na področju izobraževanja in usposabljanja, na drugih področjih pa uvajajo spremembe na eno do dve leti, najmanj pogosto na področjih postopkov proizvodnje, strojev ali opreme.

Pri uvajanju sprememb se podjetja po dejavnostih razlikujejo: storitvena in izdelovalna manj pogosto uvajajo spremembe metod dela kot preostala, storitvena manj pogosto spreminjajo inovacijske, razvojne aktivnosti in uvajajo spremembe na področju proizvodnje, pri strojih ali opremi kot preostala. Pri uvajanju sprememb se podjetja po velikosti razlikujejo: mikro podjetja manj pogosto uvajajo spremembe inovacijskih aktivnosti, pri raziskavah in razvoju in pri izdelkih, storitvah in procesih kot srednja in velika podjetja. Pri uvajanju sprememb se podjetja po starosti razlikujejo: starejša podjetja pogosteje uvajajo spremembe inovacijskih aktivnosti, pri razvoju in pri postopkih proizvodnje, strojih ali opremi kot mlajša.

Vzroki za spodbudo k uporabi oz. načrtovanju uporabe menedžerskih orodij

Anketiranci so ocenili pomembnost vzrokov za spodbudo k uporabi oz. načrtovanju uporabe menedžerskih orodij. Zanimalo nas je, kateri vzroki so najvplivnejši oz. najmočnejše pojasnjujejo, zakaj se menedžerji odločajo za uporabo posameznih orodij. Z uporabo faktorske analize smo poskušali ugotoviti, kateri vzroki so med seboj povezani in kakšen je njihov delež pri odločanju za uvedbo menedžerskih orodij.

Faktor 1 določajo vzroki »finančna spodbuda podpornih institucij in državno sofinanciranje«, »upad prodaje« in »napredek tehnologije«; to so trije vzroki, ki imajo največji vpliv na spodbudo k uporabi menedžerskih orodij (25 % celotne variance), a so velikokrat bolj povezani z zunanji dejavniki, na katere *podjetje ponavadi nima vpliva*, vendar ga želi imeti. V okviru najpomembnejšega faktorja je najpomembnejši vzrok za spodbudo »upad prodaje«.

Faktor 2 razloži 20 % celotne variance in ga določajo »izpolnjevanje zahtev naravnega okolja«, »želja zaposlenih« in »pogoji dobaviteljev«; to so vzroki, ki pogosto izhajajo iz notranjih in tudi zunanjih zahtev podjetja in *na katere podjetje oz. vodstvo lahko vpliva*.

Faktor 3 povezuje vzroka »konkurenca – znanje in ideje« ter »potrebe/zahteve odjemalcev«; razloži 16 % celotne variance in je faktor *konkurenčnosti na trgu*.

Faktor 4 razloži 13 % celotne variance in povezuje »zahteve lastnikov« in »potrebo po večjem dobičku oz. dvigu dodane vrednosti«, kar pomeni, daje faktor *poslovne uspešnosti*, ki je na četrtem mestu med vzroki za spodbudo k uporabi menedžerskih orodij v IP.

Glavne ovire pri vzpostavljanju uporabe menedžerskih orodij

Menedžerji so opredelili ovire, na katere največkrat naletimo, kadar se v IP uvaja uporaba posameznih menedžerskih orodij. Tudi tu smo skušali z uporabo faktorske analize določiti največje ovire oz. ugotoviti povezavo med njimi za lažjo postavitev modela za njihovo odstranitev. Za analizo ovir pri vzpostavljanju uporabe menedžerskih orodij smo izračunali korelacijsko matriko sedmih spremenljivk, ki predstavljajo odgovore na zastavljeno vprašanje. Izračunali smo indeks MSA v vrednosti 0,612, kar je več od 0,50 in pomeni, da so podatki primerni za faktorsko analizo, kar je potrdil tudi Bartlettov test sferičnosti ($p < 0,0001$).

Faktor 1 določajo ovire »nezanimanje srednjih in nižjih menedžerjev«, »nezanimanje in premajhna podpora zaposlenih« ter »slaba usposobljenost zaposlenih«; to so ovire z največjim vplivom na uvajanje menedžerskih orodij (27 % celotne variance), lahko bi ga imenovali kar *faktor nezanimanja in nesposobnosti*. Najpomembnejši oviri v okviru najpomembnejšega faktorja sta »nezanimanje in premajhna podpora zaposlenih« ter »slaba usposobljenost zaposlenih«.

Faktor 2 razloži 24 % celotne variance in ga določata dve spremenljivki, »problemi z dobavitelji« in »nezanimanje odjemalcev«; to sta oviri, ki izhajata iz zunanjih dejavnikov podjetja oz. *pogajev nabave in prodaje*.

Faktor 3 z 21 % celotne variance določata dve spremenljivki, »preobremenjenost menedžmenta s sprotnim delom« in »pomanjkanje virov – finančnih, kadrovskih, infrastrukturnih«; to sta oviri, ki izhajata iz notranjih problemov podjetja oz. *iz pomanjkanja virov in posledično preobremenjenosti vodstva*.

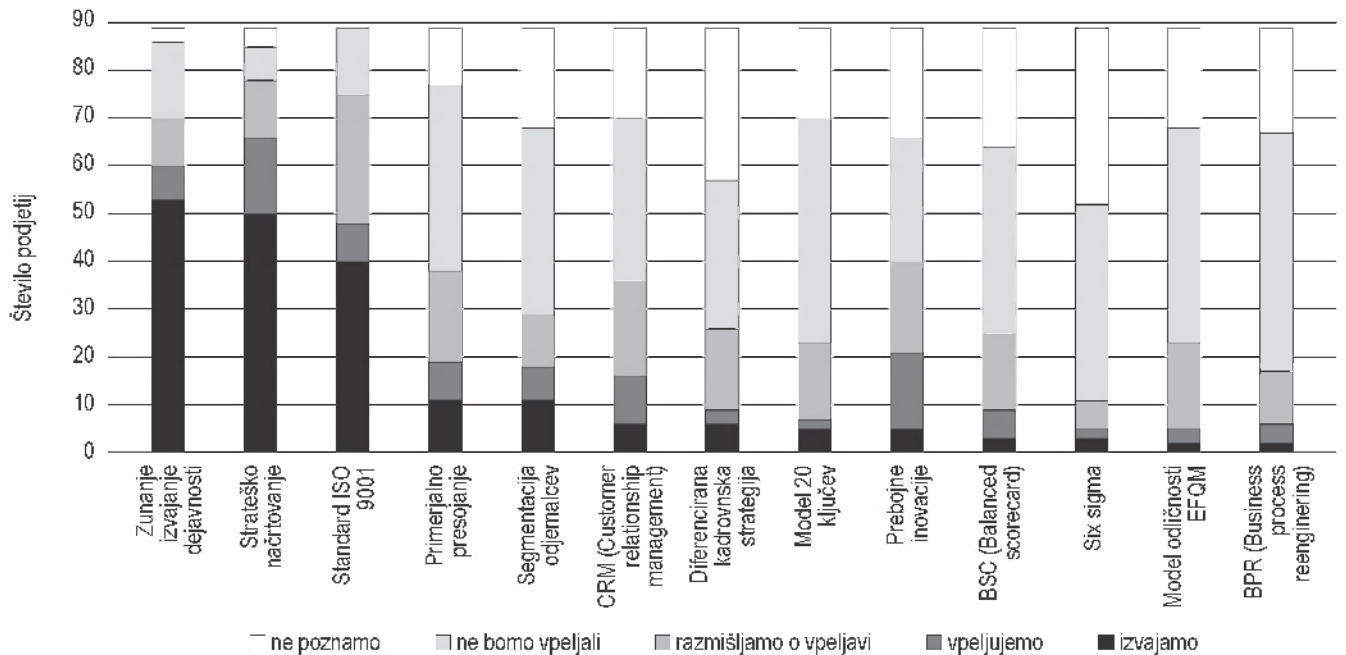
Menedžerska orodja

Med menedžerskimi orodji v IP se najpogosteje uvajajo in uporabljajo zunanje izvajanje dejavnosti, strateško načrtovanje in sistem vodenja po standardu ISO 9001, naslednja, manj poznana in uvajana je skupina orodij, ki izboljšuje trženje in odnose z odjemalci (primerjalno presojanje, segmentacija odjemalcev in CRM), najmanj pa poznajo orodji six sigma in diferencirana kadrovska strategija (slika 1).

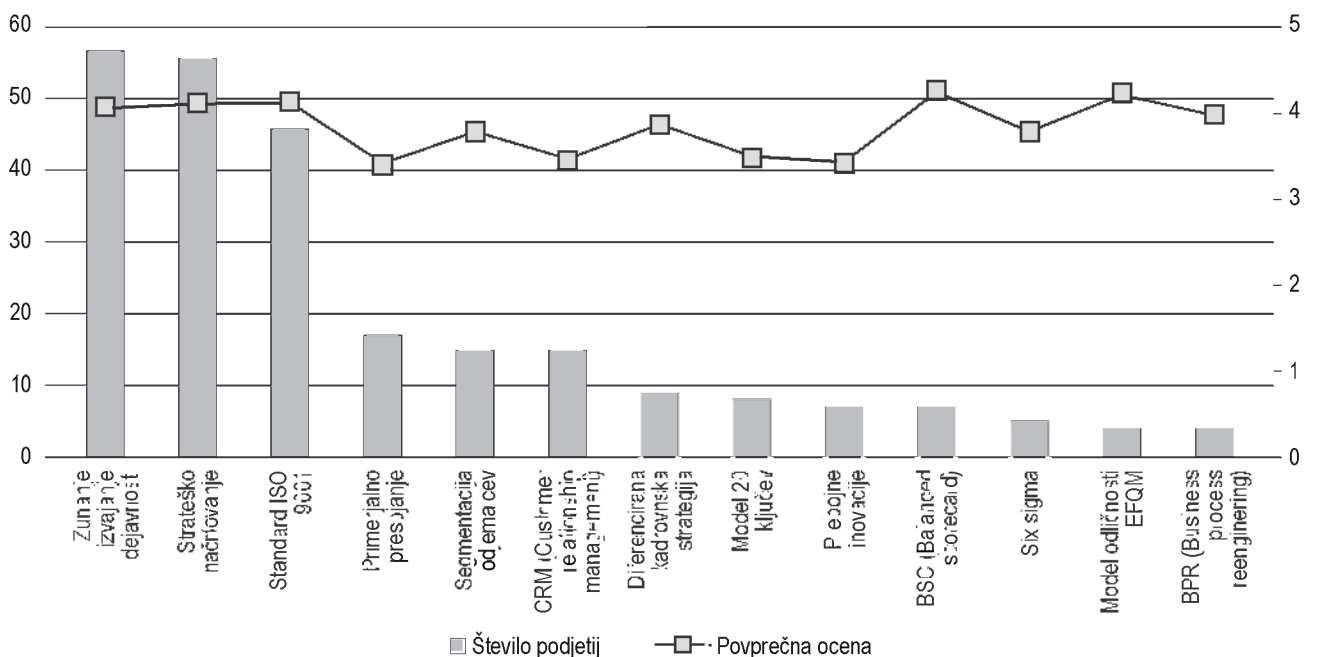
Zadovoljstvo z uporabo menedžerskih orodij

Največ anketirancev je zadovoljnih s tremi menedžerskimi orodji, z zunanjim izvajanjem dejavnosti, strateškim načrtovanjem in standardom ISO 9001, in sicer s povprečno oceno nad 4; lestvica je imela 5 stopenj (slika 2). Večina ocen zadovoljstva se giblje med 3 in 4, najboljše pa so ocene za orodji diferencirana kadrovska strategija in EFQM, vendar je ti dve orodji ocenilo manj kot 10 % anketirancev.

Slika 1: Razširjenost uporabe menedžerskih orodij



Slika 2: Ocena zadovoljstva z uporabo menedžerskih orodij



Testiranje hipotez

H1: Med načrtovanjem in uporabo menedžerskih orodij ter dodano vrednostjo invalidskih podjetij obstaja povezava.

Več kot 50 % anketiranih IP uvaja in uporablja samo tri menedžerska orodja:

- standard ISO 9001,
- strateško načrtovanje in
- zunanje izvajanje dejavnosti.

Drugih orodij podjetja ne poznajo (najvišji delež je pri six sigma, diferencirani kadrovske strategiji in BSC) oz. jih ne želijo uvesti (najvišji delež je pri BPR, modelu 20 ključev in EFQM).

Največ podjetij razmišlja o uvedbi standarda ISO 9001 in CRM, če so na voljo vsa menedžerska orodja. Povprečne dodane vrednosti so sicer na pogled višje pri podjetjih, ki orodja dejansko uvajajo in uporabljajo oz. vsaj razmišljajo o uvedbi, vendar pa se izrazito odstopanje kaže le pri orodju EFQM. Skratka, 5,6 % anketiranih IP, ki dejansko uvajajo oz. izvajajo EFQM, ima povprečno dodano vrednost na zaposlenega večjo od 29.000 EUR.

Hipoteze H1, da med načrtovanjem in uporabo menedžerskih orodij ter dodano vrednostjo podjetja obstaja povezava, za večino orodij ne moremo potrditi, saj povezave med uporabo orodij in posledično višjo dodano vrednostjo na zaposlenega nismo dokazali. Pri skupini velikih in srednjih podjetij ter skupini majhnih podjetij se je izkazalo, da imajo podjetja, ki uvajajo oz. izvajajo EFQM, signifikantno višjo dodano vrednost na zaposlenega kot podjetja, ki tega orodja ne uporabljajo. V skupini mikro podjetij pa se je pomembna razlika med dodano vrednostjo pokazala pri uporabi strateškega načrtovanja. Uporaba preostalih menedžerskih orodij pa statistične povezave na povečano dodano vrednost na zaposlenega ni pokazala.

H2: Med vzroki za spodbudo k uporabi menedžerskih orodij in razširjenostjo njihove uporabe ter med vzroki za spodbudo k uporabi teh orodij in dodano vrednostjo invalidskih podjetij obstajata povezavi.

Predpostavko o homogenosti varianc smo preverili z Bartlettovim testom χ^2 ($\alpha = 0,05$), ki je občutljiv tudi za preverjanje nenormalnosti porazdelitve.

Iz testiranja razlik med povprečno razširjenostjo menedžerskih orodij po pomembnosti vzrokov za spodbudo k uporabi teh orodij v IP lahko razberemo, da smo signifikantno povezavo med vzroki za spodbudo in razširjenostjo menedžerskih orodij potrdili za naslednje vzroke ($p < 0,05$):

- finančna spodbuda podpornih institucij in državno sofinanciranje, upad prodaje, napredek tehnologije, potrebe/zahteve odjemalcev, programi za spodbujanje podjetništva in konkurenčnosti, izpolnjevanje zahtev naravnega okolja, želja zaposlenih in pogoji dobaviteljev.

Zanimivo je, da tako potreba po večjem dobičku kot tudi želje lastnikov niso bistveni vzroki za uvedbo menedžerskih orodij v IP.

Za preverjanje drugega dela hipoteze H2 smo povezali odgovore na vprašanje, ki opredeljuje pomembnost naštetih vzrokov za spodbudo k uporabi oz. načrtovanju menedžerskih orodij, z ustvarjeno dodano vrednostjo na zaposlenega, določeno v evrih.

Dodane vrednosti na zaposlenega smo razvrstili v pet skupin glede na odgovore na vprašanje, pri čemer so anketiranci določili pomembnost posameznih vzrokov za spodbudo k uvajanju in uporabi menedžerskih orodij:

1. skupina – sploh ni pomembno, 2. skupina – ni pomembno, 3. skupina – ni pomembno niti ni nepomembno, 4. skupina – pomembno, 5. skupina – zelo pomembno.

Za vsako skupino smo nato izračunali povprečno vrednost dodane vrednosti na zaposlenega.

Iz testiranja razlik med dodano vrednostjo na zaposlenega po pomembnosti vzrokov za spodbudo k uporabi menedžerskih orodij v IP lahko razberemo, da smo signifikantno povezavo z višino dodane vrednosti na zaposlenega lahko potrdili za vzrok ($p < 0,05$):

- finančna spodbuda podpornih institucij in državno sofinanciranje.

Vendar smo tudi tu najvišjo povprečno dodano vrednost na zaposlenega določili pri skupini anketirancev, ki je ta vzrok opredelila kot popolnoma nepomemben.

Zanimivo je, da smo visoke povprečne dodane vrednosti na zaposlenega v prvi skupini, ki opredeljuje popolnoma nepomemben vzrok, zasledili še pri opredelitvah vzrokov, kot so potreba po večjem dobičku ter zahteve lastnikov. Ugotovimo lahko, da samo med vzroki za spodbudo k uvajanju menedžerskih orodij in dodano vrednostjo na zaposlenega v IP ni bistvene povezave.

Hipotezo H2 smo preverili še s korelacijo med oceno pomembnosti posameznega vzroka za spodbudo k uporabi menedžerskih orodij ter razširjenostjo uporabe posameznega orodja. V preglednici 1 so označeni signifikantni ($p < 0,05$) korelacijski koeficienti, ki nakazujejo pozitivno oz. negativno povezavo (odvisno od predznaka korelacijskega koeficienta) med razširjenostjo posameznega orodja in pomembnostjo posameznega vzroka za spodbudo k njegovi uporabi.

Vzrok, ki vpliva na razširjenost največ orodij, je »izpolnjevanje zahtev naravnega okolja«, najmanj vpliven vzrok pa je »potreba po večjem dobičku oz. dvigu dodane vrednosti«.

H3: Povečanje uspešnosti poslovanja IP ni ključna prednost uporabe menedžerskega orodja.

Menedžerji IP, ki uporabljajo menedžerska orodja, so ocenili bistvene prednosti, pridobljene z uvedbo teh orodij

Preglednica 1: Korelacija – vzrok/razširjenost

Vzroki za spodbudo k uporabi oz. načrtovanju uporabe menedžerskih orodij	Korelacijski koeficienti med posameznimi vzroki za spodbudo k uporabi oz. načrtovanju ter razširjenostjo uporabe posameznega menedžerskega orodja													
	standard ISO 9001	EFQM	model 20 ključev	BSC	six sigma	BPR	strateško načrtovanje	primerjalno presojanje	segmentacija odjemalcev	CRM	zunanje izvajanje dejavnosti	prebojne inovacije	diferencirana kadrovska strategija	
konkurenca – znanje in ideje	0,06	0,13	0,24	0,13	-0,09	0,00	0,06	0,37	0,38	0,25	-0,08	0,22	0,27	
finančna spodbuda podpornih institucij in državno sofinanciranje	0,21	0,10	0,32	0,18	0,15	0,13	-0,10	0,39	0,42	0,16	-0,09	0,10	0,38	
upad prodaje	0,14	0,08	0,41	0,28	0,05	0,12	-0,04	0,41	0,41	0,26	-0,09	0,24	0,35	
napredek tehnologije	0,10	0,12	0,34	0,31	-0,05	0,13	0,03	0,43	0,41	0,40	0,04	0,36	0,40	
potreba po večjem dobičku oz. dvigu dodane vrednosti	-0,03	0,13	-0,13	0,07	-0,05	0,00	0,26	-0,05	0,00	-0,06	0,46	0,07	0,06	
potrebe/zahteve odjemalcev	0,46	0,36	0,25	0,34	0,19	0,26	0,23	0,24	0,32	0,15	-0,16	0,12	0,30	
programi spodbujanja podjetništva in konkurenčnosti	0,10	0,25	0,24	0,19	0,11	0,14	0,10	0,27	0,24	0,26	0,16	0,23	0,12	
zahteve lastnikov	0,05	-0,05	-0,29	-0,06	-0,08	0,01	0,23	-0,27	-0,35	-0,25	0,21	-0,09	-0,10	
izpolnjevanje zahtev naravnega okolja	0,34	0,27	0,22	0,27	0,20	0,27	0,06	0,29	0,23	0,34	0,14	0,40	0,30	
želja zaposlenih	0,22	0,20	0,19	0,19	0,20	0,19	-0,03	0,32	0,22	0,28	0,18	0,30	0,35	
pogoji dobaviteljev	0,39	0,29	0,12	0,20	0,08	0,23	0,08	0,26	0,30	0,25	0,07	0,26	0,35	

Sivo so označeni korelacijski koeficienti, ki so signifikantni pri $p < 0,05$.

v podjetje. Zanimalo nas je, ali so anketiranci podobno ocenjevali posamezne prednosti oz. katere prednosti pri uporabi menedžerskih orodij so bile ocenjene z najvišjimi ocenami. Z Wardovim postopkom združevanja v skupine (klusterska analiza) smo ocenili razdalje (City block ali Manhattan) med posameznimi ocenami in pripravili drevesni diagram trinajstih prednosti zaradi uvedbe menedžerskih orodij v IP. Anketiranci se združujejo v tri skupine. V prvi skupini imamo »višjo kakovost proizvodov«, ki se hitro poveže z »večjim zadovoljstvom odjemalcev«, nato pa se jima pridruži še »večja preglednost procesov«. V drugi skupini se najprej povežeta »večje zadovoljstvo zaposlenih« ter »izboljšanje usposobljenosti zaposlenih«, nato se priključi »ugled podjetja se je izboljšal«, dodamo pa lahko še »izboljšanje urejenosti informacijsko-komunikacijskega sistema« ter »izboljšanje uspešnosti poslovanja«. Tretjo skupino sestavljajo »večji poudarek družbeni odgovornosti«, ki se združi z »izboljšanjem stanja naravnega okolja« ter »povečanjem števila inovacij v poslovnih procesih«, nato se pridruži »več naročil« in na koncu še »povečanje števila delovnih mest«.

Prvi dve skupini se združita pred tretjo skupino. Ker prednosti pri uporabi menedžerskih orodij lahko ocenjujejo le tisti menedžerji, ki posamezno orodje dejansko uporabljajo ali ga vsaj uvajajo v podjetje, smo upoštevali ocene bistvenih prednosti zaradi uporabe posameznih orodij samo za menedžerje, ki so pri razširjenosti uporabe posameznega orodja zapisali oceno 5 ali 4 (lestvica ocen od 1 do 5).

Največ anketirancev vidi bistvene prednosti pri vpeljavi menedžerskih orodij v:

- izboljšanju preglednosti procesov, višji kakovosti proizvodov, večjem zadovoljstvu odjemalcev ter izboljšanju ugleda podjetja.

Izboljšanje uspešnosti poslovanja ni bistvena prednost, ki jo ponujajo menedžerska orodja. Anketirani menedžerji, ki so v svoje podjetje že uvedli menedžerska orodja oz. jih uvajajo, so izboljšanje uspešnosti poslovanja postavili na osmo mesto glede na povprečno oceno. Hipoteze tako ne moremo zavrniti.

4 Razprava

V raziskavi smo se ukvarjali s proučevanjem poznavanja in uporabe menedžerskih orodij in z vplivom uporabljanih orodij na poslovanje IP. Proučevali smo povezave med uporabo orodij in uspešnostjo podjetij, ki se kaže z ustvarjeno dodano vrednostjo.

Ugotovili smo, da v IP letno uvajajo spremembe le na področju izobraževanja in usposabljanja. Najmanj pogosto uvajajo spremembe na področju postopkov proizvodnje, strojev ali opreme. Med menedžerskimi orodji najpogosteje uvajajo in izvajajo zunanje izvajanje dejavnosti, strateško načrtovanje in sistem vodenja po standardu ISO 9001 (v več kot polovici IP), najmanj pa model six sigma in diferencirano kadrovska strategijo. Naše ugotovitve se večinoma ujemajo z Bukovec-Markičevimi ugotovitvami

(2008). Tudi pri namenu uvajanja posameznih menedžerskih orodij so izidi podobni, saj bodo v največ podjetjih začeli uvajati ISO, strateško načrtovanje in zunanje izvajanje dejavnosti. Zanimivo je, da ta tri menedžerska orodja po mnenju anketirancev najbolj vplivajo na konkurenčnost podjetja. Pozitivno je, da so direktorji v ospredje postavili prebojne inovacije. Edino menedžersko orodje, za katero smo dokazali pozitivno povezavo z višino dodane vrednosti, je EFQM, ki pa ga res uvaja in uporablja le 5,6 % anketiranih podjetij. Največja spodbuda za uvajanje menedžerskih orodij so po mnenju direktorjev podjetij zahteve lastnikov in odjemalcev ter potreba po višjem dobičku oz. višji dodani vrednosti. Največje ovire so preobremenjenost menedžmenta s sprotnim delom, neznanje in premajhna podpora zaposlenih ter pomanjkanje virov. V mikro podjetjih manj pogosto od preostalih uvajajo spremembe predvsem na področju inovacij, v raziskavah in razvoju, na izdelkih, pri storitvah in procesih. V starejših podjetjih so bolj inovativni kot v tistih, ki poslušajo krajši čas. Največji vpliv na spodbudo k uporabi orodij ima dejavnik, ki vsebuje finančne spodbude podpornih institucij in državno sofinanciranje, upad prodaje ter napredek tehnologije, na kar pa v podjetjih običajno nimajo vpliva. Največjo oviro pri uvajanju menedžerskih orodij predstavlja dejavnik nezanimanja in nesposobnosti, kar pomeni, da srednji in nižji menedžerji niso naklonjeni spremembam, da spremembe zaposlenih ne zanimajo in da so tudi slabo usposobljeni. Z analizo anketnega vprašalnika smo ugotovili tudi, da lastniki in zaposleni ne zasledujejo istega namena. Bistvene prednosti zaradi uporabe menedžerskih orodij so predvsem v izboljšanju preglednosti procesov, v višji kakovosti proizvodov, v večjem zadovoljstvu odjemalcev in v izboljšanju ugleda podjetja. Ko gre za koristi uvajanja standardov ISO 9001, sta podobne koristi zaznala tudi Piskarjeva in Dolinšek (2006).

V IP, ki načrtujejo in uporabljajo menedžerska orodja, ne dosegajo signifikantno višje dodane vrednosti na zaposlenega kot v podjetjih, ki orodij ne načrtujejo ali ne uporabljajo. Izjema je le uporaba modela odličnosti EFQM, ki izkazuje pozitivno povezavo z višino ustvarjene dodane vrednosti. Povezave med uporabo menedžerskih orodij in posledično višjo dodano vrednostjo nismo dokazali. Izboljšanje uspešnosti poslovanja ni bistvena prednost, ki jo ponujajo menedžerska orodja, bistvene prednosti so v bolj preglednih procesih, višji kakovosti proizvodov, v izboljšanju ugleda podjetja in v večjem zadovoljstvu odjemalcev.

Raziskava je pokazala, da osnovni namen v IP ni ustvarjanje dobička oz. visoke dodane vrednosti, pomembnejše je zaposlovanje invalidov v okviru socialne ekonomije.

Vršni menedžerji se sicer zavedajo nujnosti spreminjanja, še vedno pa na tej poti prepoznavajo preveč ovir. Nujno je, da se v ustvarjanje možnosti za spreminjanje vključi tudi država, ki lahko ponudi pomoč pri zagotavljanju virov, pri izobraževanju in usposabljanju zaposlenih in tudi pri spodbujanju lastnikov in menedžerjev k spremembam. Glede na bistvene prednosti pri uporabi svetujemo, da v podjetjih

nedvomno začnejo uvajati in uporabljati menedžerska orodja. Najpomembnejše je, da bodo vrhnji menedžerji na poti do spreminjanja znali prepoznati spodbude, premagati ovire ter postaviti skupne cilje, s katerimi se bodo poistovetili vsi udeleženci v podjetju.

Omejitve raziskave so v tem, da je bila izvedena v času gospodarske recesije, da smo iz množice menedžerskih orodij izbrali le nekatera, da so odgovori na opisna vprašanja v anketi subjektivni in da je predhodnih raziskav o načrtovanju in uporabi menedžerskih orodij v Sloveniji malo, v IP pa sploh še ni bila opravljena.

V morebitnih naslednjih raziskavah naj bi predstavili uspešno invalidsko podjetje, v katerem dosegajo nadpovprečno dodano vrednost. Raziskavo, podobno naši, bi lahko opravili po določenem času, predvsem takrat, ko bodo znani učinki spremembe in dopolnitve zakonodaje, ki opredeljuje delovanje IP. Ena bistvenih omejitev raziskave je tudi čas recesije, v kateri se podjetja nahajajo. Izidi raziskave bi bili verjetno drugačni, če bi jo ponovili v času gospodarske rasti. Zanimivo bi bilo opraviti tudi raziskavo, ki bi zajela posamezne panoge, v katerih IP delujejo, saj so umeščena v različne dejavnosti.

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Mirko Markič earned his PhD in the field of organizational science on the subject of innovation at the University of Maribor, Faculty of Organizational Sciences. After 12 years of activity in the economy, he was employed at the University of Primorska, Faculty of Management in Koper. He is a professor of management, a scientific counselor, and a leader/member of 15 research projects and projects on the economy. His bibliography comprises more than 400 publications in the field of management and organizational sciences.

PROFESSIONAL DEVELOPMENT OF ELEMENTARY SCHOOL TEACHERS

Poklicni razvoj učitelja v osnovni šoli

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Abstract

Knowledge societies make new demands and expectations of teachers that require changes in their roles and abilities. Teachers must be open to change, prepared to improve their qualifications, and motivated for constant professional development. This also requires the support of head teachers. Through quantitative research, we were able to get a closer look at the opinions elementary school teachers have of their own possibilities for professional development as well as the obstacles they face along the way. The results of the research were compared with theoretical findings, and directions and recommendations for practice were suggested.

Keywords: Teacher, elementary school, career, development, work experience.

Izvleček

Družba znanja postavlja pred učitelje nove zahteve in pričakovanja, ki zahtevajo spremembe v učiteljevi vlogi in njegovi usposobljenosti zanje. Učitelji morajo biti odprti za spremembe, krepiti morajo različne kompetence in biti motivirani za svoj stalni poklicni razvoj. Pri tem pa morajo imeti tudi podporo ravnatelja. S kvantitativno raziskavo smo pridobili ožji, bolj poglobljen pogled učiteljev osnovnih šol na možnosti za poklicni razvoj in na spodbude ter ovire, s katerimi se pri tem srečujejo. Pridobljene podatke smo primerjali z izsledki v teoriji ter predlagali usmeritve in priporočila za prakso.

Ključne besede: učitelj, osnovna šola, kariera, razvoj, delovne izkušnje

1 Introduction

We live in a knowledge society. It is a society of constant change, quick decision making, and lifelong learning, where a different set of skills than that in the past is needed for a quality life. The basic condition for the successful development and acquirement of skills is an efficient and quality education system run by highly trained teachers (Pekljaj, 2008). Schools that produce the best results use development strategies to improve school and teacher progress as well as student achievement (Sentocnik, 2006). They recognize that cooperation with other schools and educational institutions is a necessity (Fullan & Hargreaves, 2000), as scientific developments are reflected in all parts of society (Pekljaj, 2008). Every generation of future teachers that is entering education will have



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a decisive impact on the educational system (Hargreaves, 2003; McBeath & Mortimore, 2001; Parsons & Stephenson, 2005; Zeller Mayer & Tabak, 2006).

All this has a great impact on the role of teachers and requires thorough improvements and reforms in teacher education (Zelena knjiga, 2001). Lifelong learning must become an essential element in the teachers' professional development. Yet the identified challenges require a different approach in the treatment of teachers from Slovene elementary schools and their leaderships as well as the acceptance of changes in education paradigms from the teachers. Thus, in this article we present the findings of research conducted from April to May 2012 to determine how elementary school teachers view the factors that determine their career development. Do they see them in a positive or a negative light? How important are these factors, and do the teachers have well-developed career goals?

It is important to emphasize that we were not interested in determining some general teacher satisfaction level. Rather, our focus was on the opinions elementary school teachers have of their professional development, particularly in connection with the educational system and their work and home environment. However, the current economic situation and social climate, as well as the influence such a climate can have on the professional development of elementary school teachers, has to be taken into account.

The article is divided into five parts. The introductory part is followed by an overview of current literature on teacher career development. The third part describes the empirical research that was conducted. The fourth part gives the results of the research, and the last part presents the most important findings and recommendations for further research.

2 Teacher Professional Development

Mone and London (2000) wrote that careers are work processes by which individuals aim to achieve set goals by improving their professional qualifications. Planning professional development is a conscious process in which individuals become aware of their personal career attributes (Randhawa, 2007). Careers have to be planned and developed in accordance with the individual's interests, capabilities, and values as well as the demands of the workplace (Biloslavo, 2008; Možina, 2002; Oldroyd, 2003; Peček, 2000; Tavčar, 2002). Organizations increasingly see professional development as a means of connecting the individual's goals to the demands of the workplace (Lipičnik, 2002; Simonsen, 1997).

Teacher professional development is an individual-oriented process (Fullan & Hargreaves, 2000; Laursen, 2003) that incorporates several new roles and tasks: the reorientation from teaching to learning, the ability to work with different types of students, the use of modern information technologies, and the necessity of cooperation with coworkers, parents, the wider community, etc. (Simons, Linden, & Duffy, 2000).

Teacher professional development is influenced by both endogenous (i.e., the teacher's beliefs and values; Javornik Krecic, 2008; Marentic Požarnik, 2007) and exogenous factors (i.e., the introduction of changes, formal and non-formal teacher education and training, school leadership, and education reforms; Erculj, 2005; Gordon, 2004; Kalin, 2004). Professional development is essential as the knowledge acquired during the teacher's initial education and training period is no longer sufficient for dealing with the complexity and unpredictability of modern school work (Goodson, 2003; Hargreaves, 2000).

The dedication of teachers to continuous professional development is at the same time a process that requires their independence as well as responsibility toward themselves and their work (Diaz-Maggioli, 2004). According to *Zelena knjiga* (2001), "Quality teacher education that ensures quality upbringing, education, and qualification must be the guiding goal of education policy." It is also important that teachers begin teaching immediately after concluding their studies to ensure that they gain new skills and abilities, form their interests and professional values (Brecko, 2006), become initiated in the workplace, and start the process of professional socialization. Several authors (Brecko, 2006; Konrad, 1996; Schein, 1987) have noted the fact that further education following initial teacher education has a large impact on lesson quality (Javornik Krecic, 2008).

Authors have also attempted to define the phases of teacher development. Razdevsek Pučko (1990) noted that teacher development goes through the following phases: the period of idealized notions, the period of survival, and the period of experience. Valentic Zuljan (2001) summed up the work of several authors (Berliner, 1989; Sheckley & Allen, 1991) to develop a five-phase model of teacher development: novice teacher, beginner teacher, skilled teacher, successful teacher, and expert teacher.

Fullan and Hargreaves (1992) subsequently added a time component to their definition:

- *Beginning*: the phase of survival and discovery. Lasts from the first to the third year of teaching;
- *Stabilization*: teachers finally commit to their careers and develop teaching skills. They make contacts with other teachers and exchange advice with them. During this period, teachers are still being put to the test. Lasts from the fourth to the sixth year of teaching;
- *Experimentation and reassessment*: teachers begin experimenting with innovative teaching approaches and new materials and exercises. They grow in maturity and responsibility and begin reassessing their careers. Vertical promotion becomes available. The phase lasts from the seventh to the eighteenth year of teaching;
- *Serenity and Conservatism*: late career period. The enthusiasm and energy of teachers begins to wane, although this is compensated by a greater feeling of trust. Teachers grow skeptical toward structural education reforms and

can develop feelings of embitterment and disappointment. Lasts from the nineteenth to the thirtieth year of teaching;

- *Disengagement*: teachers become dissatisfied with the progress of their students and with the students' parents. They slowly begin to disengage from the profession. This can be either peaceful or embittered, with senior teachers (who enjoy better teaching schedules and teach classes they prefer) being the exception. This phase lasts from the thirty-first to the fortieth year of teaching.

The transitions between individual phases are always fluid and harmonious. Recognizing individual phases of teacher development in elementary schools is particularly important from the point of view of educational planning, teacher motivation, and management of interpersonal relations at work.

Professional development in elementary schools can also be understood in terms of vertical and horizontal promotion (Konrad, 1996; Merkač Skok, 2005):

- Vertical promotion: the teacher is promoted to a position of greater authority (teacher–head of branch school–deputy head teacher–head teacher)
- Horizontal promotion: the teacher is promoted to a position of greater responsibility but without greater authority—namely, promotion through titles (*mentor–svetovalec–svetnik*) and higher pay grades

As has already been mentioned, one of the key exogenous factors in a teacher's professional development is school leadership (i.e., the head teacher), which has been confirmed by several surveys conducted by the OECD (Leithwood & Riehl, 2003; Leithwood et al., 2006), as well as others (Hopkins 2001; West, Jackson, Harris, & Hopkins, 2000). Quality leadership is required for teacher motivation (Ferjan, 1999), work satisfaction (Moretti & Moretti, 2012) and school teaching quality (Evans, 2001; Fullan, 2001; Hargreaves, 2003).

3 Empirical Research

The aim of our work was to gain a closer look at the factors that impact the professional development of elementary school teachers, particularly in view of the absence of pre-existing empirical research on teachers' careers and the challenges posed by modern education.

3.1 Methodology

The instrument of the research was a closed-ended online questionnaire based on similar questionnaires from the available literature (Easterby-Smith, Thorpe, & Lowe, 2005; Merkač Skok, 2005; Rižnar, 2008; Sagadin, 1993), which were further adjusted for the purpose of our work. The questionnaire was tested on a randomly selected pilot group of 10 elementary school teachers. There were no comprehension difficulties, but parts of the questionnaire were amended based on their replies. The final version of the questionnaire was divided into two parts. The first part consisted of four demographic questions. The second part

consisted of nine questions on the professional development of teachers in elementary schools.

The survey was conducted through the Centre of Social Informatics at the Faculty of Social Sciences of the University of Ljubljana. The electronic questionnaire was sent by e-mail to head teachers of elementary schools in Slovenia, along with a corresponding note informing them of the goal and intention of our research. The head teachers then sent the questionnaires on to their teachers. The responses to every questionnaire were checked and analyzed using descriptive data analysis—namely, univariate analysis (frequency, share, cumulative share, arithmetic mean, standard deviation, range) and bivariate analysis (analysis of variance).

3.2 Sample Description

All teachers with internet access from 450 schools with branches in Slovenia were included in a random sample. Data from the Statistical Office of the Republic of Slovenia (2012a) indicate that 15,598 teachers were employed in elementary schools in the 2010–2011 school year. We received 367 completed questionnaires (2.4% response rate). Of these, 313 of the respondents were female (85.3%) and 54 were male (14.7%). Additional relevant demographic data are summarized in the following:

- Level of education: 239 respondents (65.1%) had undergraduate university education, 83 respondents (22.6%) had short-cycle higher education, 33 respondents (9.0%) had higher education, and 12 respondents (3.3%) had postgraduate university education
- Title: 163 respondents (44.4%) held the title of adviser (*svetovalec*), 115 respondents (31.3%) held the title of mentor (*mentor*), 56 respondents (15.3%) held no title, and 33 respondents (9.0%) held the title of counselor (*svetnik*)
- Work experience: 108 respondents (29.4%) had 21–30 years of work experience, 101 respondents (27.5%) had 0–10 years of work experience, 98 respondents (26.7%) had 11–20 years of work experience, and 60 respondents (16.3%) had more than 30 years of work experience

The representativeness of the sample for gender (88% of teachers in the 2011–2012 school year were women) and education level was confirmed using data from the Statistical Office of the Republic of Slovenia (2012b).

4 Survey Results

The second part of the questionnaire was further divided into five parts to make analysis easier:

- course of professional development (3 questions)
- support with professional development (2 questions)
- professional development steps (1 question)
- factors of professional development and their influence (2 questions)
- future goals (1 question)

4.1 Course of Professional Development

Who is responsible for the teacher’s professional development? Table 1 indicates that most respondents believe that it is the teachers themselves who are responsible for professional development, mostly in cooperation with the head teacher or the school leadership. This fits Merkač Skok’s (2005, p. 24) explanation of the responsibility for staff and role division in organizations: “The top management is responsible for philosophy, strategy, and policy in the field of human resource management. [...] Individuals are responsible for themselves, they have to undergo training, be responsive and proactive.” Similarly, Fullan and Hargreaves (2000) pointed out that teachers cannot wait for the education system to change on its own and that cooperation between teachers and head teachers is the basic requirement for school and teacher professional development.

Table 1: *Who is Responsible for the Teacher’s Professional Development?*

Answers	f	Amount (%)	F %
The head teacher or the school leadership	5	1.4%	1.4%
The teachers themselves	61	16.6%	18.0%
The teachers themselves in cooperation with the head teacher or the school leadership	301	82.0%	100.0%
Total	367	100.0%	

After how many years of work experience is it time to start developing your career? Table 2 shows that the right time to start developing one’s career is after having had at least 11 to 20 years of work experience as an elementary school teacher. Fullan and Hargreaves (1992) described this period as the phase of experimentation and reassessment, when teachers are full of energy, enthusiasm, and ambition for promotion. They start setting boundaries with students and their parents and begin resisting the head teachers. Successful teachers reach the highest point in their careers (title, personal income) during this period.

Table 2: *After How Many Years of Work Experience is It Time to Start Developing Your Career?*

Answers	f	Amount (%)	F %
0–10 years	100	27.2%	27.2%
11–20 years	239	65.1%	92.4%
21–30 years	23	6.3%	98.6%
30+ years	5	1.4%	100.0%
Total	367	100.0%	

Do you believe professional development can be planned? Table 3 demonstrates that 75.7% respondents believe that professional development can be planned. Teachers’ professional development must be understood in the wider context of school progress. Erculj, Širec and Koren (2006) list examples of the processes supporting such development, including public appearances, teacher cooperation, learning, and participation in decision making.

Table 3: *Do You Think Professional Development Can Be Planned?*

Answers	f	Amount (%)	F %
Yes	278	75.7%	75.7%
No	89	24.3%	100.0%
Total	367	100.0%	

4.2 Support with Professional Development

Are you willing to turn over the responsibility for your professional development to the school leadership? Table 4 indicates that teachers want to assume responsibility for their own careers. Today it is virtually impossible to find a successful organization that does not try to actively involve all of its employees in its functioning. Schools are no exception. Teachers must again see themselves as learners and make lifelong learning their main goal (Valencic Zuljan, 2001). Several authors have defined teacher professional development as a career-long development process (Erculj et al., 2006; Goodson & Hargreaves, 1996). Head teachers must create a school culture open to the learning of both teachers and students (Earley & Bubb, 2004).

Table 4: *Are You Willing to Turn Over Responsibility for Your Professional Development to the School Leadership?*

Answers	f	Amount (%)	F %
Yes, I am willing to turn over responsibility for my professional development to the school leadership	30	8.2%	8.2%
No, I want to assume responsibility for my professional development	337	91.8%	100.0%
Total	367	100.0%	

Who was your biggest source of support in professional development? Table 5 shows that elementary school teachers relied on different sources of support: head teachers, coworkers, families, and/or their partners. The number of respondents who said that they had not yet built their careers corresponds with the number of respondents with 0 to 10 years of work experience.

Table 5: *Who Was Your Biggest Source of Support in Professional Development?*

Answers	f	Amount (%)	F %
I have built my career without any support	72	19.6%	19.6%
Head teacher or school leadership	91	24.8%	44.4%
My coworkers	54	14.7%	59.1%
My family, my partner	81	22.1%	81.2%
I have not yet built my career	69	18.8%	100.0%
Total	367	100.0%	

4.3 Professional Development Steps

Table 6 indicates that the respondents consider the following steps as important for their professional development:

- leading a teacher work group
- ensuring parent and student satisfaction
- receiving a promotion in title (mentor, adviser, counselor)
- promoting student success in competitions
- leading the school development team
- earning a promotion to a higher pay grade
- gaining new knowledge and skills with further training and education

In addition, two options are not considered as important professional development steps:

- becoming a member or president of the school council
- becoming the school union representative

It must be noted that the functions have no direct connection with teaching, but are part of the organizational work of the school. They can be defined as functions that—although having no formal title—carry great influence in the school (Cvetko, 2002; Konrad, 1996). That is why we believe these functions were not recognized as steps in their professional development.

The following are not considered to be either important or unimportant for professional development:

- being promoted to assistant head teacher or head teacher
- becoming a form teacher

Table 6: *Professional Development Steps: f/ Amount (%)*

Propositions	Answers (f/ Amount (%))		
	Yes	No	F %
Acquiring new skills and competencies in the field of teaching	340	27	367
	92.6%	7.4%	100.0%
Parent and student satisfaction	327	40	367
	89.1%	10.9%	100.0%
Promotion in title (mentor, adviser, counselor)	321	46	367
	87.5%	12.5%	100.0%
Student success in competitions	315	52	367
	85.8%	14.2%	100.0%
Leading the school development team	274	93	367
	74.7%	25.3%	100.0%
Promotion to higher pay grade	274	93	367
	74.7%	25.3%	100.0%
Leading a teacher work group	260	107	367
	70.8%	29.2%	100.0%
Promotion to form teacher	201	166	367
	54.8%	45.2%	100.0%
Promotion to deputy head teacher or head teacher	184	183	367
	50.1%	49.9%	100.0%
Joining the school council or becoming president of the school council	142	225	367
	38.7%	61.3%	100.0%
Becoming the school union representative	82	285	367
	22.3%	77.7%	100.0%

4.4 Factors of Professional Development and their Influence

Which factors have a positive impact on professional development, and which have a negative impact? Table 7 shows that the following factors have a positive impact on professional development:

- head teacher or school leadership
- family or home environment
- coworkers or school climate
- implementation of changes into the educational process
- free time for professional development

The following factors have a negative impact on professional development:

- inappropriate education legislation at the state level
- unsuitable or unfinished education
- inadequate professional knowledge
- state of the economy

Table 7: Factors with a Positive, Neutral, or Negative Impact on Professional Development

Factors	Answers (f/ Amount (%))			
	Positive influence	Neutral influence	Negative influence	F %
Head teacher or school leadership	258 70.3%	96 26.2%	13 3.5%	367 100.0%
Family or home environment	251 68.4%	93 25.3%	23 6.3%	367 100.0%
Coworkers or school climate	242 65.9%	101 27.5%	24 6.5%	367 100.0%
Introduction of changes into the educational process	218 59.4%	128 34.9%	21 5.7%	367 100.0%
Free time for professional development	190 51.8%	89 24.3%	88 24.0%	367 100.0%
Students' parents	128 34.9%	218 59.4%	21 5.7%	367 100.0%
Other state institutions (e.g., Ministry of Education, National Education Institute)	67 18.3%	211 57.5%	89 24.3%	367 100.0%
State of the economy	44 12.0%	92 25.1%	231 62.9%	367 100.0%
Inadequate professional knowledge	13 3.5%	46 12.5%	308 83.9%	367 100.0%
Unsuitable or unfinished education	10 2.7%	79 21.5%	278 75.7%	367 100.0%
Inappropriate education legislation on state level	2 0.5%	81 22.1%	284 77.4%	367 100.0%

According to the responses, students' parents or guardians as well as institutions such as the Ministry of Education and the National Education Institute of the Republic of Slovenia play a neutral role in professional development.

Factors impacting professional development in elementary schools. The propositions were presented in the form of a 5-point Likert scale. Respondents could indicate their level of agreement on a scale of 1 to 5, with 1 being "no significant influence" and 5 being "significant influence." The statistical reliability of the questionnaire was demonstrated using Cronbach's alpha, which was 0.85. The propositions in Table 8 are arranged in a descending order according to mean score. The lowest mean score was 3.2., and the highest 4.8. This leads to the conclusion that the average teacher considers all the factors as important. The standard deviation ranged from 0.611 to 1.102.

Our intention was also to discover whether there were any statistically significant differences in responses (between mean scores) according to demographic data. The *t*-test showed no significant differences between female

Table 8: Factors Impacting Professional Development in Elementary Schools

Propositions	Total	Mean score	Standard deviation	Range
Work satisfaction	367	4.80	0.611	0.373
Professional knowledge	367	4.51	0.771	0.595
Further education	367	4.43	0.789	0.623
Free time for professional development	367	4.39	0.774	0.599
Family or work environment	367	4.20	0.888	0.788
Own financial means for professional development	367	4.08	1.008	1.015
Education level	367	4.06	1.019	1.038
Coworkers or school climate	367	4.03	0.920	0.846
Workload	367	4.02	0.871	0.759
Introduction of changes into the educational process	367	3.95	0.892	0.795
Head teacher or school leadership	367	3.86	0.977	0.954
Promotion to higher title or pay grade	367	3.79	1.074	1.154
State of the economy	367	3.79	1.072	1.148
Education legislation	367	3.49	0.994	0.988
Students' parents	367	3.26	1.102	1.214
Other state institutions (e.g., Ministry of Education, National Education Institute)	367	3.20	1.058	1.120

and male respondents. No significant differences according to years of work experience were found after analysis of variance. Significant differences did appear, however, when we made comparisons according to title (analysis of variance; introducing changes into the educational process – sig. =0.043, family or home environment – sig. =0.036) and education level (coworkers and school climate – =0.013, further education – sig. =0.012, students' parents or guardians – sig. =0.029).

Figure 1 shows that the higher the title, the greater importance individual propositions have for professional development. What is also clear is that the introduction of changes into the educational process has an important influence on professional development. This confirms the findings of the available literature, which states that teachers are confronting changes brought about by educational reforms (Marentic Požarnik, 2004). These changes require additional training for teachers (Dadds, 2001; Erculj, 2005; Kalin & Valencic Zuljan, 2004). At the same time, teachers have to meet several other challenges, such as the changing role of the family—including their own (Marentic Požarnik, 2000).

Figure 1: Differences according to title

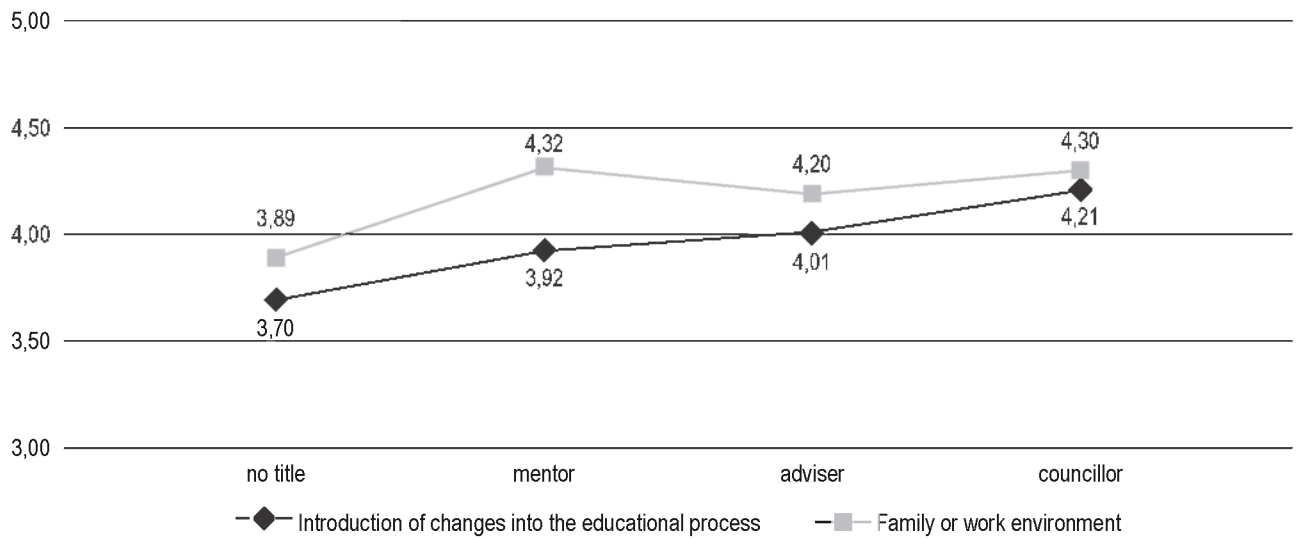


Figure 2: Differences according to education level

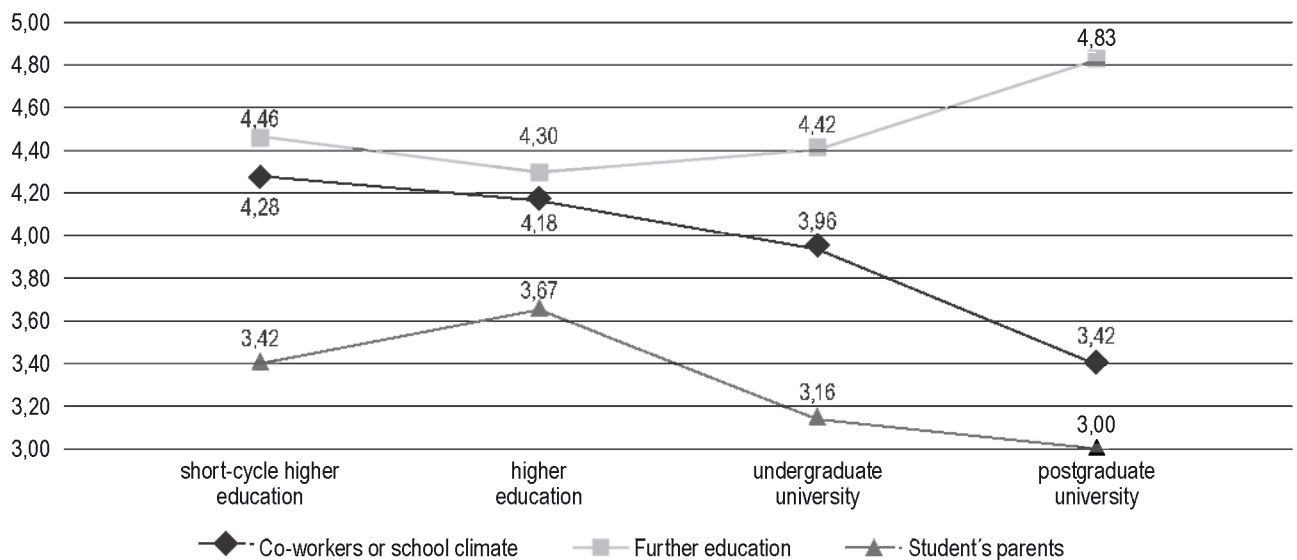


Figure 2 shows that:

- the higher the education level, the smaller the importance attached to the role of coworkers, school climate, and students' parents in professional development; and
- the higher the education level, the bigger the importance attached to further education.

The results can be explained by the fact that the standards of personal success are connected with individuals' abilities to acquire and use the knowledge with which they then contribute to the goals of the organization (Tavčar, 2005).

4.5 Teachers' Future Goals

The teachers listed the following personal future goals (listed in order of the frequency of appearance as several

answers were possible): professional growth (330), good relationship with parents/guardians and students (299), promotion in title or to higher pay grade (185), becoming a good form teacher (228), leading a teacher work group (107), acquiring a higher level of education (92), change of work environment (77), becoming a head teacher (53), and becoming a deputy head teacher (48).

5 Most Important Findings and Recommendations for Further Work

The results of our research provide an accurate look into how elementary school teachers perceive the factors of professional development. Some of the findings described in the available literature are given further confirmation and are considered anew in light of the current state of the economy.

Teachers realize that they are the ones primarily responsible for their professional development and that this requires the cooperation of the school leadership. They believe that the most appropriate time to start building their careers is after 11 to 20 years of work experience (Fullan & Hargreaves, 1992). At the same time, 75% of respondents believe that professional development can be planned, and they want to become actively responsible for its development. The respondents see additional training and education—as well as other variables dealing with student success and parent satisfaction—as the most important steps in their development. Satisfaction is one of the foundations upon which organizations build long-term success (Ropar, 2012), with employee–student–parent satisfaction being mutually connected. The most successful schools are flexible ones; their teachers have a clear picture of the schools' functioning and vision. Factors directly connected to the teachers (i.e., head teachers, families, coworkers) are seen as having a positive impact on professional development. Inappropriate education legislation and unsuitable education, on the other hand, are seen as having a negative impact. The latter—especially if considered in connection with the teachers' evaluation that the introduction of changes into the educational process has had an important influence on professional development—shows that teachers realize the importance lifelong education has for themselves and the school (Verbiest, 2004). What is also of interest is that teachers find self-affirmation in horizontal promotion and thus become less sensitive to the pressure of their environment (i.e., their coworkers and students' parents). This, in turn, makes them put even more value on further education. Different forms of formal and non-formal education are considered as exogenous factors of professional development (Javornik Krečič, 2007), but they also influence the teachers' beliefs and values—namely, the endogenous factors of professional development.

Therefore, we propose the following:

- school leadership should foster all forms of employee cooperation that build trust, ensure mutual support, and lead to quality work and open dialogue;
- all forms of teacher education should be promoted in order to ensure personal growth and school development;
- head teachers should take on co-responsibility for their teachers' professional development (head teachers might have different ideas about the teachers' professional development and might identify possible approaches for professional development, etc.);
- a long-term vision of human resource management based on a strong school vision should be developed;
- five-year individual teacher development plans (including action plans for further education and training, etc.) should be developed;
- individual teacher development should be incorporated into school development plans;
- teachers should be placed in leadership positions connected with planning, organization, guidance, and work control;
- teachers should have the authorization to gain new qualifications and knowledge to improve teaching quality;
- it should be possible for teachers to help create a school culture that will enable quality work and school success; and
- the school administrators should ensure a safe environment for the teachers.

The findings of our work will be of interest to teachers, head teachers, and anyone seeking employment in elementary schools. It is our hope that it will be of assistance to anyone involved in the long-term planning of professional development and that it will help them recognize the potential elementary school teachers have for both professional and school development.

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POVEZANOST STRUKTURE DIPLOMANTOV TERCIARNEGA IZOBRAŽEVANJA Z GOSPODARSKO RAZVITOSTJO – ANALIZA EVROPSKIH DRŽAV

Correlation between Tertiary Education Graduates by Field of Study and Economic Development—An analysis of European countries

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Izvleček

V prispevku analiziramo povezanost strukture diplomantov terciarnih programov po klasifikaciji ISCED 1997 z realnim BDP/preb. po področjih izobraževanja za 25 držav Evropske unije ter za Islandijo, Norveško in Švico. Povezanost izobraževanja z gospodarsko razvitostjo je predmet številnih, med seboj nasprotujočih si razprav. Zelo malo študij pa se nanaša na področja izobraževanja; v pregledu literature tudi nismo zasledili podrobnejše analize, ki bi se nanašala na povezanost strukture diplomantov po vseh področjih izobraževanja ter na BDP/preb. Na osnovi dobljenih rezultatov lahko potrdimo povezanost strukture diplomantov po področjih terciarnega izobraževanja z BDP/preb., pri čemer lahko identificiramo nekatere pozitivne ter nekatere negativne povezave.

Ključne besede: terciarno izobraževanje, področja izobraževanja, BDP/preb.

Abstract

In this paper the correlation between the structure of graduates by study fields (using ISCED 1997 classification) and real GDP per capita is analyzed for the 25 countries of the European Union, Iceland, Norway, and Switzerland. Although the relationship between education and economic development has been the topic of numerous studies, results are often contradictory, and only a few studies have analyzed the structure of graduates by study fields of education. Our research results suggest that the structure of graduates by study fields correlates with the GDP per capita, where some negative and some positive correlations are identified.

Keywords: tertiary education, fields of study, GDP/capita.

1 Uvod

Mnenja o vplivu izobraževanja na gospodarsko razvitost so deljena in so še vedno predmet številnih razprav (Guisan 2009a, Guisan in Aguayo 2010, Hanuschek in Kimko 2000, Michaelowa in Weber 2008). Večina avtorjev meni, da so boljše usposobljeni in izobraženi delavci produktivnejši in se hitreje prilagajajo tehnološkim spremembam (Corvers 1997, Guisan 1997, Barro 2001), saj višja stopnja razpoložljivega človeškega potenciala omogoča absorpcijo visokih tehnologij, za kar je še posebej pomembno izobraževanje na sekundarni in terciarni stopnji (Barro 2000). Ne samo, da imata izobrazba in njen kvalitativni vidik pozitiven vpliv na gospodarsko razvitost in sta potencialno pomembno

gonilo ekonomskega razvoja (Michaelowa in Weber 2008), pozitiven vpliv imata tudi na socialno okolje, saj zmanjšujeta rodnost,¹ izboljšujeta produktivnost delavcev ter ustvarjata pogoje za razumno socialno in ekonomsko politiko (Guisan 1997). Romer (1990) meni, da velika populacija ni dovolj za doseganje gospodarske razvitosti. Surovine, ki jih uporabljamo, se ne spreminjajo, spreminjajo se postopki, ki so z raziskavami in tehnološkim razvojem vedno bolj sofisticirani, zato je za rast pomembnejša večja količina razpoložljivega človeškega potenciala kot pa večje število ljudi v gospodarstvu države. Nasprotno pa nekateri avtorji (Sanders 2003, Bills in Klenov 2000) trdijo, da je proces obraten in da ugoden gospodarski razvoj pospešuje izobraževanje.

2 Pregled literature in postavitve hipotez

Analiziranje povezanosti izobraževanja in BDP/preb. je v literaturi opredeljeno z različnih vidikov. V okviru pregleda literature se omejujemo zgolj na dva vidika, in sicer na študije, ki proučujejo razpoložljivi človeški potencial z vidika trajanja šolskega oz. študijskega programa in stopnje izobrazbe, pridobljene na sekundarni in terciarni ravni, ter z vidika primerjav človeškega potenciala v različnih gospodarstvih na podlagi rezultatov mednarodnih testov matematike in naravoslovja.

V analizah mednarodnih razlik v gospodarski razvitosti je bilo namreč ugotovljeno, da je znanje matematike in naravoslovja kot primarna komponenta razpoložljivega človeškega potenciala pomembno za kvaliteto delovne sile (Hanushek in Kimko 2000, Lee in Barro 2001, Barro 2001). Gospodarski razvoj generirajo raziskave z razvojem idej in invencij. V raziskavah o razpoložljivem človeškem potencialu so se avtorji osredotočali predvsem na formalne šolske aktivnosti, pri čemer je bila najpogostejše merilo stopnja vpisa v primarno in sekundarno šolanje (Romer 1990, Barro 1991, Mankiw idr. 1992). Hanushek in Kimko (2000) menita, da navedene spremenljivke niso primerne za prikaz razpoložljivega človeškega potenciala. Primernejši indikatorji so rezultati mednarodnih testov v matematiki in naravoslovju, ki so med državami primerljivi. V raziskavi sta uporabila model rasti ter merila povezanost povprečne letne stopnje rasti BDP/preb. v različnih obdobjih in rezultate mednarodno primerljivih testov. Rezultate v različnih obdobjih za 31 držav sta merila tako, da sta spremljala kvaliteto v 30-letnem obdobju, med letoma 1960 in 1990. Ugotovila sta, da sta kvantiteta šolanja in kvaliteta delovne sile v pozitivni korelaciji z rastjo BDP/preb. Z dodanim merilom za kvaliteto (na osnovi testov matematike in naravoslovja) se pojasnjena varianca v modelu rasti poveča s 33 odstotkov na 73 odstotkov. Če se v modelu rasti kvaliteta delovne sile poveča za en standardni odklon (SD), se poveča realna stopnja rasti BDP/preb. za 1,46 odstotne točke na leto. Povečanje kvantitete šolanja za en SD poveča

letno rast BDP/preb. samo za 0,26 odstotne točke. Hanushek in Kimko (2000) zato menita, da kvantiteta in kvaliteta šolanja delujeta na rast komplementarno.

V raziskavah o vplivu trajanja šolanja na gospodarsko razvitost je ta vpliv obravnavan na različne načine, z uporabo različnih metodoloških pristopov. Tako je Barro (2001) uporabil metodo panelne regresije. V raziskavo je zajel populacijo nad 25 let v obdobju med letoma 1965 in 1995 v 100 različno razvitih državah. Ugotavlja, da je rast BDP/preb. v pozitivni povezavi s povprečnimi leti šolanja odraslih moških na sekundarni in terciarni stopnji, primarno izobraževanje žensk pa povečuje gospodarsko rast posredno, z zmanjšano rodnostjo.

V analizi gospodarske razvitosti 83 latinskoameriških držav v obdobju med letoma 1985 in 1995 sta De Gregorio in Lee (1999) uporabila razširjeno različico Solowovega modela rasti in regresijsko analizo, ki je zajela povprečno število let šolanja moške populacije nad 25 let na sekundarni in terciarni ravni (po podatkih v Barro in Lee 1996). Ugotovila sta, da večji začetni človeški potencial pomeni več usposobljene delovne sile, ki z danimi naravnimi in fizičnimi viri lahko proizvede več. Spremenljivka za dosežke v izobrazbi, ki je bila opredeljena s povprečnim številom let sekundarnega in terciarnega izobraževanja, je imela statistično značilen učinek na stopnjo rasti BDP.

Učinek izobraževanja na gospodarsko rast kot letno spremembo indeksa rasti BDP/preb. sta z regresijsko analizo presečnih podatkov merila Krueger in Lindahl (2001). Na vzorcu 110 držav sta ocenjevala spremembe po petih, desetih in dvajsetih letih v obdobju med letoma 1965 in 1985. Ugotovila sta, da imajo povprečna leta šolanja pozitiven in statistično pomemben učinek na gospodarsko rast v daljšem obdobju, to je v 20 letih.

Povezanost indikatorjev izobraževanja in gospodarske razvitosti sta v raziskavah analizirali tudi Guisanova (2009b) ter Guisanova in Aguayeva (2010), ki sta ugotavljali posredne in neposredne učinke šolanja na socioekonomski razvoj. Analiza 22 ameriških držav leta 2005 je pokazala, da je zadovoljstvo z življenjem v pozitivni korelaciji z gospodarsko rastjo in z leti šolanja. Ugotovili sta pozitivno korelacijo med indikatorji izobraževanja, ki jih predstavljajo leta šolanja, in BDP/preb.

Po drugi strani pa nekateri avtorji (Sanders 2003, Bills in Klenov 2000) trdijo, da ugoden gospodarski razvoj pospešuje izobraževanje. Bills in Klenov tako menita, da povezava med izobraževanjem in rastjo BDP/preb. ne more razložiti več kot ene tretjine opazovane povezanosti, kar sta utemeljila z upoštevanjem znanja predhodne generacije, ki v Mincerjevem modelu (Mincer 1974) temelji na predpostavki o akumulaciji človeškega kapitala. Lee in Barro (2001), ki sta uporabila regresijsko analizo presečnih podatkov, pa sta v raziskavi zajela podatke mednarodnih rezultatov študentov iz 58 držav v obdobju med letoma 1964 in 1991 na področju primerljivih testov iz matematike, naravoslovja in pismenosti. Ugotovila sta povezanost rezul-

¹ Guisan (1997), ki je v raziskavo zajela 199 držav iz celega sveta (Afrika, Amerika, Avstralija, Azija, Evropa, Indija), kjer se večji del prebivalstva bori s problemi pomanjkanja ter prevelike naseljenosti, je majšo rodnost izpostavila kot prednost in pozitivno posledico večje izobrazbenosti žensk.

tatov testov s karakteristiko družine glede na prihodke in izobrazbo staršev ter z leti primarnega šolanja. Najbolj so izstopali rezultati testov s področja naravoslovja, ki so bili v pozitivni korelaciji s trajanjem šolanja. Lee in Barro sta ugotovila, da družinske karakteristike, kot sta prihodek in izobrazba staršev, vplivajo na uspešnost študenta. Otroci, ki prihajajo iz držav z visokim BDP/preb. (premožnejši starši), imajo na splošno višje rezultate v testih iz naravoslovja, matematike in pismenosti, zato lahko domnevamo, da obstajajo v državah z visokim in nizkim BDP/preb. razlike v strukturi diplomantov terciarnega izobraževanja.

V pregledu literature nismo zasledili vsebine, ki bi opredeljevala diplomante terciarnih programov tudi po področjih izobraževanja. Merila, kot so povprečno število let šolanja, stopnja vpisa, starost udeležencev izobraževanja ali stopnja financiranja izobraževanja, ne opredeljujejo tudi področij izobraževanja. Zato smo v raziskavi podali analizo, ki se nanaša na omenjeni vidik. Za področja izobraževanja smo uporabili klasifikacijo ISCED 1997, ki opredeljuje diplomante po področjih, in nato iskali povezavo terciarnega izobraževanja z BDP/preb.

Oblikovanje raziskovalnega vprašanja in postavitev hipotez

Na osnovi pregleda literature smo zastavili raziskovalno vprašanje, ki se nanaša na identificiranje povezave med strukturo diplomantov terciarnega izobraževanja po področjih izobraževanja (klasifikacija ISCED 1997) in BDP/preb. v vzorcu izbranih evropskih držav:

Pri katerih področjih terciarnega izobraževanja diplomantov je mogoče identificirati pozitivno korelacijo z BDP/preb. in pri katerih negativno?

Predpostavljamo, da je struktura diplomantov povezana z BDP/preb., pri čemer obstajajo nekatere pozitivne in nekatere negativne povezave. Zato smo postavili raziskovalno hipotezo:

H1: Struktura diplomantov po področjih izobraževanja je povezana z višino BDP/preb.

3 Metodologija in podatki

3.1 Oblikovanje spremenljivk

V raziskavi smo se omejili na evropske države, za katere obstajajo zanesljivi in primerljivi podatki o izobraževanju, in uporabili podatke o že doseženih rezultatih izobraževanja, saj menimo, da podatki o vpisu ne dajejo realne slike o študentih, ki bi študij tudi dejansko dokončali (Barro in Lee 1996, Krueger in Lindahl 2001).

Krueger in Lindahl (2001) sta merila učinek povprečnih let izobraževanja na rast kot letno spremembo indeksa rasti BDP/preb. in pri tem ocenjevala spremembe v zamiku petih, desetih in dvajsetih let v obdobju med letoma 1965 in 1985. Glede na to, da se naši podatki nanašajo na diplomante terciarnega izobraževanja, smo ocenjevali povezanost z BDP/preb. v krajšem času, to je na dve in na pet let,

ker predvidevamo, da v tem času izoblikovani profil diplomanta terciarne stopnje že lahko ustvarja rezultate, ki se nanašajo na znanje, pridobljeno z izobraževanjem. Podatke o številu diplomantov po klasifikaciji ISCED 1997 smo zbrali za leto 2005, korelacijo z BDP/preb. pa analizirali za leti 2007 in 2010.

Za predstavitev povezanosti med strukturo diplomantov terciarnega izobraževanja (ki so končali programe z najzahtevnejšo visokošolsko kvalifikacijo – ISCED 5A) po področjih izobraževanja ter realnim BDP/preb.² smo izbrali 25 držav Evropske unije (v nadaljevanju EU) ter tri države zunaj EU, Islandijo, Norveško in Švico. V raziskavo smo želeli vključiti vseh 27 držav EU, vendar za dve državi ni bilo razpoložljivih podatkov o diplomantih ali pa so bili pomanjkljivi (Luksemburg, Ciper).

Za analizo povezanosti med strukturo diplomantov po posameznih področjih izobraževanja in BDP/preb. smo uporabili Pearsonov koeficient korelacije, ki je merilo za linearno povezanost med dvema spremenljivkama. Korelacijski koeficient ne pokaže vzročno-posledične povezanosti, temveč samo povezanost med dvema spremenljivkama, njegova vrednost sega od -1 do $+1$. Če je vrednost enaka 0, spremenljivki nimata medsebojnega vpliva, z naraščanjem proti vrednosti 1 ali -1 pa se med njima večja jakost pozitivne ali negativne povezanosti (Robertson in McCloskey 2002).

Za testiranje domneve o normalni porazdelitvi v vrednosti analiziranih spremenljivk smo uporabili test Kolmogorov-Smirnova (zaradi preverjanja pogojev za primernost uporabe Pearsonovega koeficienta korelacije).

3.2 Podatki

V empirični analizi smo zajeli podatke, ki se nanašajo na odstotke diplomantov terciarnega izobraževanja za leto 2005,³ ki smo jih razvrstili glede na:

- stopnje in
- področja izobraževanja.

1. Stopnje izobraževanja, kot jih opredeljuje ISCED 1997 (ISCED 2001), so povezane z zahtevnostjo vsebine izobrazovalnega programa. V raziskavi smo zajeli programe ISCED 5A⁴ in ISCED 6. Programi ISCED 5A omogočajo prvo diplomno ob koncu prve visokošolske stopnje (*Bachelor's degree*) in drugo diplomno ob koncu druge visokošolske stopnje (*Master's degree*). Od nacionalnega sistema je odvisno, ali dani program omogoča

² Podatki nacionalnih računov so izraženi z vrednostjo na osnovi veriznih indeksov, z bazo v referenčnem letu 2005 (EUROSTAT 2012).

³ Podatki so prikazani v tabeli 4.

⁴ Vmesno kvalifikacijo (»intermediate«), ki je ISCED 1997 posebej ne razlaga, priročnik OECD eksplicitno vpeljuje kot eno izmed podkategorij razvrščanja programov 5A. Uporablja se za programe, ki so krajši od treh let. Kategorije v kvalifikacijski strukturi oz. strukturi diplom so po priročniku OECD naslednje: vmesna (intermediate) kvalifikacija, prva diploma (oz. stopnja), druga diploma (oz. stopnja), tretja in nadaljnje.

tudi nadaljnjo diplomo oz. znanstveno izobrazbo (*research degree*) v okviru stopnje 5 po ISCED (*Master of Philosophy degree*; ISCED 2001).

Stopnja 5 po ISCED se deli v dve podskupini. Programi ISCED 5A so večinoma teoretični in pripravljajo študente za raziskovalno delo oz. omogočajo dostop do zahtevnih poklicev. Programi ISCED 5B so naravnani praktično, strokovno in poklicno specifično.

Diplomanti terciarnih programov tipa A (programi ISCED 5A⁵) so namenjeni pridobitvi zadostne izobrazbe za poklice z visokimi zahtevami usposobljenosti, kot so npr. medicina, zobozdravstvo ali arhitektura. Terciarni programi tipa A teoretično trajajo najmanj tri leta kot redna oblika študija (*full-time*), čeprav lahko trajajo štiri leta ali več. Ti programi se lahko izvajajo tudi zunaj univerz. Nasprotno pa niso vsi univerzitetni programi na nacionalni ravni opredeljeni kot terciarni programi tipa A (Education at a Glance 2002).

Podatke, ki se nanašajo na odstotek diplomantov terciarnega izobraževanja tipa A za leto 2005, smo zbrali iz treh statističnih baz: OECD (2012), EUROSTAT (2012) in SURS (2012).

Podatke o diplomantih terciarnih programov tipa A smo vsebinsko ovrednotili in kvalitativno uskladili tako, da smo podatke v statistični bazi OECD in EUROSTAT primerjali s podatki in poimenovanji v statistični bazi SURS.

- V statistični bazi OECD smo izbrali podatke za diplomante terciarnih programov tipa A po področjih izobraževanja (Graduates by field of education: Tertiary type A and advanced research programmes). V statistični bazi OECD so podatki za vse države EU, razen za Bolgarijo, Ciper, Latvijo, Litvo, Malto in Romunijo.
- Statistično bazo EUROSTAT smo uporabili zato, ker v statistični bazi OECD podatki za Bolgarijo, Ciper, Latvijo, Litvo, Malto in Romunijo niso zajeti.
- Primerljivi podatki z bazo SURS za diplomante terciarnih programov tipa A so v bazi EUROSTAT navedeni v kodah:
 - koda ED5AD1 zajema prejšnje⁶ visokošolske univerzitetne programe ter bolonjski visokošolski strokovni in specialistični program,

⁵ UNESCO. International Standard Classification of Education. I S C E D 1997. Dosegljivo: http://www.unesco.org/education/information/nfsunesco/doc/iscsed_1997.htm.

⁶ Pred bolonjsko reformo, ki je izraz za proces prenove evropskih visokošolskih izobraževalnih sistemov, ki temeljijo na t. i. Bolonjski deklaraciji. Bolonjska deklaracija je politični akt, ki so ga junija leta 1999 v Bologni (Italija) sprejeli ministri, pristojni za visoko šolstvo, 29 evropskih držav, med njimi tudi Slovenije. Dosegljivo 8. 1. 2013:

⁷http://www.arhiv.mvzt.gov.si/si/delovna_podrocja/visoko_solstvo/bolonjski_proces/vsebina/.

- koda ED5AD2 zajema prejšnji magistrski in sedanji bolonjski magistrski program (po končani 1. bolonjski stopnji in enoviti magistrski program),
 - koda ED6 zajema prejšnji doktorski in bolonjski doktorski program.
2. Za razvrstitev po področjih in po stopnjah izobraževanja smo zaradi mednarodne primerljivosti podatkov za diplomante terciarnega izobraževanja, ki so končali programe z najzahtevnejšo kvalifikacijo – ISCED 5A (v nadaljevanju diplomanti), upoštevali klasifikacijo ISCED 1997 (Anderson in Olsson 1999). Klasifikacija ISCED 1997 opredeljuje vsak izobraževalni program po področju in po stopnji izobraževanja.

V tabeli 1 je prikazana temeljna klasifikacijska enota za izobraževalne programe po področjih izobraževanja

Tabela 1: Klasifikacija ISCED za področja izobraževanja

Šifra ISCED 1997	Področja izobraževanja
ISCED 0	Splošni programi
ISCED 1	Izobraževanje
ISCED 2	Umetnost in humanistika
ISCED 3	Družbene vede, poslovne vede in pravo
ISCED 4	Naravoslovje, matematika in računalništvo
ISCED 5	Tehnika, proizvodne in predelovalne tehnologije in gradbeništvo
ISCED 6	Kmetijstvo in veterina
ISCED 7	Zdravstvo in sociala
ISCED 8	Storitve

Vir: Anderson in Olsson 1999

V raziskavi smo zajeli področja izobraževanja po ISCED od 1 do 8. Zaradi splošne vsebine klasifikacije ISCED 0 nismo zajeli. V nadaljevanju smo spremenljivke označili z ISCED *i*, *i* = 1, 2 ... 8, ki predstavljajo odstotek vseh diplomantov, ki so diplomirali na *i*-tem področju.

Ugotoviti smo želeli, ali obstaja korelacija med področji izobraževanja diplomantov terciarnega izobraževanja po klasifikaciji ISCED 1997, ki zajema terciarno stopnjo izobraževanja 5 in 6, ter med BDP/preb. za skupino izbranih evropskih držav. Podatki so zajeti v tabeli 4 v Prilogi, v kateri so prikazana področja terciarnega izobraževanja diplomantov po klasifikaciji ISCED 1997 v odstotkih za leto 2005 in realni BDP/preb. za leti 2007 in 2010.

4 Rezultati

V tabeli 2 predstavljamo rezultate deskriptivne statistike spremenljivk, ki jih dalje uporabljamo za računanje povezav med odstotkom diplomantov po posameznih področjih izobraževanja za leto 2005 in BDP/preb. za leti 2007 in 2010.

Tabela 2: Deskriptivna statistika deleža diplomantov po posameznih področjih izobraževanja v letu 2005 in BDP/preb. v letih 2007 in 2010

Področja	N ⁷	Minimum	Maksimum	M	SD	Z
ISCED 1	25	2,53	20,05	12,94	4,905	0,785**
ISCED 2	25	5,69	24,53	11,84	4,43	0,613**
ISCED 3	28	22,94	53,67	35,92	8,81	0,410**
ISCED 4	28	3,47	18,47	9,69	3,97	0,756**
ISCED 5	24	6,08	21,29	13,02	3,86	0,524**
ISCED 6	28	0,10	3,77	1,904	0,997	0,487**
ISCED 7	28	3,66	28,25	12,43	6,51	0,704**
ISCED 8	28	0,05	9,42	3,28	2,36	0,902**
BDP 2007	28	3400	54700	23428,6	14566,7	0,669**
BDP 2010	28	3500	52100	22439,3	13727,8	0,672**

Opomba: N – število držav v analizi, M – aritmetična sredina, SD – standardni odklon, Z – vrednost za test odstopanja od normalne porazdelitve Kolmogorov-Smirnova, ** – domneve o normalni porazdelitvi spremenljivke ne zavrnamo.

V tabeli 3 so prikazane vrednosti koeficienta korelacije (r_s) med odstotkom diplomantov po posameznih področjih izobraževanja v letu 2005 in BDP/preb. v letih 2007 in 2010.

Tabela 3: Spearmanov korelacijski koeficient (r_s) med deležem diplomantov po posameznih področjih izobraževanja v letu 2005 in BDP/preb. v letih 2007 in 2010

Področja 2005		BDP 2007	BDP 2010
ISCED 1	r_s	-0,510**	-0,499*
	p	0,009	0,011
	N	25	25
ISCED 2	r_s	0,451*	0,434*
	p	0,024	0,030
	N	25	25
ISCED 3	r_s	-0,553**	-0,538**
	p	0,002	0,003
	N	28	28
ISCED 4	r_s	0,399*	0,395*
	p	0,036	0,037
	N	28	28
ISCED 5	r_s	-0,468*	-0,434*
	p	0,021	0,034
	N	24	24
ISCED 6	r_s	-0,419*	-0,415*
	p	0,026	0,028
	N	28	28
ISCED 7	r_s	0,605**	0,608**
	p	0,001	0,001
	N	28	28
ISCED 8	r_s	-0,437*	-0,442*
	p	0,020	0,019
	N	28	28

Opomba: r_s – vrednost za koeficient korelacije, p – stopnja značilnosti preizkusa.

**Korelacija je statistično značilna pri stopnji 0,01 (2-stranski test).

*Korelacija je statistično značilna pri stopnji 0,05 (2-stranski test).

Iz table 3 razberemo, da obstaja negativna, statistično značilna in srednje močna korelacija med BDP/preb. ter deležem diplomantov na področjih izobraževanja (ISCED 1), družbenih in poslovnih ved ter prava (ISCED 3), tehnike, proizvodne in predelovalne tehnologije in gradbeništva (ISCED 5), kmetijstva in veterine (ISCED 6) ter storitev (ISCED 8), kamor sodijo osebne in transportne storitve, varovanje okolja ter varovanje.

Hkrati lahko identificiramo pozitivno, srednje močno in statistično značilno povezanost s strukturo diplomantov na področjih umetnost in humanistika (ISCED 2), naravoslovje, matematika in računalništvo (ISCED 4) ter zdravstvo in sociala (ISCED 7).

Na osnovi dobljenih rezultatov lahko potrdimo zastavljeno hipotezo, saj je struktura diplomantov po področjih terciarnega izobraževanja torej povezana z BDP/preb.

Rezultati so tudi pokazali, da med letoma 2007 in 2010 ni bilo večjih razlik v korelacijskih koeficientih med deležem diplomantov po posameznih področjih izobraževanja in BDP/preb.

Ugotovimo torej lahko, da z naraščanjem deleža diplomantov na področju naravoslovja, matematike in računalništva, na področju zdravstva in sociala ter na področju humanistike in umetnosti v povprečju narašča tudi BDP/preb. (in obratno). Ena izmed možnih interpretacij je, da države z višjim BDP/preb. namenjajo več sredstev za študije, ki v povprečju pomenijo višje stroške na diplomanta, kar velja za zgoraj omenjena področja.

⁷ Ker je korelacijski koeficient močno odvisen od izstopajočih vrednosti (osamelec ali t. i. »outlier«), smo na osnovi grafičnega prikaza pri analizi, ki se nanaša na področja ISCED 1, 2 in 5, izpustili nekatere države z izstopajočimi vrednostmi, in sicer pri ISCED 1 Romunijo, Islandijo in Norveško, pri ISCED 2 Nizozemsko, Švedsko in Švico in ter pri ISCED 5 Latvijo, Poljsko, Madžarsko in Malto. Pri vseh obravnavanih spremenljivkah tako ne zavrnamo domneve o normalni porazdelitvi.

Prav tako imajo države z višjim BDP/preb. več možnosti za spodbujanje⁸ vlaganj v raziskave in tehnološki razvoj ter s tem povezano izobraževanje na področju naravoslovja, matematike in računalništva. Guisanova (2009b) meni, da je vpliv izobraževanja in BDP/preb. obojestranski: visok BDP/preb. prav tako vpliva na spremenljivke blagostanja, med katere sodi tudi izobraževanje.

Identificirali smo tudi negativno korelacijo med deležem diplomantov na področju družbenih in poslovnih ved in prava ter na področju storitev z BDP/preb. Tako imajo največ diplomantov družbenih in poslovnih ved države z najnižjim BDP/preb., ki se vse, razen Malte, uvrščajo v četrtno držav z najnižjim BDP/preb. v letu 2010 (Latvija, Bolgarija in Romunija z BDP/preb. od 3.500 do 5.500 €).

Diplomanti na področju storitev so prav tako številčnejši v državah z nižjim BDP/preb., kot so Madžarska, Estonija, Slovaška, Bolgarija in Poljska z BDP/preb. od 3.500 € do 8.800 €.

Izobraževanja na področju družbenih in poslovnih ved ter storitev so pričakovano v povezavi z državami v EU, ki imajo najnižji BDP/preb. Rezultati se posredno skladajo z ugotovitvami (Barro 2001, Hanushek in Kimko 2000, Lee in Barro 2001) analiz mednarodnih razlik v stopnjah rasti, da je znanje matematike in naravoslovja kot primarne komponente razpoložljivega človeškega potenciala pomembno za kvaliteto delovne sile. Kot menita tudi Sianesi in Reen (2000), razvitost države vpliva na izobrazbo. Razvitost države pa je povezana tudi s sočasnim izboljšanjem ne samo izobraževalnih sistemov, temveč tudi z uveljavitvijo lastninskih pravic, večje odprtosti gospodarstva, razvoja tehnologij, politike ipd. (Bils in Klenov 2000). Rezultate lahko še dodatno komentiramo z dejstvom, da je presežek družboslovnih študijev oz. manko naravoslovno-matematičnih študijev indikator za nižji BDP/preb. Barro (2000), Rodriguez-Pose in Tselios (2009) ter Checci (2000) menijo, da sta distribucija dohodkov in distribucija izobrazbe v korelaciji, saj posledično zaslužek daje možnost izbire izobraževanja. Dohodkovna neenakost preprečuje dostop do izobrazbe nižjim slojem. Bolj ko je distribucija dohodka neenakomerna, bolj je del populacije izločen iz šolanja in večja je neenakost v izobrazbenih dosežkih.

5 Sklep

Številne študije potrjujejo, da investiranje v izobraževanje pozitivno vpliva na porazdelitev dohodka in premoženja in ima dolgoročni učinek na gospodarsko razvitost (Asplund 2004, Barro 2000, Bassanini in Scarpetta 2001, Corvers 1997, Guisan 1997), nanašajo pa se predvsem na korelacije med razpoložljivim človeškim potencialom, merjenim s povprečnimi leti šolanja (Bassanini in Scarpetta 2002, De Gregorio in Lee 1999) ali s stopnjo vpisa v primarno, sekundarno ali terciarno izobraževanje (Barro 2000, Romer 1990) ter s starostjo udeležencev izobraževanja (Bils in Klenov

2000, Blanco 2010). Takšna merila o oceni razpoložljivega človeškega potenciala pa porajajo pomisleke o primernosti. Castelo in Domenech (2002) menita, da povprečna leta šolanja ne povedo dovolj o distribuciji izobrazbe, ki se lahko v posameznih državah precej razlikuje.

V prispevku zagovarjamo stališče, da navedena merila niso v celoti primerna za raziskovanje povezanosti izobraževanja in gospodarske razvitosti, saj so presplošna in ne povedo ničesar o področjih izobraževanja. Zato smo v raziskavi postavili povsem drugačen koncept. Menimo, da je pomembno opredeliti vidik, ki se nanaša na področja izobraževanja, in na osnovi tega zastaviti vprašanje o povezanosti izobraževanja z BDP/preb.

Za ugotavljanje povezanosti področja izobraževanja z BDP/preb. smo uporabili korelacijo, ki sta jo v analizah pogosto uporabljali Guisanova (1997, 2009a, 2009b) ter Guisanova in Aguayeva (2010).

V naši raziskavi smo dobili precej nižje pozitivne korelacijske koeficiente, kot jih navaja ($r_{1994} = 0,908$) Guisanova (1997). Rezultati tudi niso popolnoma primerljivi. Guisanova je v raziskavo zajela 37 manj razvitih držav,⁹ novoindustrializiranih držav in držav OECD. Korelacija se nanaša na odvisno spremenljivko BDP/preb. in na pojasnjevalni spremenljivki, ki sta zajeli fizični kapital (osnovna sredstva) ter razpoložljiv človeški potencial. Korelacija med razpoložljivim človeškim potencialom in BDP/preb. je visoka ne glede na to, ali je bila merjena z razpoložljivim človeškim potencialom, izraženim z odstotkom prebivalcev nad 25 let z najmanj sekundarno izobrazbo, ali s povprečnimi leti šolanja.

Guisanova (2009b) je raziskavo razširila na 132 razvitih in nerazvitih držav po celem svetu. Korelacija med BDP/preb. (v letu 2005) in leti šolanja v letu 2004 ($r = 0,839$) je prav tako visoka. Navedeni rezultati prav tako niso popolnoma primerljivi, saj se ne nanašajo na terciarno izobraževanje in vključujejo nehomogeno strukturo držav. Problem obširnih raziskav je, da večina avtorjev uvršča razvite in nerazvite države v isti okvir in v analizi ne upošteva stopnje razvitosti države (Sianesi idr. 2003).

Z vidika povezanosti določenega področja izobraževanja z BDP/preb. lahko primerjamo z Barrovo raziskavo (2000), v kateri so bili zajeti podatki o mednarodnih rezultatih študentov iz 43 držav za leto 1997 na področju primerljivih izpitov iz matematike, naravoslovja in bralnega razumevanja, ki so predstavljali indikatorje kakovosti izobraževanja. Najbolj so izstopali rezultati testov s področja naravoslovja, ki so imeli pozitivno korelacijo z gospodarsko razvitostjo. Lee in Barro (2001) sta ugotovila, da imajo otroci, ki prihajajo iz držav z visokim BDP/preb., na splošno

⁸ Progress towards the common European objectives in education and training. Indicators and benchmarks 2010/2011.

⁹ 37 držav, ki so bile zajete v raziskavo: Egipt, Etiopija, Nigerija, Južna Afrika, Kanada, Mehika, ZDA, Argentina, Brazilija, Kolumbija, Bangladeš, Kitajska, Indija, Japonska, Južna Koreja, Tajska, Avstrija, Belgija, Danska, Finska, Francija, Nemčija, Madžarska, Irska, Italija, Nizozemska, Poljska, Portugalska, Španija, Švedska, Švica, Turčija, Združeno kraljestvo, Avstralija, Nova Zelandija, Rusija.

višje rezultate v testih iz naravoslovja, matematike in pismenosti. Rezultati naše raziskave tudi potrjujejo povezavo deleža diplomantov naravoslovnih ved (ISCED 7 in ISCED 4) z državami z visokim BDP/preb. (zgornji kvartil). Lahko pa bi se tudi strinjali z ugotovitvijo Bilsa in Klenova (2000), ki menita, da gospodarska razvitost pravzaprav pogojuje strukturo izobraževanja in ne obratno (Sianesi 2000) ter da države z višjim BDP/preb. namenjajo več sredstev za študije, ki v povprečju pomenijo višje stroške na diplomanta (študij naravoslovja, matematike, računalništva, zdravstva ipd.).

Analiza je torej pokazala, da obstajajo korelacije med področji terciarnega izobraževanja po klasifikaciji ISCED 1997 in BDP/preb. in da je presežek družboslovnih študijev oz. manko naravoslovno-matematičnih študijev indikator za nižji BDP/preb.

V raziskavi je postavljen zgolj okvir za razmišljanje o primernosti uporabe posameznih področij terciarnega izobraževanja za ugotavljanje povezanosti z BDP/preb. in odpirajo se tudi številne možnosti za nadaljnje raziskave, ki se nanašajo na opredelitev podrobnejše strukture diplomantov na osnovi mikropodatkov za evropske države kot celoto kakor tudi za posamezne države.

Rezultati so pokazali, da je obilje družboslovnih diplomantov domena revnejši držav, ker pa je področje družboslovja široko, saj zajema psihologijo, sociologijo, politologijo, ekonomijo, novinarstvo, poslovne in upravne vede, finančništvo, bančništvo, zavarovalništvo, računovodstvo, davkarstvo, poslovedenje in upravljanje, administrativno delo in pravne vede, bi bilo treba v tem naboru opredeliti specifična področja.

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Tabela 4: Področja terciarnega izobraževanja diplomantov po klasifikaciji ISCED 1997 v odstotkih za leto 2005 in realni BDP/preb. za leti 2007 in 2010

Zap. št.	DRŽAVA	ISCED 1 IZOBRA- ZEVANJE V %	ISCED 2 UMETNOST IN HUMANI- STIKA V %	ISCED 3 DRUŽBENE VEDE, POSLOVNE VEDE IN PRAVOV V %	ISCED 4 NARAVO- SLOVJE, MATEMATIKA IN RAČUNAL- NIŠTVO V %	ISCED 5 TEHNIKA, PROIZVODNE, PREDELOVAL- NE TEHNOLO- GIJE IN GRADB. V %	ISCED 6 KMETIJSTVO IN VETERINA V %	ISCED 7 ZDRAVSTVO IN SOCIALA V %	ISCED 8 STORITVE V %	SKUPAJ ISCED 2005 V %	Realni BDP/preb. 2007	Realni BDP/preb. 2010
1	Avstrija	9,0270	10,7906	39,2375	13,5666	14,4665	1,8440	8,6976	2,3702	10,1	31.800	31.300
2	Belgija	8,4017	16,0614	35,3002	11,5716	10,9028	3,3617	13,1742	1,2266	10,1	30.200	29.600
3	Bolgarija	8,0153	8,4747	49,6112	5,3954	15,5832	1,8064	4,7996	6,3142	10,1	3.400	3.500
4	Češka republika	20,0480	9,0246	31,8627	8,1451	16,7637	3,7701	6,9089	3,4770	10,1	11.500	11.400
5	Danska	10,3851	15,0681	25,8277	8,3849	9,7571	1,0428	28,2498	1,2845	10,1	39.900	37.200
6	Estonija	10,6736	15,3207	34,4315	13,0307	10,7674	3,7364	5,0757	6,9640	10,1	9.900	8.400
7	Finska	7,1602	12,7150	22,5377	8,7911	21,2787	2,2828	19,0214	5,8130	10,1	32.700	30.600
8	Francija	2,5338	16,3625	41,5458	15,1316	11,9233	0,8159	8,1207	3,5664	10,1	28.200	27.300
9	Grcija	14,0545	17,6301	28,9314	18,4668	10,1785	2,5935	4,8080	3,3372	10,1	18.700	17.300
10	Irska	8,0820	24,5321	27,4599	16,5084	8,7101	0,7294	13,0208	0,9574	10,1	41.500	37.200
11	Islandija	25,8870	11,1513	34,2505	8,9790	6,0825	0,7241	11,8030	1,1224	10,1	46.700	41.500
12	Italija	9,8489	13,3497	36,0319	7,0536	15,2120	1,8847	14,4065	2,2127	10,1	25.100	23.500
13	Latvija	18,9263	6,5462	53,6702	5,2862	7,7193	1,0408	3,6565	3,1544	10,1	5.600	5.500
14	Litva	19,0544	8,5308	38,5103	7,0719	15,2407	1,8280	7,6849	2,0789	10,1	7.400	6.700
15	Madžarska	19,6704	7,4333	42,7627	3,4677	6,5549	2,7524	7,9383	9,4203	10,1	9.200	8.800
16	Malta	12,3274	11,5878	50,9862	4,8323	4,9803	0,0986	15,1381	0,0493	10,1	12.700	13.100
17	Nemčija	7,7837	14,5515	29,4686	15,3633	15,8844	2,0148	13,0986	1,8352	10,1	29.000	29.100
18	Nizozemska	16,7881	7,9656	37,8271	7,4846	8,3819	2,1958	16,8884	2,4686	10,1	33.700	33.100
19	Norveška	19,6866	7,1549	24,1239	8,1789	7,8701	1,2353	26,7310	5,0192	10,1	54.700	52.100
20	Poljska	16,9462	7,4722	46,8925	6,7670	7,3434	1,6095	7,1733	5,7959	10,1	7.300	8.100
21	Portugalska	19,2012	8,3755	25,2229	10,7081	11,3629	1,8076	17,8207	5,5012	10,1	15.100	14.800
22	Republika Slovaška	15,8129	5,6865	30,1438	9,5424	17,6493	3,6932	10,7889	6,6831	10,1	8.500	8.900
23	Romunija	1,0982	11,0012	49,2342	5,1184	17,3807	2,2631	11,5422	2,3621	10,1	4.200	4.200
24	Slovenija	16,6667	10,6742	39,1653	6,8486	11,9984	2,4478	10,7277	1,4714	10,1	16.100	15.300
25	Španija	13,4806	9,4704	30,7818	9,9100	14,3258	2,7845	14,6358	4,6111	10,1	21.800	20.600
26	Švedska	18,1219	5,3959	23,3990	7,7477	17,9307	0,7165	25,6877	1,0005	10,1	35.100	34.500
27	Švica	9,9158	10,9660	41,6579	12,7365	14,0685	1,3639	8,2477	1,0438	10,1	43.800	44.200
28	Združeno kraljestvo	10,6912	16,9953	34,4068	15,2997	8,7966	0,8805	12,1981	0,7318	10,1	32.200	30.500

Vir: OECD (2012), EUROSTAT (2012), SURS (2012), lastni izračuni



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THE ENVIRONMENTAL CREDITWORTHINESS 'ASSESSMENT METHODOLOGY'¹

Metodologija presojanja okoljske bonitete

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Abstract

This paper aims to offer a review of existing theoretical bases of the measurement and assessment of environmental creditworthiness, particularly on the level of enterprises. Its objective is also to examine the possibilities of the multi-criteria assessment of environmental creditworthiness by enterprises themselves ("internal rating"). Following the prescriptive approach, it delineates the particularities of a frame procedure for the multi-criteria assessment of environmental creditworthiness. The credibility of eco-ratings depends not only on the quality of information sources and the choice of sensible environmental indicators, but also on the transformation of data into local and aggregate values that are understandable to decision makers.

Keywords: environmental creditworthiness assessment, enterprise, multi-criteria decision making, prescriptive approach, social responsibility

Izvleček

V prispevku podajamo pregled teoretičnih osnov merjenja in presojanja okoljske bonitete, in sicer predvsem na ravni podjetij. Cilj prispevka je proučiti možnosti večkriterijskega presojanja okoljske bonitete v podjetjih samih (t. i. interni rating). Upoštevajoč preskriptivni pristop, razčlenjujemo posebnosti okvirnega postopka za večkriterijsko presojanje okoljske bonitete. Ugotavljamo, da je kredibilnost ekoringov odvisna ne le od kakovosti informacijskih virov in izbire okoljskih indikatorjev, ampak tudi od transformacije podatkov v odločevalcem razumljive lokalne in agregirane vrednosti.

Ključne besede: presojanje okoljske bonitete, podjetje, večkriterijsko odločanje, preskriptivni pristop, družbena odgovornost

1 Introduction

In seeking ways to link economic and environmental performance, firms adopt environmental standards when trying to remain competitive or gain a competitive advantage. As a result, they are interested in environmental best practices and environmental creditworthiness (EC), also known as eco-rating, of others and of themselves (Knez-Riedl, 2002, p. 169). The motives for eco-rating assessment are various. Some environmentally conscious enterprises want to choose their partners based on their environmental profile or en-

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environmental performance; prudent enterprises check both existing and potential business partners either by themselves (“internal” or “in-house” rating) or using external ratings provided by several rating agencies. The number of external rating agencies specializing in eco-ratings is increasing all over the world. As ratings are important for several reasons, especially strategic business decisions, the importance of the environmental bottom-line raises the quest for information about environmental performance, environmental impact, and especially environmental risks. Thus, the level of disclosure in environmental reports is critical.

At the same time, the importance of so-called green investing is also increasing. In this context, banks in particular have been developing several assessment approaches for environmental risks. The information they are providing are of different explanatory power, depending on criteria and sub-criteria taken into account. Eco-rating approaches are mainly sector- or activity-specific approaches (ADFIAP, 2009). For example, licensed assessors provide eco-rating construction assessments, packaging eco-assessment ratings, and sustainability ratings for mobile phones in the mobile service industry; at the level of national economies, an eco-rating certification program for eco-tourism has already been developed.

Building a green portfolio involves emphasizing not only environmental risks. Investors (both individual and institutional) are equally aware of environmental opportunities. They are determined to raise their stakes in the market of opportunities for potential profit offered by investing in solar and wind power, marine and geothermal energy, power storage, smart grids, hydrogen and fuel cells, green transport, green buildings, and the waste sector (Hanna, 2010). Thus, profit still matters because, in the long run, a company cannot ensure its own sustainability unless it is generating an excess of income over the costs.

The concepts of the creditworthiness of a firm vary, as do the approaches to its assessment. The main objectives of this paper are as follows:

- To review existing theoretical bases of the measurement and assessment of EC, particularly in enterprises, and
- To examine the possibilities of the multi-criteria assessment of EC in enterprises for internal rating.

The research methodology used in this paper includes a literature review—a thorough search for relevant papers in international databases, conference proceedings, and official documents, together with their interpretation in web sources. As a result of our exploratory and descriptive research, we compile an array of environmental indicators and approaches to EC assessment and adapt the prescriptive approach to multi-criteria decision making for EC assessment.

Selected viewpoints of the environmental creditworthiness assessment (ECA) are presented in the following

section. Studying the main characteristics of the current approaches to the assessment of EC, we suggest the multi-criteria methodology for the ECA. The subsequent section highlights the prescriptive approach (Raiffa, 1994) to multi-criteria assessment of EC. We delineate the particularities of a frame procedure for the multi-criteria assessment of EC. The last section draws conclusions about the usability of the multi-criteria ECA in firms, the conflicts between environmental and economic responsibility, and the credibility of eco-ratings.

2 Selected Viewpoints of the Environmental Creditworthiness Assessment

Most current methods for ECA deal with both risks and opportunities. In addition to risk awareness, the contemporary concept of creditworthiness is oriented toward the conscious search for perspective business partners. In the last two decades, the cognition that it is not enough to use only a financial analysis as a predominant analytical method and the financial measures as the main analytical tool has been brought into force. Therefore, some approaches, known and used especially in the field of marketing and strategic management (e.g., SWOT analysis, portfolio method, life-cycle approach) seem to be appropriate for ECA (Knez-Riedl, 2002, p. 171).

The EC can be assessed either implicitly or explicitly. In the case of a lack of appropriate databases or of an undeveloped environmental information system, it is assessed implicitly. The data describing the ecological profile of a firm are extracted from the existing databases for each of other relevant factors for assessing creditworthiness (Knez-Riedl, 2002, pp. 172–174). An ecological balance sheet enables quicker and improved insights into the ecological profile of a firm by calculating what is known as the environmental indicators.

In addition to the development of the environmental ratios systems, which present the quantitative factors and indicators of EC, the ecological dimension of the other qualitative factors and indicators should be analyzed and assessed (e.g., of site, business program, products/services, technology, investments, strategies, innovations, knowledge, management quality) (Knez-Riedl & Vezjak, 1997).

2.1 Environmental Indicators

The OECD’s work on environmental indicators (OECD, 2003) concluded that they are cost-effective and valuable tools as they strengthen the countries’ capacity to monitor and assess environmental conditions and trends so as to increase their accountability and evaluate how well they are satisfying their domestic objectives and international commitments. Similar conclusions can be drawn for firms.

Environmental indicators should be a tool for decision making and control over a firm itself and for its partners. They demonstrate the level of ecological awareness and the impact of a firm on the environment. They are mainly

distinguished into indicators about materials, packaging, energy, water, and waste. In addition, they can be classified as emissions, cost indicators, and investments. Several industries have developed specific, relevant indicators.

According to Biswas et al. (1998), econometrics are indicators that reflect either environmental attributes, such as a concentration or temperature, or an effect anticipated to have an environmental consequence, such as a discharge, the selection of a given material, or the use of a product. Economic, technical, and societal factors are often embedded into these measures. Econometrics have been proposed for applications in areas as diverse as ecolabeling, new product design, marketing, internal and external corporate reporting, and credit screening (Biswas et al., 1998). Specific indicators for given decision makers, industrial sectors, products, and services are required.

Indicators, categorized as micrometrics, have been developed for firm-wide (as well as for local and product-based) assessments. They include materials intensity, energy consumption, and emission data—often from lifecycle perspectives—scaled with respect to unit of production, gross domestic product (GDP) per capita, and other normalization variables. Micrometrics are oriented to a given product and industry and might indicate consumption through the lifecycle as measured by material and energy intensity or waste and toxic release emissions. Eco-indicators are a subset of microeconometrics and can be used to evaluate firms according to environmental criteria (Biswas et al., 1998).

From a firm management point of view, several dimensions are relevant for constructing indicators for environmental policy making, including waste minimization, reduced consumption of non-renewable resources; energy efficiency; shared responsibility; environmental training; targets and objectives set beyond minimum compliance; public disclosure; sustainable development; habitat conservation; research and development, British Standard 7750² (BS7750), and Eco-Management and Audit Scheme (EMAS); worldwide standards; compensation for environmental damage; and legislative compliance and liability on environmental issues (Olsthoorn et al., 2001).

Olsthoorn et al. (2001, p. 3) delineated the function of environmental indicators inside and outside the firm to different users—namely, corporate manager, production plant manager, market manager, purchasing manager, environmental authorities, authorities (national), investors and shareholders, and consumers. The authors highlighted the notable need for standardization (to make sense of environmental information) and aggregation of environmental information for both external as well as internal

users. In this paper, we can conclude that, when indicators are developed, they supplement each other; however, the need for standardization and the aggregation of environmental information still exists. Multi-criteria decision analysis can therefore be used for the aggregation of environmental information.

2.2 Broader Approaches to and Contexts of Environmental Creditworthiness Assessment

In this article, EC is understood in the context of sustainable development. Our exploration of ECA is therefore included in the sustainability and social responsibility context. Spangenberg (2002) underscored the lack of comprehensive frameworks consisting of a limited number of selected indicators based on a standardized, transparent, and methodologically sound basis permitting cluster indicators in meaningful ways to suggest policy priorities. It can be concluded that, for the environmental and social impacts of economic policies, a number of indicators have been developed, mainly based on the notion of preserving the capital stocks of social and environmental capital (OECD, 2001a, 2001b).

Greater awareness of (process and product) sustainability in recent years (i.e., before the 2008+ crisis) has led to the development and implementation of a wide range of instruments for measuring, evaluating, and comparing environmental performance. According to Proto et al. (2007), eco labeling has become a fundamental benchmarking system for enterprise sustainability performance and guidance in consumer choice. The improvement of organizational, environmental, social, and ethical performance contributes to various actions toward sustainability via three dimensions: economic, environmental, and social (i.e., the “triple-bottom-line” approach).

Many approaches and tools can be used to integrate environmental aspects into eco-rating assessments that have been or are being developed. Criteria structured into sub-criteria use a variety of information. For example, the Dow Jones Sustainability Index (SAM, 2012) covers economic, environmental, and social dimensions. The environmental dimension relies upon the following criteria: biodiversity; business opportunities financial services/products; business risk in large projects/export finance; climate change governance; climate strategy; electricity generation; environmental footprint; environmental policy, management system; environmental reporting; transmission and distribution; and water-related risks.

In recent years, a firm’s environmental performance has been dealt with within the concept of corporate social responsibility (CSR). The literature on social responsibility indicates that such interest in CSR has increased the realization of the social necessity to develop holistic aims and objectives as well as the contemporary consideration of economic, social, environmental, and ethical aspects in the formulation of corporate guidelines (Menz, 2010).

² BS7750 is a specification for an environmental management system. The system is used to describe the company’s environmental management system, evaluate its performance, and define policy, practices, objectives, and targets as well as provide a catalyst for continuous improvement (Quality Network, 2006).

The 2011 World Resources Forum revealed the need for effective steps toward a resource-efficient green economy. These steps depend not only on technical knowledge, but also on institutional changes and social innovation; therefore, they call for consideration of the social sciences and humanities perspectives. Assessment methods and resource-use indicators, among other topics, have been dealt with. Additional issues (e.g., values, emotions, mindsets, and underlying driving forces for consumption, such as status) should also be considered in addition to quantified data and indicators (SAGUF, 2011).

Our suggestion for enterprises is to follow the Roadmap to a Resource-Efficient Europe (EC, 2011) and include the adapted resource-efficiency indicators³ in the model for ECA.

3 Multiple Criteria Assessment of Environmental Creditworthiness

Taking into account multiple dimensions, ECA by its very nature cannot have one unambiguously optimal solution. We can determine the ideal solution, which usually does not exist in real life. Real-life alternatives can be compared, and the best solution from among them selected. Almost two decades ago, Munda (1995) pointed out that sustainability assessment must be based on multi-criteria analysis. Based on the performed investigation, it can be concluded that ECA must be based on multi-criteria decision making (MCDM)⁴ as well.

As even the use of well-defined traditional quantitative procedures can oppress effective decision making and given that decision theories—particular game theory—are based on the unreal assumption that a decision maker is always perfectly rational, Raiffa (1994) suggested using a prescriptive approach to decision making: Instead of regarding people as perfectly rational individuals, we develop systematic decision-making procedures based on a combination of normative theories, cognitive aspects, and behavioral

aspects—namely, the structural components of decision making in practice.

Considering the prescriptive approach to decision making, we present the framework for MCDM (Cancer, 2007), which includes the following steps: define the problem, eliminate unacceptable alternatives, structure the problem, measure the local values of alternatives, weigh the criteria, synthesize, rank, and conduct a sensitivity analysis. We will delineate the particularities of the framework for the multi-criteria assessment of EC in a step-by-step manner.

First Step: Define the problem

When a problem arises, we should describe it accurately by defining relevant criteria—namely, environmental factors and indicators—and alternatives. When building a multi-criteria model for the ECA in enterprises, alternatives include enterprises or groups of them. The characteristics of indicators can be described using the SMART concept: They should be simple, measurable, accessible, relevant, and timely. Moreover, they should be administratively practical and cost-effective to populate (Department of the Environment and Heritage, 2006). These should be taken into consideration when choosing the criteria in the definition of the multi-criteria problem—that is, the ECA.

It has already been reported that attempts to develop indicator sets often fail to gain broad support because their developers invest too much effort in specifying the indicators and not enough in understanding the issues and objectives for which the indicators are intended to inform (Department of the Environment and Heritage, 2006). The choice and use of environmental indicators by companies also depend to some—perhaps large—extent on the type of firms; their sector, size, and proximity to environmentally sensitive consumer markets; the time horizon involved; the type and degree of external environmental regulations; and the corporate culture of the organization (Olsthoorn et al., 2001).

Among the OECD categories of environmental indicators, in our opinion, sectoral environmental indicators (SEI) are the most appropriate for being adapted for ECA in a particular enterprise. Enterprises can consider SEI when designing firms' indicators. SEI are designed to help integrate environmental concerns into sectoral policies, and each set focuses on a specific sector (e.g., transport, energy, household consumption, tourism, agriculture). Indicators are classified following an adjusted pressure-state-response model reflecting sectoral trends on environmental significance; their interactions with the environment (including positive and negative effects); and related economic and policy considerations.

Among environmental performance indicators, the ones linked to qualitative objectives can come to the forefront when designing the set of indicators for ECA, particularly with respect to the eco-efficiency of human activities.

³ The roadmap proposes that several key stakeholders discuss and agree on indicators by the end of 2013. Two levels of indicators are provisionally formulated: a provisional lead indicator—resource productivity (e.g., gross domestic product to domestic material consumption, expressed in EUR/ton)—and a series of complementary indicators on key natural resources such as water, land, materials, and carbon (EC, 2011). In order to measure more effectively the shift in the price signals needed to encourage greater investment in the more efficient use of resources, an additional indicator might be needed, such as the effective tax rate on environmental pollution or resource use.

⁴ MCDM describes the set of approaches that can help individuals or groups research important, complex problems. They should be used when intuitive decision making is not enough for several reasons, such as conflicting criteria or disagreement between decision makers about which criteria are relevant or more important and what alternatives and preferences are acceptable. For example, the analytic hierarchy process (AHP) can be used to assess the EC of the firm. However, SWOT analysis can be supported by the analytic network process (ANP).

They can be adapted for the use on the firms' level (e.g., emissions per unit of value added⁵ instead of GDP, relative trends of waste generations, and value-added growth). Environmental performance indicators for policies, programs, or initiatives need to be clearly related to the objectives they are meant to measure.

Among environmental indicators, management indicators⁶ yield complementary information that often explains the environmental performance as quantified by the physical, economic, or impact indicator. We would like to underscore that the first class of management indicators, corresponding to those described in the International Business Environmental Barometer (Belz & Strannegård, 1997), is designed for the measurement of perceptions, attitudes, and strategies toward the environment (Olsthoorn et al., 2001). In the second broad class of management indicators, the information is based on quantified, verifiable information. Examples include environmental investments, running costs pertaining to environmental protection (fees, personnel expense, fines, energy, maintenance), number of employees with specific environmental tasks, number of reported incidents, and degree of compliance with regulations.

The European Eco-Management and Audit Scheme (EMAS) can be helpful when constructing the core indicators that can be used in all companies. In the first version (available since 1995), EMAS originally restricted to companies in industrial sectors; since 2001 it has been open to all economic sectors, including public and private services. In our opinion, the core indicators⁷ suggested in the EU Regulation (European Parliament, Council, 2009) can be included in the structure for the ECA in organizations.

Second Step: Eliminate unacceptable alternatives

We should define the requirements for the alternatives. We assess all possible alternatives; when the alternative does not fulfill the requirements, it is defined as unacceptable and should therefore be eliminated. It has already been reported that the selection of environmental indicators depends on the companies' characteristics. Similarly, the set of alternatives is also defined by considering the type

of firms as well as their sector, size, and proximity to environmentally sensitive consumer markets.

Third Step: Structure the problem

In the multi-criteria assessment of EC, both quantitative and qualitative factors of EC, together with relevant environmental indicators, should be structured in the hierarchical model. Each problem consists of a goal (ECA), criteria (factors), often levels of sub-criteria (indicators), and alternatives (enterprises). In a hierarchy, criteria can be structured in more levels so that lower levels specify sets of sub-criteria related to the criterion of a higher level. Considering the logic of requisite holism (Rebernik & Mulej, 2000), the criteria can be structured into two levels: factors and indicators. When differentiating between quantitative and qualitative factors, they can be structured into three levels.

Fourth Step: Weighting criteria

We have to establish the criteria's importance in order to define the weights of the criteria by using the methods based on the ordinal (e.g., SMARTER), interval (e.g., SWING and Simple Multi-attribute Rating Approach) and ratio (e.g., AHP⁸) scale or through direct weighting (Bouyssou et al., 2000; Helsinki University of Technology, 2008). Professionals from several fields who are capable if interdisciplinary cooperation should be involved in this step.⁹ They can respond the questionnaires and then coordinate their judgments with other respondents. Establishing group priorities is well supported by the group decision-making upgrades of computer programs for MCDM.

In the ECA, we want to achieve diversification among the criteria's importance. The calculation methodology of Kinder, Lydenberg and Domini—one of the world's first rating agencies that specializes in the analysis and assessment of corporate social performance considering the multidimensionality of CSR—has already been criticized because almost all factors have the same weight (Menz, 2010). Obviously, in a sector comparison, social, societal, and environmental aspects are of differing relevance. For example, in the energy and chemical industry, environmental issues play a more important role, whereas in the textile and toy industry as well as in food and beverage manufacturing social factors often come first (Menz, 2010). Not all sectors are affected by the same level of economic, environmental, and social problems.

Fifth Step: Measure alternative values

This step involves judging the preferences to alternatives and the calculation of the values of alternatives with respect to each criterion on the lowest-level indicators.

⁵ Value added is often advocated because it supposedly reflects the contribution of manufacturing activity to the global welfare, as measured by, for example, the national GDP (Olsthoorn et al., 2001).

⁶ Management indicators provide information on the organization's capability and efforts in managing matters such as training, legal requirements, resource allocation, documentation, and corrective action, which have or can have an influence on organizations' environmental performance (Olsthoorn et al., 2001).

⁷ Core indicators focus on performance in the following key environmental areas: (i) energy efficiency; (ii) material efficiency; (iii) water; (iv) waste; (v) biodiversity; and (vi) emissions. Each core indicator is composed of a figure *A* indicating the total annual input/impact in the given field, a figure *B* indicating the overall annual output of the organization, and a figure *R* indicating the ratio *A/B* (European Parliament, Council, 2009).

⁸ We have already used the AHP methodology to assess business partners' creditworthiness (Cancer et al., 2003).

⁹ However, decision makers are often not aware of the relationships among different factors and indicators taken into account for the goal fulfillment.

We can measure the local alternatives' values by making pair-wise comparisons (e.g., measuring local values of alternatives with respect to qualitative or intangible criteria) or by using value functions.¹⁰ According to the authors' experience, value functions are especially applicable when exact (e.g., financial) data are available for alternatives with respect to a particular criterion.

Value functions have already been successfully used in measuring eco-efficiency, such as being applied to the evaluation of the pollution emissions of an industrial plant and to cleaning up a polluted site¹¹ (Beinat, 1997). According to the characteristics of an indicator, experts can determine increasing or decreasing, exponential, linear, or piece-wise linear value functions. For example, value functions for lead pollution, the reduction of organic matter, cost and time, as well as the environmental concentration of topsoil, surface water, and groundwater are constructed as decreasing, piece-wise linear, or linear ones.

Professionals from several fields should be involved in this step as well; in particular, those with skills in their own professions as well as the ability to engage in interdisciplinary cooperation are of great importance when making pair-wise comparisons or defining value functions (the type, lower and upper bounds). Expert judgments are necessary in order to fill any information gaps.

Sixth and Seventh Steps: Synthesize and rank

Aggregation transforms data to allow for a better understanding or interpretation of the data by different groups or for different purposes. Due to the large multiplicity of data and measurement units used to describe business activities, methods are needed to integrate various parameters from different levels of analysis. According to Olsthoorn et al. (2001), the most frequently used methods are linear programming-based methods (such as data envelopment analysis and the productive efficiency method) or, more generally, multiple criteria analysis.

In synthesis, the additive model is usually used to obtain the aggregate (overall, global) alternatives' values. Using the alternatives' ranking, we can select the most appropriate alternative(s), eliminate the alternative(s) with the lowest final value, or compare the alternatives with respect to their aggregate values.

The creditworthiness assessment results enable us to perform benchmarking to either detect the best alternative or construct the ideal alternative and then compare the considered alternatives with the alternative that fulfills the benchmark criteria (Cancer, 2005). The detailed presentation of results should be chosen in order to determine the

considered alternatives' value and rank with respect to each indicator and factor.

Although in MCDM the additive model is usually used in synthesis, some authors (in the field of sustainable development as well) warn that a simple addition will not be feasible for minimizing trade-offs and exploiting synergies among criteria. According to Stangenberg (2002), the likely best-known interlinkage indicator is eco-efficiency, which is an example of the integration of economic and environmental objectives. Interactions among criteria can be considered by using other approaches, such as the multiplicative model (Bouyssou et al., 2000) or the discrete Choquet integral (Cancer, 2010; Grabisch, 1995; Marichal & Roubens, 2000).

Eighth Step: Analyze sensitivity

Sensitivity analysis is used to investigate the sensitivity of aggregate alternatives' values to changes in the criteria weights. It also enables assessors to detect the key success and failure spheres of a firm's environmental performance.

4 Conclusion

Given the great diversity of industries, stakeholders, and applications, it is not possible to unify different approaches to environmental indicators into a single set of indicators. National and international organizations and institutions can offer only the framework for the development of the ECA model at the firm level; they cannot prescribe a list of the indicators that should be included in the companies' model for ECA—not only because companies are privately run, but also because indicators should vary among companies according to their industry, previous environmental activities, location, etc. Therefore, it is impossible to design a uniform selection of eco-indicators for all enterprises.

Even when indicators are agreed upon (e.g., within organizations of a particular sector) and data are available, expertise and specialist knowledge are still required to interpret data results (Department of the Environment and Heritage, 2006), not to mention the whole range of tacit knowledge (Polanyi, 1966/1983) and organizational routines (Nelson & Winter, 1982). The ECA based on the multi-criteria methods seeks to integrate objective measurements with value judgments and manage subjectivity.

The proposed multi-criteria ECA methodology offers several advantages. The prescriptive approach by using the above mentioned group of methods based on assigning weights is computer supported. Although the transformation of data into local and aggregate values is obtained using easy-to-use software (see, e.g., Helsinki University of Technology, 2008; Zopounidis & Pardalos, 2010), multi-criteria methods do not replace the experience of various professionals; however, such methods are invaluable when defining and structuring the problem (i.e., ECA) in criteria weighting and in measuring local alternatives' values. Multi-criteria ECA methodology enables us to take into account

¹⁰ Value functions map the scores profile of an alternative into a (local) value, usually normalized from 0 to 1. The 0 and 1 values are associated with two real or hypothetical score profiles, which represent the best and worst situations considered (Beinat, 1997).

¹¹ This assessment aimed at determining the expert-value functions.

multiple more or less conflicting criteria (i.e., factors and indicators of EC). It also helps decision makers confront other participants' judgment, understand the aggregate alternatives' values, and use them in the activities toward sustainability and social responsibility.

Another advantage of MCDM is that it enables group decision making; moreover, it has become a developing tendency in MCDM. Namely, building models for ECA, assigning weights to criteria, and measuring local values of alternatives are the steps of the MCDM in which different interested parties and interdisciplinary professional expertise should contribute. Value functions are effective in integrating expert judgments and decision-maker values, especially when appropriate assessment techniques for environmental decision problems can be applied (Beinat, 1997). Expert-based value functions are able to reproduce expert opinions.

However, firms should be aware that socially responsible and, in this context, environmentally responsible companies cannot necessarily achieve better economic development than other firms. Menz (2010) pointed out that the consideration of social and environmental factors is also directly associated with higher costs because, for example, extensive health and safety measures of modern, environmentally friendly production facilities are expensive, which could result in a company's decrease in profitability and competitiveness. As the side effects caused by entrepreneurial activity (for example, air and water pollution, health impairments) are often not or not fully borne by the polluter (imperfect internalization of external effects), less responsible companies could benefit economically at the expense of society.

The credibility of eco-ratings depends on the quality of information sources and the choice of sensible environmental indicators. Still, indicators or ratios are not enough. Information and indicators should contribute to high-quality analyses and resulting findings as well as recommendations and suggestions. In terms of analyses, different types are in use (for example, integrated analyses, portfolio analyses) in addition to staggered approaches (ADFIAP, 2009). The multi-criteria assessment of EC proposed in this paper presents such a methodology that can bring about more reliable results.

Finally, we cannot overlook the fact that environmental performance is only one dimension of the triple-bottom-line concept, and environmental assessments and reports are just a part of sustainability assessments and reports. What's more, the preparation of integrated reporting occurs before launching an international integrated reporting framework (IIRC, 2012). In this context, all three reports (economic, environmental, and social) should be unified into one report. However, the connectedness between them should be professionally analyzed and interdependencies explained. Environmental creditworthiness assessment methodology can be instrumental in this endeavor.

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OPERATIONAL CRISIS MANAGEMENT TECHNIQUES IN THE CATERING INDUSTRY IN TIMES OF RECESSION: THE CASE OF THE MUNICIPALITY OF PIRAN

Operativne tehnike kriznega upravljanja v gostinstvu v času recesije: primer občine Piran

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Abstract

This study examines crisis management techniques in the catering industry. The survey was conducted in the municipality of Piran, the most developed Slovenian municipality in terms of tourism and an important tourist center in the northern Mediterranean. This paper investigates the response of the catering industry to the economic crisis by analyzing the use of different micro-level crisis practices in the catering industry. The study uses a questionnaire to evaluate the importance and usage of different crisis management techniques in the catering industry. The findings indicate a high level of inconsistency between the importance and usage of crisis management techniques. Government assistance is by far the most important and most used technique in times of crisis. Suggestions for future research and useful information for managers of catering facilities are provided.

Keywords: recession, crisis management, catering industry, municipality of Piran

Izvleček:

V študiji so obravnavane tehnike kriznega menedžmenta v gostinski operativi v času recesije. Raziskava je bila opravljena na območju občine Piran, ki je turistično najrazvitejša občina v Sloveniji. V raziskavi smo proučevali odziv gostinskih obratov na gospodarsko krizo z analiziranjem uporabe različnih operativnih tehnik v gostinstvu. V študiji smo uporabili vprašalnik za ocenjevanje pomena in uporabe različnih operativnih tehnik za krizno vodenje v gostinstvu. Ugotovitve kažejo, da obstaja visoka stopnja neskladnosti, ko govorimo o pomenu in uporabi različnih tehnik kriznega upravljanja. Državna pomoč je daleč najpomembnejša in najbolj uporabljena tehnika kriznega upravljanja. V sklepu so podane koristne informacije za vodje gostinskih obratov ter predlogi za prihodnje raziskave.

Ključne besede: recesija, krizno vodenje, gostinstvo, občina Piran

1 Introduction

One of the most significant characteristics of modern times is the existence of crises. The economic crisis that began in 2008 has been the most tenacious one since 1929 (Brandl & Traxler, 2011). The crisis began with a liquidity crisis in the banking system resulting from the sale of complexly structured financial products. In the beginning, the crisis did not reach Slovenia; however, during the crisis, the Slovene economy suffered, mostly due to its economic (banking) problems. The altered perception of risk and the increased number of unemployed people led to decreased demand.



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The statistical and financial data show that tourism represents 2.5% of the national GDP and employs 3.3% of the economically active population in the country (SORS, 2010). The current research was performed in the municipality of Piran. The data from Statistical Office of the Republic of Slovenia show that the municipality of Piran is the most developed Slovenian municipality in terms of tourism. The municipality of Piran achieved the highest number in overnight stays (1,415,337 tourists), the highest number of rooms and beds (42,720 and 15,253 respectively), and the second highest number of tourist arrivals (415,469) (SORS, 2013a, 2013b).

In 1994 Slovenia took over a new classification of business entities for the purposes of official and other administrative databases. The Standard Classification of Activities covers 21 areas, and food and beverage facilities can be found under “Food and beverage service activities”¹ (SORS, 2010). In Slovenia in 2011, 2,193 F&B companies (establishments) operated, with a total of 8,859 employees. The number of F&B establishments operating in the municipality of Piran in 2011 was 172. Table 1 provides basic financial data for companies in F&B for Slovenia and the municipality of Piran in 2011. Companies in the municipality of Piran have a higher share of assets founded by the owner’s equity. Both return ratios are negative, which indicates that companies are suffering losses. As far as ratios of salaries are concerned, companies in the municipality of Piran achieved worse results than the average of companies in Slovenia. The low value of value added per employee indicates that some serious structural changes are needed. The most apparent outcome of the crisis is a decline in consumption and the reduction of tourists and daily visitors (Ajpes, 2012).

Table 1: *F&B Service Activities for Slovenia and the Municipality of Piran—Financial data for 2011*

Financial indicators	Value	
	Slovenia	Municipality of Piran
Ratio of capital to capital and liabilities, in %	21.3	32.8
Current Ratio	0.77	0.75
Net return on assets (ROA)	-0.010	-0.009
Net return on capital (ROE)	-0.045	-0.027
Revenues per employee in EUR	61,087	56,605
Value added per employee in EUR	19,721	18,483
Average gross monthly salary per employee in EUR ²	958	939

Source: (Ajpes, 2012)

The current study expands the existing body of literature by examining the catering industry. Current litera-

¹ Food&Beverage (F&B)

² Official figures do not include tips and other benefits.

ture on crisis management (presented in the next section) primarily focuses on general and strategic guidelines for coping with different crisis situations, while almost no studies measure and evaluate the micro-level operational practices of the catering businesses. Thus, the goal of this article is to analyze the perceived importance and the level of usage of different crisis management practices in the catering industry in Piran in times of recession.

Based on the literature review, we formulated our research question: How do managers of food and beverage facilities in the municipality of Piran evaluate the importance and usage of crisis management practices for the catering industry?

This paper offers a methodology for studying and implementing micro-level practices of crisis management in the catering industry in Slovenia. In the conclusion, suggestions for future research and useful information for managers of catering facilities are provided.

2 Literature Review

The current literature on crisis management in tourism focuses primarily on general prescriptive models (techniques) that provide general guidelines for coping with different crisis situations such as terrorism, health-epidemic crises (Baxter & Bowen, 2004; Handerson, 2003), and natural disasters (Pforr & Hosie, 2010). The majority of research efforts were primarily directed to violence activities relevant to the tourism industry and recommendations for preparations for times of terror. Pizam and Mansfeld (1996), Leslie (1996), and Mansfeld (1999) analyzed different occurrences of terrorism in the tourism context whereas Stafford, Yu, and Armoo (2002) and Blake and Sinclair (2003) detailed the reaction of the USA hospitality industry to the terroristic events of September 11, 2001. In addition, Damion (2012) analyzed the recovery of Balinese and Egyptian tourism after terrorist attacks. Ritchie (2003) stressed the importance of a holistic approach to crisis management in tourism, as tourism crisis management can be vastly improved through the application of crisis and disaster theories and concepts from other disciplines.

Alternative models generally focus on business crises, although the scientific literature barely mentioned the economic crisis effects on tourism prior to the financial crisis of 2008. The majority of studies (published before 2008) present crisis management from a historical, descriptive, or comparative perspective. Lerbinger (1997) categorized crisis according to external and internal factors that generated different business crisis types. Mansfeld’s (1999) historical review suggests that one method for coping with crisis is by using extensive marketing. Other studies have sought to improve theoretical models (i.e., the ability) to forecast sudden major changes in economic systems and business cycles that could potentially lead to crisis situations (Chian, Borotto, Rempel, & Rogers, 2005; Puu, 1991). Ang (2001) compared the impact of major crisis areas on different national economies (the 1973 US oil crisis, the

1990 Yugoslavian stagflation, the mid-1980s Filipino stagflation, the 1989 economic democracy in Eastern Europe). The results indicated that crisis planning received little attention, and a major concern for crises was generated only after experiencing crisis events. This finding was also supported by Spillan and Hough (2003) in their research about crisis planning, which found that even those businesses that had previously experienced crises did not have crisis management teams.

Finally, some studies provide an outline for crisis management in the hospitality industry. Barton (1994) presented general guidelines for managerial preparations required in times of crisis. Ulmer and Sellnow (2000) provided a case study based on historical and ethnical analysis in presenting the crisis on a restaurant chain. Studies dealing with economic effects on tourism (mostly on tourism demand, not on offer) were published only after 2008 (Blazevic, 2010; Mihailovic & Marjanovic, 2010; Prstojevic & Dimitric, 2010; Richa & Venkatesh, 2009; Susilovic & Sertic, 2010), although some authors have investigated the response of different hospitality facilities to the crisis. Kimes (2009) investigated the hotel revenue management practices in an economic downturn. The study revealed that the crisis is worldwide and no distinction is made between different hotel types with different brands or qualities, although Barsky (2009) found that crisis affects luxury hotels less than others. This finding was also supported by Barsky and Nash (2008) and Kim and Kim (2005). Meanwhile, Herbert, Hudspeth, Soni, Tarry, and Walton (2009) stated that, for some reasons, the most severely affected businesses tend to be the French fine-dining restaurants, as they carry the stigma of being expensive. These findings are also supported by Hampson and McGoldrick (2011). Their research on shopping patterns during a recession showed that shoppers are much more knowledgeable about and concerned with value than ever before.

Alonso-Almeida and Bremser (2012) investigated strategic responses of the Spanish hospitality sector to the financial crisis. The study showed that hotels focusing on high quality, brand image, strong marketing performance, and loyal customers are best equipped to handle the crisis. In times of crisis it appears that branded hotels can retain their clientele by offering added value for customers. This finding suggests that a positive relationship exist between customer loyalty and retention and the hotel's financial performance (Williams & Neumann, 2011). Gruca and Rego (2005) indicated that customer satisfaction and loyalty reduce the variability of future cash flows, and hotels with a higher level of customer satisfaction enjoy lower price sensitivity. Along with brand image and quality, the findings demonstrated that the best way of coping with crisis is by maintaining a large and loyal customer base, which affects performance positively during and after the crisis (Alonso-Almeida & Bremser, 2012).

Cost reduction is also a commonly used strategy in times of recession. Retrenchment through cost-cutting enables

firms to rebound from recession (Pearce & Michael, 1997), but extra caution is required when implementing such measures as they could permanently damage the company's competitive advantage and market share growth. The data also showed that the worst performers in times of crisis only take measures to increase flexibility. Such measures change the service offered and deteriorate the competitive position. As a result, companies are forced to reduce prices to attract customers. Managers must be extra cautious regarding the extent to which they implement this strategy (Alonso-Almeida & Bremser, 2012; Okumus & Karamustafa, 2005). Alonso-Almeida and Bremser (2012) found that hotel management cuts salaries, budgets, and services immediately to cope with a crisis. A cost-reduction strategy is essential, but it must be implemented carefully and should always take into account other vital elements, especially the brand image and the quality of services offered. The best model of coping with crisis (the case of Spain) shows that some hotels did not suffer a decrease in sales after carefully reducing costs. The worst performers were not able to cut operational costs, but were forced to decrease their prices (Alonso-Almeida & Bremser, 2012).

Recession also creates opportunities, and managers should make efforts to create a strong brand through marketing, new distribution channels, alternative suppliers, etc. Managers should not take measures that visibly affect either brand image or quality (Alonso-Almeida & Bremser, 2012; Okumus & Karamustafa, 2005). Cost reduction (Alonso-Almeida & Bremser, 2012) is generally the most used crisis practice to cope with crisis in Spain and is followed by efficiency improvement, competitiveness improvement, and income reduction. Income reduction through price reductions and the reduction of occupancy rates is the last measure managers take to cope with crisis. A study on the impacts of recession on tourism and hotel companies in Croatia (Smolčić Jurđana & Maskarin, 2010) revealed similar measures implemented by hoteliers in order to minimize the impacts of recession. Such measures include pricing policy (in terms of intensive yield management, lower prices were offered only for special purposes), product policy (instead of offering new products, hoteliers thoroughly focused on existing ones), promotion (marketing budgets were increased between 30% and 60%), and costs (employee, material, and energy costs). The analysis pointed out that none of the measures had influenced the quality level and that hidden reserves for increasing business efficiency were found.

In theory, crisis management can be divided into anticipatory, crisis identification, and reactive crisis management (Laitinen, 2000). Previous studies considered proactive marketing strategies as the most successful ones in times of crisis (increased spending on marketing and sales), as results have shown that during recession consumers adapt their shopping patterns. Companies must react to this change with increased visibility on the market (Laitinen, 2000; Okumus & Karamustafa, 2005). Azabagaoglu and

Oraman (2011) stated that, although in general shopping patterns change during recession, consumers prefer known quality brands and tend to be loyal to them. Turning to new markets or segments during recession also helps increase sales. Kimes (2009) and Lee, Beamish, Lee, and Park (2009) noted that, during the peak of a recession, even a cautious expansion (new marketing acquisition) should be pursued.

Nevertheless, to date almost no research has examined specific micro-level practices in the catering industry. No similar studies have been conducted in Slovenia or the EU. The only studies that have addressed the specific micro-level (operational) activities restaurant managers have to take to manage crisis situations and evaluate the importance of these activities (as well as their usage) in the catering industry are those conducted by Israeli and Reichel (2003) and Israeli (2007) on the Israeli hospitality industry and Okumus and Karamustafa (2005) on the Turkish hospitality industry.

Based on the literature review, we formulated the following research question: How do managers of food and beverage facilities in the municipality of Piran evaluate the importance and usage of crisis management practices for the catering industry?

3 Methodology

The basis of our study is a questionnaire developed by Israeli and Reichel (2003) as a tool for evaluating crisis-management practices in the Israeli hospitality industry. This method is based on the importance-performance model, which focuses on two related factors: recognition of the importance of measures and the level of performance (usage) for each of these measures (Martilla & Jameson, 1977). The main argument of the importance-performance model is that matching importance and performance is the basis of effective management. The first part of the questionnaire examined the level of importance managers assigned to each of the 19 practices whereas the second part included questions about the level of actual usage for each of the 19 practices using a 5-point Likert-type interval scale. The study used these techniques to develop four major categories of crisis management: marketing, operational processes, government assistance, and human resources. This model can aid in evaluating different crisis management techniques. As the selection of specific techniques in a given industry is crucial (Yoon & Hwang, 1995), the list of techniques with general guidelines can also be assembled for specific problems in different areas of tourism industry. Due to local specifics of the catering industry, some practices listed by Israeli (2007) were adequately adjusted.

In order to measure how managers cope with the global financial crisis, a field survey was conducted. Our research covered the entire population of F&B facilities in the coastal municipality of Piran. Managers were asked to cooperate in the research in order to gain their perspectives of crisis management. The sample included all 191 facilities operating in the municipality of Piran. The survey was

Table 2: *Techniques of Crisis Management for the Catering Industry (by category)*

Category	Technique description
Human resources	Reduce the number of employees Shorten working hours Lower personal income Replace high-tenure employees with new employees Increase reliance on outsourced human resources
Marketing	Joint marketing campaigns with business partners Active advertising in the media Increased the number of specific actions (happy hour, etc.) Price drops Promote new products and services Market to new segments Increase the number of fixed price menus
Operational processes	Cost cuts by limiting restaurant services Cost cuts by using cheaper substitutes in the kitchen Postpone maintenance to the facility Postpone scheduled payments
Government assistance	Organize protest against the tax legislation Organize protest against labor legislation Increase the sector's power by joining catering associations, chambers, unions, etc.

Source: Adapted from Israeli and Reichel, 2003

carried out by students of the Faculty of Tourism Studies Portorož–Turistica in September 2012. A surveyor went to each facility, asked to meet the manager, and gave him or her the questionnaire. The manager could complete the questionnaire on the spot or ask the surveyor to return at a later time to pick up the questionnaire. Some managers refused to participate for a variety of reasons. From the original sample of 191, 94 questionnaires were returned. The response rate was 42.21%. Eight of these questionnaires were unusable, so they were not included in our study. Hence, the final analysis is based on 86 valid questionnaires. Students' fieldwork was supervised by lecturers. The SPSS program was used for the analysis of the results.

The questionnaire consisted of two parts. The first part measured managers' perceptions of the importance and use of crisis management techniques on a 5-point Likert-type interval scale ranging from 1 (least important/rarely used) to 5 (most important/extensively used). Due to weak and statistically non-significant correlations (at $p > 0.05$), for the empirical analysis, the non-parametric Wilcoxon Mann Whitney U test was employed. This test is quite commonly used instead of t -test for independent groups (Ho, 2006). We compared the medians (Me) between different paired groups and checked for any statistically significant differences. For the empirical analysis, we formed the null hypothesis (H_0) and the alternative hypothesis (H_1) for each pair of analyzed variables: $H_0: Me_1 = Me_2$, $H_1: Me_1 \neq Me_2$. The second part of the questionnaire collected socio-demographic data about respondents and basic information on F&B facilities. These data were analyzed using a descriptive statistical analysis.

4 Results and Discussion

First we analyzed the socio-demographic data. The demographic data of the respondents are presented in Table 3.

There were more male managers (65.1%) than females (34.9%). The highest proportion of respondents fell into the 35 to 44 years old age group (31.4%), followed by 45 to 54 years old age group (30.2%). As far years of experience are concerned, the highest proportion of respondents fell into the 0 to 10 years group, and 38.4% of respondents had completed secondary education. In addition, 52.3% of respondents owned and managed the facilities. Next we analyzed basic information on F&B facilities.

Table 4 indicates that snack bars (25.6%) and ordinary bars (24.4%) prevailed in our study. More than half of F&B facilities (58.1%) were organized as sole proprietorship. This led us to think that these F&B facilities are smaller business entities.

According to Table 5, in terms of importance of techniques, the highest mean is “increase reliance on outsourced human resources,” followed closely by “postpone maintenance to the facility,” “postpone scheduled payments,” and “organize protest against the tax legislation.” Only in the fifth place we can find a technique from the marketing category “promote new products and services.” If we turn our attention to the usage of crisis management techniques, the highest mean is “increase the number of specific actions,” followed by “reduce the number of permanent employees,” “lower personal income,” and “increase the number of fixed price menus.” Interestingly, the lowest mean for importance of techniques was “lower personal income,” but this same technique is among the top three when it comes to the highest mean in terms of the usage of crisis management techniques.

In the next step, the Spearman correlation was calculated; in almost all cases, the correlations were not statis-

Table 3: Profile of Respondents (n=86)

Variables		Frequency (s)	Percentage (%)
Gender	Female	30	34.9
	Male	56	65.1
Age	up to 24	8	9.3
	25–34	20	23.3
	35–44	27	31.4
	45–54	26	30.2
	55–64	5	5.8
Years of experience	0–10	51	59.3
	11–20	21	24.4
	21–30	9	10.5
	31–40	5	5.8
Level of education	Postgraduate education	1	1.2
	Higher education	28	32.6
	Secondary school	33	38.4
	Vocational school	20	23.3
	Primary school	4	4.7
Ownership structure	Owner and manager of a facility	45	52.3
	Manager of a facility	41	47.7

Table 4: Basic Information on F&B Facilities (n=86)

Variables		Frequency (s)	Percentage (%)
Type of F&B facility	Restaurant	26	30.2
	Inn	10	11.6
	Pastry shop	3	3.5
	Cafe	3	3.5
	Snack bar	22	25.6
	Bar	21	24.4
	An establishment for preparation and delivery of meals	1	1.2
Type of business entities	Sole proprietorship	50	58.1
	Limited liability company	33	38.4
	Joint-stock company	3	3.5

tically significant (at $p > 0.05$). This led us to conclude that a high level of inconsistency exists when we talk about the crisis management behavior of managers who participated in our research. A statistically significant correlation (at $p < 0.05$) was found for only five techniques: “organize protest against the tax legislation,” “cost cuts by limiting restaurant services,” “joint marketing campaigns with business partners,” “reduce the number of employees,” and “increase the number of specific actions.” The values of the Spearman correlation were 0.292, 0.408, 0.357, 0.415, and 0.397, respectively.

This led us to use the non-parametric Wilcoxon Mann Whitney U Test for two independent samples. We compared the medians (*Me*) between different paired groups and checked for any statistically significant differences. The results are presented in Table 6.

When we talk about the importance of crisis management techniques, we can reject the null hypothesis in favor

of the alternative hypothesis for only one technique: “price drops.” If we look at the usage of crisis management techniques, we can reject the null hypothesis in favor of the alternative hypothesis for only two techniques: “organize protest against tax legislation” and “organize protest against labor legislation.” For the technique “price drops,” the mean at restaurants is 3.42 while the mean at bars is 2.71. For the technique “organize protest against tax legislation,” the mean at restaurants is 1.88 while the mean at bars is 2.95. For the technique “organize protest against labor legislation,” the mean at restaurants is 1.93 while the mean at bars is 2.90. The data indicated the combination of marketing practices with practices of turning to government for support. This combination can be explained by the awareness of many managers that price drops are inevitable, but it is the government’s responsibility to rescue them from the impact of this crisis. Moreover, they believe that with government assistance they will be able to reduce their costs and offer more competitive prices.

Table 5: Techniques’ Mean and Standard Deviation of Importance and Usage

Technique description	Importance		Usage	
	Mean	Std.dev.	Mean	Std.dev.
1. Reduce the number of employees	2.85	1.459	2.97	1.491
2. Shorten working hours	2.62	1.365	2.62	1.312
3. Lower personal income	2.40	1.357	3.10	1.096
4. Replace high-tenure employees with new employees	2.93	1.263	3.14	1.219
5. Increase reliance on outsourced human resources	3.57	1.213	2.95	1.405
1. Joint marketing campaigns with business partners	2.91	1.351	2.48	1.477
2. Active advertising in the media	2.47	1.326	2.66	1.428
3. Increased number of specific actions	2.50	1.299	3.19	1.288
4. Price drops	3.00	1.198	3.03	1.467
5. Promotion of new products and services	3.48	1.225	2.58	1.306
6. Market to new segments	3.37	1.381	2.70	1.398
7. Increased number of fixed price menus	3.08	1.357	3.08	1.180
1. Cost cuts by limiting restaurant services	3.37	1.381	2.91	1.343
2. Cost cuts by using cheaper substitutes in the kitchen	2.84	1.379	2.91	1.508
3. Postpone maintenance to the facility	3.52	1.244	2.98	1.337
4. Postpone scheduled payments	3.52	1.272	2.57	1.523
1. Organize protest against the tax legislation	3.52	1.326	2.50	1.485
2. Organize protest against labor legislation	2.95	1.405	2.57	1.402
3. Increase the sector’s power by joining catering associations, chambers, unions, etc.	2.70	1.311	2.28	1.469

Table 6: Wilcoxon Mann Whitney U Test—Restaurants and bars

	Importance	Usage	
	Price drops	Organize protest against tax legislation	Organize protest against labor legislation
Mann-Whitney U	182.500	158.000	157.000
Wilcoxon W	413.500	509.000	508.000
Z	-1.991	-2.589	-2.609
Asymp. Sig. (2-tailed)	0.046	0.010	0.009

Table 7: Wilcoxon Mann Whitney U Test—Bars and snack bars

	Importance
	Increased reliance on outsourced human resources
Mann-Whitney U	152.000
Wilcoxon W	405.000
Z	-2.021
Asymp. Sig. (2-tailed)	0.043

Table 7 shows that, when we talk about the importance of crisis management techniques, we can reject the null hypothesis in favor of the alternative hypothesis for only one technique: “increased reliance on outsourced human resources.” In terms of the usage of crisis management techniques, we must accept the null hypothesis for all 19 techniques. For this technique, the mean at bars is 3.71 while the mean at snack bars is 3.36. It is quite difficult to explain the inclusion of only this technique in the importance category. Nevertheless, this led us to the logical conclusion that some cost cuts will eventually have to focus on human resources as this category presents the majority of all operational costs in bars.

The results in Table 8 show that, in terms of the importance of crisis management techniques, we can reject the null hypothesis in favor of the alternative hypothesis for three techniques: “lower personal income,” “price drops,” and “organize protest against the tax legislation.” For the usage of crisis management techniques, we can reject the null hypothesis in favor of the alternative hypothesis for three techniques—namely, “increased reliance on out-

sourced human resources,” “organize protest against the tax legislation,” and “organize protest against labor legislation”.

Let us look at the means considering the importance of crisis techniques. For the technique “lower personal income,” the mean at restaurants is 1.96, while the mean at snack bars is 2.52. For the technique “price drops,” the mean at restaurants is 3.42, while the mean at snack bars is 2.71. For the technique “organize protest against the tax legislation,” the mean at restaurants is 3.15, while the mean at snack bars is 3.33. For the usage of crisis techniques, the means are as follows: for “increase reliance on outsourced human resources,” the mean at restaurants is 2.54, while the mean at snack bars is 2.76; for “organize protest against the tax legislation,” the mean at restaurants is 1.88, while the mean at snack bars is 2.95; for “organize protest against labor legislation,” the mean at restaurants is 1.92, while the mean at snack bars is 2.90.

The results reflect a relatively high consistency of the importance and usage of techniques from the human resource category and the government assistance category. The “price drops” and “organize protest against the tax legislation” techniques combined the same logic that was discovered in Table 6. The common theme behind these two techniques is the belief that with government assistance companies will be able to reduce their costs and maintain their prices.

Table 9 shows that, for the importance of crisis management techniques, we can reject the null hypothesis in favor of the alternative hypothesis for only one technique: “joint marketing campaigns with business partners.” This finding means that joint marketing is also an important crisis management practice. For the usage of crisis management techniques, we can reject the null hypothesis in favor

Table 8: Wilcoxon Mann Whitney U Test—Restaurants and snack bars

	Importance			Usage		
	Lower personal income	Price drops	Organize protest against the tax legislation	Increased reliance on outsourced human resources	Organize protest against the tax legislation	Organize protest against labor legislation
Mann-Whitney U	174.000	190.000	175.500	192.000	193.000	177.500
Wilcoxon W	525.000	443.000	526.500	543.000	544.000	528.500
Z	-2.413	-2.049	-2.362	-1.992	-2.036	-2.363
Asymp. Sig. (2-tailed)	0.016	0.040	0.018	0.046	0.042	0.018

Table 9: Wilcoxon Mann Whitney U Test—Sole proprietorship and limited liability company

	Importance	Usage		
	Joint marketing campaigns with business partners	Shorten working hours	Active advertising in the media	Market to new segments
Mann-Whitney U	604.000	621.000	615.500	568.000
Wilcoxon W	1879.000	1896.000	1176.500	1129.000
Z	-2.107	-1.958	-2.005	-2.464
Asymp. Sig. (2-tailed)	0.035	0.050	0.045	0.014

of the alternative hypothesis for three techniques: “shorten working hours,” “active advertising in the media,” and “market to new segments”.

For “joint marketing campaigns with business partners,” the mean at sole proprietorship is 2.60 and at a limited liability company is 3; for “shorten working hours,” “active advertising in the media,” and “market to new segments,” the means are 2.34 and 1.88, 2.88 and 3.12, and 2.96 and 3.13, respectively. The assortment of used marketing techniques corresponds quite nicely with the marketing category. This category included the promotion-related techniques available for crisis management. “Shorten working hours” comes from the human resource category, but the main motivation behind this technique is to improve restaurant competitiveness, which focuses on targeted promotion and product offering. The grouping of these practices seems logical.

Table 10: Wilcoxon Mann Whitney U Test—Owner and manager or manager

	Importance	Usage
	Increase the sector's power by joining catering associations, chambers, unions, etc.	Market to new segments
Mann-Whitney U	674.500	702.500
Wilcoxon W	1709.500	1737.500
Z	-2.197	-1.958
Asymp. Sig. (2-tailed)	0.028	0.050

If we look at the mean at the importance of the technique “increase the sector’s power by joining catering associations, chambers, unions, etc.,” the mean for owner and manager is 2.42 while the mean for manager is 3.00. For “marketing to new segments,” the mean is 2.42 and 3.00, respectively. The results in Table 10 show that, for the importance of crisis management techniques, we can reject the null hypothesis in favor of the alternative hypothesis for only one technique: “increase the sector’s power by joining catering associations, chambers, unions, etc.” For the usage of crisis management techniques, we can reject the null hypothesis in favor of the alternative hypothesis for only one technique as well: “market to new segments.” The importance and usage of these two techniques seem quite inconsistent with their original categories (marketing category and government assistance category), but they again confirm the same logic that was discovered in Tables 6 and 8. The technique combined a government assistance technique aimed at increasing the sector’s power and demand for a reduction of taxes with a technique from the marketing category focused on the aspect of promotion. This can be logically explained as the government assistance is something managers can only demand. In contrast, the technique from the marketing category is under immediate control of management, who can control how it is applied in the business.

5 Conclusions, Recommendations, and Suggestions for Future Research

In conclusion, the findings focus on several important observations and findings. According to our research question we can conclude that there is a high level of inconsistency when we talk about the crisis management behavior of managers who participated in our research.

The first important observation was that most of the techniques were used reactively as a direct response to the crisis. This finding was already identified in other studies (Israeli, 2007; Israeli & Reichel, 2003; Mansfeld, 1999). Proactive management is undoubtedly necessary, but in practice randomly occurs. Proactive strategies are difficult to implement universally, as the use of internal factors to successfully overcome the external crisis (recession) often depend on other external factors (legislation, market offer, politic situation, etc.), thereby limiting managerial ability to use internal factors. As a result, crisis management is often performed through different combinations of practices.

Second, the crisis management scenario mostly relies on gaining government support. This is by far the most important and used technique in times of recession. Recession is an external and not internal (managerial) crisis, and the government is perceived as the main culprit for the crisis. This finding was already identified by Israeli (2007) and Stafford et al. (2002). The other important group of technique can be titled cost reductions. This group of practices included “cost cuts by limiting restaurant services,” “joint marketing campaigns with business partners,” “reduce the number of employees,” and “increase the number of specific actions.” In times of crisis, cost reductions must be a major element of the business activity, but specific techniques such as “cost cuts by limiting restaurant services” and “reduce the number of employees” should be implemented with extreme caution. As people are the crucial and unmistakable component of success in the catering business, managers should avoid these techniques. Competitiveness should be achieved through other practices rather than labor cost reductions. As there are no similar studies in Slovenia or the EU, we can strive to compare this study to measures implemented by hoteliers. The analysis of the neighboring Croatia (Smolčić Jurdana & Maskarin, 2010) pointed out that none of the measures implemented by hoteliers influenced the quality level and that hidden reserves for increasing business efficiency were found. This could be partially explained by the incomparable size of the establishments (bars prevailed in our study) and the educational level of managers. The majority of restaurant managers only have vocational or secondary education.

In the context of the catering industry, we can reconfirm Israeli’s (2007) two main practical recommendations. Managers should focus primarily on increased competitiveness and cost/price reduction as a part of their daily routine. According to our findings, we must further recommend the future education of restaurant managers. As different crises

also create opportunities, managers should make efforts to take advantage of any crises by turning to new segments, creating a strong brand image through intensive marketing, implementing new distribution channels, etc.

The suggestions for future research are to extend the analysis to different areas of the tourism industry in the country and region. Israeli (2007) stated that, due to the lack of the long-term perspective, it is impossible to determine whether crisis management practices improve position and performance of the firm on the long run. We can conclude that the economic crisis will undoubtedly pass, but there will always be different crises. Crisis management techniques can help companies adapt and survive in times of crisis. As catering companies operate in a volatile environment, constant adaptation is needed. The list of specific techniques can be used as a guideline for crisis managers on how to successfully overcome or even avoid different crisis situations, if the techniques are used proactively.

Given the limited geographic area in which the study was performed, the results might not be applicable to facilities in other locations. An increase in the geographic coverage to the entire country could offer further valuable insights. The survey only gives a snapshot of the situation during the crisis period, although it offers an almost complete picture of a specific geographic area. Larger data are required to detect the long-term effects of the recession. In addition, a thorough financial analysis could offer useful information as managers' perception is often biased. This study only refers to catering establishments. Other companies that also belong to the tourism sector are not included in the study. Further interesting findings would result from a deeper analysis of the entire tourism sector.

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