#### TAMÁS HARANGOZÓ

## INTEGRATING HUMAN CAPITAL INTO CORPORATE STRATEGIC PERFORMANCE MANAGEMENT

- CHALLENGES AND PRACTICAL IMPLICATIONS FROM THE LEADER'S PERSPECTIVE

### A HUMÁN TŐKE BEÉPÍTÉSE A SZERVEZETI STRATÉGIAI TELJESÍTMÉNYMENEDZSMENTBE

KIHÍVÁSOK ÉS GYAKORLATI KÖVETKEZMÉNYEK A VEZETŐ SZEMPONTJÁBÓL

The increasing role of intellectual capital – and its key component, human capital – in corporate value creation has been one of the most discussed topics in performance management studies in the last three decades. Many scholars and practitioners agree that these critical intangible strategic resources must be monitored and effectively managed at the firm in order to achieve corporate performance targets and execute strategy successfully. Integrating human capital into the strategic performance management system is not a simple exercise though as various organizational factors must be managed consciously on the way. This longitudinal case study research is focusing on the role of leadership on how human capital is integrated to strategic performance management, by analyzing various data at a leading financial service provider for more than 10 years. During this period the senior leadership was changed, which had a significant impact on both the perceived importance of human capital as well as the way how it was integrated to strategic performance management at the specific organization.

#### Keywords: intangibles, human capital, strategic performance management systems, leadership

Az intellektuális tőke – valamint az annak kulcselemét jelentő humán tőke – a vállalati értékteremtésben betöltött megnövekedett szerepének kérdése az elmúlt 30 év teljesítménymenedzsment-szakirodalmának egyik leggyakrabban tárgyalt témaköre. Számos kutató és gyakorlati szakember egyetért abban, hogy ezeknek a kulcsfontosságú nem tárgyiasult stratégiai erőforrásoknak a mérése és hatékony menedzsmentje kulcsfontosságú mind a vállalati teljesítménycélok elérése, mind pedig a stratégia sikeres megvalósítása szempontjából. A humán tőke stratégiai teljesítménymenedzsment-rendszerbe való beépítése azonban korántsem egyszerű feladat, hiszen számos szervezeti kihívással kell számolni a megvalósítás során. Ennek a 10 éves longitudinális esettanulmány-kutatásnak a fő fókusza annak vizsgálata, hogy miképpen hat a felső vezető vezetési stílusa a fenti kérdésre egy hazai piacvezető pénzügyi szolgáltató esetében. A kutatási időszak során a felső vezetők cserélődtek a vizsgált szervezetben, ami szignifikánsan befolyásolta mind a humán tőke észlelt fontosságát, valamint annak megjelenését a stratégiai teljesítménymenedzsment-rendszerben is.

Kulcsszavak: nem tárgyiasult erőforrások, humán tőke, stratégiai teljesítménymenedzsment-rendszerek, vezetési stílus

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It was more than 25 years ago when Fortune Magazine published Thomas Stewart's (1991) ground-breaking cover story about the role of intangibles or intellectual capital (IC) in value creation and corporate performance.

Although human resources, effective processes and organizational structures or sustainable market relations had earlier been already considered and discussed as key factors in value creation, both Stewart's article and popular

book six years later (Stewart, 1997), did significantly stimulate the theoretical and practical discussion about knowledge capital at the early 1990s.

In the meantime, other well-recognized scholars – such as Lev, Davenport, Mouritsen and Paloma Sánchez –, and practitioners from different backgrounds – such as Edvinsson, Sveiby or Kaplan and Norton – have also joined in this discussion about intellectual capital management (ICM) and its role in value creation or executing corporate strategy and generating performance.

The first period of the related studies was trying to create clear definitions and practical classifications for intellectual capital and its components. In parallel, various measurement methods and tools have been developed to capture performance, value or strategic contribution of intangible strategic resources, including human capital. Many organizations have realized that their traditional performance management tools and reporting structures lack proper managerial information about their most crucial resources, the intangibles. This led to significant investments to new performance management tools and projects even if the first ICM initiatives often ended up with low impact on the organization and its management practices. This led to most recent times when the scholars are aiming to understand the way how to overcome the key challenges what organizations have been facing during the implementation and use of their ICM tools or when trying to integrate intangibles and human capital into their management systems. As various scholars (see, for instance Bőgel, 2006) emphasize it, if the organization does not manage its strategic resources like human capital properly, they face a significant risk of losing a significant part of their assets. One of the first steps is to be aware and monitor the key performance dimensions of human capital and integrating it to strategic performance management systems of the firm accordingly.

How can senior leadership of the firm influence and support the organization to overcome the related challenges, and what are the typical dimensions of human capital being captured in a strategic performance management system – these are the key questions of this paper.

When answering these two main topics, this paper starts with extensive literature review on the role and management tools of intellectual and human capital. Then a 10 years longitudinal case study will be described and used to lead us to our main scientific results and practical insights. The financial service provider in the center of this paper is a good example to understand the role of senior leadership in intellectual capital management in a knowledge-oriented organization.

## Value creation and corporate performance – An increase in role of intangible strategic resources

The discussion in management sciences about the role of intangible strategic resources is not a new (see, for instance Beer, Spector, Lawrence, Mills, & Walton, 1985; Davenport & Prusak, 2001; Hislop, 2009; Dalkir, 2011;

Gudas, 2012 or Tari, 2019) but still one of the 'hot topics' in both performance management and management accounting studies in the last two or three decades. The first stage of the intellectual capital management dialogue in the early 1990's was intensive and concentrated mainly on 'theoretical basics'. From the mid 1990's and early 2000's various practical management methods have been developed, most of them consciously designed to capture intangible strategic resources and manage them from various functional aspects in an organization, including its management control and strategic performance management systems. After a relatively quiet period in the mid 2000's, the research of more recent times has concerned by a better understanding of the practical challenges of implementing and using the developed IC management tools in practice, as well as finding possible solutions and answers to the significant critiques have emerged regarding the generic and theoretic approach and the lack of real practical impacts and implications offered by the ICM perspective (Bontis, 2001; Juhász, 2004, 2016; Kaufmann & Schneider, 2004; Tóth, 2008; Dumay, 2009; Guthrie, Ricceri, & Dumay, 2012; Dumay & Garanina, 2013; Guthrie & Dumay, 2019).

If we apply Gartner's classic lifecycle model (Gartner, 2016) to the ICM approach and its practical use in organizations, the most recent times could be called the phase of 'Through disillusionment'. After the ICM perspective brought up a significant management topic onto the table but has been not able to fulfill the high expectations generated previously regarding the impact and benefits of the developed management tools and methods, recently both the scientific and practical management society have been disappointed and started to discuss the key problems and look for solutions to answer the practical challenges regarding intellectual capital management perspective (Dumay & Garanina, 2013).

Despite these challenges and the lower impact of ICM approach on corporate management practices, most scholars still agree that intangible strategic resources and human capital often play critical role in many organizations, especially in the so-called knowledge industries like education, financial services, software development, fashion, consulting or technology innovations. In these but also in other sectors effective and efficient management of human capital – or as Austin and Larkey refer to it, talent, skills and knowledge differentials of *knowledge workers* – is extremely critical for success (Austin & Larkey, 2007).

Besides the example above, there are several additional signs and indications of a significant and increased role of intangible strategic resources in both corporate performance and value. These are all emphasizing the need for such management tools in organizations which can effectively and efficiently capture and handle these important strategic resources of the firm. Such trends are for instance:

• *Increasing gap between market and book value*. Share of intangible assets in corporate value is still relevant (higher than 85%) today as well and not only before the

financial crisis (based on Ocean Tomo LLC, 2015; Mahn, 2015).

• Increased investments into intangible strategic resources and human capital.

According to Leonard Nakamura's calculations, the US-based companies alone have already invested more than 1 trillion dollars into intangible strategic assets between until 2001 only. The author estimates the long-term investments balance into intellectual capital by private companies in the US around 6 trillion US dollars (see, in Lev & Zambon, 2003).

A most recent study has also reemphasized this trend: according to Statista Database, organizations consider their people, brands, customer relations, strategic partners, innovation and patents, and flexible organization are the most critical strategic resources and tend to invest into these assets more actively (Statista, 2017).

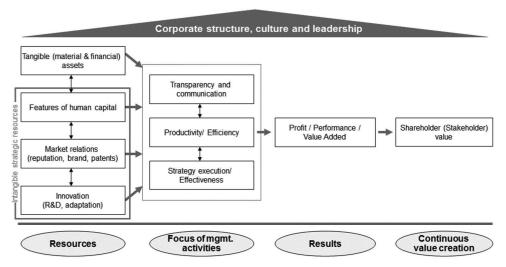
- Looking at the phenomenon from a broader *strategic*, organizational and performance management perspective, other significant insights and research studies can be listed regarding role and impact intellectual capital on organizations.
  - ° According to commonly referred-to scholars in this area, experienced human resources, patents, know-how, software, customer relations, brands, well-developed organizational processes and innovative business models play a crucial role in growth and corporate performance. As the authors emphasize, creating sustainable value is impossible without the conscious management and monitoring of these most crucial intangible components of performance (Lev, 2004).
  - ° Similarly, another study from the early 2000s highlights the role of market liberalization and expansion, better protection of intellectual properties, enhanced information sharing, the application of new ICT tools and systems, as well

- as product and technology innovations as the most important triggers of performance (Teece, 2000). Most of these components are strongly connected to intangible strategic resources, and thus emphasize the importance that should be awarded to intellectual capital measurement and management.
- o In another study, 84% of top managers of US-based companies highlighted the availability of highly qualified and motivated human resources ('human capital') as a crucial factor in corporate value creation and performance. Additionally, these managers not only believe in the reality of this situation but expect the trend to become stronger in the future (Oliver, 2001, in Juhász, 2004).
- A similar conclusion can also be derived from a Hungarian research project: in a combined study implemented by KPMG and Pannon University, 77% of the participating 130 companies in Hungary categorized intangibles and human capital as critical strategic resources of the organizations (KPMG BME Academy & Pannon University, 2006).
- ° Finally, a comprehensive research approach was applied by Juhász, 2016, when the author consolidated his longitudinal research focusing on 300 financial and top managers of different Hungarian manufacturing and service firms. According to the involved managers, in average still 48 to 51% of their firm's value depend on intangible strategic resources. Interestingly, most companies give little attention to measuring these items correctly.

As the above-mentioned studies already highlight, there is a practical need to systematically monitor and manage intangible strategic resources in most organizations. From a strategic performance management perspective, this means that the related key success factors and performance dimensions need to be integrated into the SPM system – or, based on the context and management

Figure 1.





Source: based on Lev & Servatius, in Horváth & Möller (2004) - modified

needs, to specific components of it. This observation is also valid for human capital, as one of the key components of intangible strategic resources or intellectual capital (specifically for human capital see in addition e.g. Crook, Todd, Combs, Woehr & Ketchen, 2011 or Önhon, 2019).

The 'house of value creation' has significantly changed in recent times, both in terms of type of strategic resources and the related key management requirements and activities (see, Figure 1.).

To execute strategy and create value in an organization having such a resources and activities structure like the house illustrates, the leaders of the firm need to put conscious emphasis on selecting and manage the most important resources and activities as key components of a comprehensive system: not only the classic tangible assets have to be developed but even more the intangible strategic resources such as *human capital*, *corporate relations*, and *innovation*. Amongst other components, *human capital* is a strategic resource, so management activities and communication about it should be transparent, its productivity should be measured, and its contribution to strategy execution monitored effectively.

## Intangible strategic resources and human capital – A various definitions for a 'complex organizational concept'

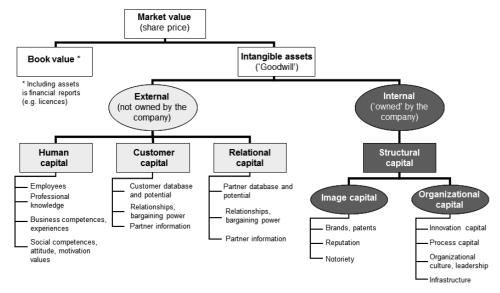
Since this article does not aim to consolidate or provide a comprehensive list of the different IC definitions and terminology, the following definitions are only examples to illustrate the key dimensions of intellectual capital or intangible strategic resources<sup>1</sup>:

• Intellectual capital is usually defined as a portfolio of strategic resources with no physical, material or

- monetary shape or existence but which still generates value for the organization (based on Kaufmann & Schneider, 2004; Arbeitskreis IWR, 2001).
- Gu and Lev (2001) additionally emphasize the role of context and declare that knowledge capital does not necessarily create value for an organization, but *they turn into value* in the form of profit or better strategic performance (etc.) only if they are integrated into the value adding processes of the firm. The authors refer to company's research and development, marketing, human resources management and IT practices as the most important intangible drivers of the organization.
- In another definition, intellectual capital refers to *such* assets of an organization that are based on knowledge. This approach differentiates between internal and external attributes of intellectual capital. In the first category, we can find such components like the expertise and experience of employees, business processes or the information system. Amongst external factors the brand value and the loyalty of customers are highlighted by the authors (Brennan Connell, 2000).
- Similarly, Pfeil (2004) based on Edvinsson and Sullivan defines *intellectual capital as knowledge that can be converted to value*.
- Another relevant and practice-oriented perspective was provided by RICARDIS project funded by the European Union, where term intangible strategic resources or intellectual capital refers to a combination of human, structural and relational capital, and those business activities of the organization which aims to develop these three categories (RICARDIS, 2006). In addition to providing a comprehensive glossary of intellectual capital management, this project emphasizes the difference between static and dynamic characteristics intangible strategic resources, which is an important added value

Figure 2.

General classification of intangible strategic resources – a management accounting and performance
management perspective



Source: based on Stoi & Daum, in Horváth & Möller (2004) – modified

from a performance management perspective (Sánchez, Castrillo & Elena, 2006).

• Finally, according to Kaplan and Norton (2005), the developers of balanced scorecard methodology, intangible strategic resources refer to a combination of different skills and capabilities of employees (expertise, talent, motivation), information systems (IT tools and infrastructure, knowledge management) and organizational dimensions (culture, leadership, coordination and team work) which are critical to generate strategic advantage and provide high-level services to customers.

Although the list of various definitions of intellectual capital may be continued<sup>2</sup>, it is not hard to recognize that most of these descriptions are too generic for any research and do not provide a pragmatic framework for performance management either. To able to identify key success factors and dimensions of intangible strategic resources and human capital, and measure their strategic contribution and performance, we need a more pragmatic and practice-oriented approach to define intellectual capital.

The following chart (Figure 2.) illustrates such a pragmatic and comprehensive categorization of intangible strategic resources.

In this categorization, *human capital* is considered as the most critical component of intangible strategic resources. Amongst others, skills and capabilities, professional knowledge as well as social competences, and experience and attitude of employees are in this category. Briefly, human capital consists of the most critical (strategic) skills, knowledge and other attributes of people in the organization which affect productive work and strategic execution (Sveiby, 2001a, 2001b).

By combining the abovementioned pragmatic classification of intellectual capital with the previously mentioned differentiation between *static versus dynamic notion of intangible strategic resources*, a pragmatic management method and tool is created to be effectively and efficiently utilized to capture and manage strategic performance or intellectual capital, and its components (including human capital).

Table 1. Intangible strategic resources and activities (a dynamic vs. static view of intellectual capital)

I. Static dimen- sion	Intangible strategic resources			
	Human Capital	Organization- al Capital	Relational Capital	
	Intangible strategic activities			
II. Dynamic dimension	To develop inter- nally or acquire intangible re- sources	To increase the value of already avail- able intangible resources	To evaluate and monitor intangible activities	

Source: based on Sánchez, Castrillo & Elena (2006) – modified

As the Table 1. illustrates as a part of comprehensive performance management process human capital management cannot only mean to focus on *intangible strategic resources* only, but also on those *intangible activities* which are to acquire, develop, improve or evaluate and monitor intangible strategic resources and human capital.

If we apply this differentiation between dynamic and strategic performance dimensions for human capital: not only the actual status and contribution of human resources are relevant for corporate performance management, but the activities as well which help the organization to maintain the necessary high alignment of human capital to strategy or even develop it further.

#### Intangibles in corporate strategic performance management – The typical performance dimensions to capture human capital and its contribution

Strategic performance management (SPM) systems play an important role in 21st century organizations. They are designed, implemented and used to provide the necessary information about performance and the status of strategy execution in an organization. As Franco-Santos and his colleagues claim, 'today, contemporary performance measurement systems comprise the use of financial as well as non-financial performance measures linked to the organization's business strategy', and 'are frequently recommended for facilitating strategy implementation and enhancing organizational performance' (Franco-Santos, Lucianetti, & Bourne, 2012, p. 79). Accordingly, the main objectives of SPM systems is enhancing performance by aligning people's behavior to strategy, as well as developing the necessary capabilities the organization may need to implement strategy successfully. One of the most important aspect of this latter, is providing relevant managerial information to leadership and support their decision making in organizations effectively.

According to De Waal, one of the most frequently referred authors of SPM literature, 'strategic performance management is 'the process in which steering of the organization takes place through the systematic definition of mission, strategy, and objectives of the organization, making these measurable through critical success factors and key performance indicators to be able to take corrective and preventive actions to keep the organization on track to great performance' (De Waal, 2013, p. 5).

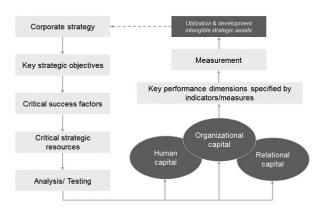
If we translate and apply this and link it to the current state of organizational value creation (Figure 1.) and the enhanced impact of intangible strategic resources on corporate performance, integrating intangibles (including human capital) into strategic performance management is vital to manage performance of the firm effectively. Amongst others, this has been one of the main goals of developing the various intellectual capital management methods in the last decades: to understand strategic objectives and business model better, support managerial

decision making and create better transparency about key performance of the firm (RICARDIS, 2006; Serenko & Bontis, 2013; Grimaldi & Rogo, 2013).

This is an especially relevant objective of the socalled scorecard methods of intellectual capital management, where the main goal is to identify the most critical components and performance dimensions (success factors) related to intangible strategic resources of the organization, and design such functional key performance indicators which are used later to monitor the status of the most important aspects of these resources (Bontis, 2001; Roos, Pike, S. & Fenrstrom, 2005; or Juhász, 2004; Harangozó, 2007; Boda, 2008; Tóth, 2008; Stocker, 2012; Németh & Dőry, 2019). By identifying critical success factors and strategic resources of the firm, as well as measure and analyze their impact on strategy execution and performance regularly are crucial to manage intellectual capital and its components successfully.

The overall SPM cycle of intangible strategic resources, including human capital, is summarized on the Figure 3.

Figure 3.
Key steps of strategic performance management and monitoring of intellectual capital



Source: based on De Beer & Barnes (2003, p. 19) - modified

One of the first steps in the ICM-cycle is to understand the corporate strategy and identify those components which are the most critical to implement strategy and achieve performance targets. These factors are to be monitoring by properly selected key performance indicators and reported to management regularly. Since intangible strategic resources are embedded into corporate strategy and context, the related key strategic performance indicators must be also derived from corporate strategy. There no 'one best' set of performance dimensions for human capital.

Nevertheless, after analyzing 15 various scorecard methods designed for measuring and managing performance of intangible strategic resources, with a special focus on human capital, the following key performance dimensions can be identified in the literature. These represent the most critical and typical six performance dimensions which shall be theoretically integrated into strategic performance management system.

Table 2. Key strategic performance dimensions of human capital

Overall	Static performance	Dynamic perfor-
category	dimensions	mance dimensions
Skills and competences	<ul> <li>Degrees &amp; educational level</li> <li>Proportion of core &amp; support staff</li> <li>Experience (knowledge)</li> </ul>	Training (volume, coverage, spending per employee)  Knowledge sharing & experience building
Attitude and loyalty	<ul> <li>Employee satisfaction</li> <li>Absenteeism</li> <li>Loyalty (years)/</li> <li>Average age in the organization</li> <li>Social competencies</li> </ul>	Training in social competencies     Team building
Diversity	Flexible employment (forms, coverage)     Women in different positions (manager, core, support)     Gender structure     People with disabilities	Fluctuation of key target groups     Hiring/ Employees from key target group     HR support for diversity (projects, services, etc.)
HR stability and growth	Positions filled/ open     Organizational image     (in the targeted labor market segments)     Application trends for the organization     Experience (years)	Fluctuation/ Turnover of staff     Hiring/ New     employees     Employees leaving     / Resignations versus dismissals     Retirements
HR effective- ness	Value added/ Profit per employee     (as total or per HR employee)     Customer satisfaction (with employees, with HR services) – internal & external stakeholders     Achievement level of HR targets & strategies (corporate level, and at the level of HR Department.	
HR efficiency	Personnel costs (per employee or compared to total costs)     Total costs of HR Department (per employee or compared to total costs)     Operational efficiency of HR processes and services (time, quality, costs)	

Source: based on own analysis and consolidating 15 relevant IC measurement methods

Since the specific indicators in an organization need to be defined according to corporate strategy (Figure 2.), the Table 2. is to be considered rather as a potential benchmark and practical guideline to generate ideas and potential KPIs to capture human capital. From a practical perspective both corporate strategy, various organizational (size, sector, etc.) and other factors like data availability (see, e.g. Kremer, 2018) or 'soft'-organizational factors (see Harangozó, 2007 and later in this paper) may also have a significant influence on the performance dimensions of human

capital, and the way of implementation and utilization of them during strategic performance management of the firm.

## Typical organizational factors influencing performance management systems and their use for intangible and human capital purposes

Implementing strategic performance management systems is not an easy task on its own. There are various organizational and behavioral factors which can *support*, *substitute or neutralize* the impact and beneficial use of corporate performance management systems (for more details, see amongst others in Ginzberg, 1980; Gabris, 1986; Burns & Scapens, 2000; Kennerley & Neely, 2002; Kasurinen, 2002; Bodnár, Harangozó, Szűcs, & Dankó, 2009; Harangozó, Bodnár, Szűcs, & Dankó, 2010; Alsharari, Dixon, & Youssef, 2015; Vajda, 2019).

According to Pandey (2005), for example, the success or failure of strategic performance measurement systems depends on the following organizational prerequisites:

- top management commitment and support,
- ability to determine critical success factors (objectives),
- translation of critical factors into measurable objectives and measures (metrics),
- linking of performance measures to rewards,
- installation of a simple monitoring and tracking system,
- setting up a sound communication system to harness the advantages of the system inside the organization,
- enhancement of allocation of resource and linking of strategic planning to new performance management system.

The author also highlights that SPM systems need to be changed and focus on intangibles and intellectual capital in an enhanced manner compared to recent practice. In addition to focusing on the non-financial performance dimensions of the firm, creating a better understanding of strategy and business model, linking strategy to day-to-day operations, or introducing professional tools and practices for performance review and feedback – these are all important requirements for a modern strategic performance management system.

Another study classifies the influencing factors on successful SPM implementation into two groups (Islam & Kellermans, 2006):

- Organizational factors, including elements such as norms, pressure from customers or competitors, and the availability of necessary organizational resources.
- Individual-level factors such as perceived ease of use, perceived usefulness, or the management's awareness and intentions to use the SPM system – all these may play a crucial role in success.

As the authors state, both socio-psychological, economic and resource-based factors can significantly influence SPM systems, and cause them to deviate from their original goals and functions.

Finally, in his already mentioned model, De Waal (2004) describes and highlights the following – mostly behavioral – factors with a significant role in increasing the probability of any successful strategic performance management system implementation and change:

- understanding of organizational members regarding the goals of the strategic performance management system,
- positive attitude of organizational members towards performance management,
- the SPM system is aligned with the responsibilities of employees,
- existence of a performance and development-oriented organizational culture,
- clear leadership focus on performance management.

The author also claims that leadership is one of the most important factors, and important leadership-related attributes – such as Accountability, Appropriate leadership style, Action-oriented communication, Integrity, Ability to lead, Content, and the Aligned division of responsibilities – have critical impact on the implementation and use of strategic performance management.

Altogether, amongst other factors leadership support is a critical factor in implementing and using performance management system in organizations. This plays an even more important role when the object of measurement, for instance intangibles and human capital, is hard to be measured and more effort needed from both the management and organization. Since the probability that a performance management system fails is significantly higher if (1) the perceived subjectivity of measurement is high, or (2) perceived ability of the system and trust in metrics to capture performance is low (Ittner, Larcker, & Meyer, 2003), the leadership needs to invest more effort to integrate intangibles and human capital into corporate SPM system.

The impact of subjectivity and role of leadership support in implementing and using performance management tools designed to capture intangible strategic resources in organizations have been studied by various scholars from both practical and theoretical aspects. Briefly, majority of scholars have discussed and agreed that one of the most relevant practical challenges of performance management is integrating intangibles and human capital performance in an effective, efficient and beneficial manner, is their 'intangible' character and the missing practical experience in defining of proper 'objective' indicators to measure and monitor performance of intangibles (see, for comprehensive overview, for instance, Harangozó, 2007; or Serenko & Bontis, 2013). From many aspects, this is normal though. Since KPIs are tools to support corporate management in strategy execution and provide them with relevant information on status of intangible resources

and activities, they must be aligned with the context and business model, as well as the strategy of the firm. The strong embeddedness of intangible strategic resources and human capital into context makes it challenging to understand and compare organizations with different context, size, strategy or business model. One next step forward could be for instance to reach a deep understanding of a selected organization, and build a comprehensive research model accordingly. This latter might be analyzed by using quantitative statistical methods and tested in a broader a sample.

This paper is focusing on the first step at this stage though, and aims to provide brief but practical insights the way intangibles (and especially, human capital) are integrated into corporate performance management of the firm. The selected case study organization is a leading financial service provider in Hungary<sup>3</sup>, where human capital is considered as a crucial strategic resource with high relevance for senior management and strategy execution. The longitudinal and explorative case study research has started in 2008 and has continued for more than 10 years by now. In addition to the various managerial interview rounds (2008, 2010/12 and 2017/18), all strategy and performance management documents have been also analyzed, and most of the organization has also filled a qualitative survey (2018) where the focus was to understand corporate SPM practices and the way how human capital performance is measured and managed by the firm. The results of the survey were also discussed in a focus group to gather additional information and stories, and reach a better understanding of context and role of leadership.

# Case study – Human capital's integration into corporate strategic performance management at a leading financial service provider

Based on literature in such a knowledge-intensive organization like the financial service provider in our case human capital specifically shall play an important role in strategy and performance. After consolidating the results of the last 10 years' empirical data collection (incl.

3 in-depth interview rounds in 2008, 2012 and 2018, as well as qualitative survey filled by all members of the firm and focus group with the management in 2018) at the case study organization, the following strategic resources are identified as the Top 5 most critical success factors:

- 1. Professional knowledge and experience,
- 2. Motivation.
- 3. Market appearance and network,
- 4. Organizational culture and leadership,
- 5. Access to market information.

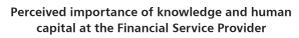
The first and second dimensions are directly, while the fourth is indirectly linked to human capital (this is also highlighted at the Figure 4. summarizing the results of the qualitative survey).

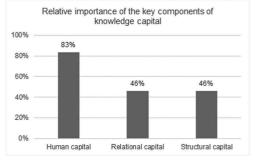
If human capital is perceived and communicated as a key strategic resource, the next step is to analyze how is it covered by the firm's performance management systems. Since the Financial Service provider introduced a balanced scorecard (BSC) based corporate strategic performance management system in 2007, the first focus point has been that. As the Table 3. summarizes, the corporate SPM system of the Company has consisted 10 strategic KPIs to capture and monitor human capital performance. This is one third of the 31 indicators in the corporate BSC in total.

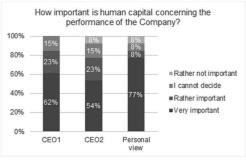
If we compare Table 3 to Table 2 above, where the usually measured strategic performance dimensions of human capital are listed according to literature review, it is clear how strongly the Company's corporate performance management system focuses on effectiveness and efficiency dimensions of human capital rather than Skills and competencies, Attitude and loyalty, Diversity or HR stability and growth. This is a result of the firm's strategic focus on these two in general, but also strongly influenced by data availability and low ability of the firm to measure the other four dimensions.

In addition, there is a contradiction at the case study organization between the important and regularly monitored strategic performance dimensions of human capital (see, Figure 5.).

Figure 4.







Source: own analysis based on Survey (2018) – cross-checked with interview and focus group results

Table 3. Human capital indicators integrated into corporate SPM of the Financial Service Provider

Category	Static (stock) performance dimensions	Dynamic (flow) performance dimensions	
Skills and		No of trainings	
competences		(per employee) (1)	
Attitude and			
loyalty			
Diversity			
HR stability			
and growth			
HR effective-	No of conference presentations		
ness	(per employee)		
	No of publications (per employee)		
	Planned knowledge sessions conducted in		
	distribution network (No, %)		
	Provided training days per		
	distribution FTE		
	Training satisfaction of		
	distribution network		
	Satisfaction of distribution network		
	(support, operations) (1) (2)		
HR efficiency	• Coverage of new incentive system (%)		
	• No of transactions per FTE (1)		
	No of corrections and cancellations per		
	FTE (1)		

Source: based on own analysis

— Note: (1) Applied for Back-office only.
(2) It also strongly impacted by system/ IT quality)

According to the organizational members personal view, Attitude and loyalty, HR stability and growth, and Skills and competencies are more important and should be measured and integrated into corporate SPM more actively, rather than HR effectiveness and HR efficiency which are in the focus of the corporate BSC. The perceived level of measurement of these three human dimensions is lower than the organization members would recommend it.

Besides, there is also a difference in focus in case of the two CEOs as well. During the team interviews and the focus group session the following additional details were highlighted:

- During the time of CEO1 *Attitude and loyalty*, *Skills and competencies* and *Diversity* were relatively more important, while
- For CEO2 Stability and growth, as well as HR Effectiveness and HR Efficiency have been more critical.
- In both cases *HR Effectiveness* is more important than *HR Efficiency*.
- In both cases, *HR Effectiveness* and *HR Efficiency* are the most measured human dimensions.

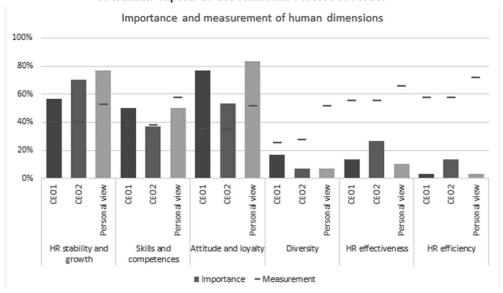
Finally, in the interviews with them the top management of the firm has usually emphasized *Stability and growth*, *Skills and competencies* and *HR Effectiveness* as the most important human dimensions for successful strategy execution and performance of the organization. This also underlines the conflict between communicated and measured dimensions of human capital, as discussed in the earlier chapters. Shortly, even if both the organization and its management perceive these latter human dimensions as the most critical ones for the firm's success, HR effectiveness and HR efficiency indicators are easier to be measured, so the Company tends to implement and use them more actively.

Low data availability and perceived reliability of human capital indicators is only one reason of the contradiction between the high communicated importance and low level

Figure 5.

Perceived importance vs. measurement practice of the various performance dimensions

of human capital at the Financial Service Provider



Source: own analysis based on Survey (2018) – cross-checked with interview and focus group results

of integration into corporate performance management integration. At least four additional organizational and contingency factors have also significant impact at the case study organization:

- First of them is the senior managers' leadership style and attention on corporate strategic performance management system. The first CEOs (CEO1) authoritative leadership style (based on Goleman, 2000), and interest in professional and formal management systems. This gave a push to corporate BSC and performance management, and to use it as a tool to mobilize people and organization towards strategy. The recent CEO (CEO2) is a dominantly pacesetting leader with additional characteristics of affiliative leadership. His leadership characteristics and focus and interest in a formal and comprehensive SPM system, the overall performance management practice in general but also for human capital has moved from the corporate level to two specific components, namely management-by-objectives system and a mainly financial performance-focused bonus calculation system. This latter focuses more on people than the firm, and create the room for the CEO to manage its people without a formal corporate performance management system.
- Second, the perceived functionality and maturity of the performance management system itself have a significant impact on its use in general and for monitoring intangibles. For both CEOs, enhancing decision-making function of corporate performance management has been an important factor. In addition, for the previous CEO (CEO1) generating psychological guidance was also important when implementing a formal corporate SPM system. For the recent CEO (CEO2) performance measurement is also relevant. Since the overall maturity of SPM is perceived low at the case study organizations, to satisfy his need for performance measurement without putting the pressure of a whole corporate SPM system on the organization, two components of a performance management function are actively used by the recent CEO, namely the bonus and management-by-objectives system. These are also strongly focusing on intangibles performance and human capital.
- The third factor is related to the availability and use of the most relevant management functions at the firm. From a strategic and human capital perspective, the two most relevant corporate functions are (1) Strategy and (2) Human Resource Management. According to the case study analysis both has low maturity at the firm and have a significant impact on the use of strategic performance management system in general, and the way of human capital's integration into it.
- Finally, the case study analysis also highlights the importance of change management and the attitude

of the firm towards the performance management system. Regarding this a clear pattern can be identified at the case study organization which had a significant impact of the use of SPM in general and for intangible purposes. At the beginning despite the organizational members fear and stress from new, the strong trust in the CEO and the positive curiosity positively supported the active use of corporate performance management system, and made it as a social norm at the case study organization. The timing of the new SPM system had also a supportive role at the beginning, until the times when the impacts of the global financial crisis came in 2008/2009. Being a financial service provider, the Company had to manage this on a dayto-day basis which shifted the focus from intangibles and human capital to the financial measures and markets. The personal involvement of organizational members has decreased, together with their trust in the applicability of the system itself. Because of all these components to use of the corporate SPM tool has decreased significantly and got to be replaced by the above-mentioned two performance management components - i.e. management-by-objectives and bonus system – only. These appear though to be functional for the case study organization and its management to monitor performance intangibles and human capital.

#### Discussion

Altogether, corporate strategic performance management systems are designed and used in organizations to capture the key success factors and critical strategic resources of the firm and support the management in developing and monitoring their dynamic and static characteristics in a regular and structured manner. Based on both theoretic and practical experiences, SPM systems are designed in alignment to the context and strategy of the organization, to support management in its decision-making processes with relevant information on performance of the firm. Nevertheless, to implement such systems is not easy task, especially if we consider the changes in value creation and performance, especially the increased role of intangible strategic resources in recent times. The classic strategic performance management systems usually struggle to handle and integrate intangibles. Why is this the case and how leadership of the organization can influence this, that has been discussed in this paper.

The answer to this question is complex indeed, and it is hard to step forward from the current state of 'through disillusionment' of ICM perspective without better understanding the role of management and organizational factors in successful implementation of performance management tools used to capture intangible strategic resources and human capital. In general, to capture the strategic intangible resources of the firm, their measurability and data availability are also much lower than in case of classic financial, market related or operational indicators. This creates several difficulties

in identifying and specifying the most critical key performance dimensions of intellectual capital, and measure them by appropriate indicators in general.

In addition, various leadership and context related factors may have also significant impact on how intellectual capital management tools are implemented, and how one of its key components, human capital, is integrated into corporate performance management system. This has been the focus on this paper and the longitudinal case study research conducted at a leading financial service provider in Hungary. According to results of this explorative case study research, even if the organization perceives human capital as an important and critical strategic resource of the firm, organizational factors such as lack of data availability for human capital indicators, missing trust in the performance management tool itself, or an extra need for leadership to focus and handle external contingency factors (in this case, financial crisis for instance) can easily neutralize and substitute the senior management's original intention to implement and use a comprehensive performance management system and integrate human capital into it. This is aligned with the previous performance management studies and scholars (see, e.g. Simons, 2002 or Anthony & Govindarajan, 2009) and appears to be even more relevant in case of intangibles and human capital (based on the case study results at least).

One of the most important factors influencing the effective and efficient performance management of human capital is leadership attention and support indeed. Practically, even if the overall corporate SPM system is designed properly it can easily fail in the organization. Nevertheless, if the senior management of the firm wants to monitor and manage its human capital performance effectively and on a regular manner, it will find a solution. Our case study organization is a good example for this, especially if we consider that the CEOs have replaced corporate BSC with two separate management tools to manage human capital and its performance in a transparent but also motivating way. The management-by-objectives process in a combination of a proper bonus calculation and incentives toolset can function as a successful performance management framework, even if no comprehensive corporate strategic performance management system is used in the organization.

These results are highly context and organization related components indeed. What is functional in our case study organization, it could be completely dysfunctional in another case. So, to test our case study results and reach more generalizable insights, further research is necessary. Based on the deep understanding our one case in the last 10 years, our research questions and model can be updated and studies in a broader sample. The broad sample could mean a direction with wider quantitative statistical analysis, or a pattern with extended number of interviews in various organization and cases. Dependent on the researcher's perspective, but both can lead to additional and more generalizable results during the potential next steps of this explorative research project.

#### Limitations and future research directions

As highlighted in previous sections, the generalizability of the results derived from this case study research is limited. This was not the goal of it indeed, rather achieving a deep understanding of a specific organization and its human capital performance management practices. Human capital is embedded to strategy and context, so are the related strategic performance management practices.

One of the potential directions for future research is to develop and implement a more quantitative research model with broader statistical analysis and methodology. Such a research could focus on a sample of companies from the same sector (here: financial services), or overall an even broader selection of organizations from various industries where human capital is significant based on relevant literature. Both ways apply classic statistical methods and lead to more generalizable results: in the first option with deeper understanding of a specific sector, while if the second model is implemented, that could deliver results to be potentially used for multisectoral comparisons (e.g. financial sector versus education, consulting or others).

Another direction can be to integrate additional organizational behavioral factors rather than leadership only. This latter was a conscious choice in this research, however, the potential impact of other "soft" factors such as corporate culture, attitude, team or power might be also integrated into the case-study based explorative research model (see, for instance, Harangozó, 2007).

Finally, analyzing role of leadership in other firms from the same industry or context, and comparing each local result to each other, would also enrich the researcher's understanding of how leadership influences the way human capital is handled in an organization and integrated into corporate performance management. If the number of organizations is significant enough, it may also lead to more valuable practical lessons-learned for similar organizations.

These are only examples of future research directions, by using this research as the basis. The ways forward are not limited to these ones.

#### **Notes**

- <sup>1</sup> For a comprehensive overview of definitions, see Harangozó (2007).
- <sup>2</sup> Since the most relevant Hungarian literature mainly follows the international mainstreams regarding intellectual capital, no additional Hungarian authors have been listed above (for more details on Hungarian scholars and research results, see e.g. Juhász 2004; Szabó, 2005; Boda, 2008; Stocker, 2012; Martin, 2013 or Tirnitz, 2015).
- <sup>3</sup> Based on the request of the Company's top management, the name and additional details of the firm must be handled anonymously.

#### References

Alsharari, N. M., Dixon, R. & Youssef, M. A. (2015). Management accounting change: critical review and a

- new contextual framework. *Journal of Accounting and Organizational Change, 11*(4), 476-502. https://doi.org/10.1108/JAOC-05-2014-0030
- Anthony, R. N. & Govindarajan, V. (2009). Menedzsmentkontroll-rendszerek. Budapest: Panem.
- Arbeitskreis IWR (2001). Kategorisierung und Bilanzielle Erfassung immaterielle Werte. Arbeitskreis "Immaterielle Werte im Rechnungswesen" der Schmalenbach-Gesellschaft für Betriebswirtschaft e. V., Der Bertieb, Heft 19, 11 Mai, 989-995.
- Austin, R. & Larkey, P. (2007). Measuring knowledge work. In Neely, A. (ed.), Business Performance Measurement. Unifying theories and integrating practice (pp. 279-303). Cambridge UK: Cambridge University Press.
- Becker, B. E., Huselid, M. A., & Ullrich, D. (2001). The HR Scorecard: Linking People, Strategy, and Performance. Cambridge, Mass.: Harvard Business Review Press.
- Beer, M., Spector, B., Lawrence, P. R., Mills, D. Q. & Walton, R. E. (1985). *Managing Human Assets*. New York, NY: The Free Press.
- Boda, Gy. (2008). A tudástőke kialakulása és hatása a vállalati menedzsmentre. Budapest: Infota.
- Bodnár, V., Harangozó, T., Szűcs, N., & Dankó, D. (2009). Performance management in a knowledgeintensive organization. The role of 'soft' factors in 'hard' measurement. 5th Conference on Performance Measurement and Management Control, EIASM, 23-25. September, Nice, France.
- Bodnár, V., Harangozó, T. & Szűcs, N. (2010). Performance management in a knowledge-based SME in crisis. Balanced Scorecard as a potential frame of intellectual capital management. 6th Interdisciplinary Workshop on Intangibles, Intellectual Capital and Extra-Financial Information, EIASM, 30. Sep. 1. Oct., Catania, Italy.
- Bőgel, Gy. (2006). Tudásmenedzsment: régi dolgok új köntösben. In Noszkay, E. (ed.), Megragadni a megfoghatatlant Tudásmenedzsment elméleti és módszertani megközelítésben (pp. 50-59). Budapest: N & B Kiadó.
- Bontis, N. (2001). Assessing knowledge assets: a review of the models used to measure intellectual capital. *International Journal of Management Reviews*, *3*(1), 41-60. https://doi.org/10.1111/1468-2370.00053
- Brennan, N. & Connell, B. (2000). Intellectual Capital: current issues and policy implications. *Journal of Intellectual Capital*, *I*(3), 206-240. https://doi.org/10.1108/14691930010350792
- Burns, J. & Scapens, R. W. (2000). Conceptualizing management accounting change: an institutional framework. *Management Accounting Research*, 11(1), 3-25.
- Crook, T., Todd, S. Y., Combs, J. G., Woehr, D. J. & Ketchen Jr., D. J. (2011). Does human capital matter? A meta-analysis of the relationship between human capital and firm performance. *Journal of Applied Psychology*, *96*(3), 443-456. https://doi.org/10.1037/a0022147

- Dalkir, K. (2011). *Knowledge management in therory and practice*. Cambridge, Mass.: MIT Press.
- Davenport, T. H. & Prusak, L. (2001). *Tudásmenedzsment*. Budapest: Kossuth Kiadó.
- De Beer, M. & Barnes, N. (2003). The Assessment of Intellectual Capital (IC) in the South African Context A Qualitative Approach. *SA Journal of Human Resource Management, 1*(1), 17-24. https://hdl.handle.net/10520/EJC95739
- De Waal, A. (2004). Stimulating performance-driven behavior to obtain better results. *International Journal of Productivity and Performance Management*, 53(4), 301-316. https://doi.org/10.1108/17410400410533890
- De Waal, A. (2013). Strategic Performance Management. A Managerial and Behavioral Approach. New York, NY: Palgrave Macmillan.
- Dumay, J. C. (2009). Intellectual capital measurement: a critical approach. *Journal of Intellectual Capital*, 10(2), 190-210.
  - https://doi.org/10.1108/14691930910952614
- Dumay, J. C. & Garanina, T. (2013). Intellectual capital research: a critical examination of the third stage. *Journal of Intellectual Capital*, *14*(1), 10-25. https://doi.org/10.1108/14691931311288995
- Goleman, D. (2000). Leadership That Gets Results. *Harvard Business Review*, 79(3), 2-17.
- Franco-Santos, M., Lucianetti, L. & Bourne, M. (2012). Contemporary performance measurement systems: A review of their consequences and a framework for research. *Management Accounting Research*, 23(2), 79-119.
  - https://doi.org/10.1016/j.mar.2012.04.001
- Gabris, G. T. (1986). Recognizing Management Technique Dysfunctions: How Management Tools Often Create More Problems than They Solve. *Public Productivity Review, 10*(2), 3-19.
  - https://www.jstor.org/stable/3380448
- Gartner (2016). *Hype Cycle Special Report for* 2016. Retrieved from http://www.gartner.com/newsroom/id/3412017
- Ginzberg, M. J. (1980). An Organizational Contingencies View of Accounting and Information System Implementation. *Accounting, Organizations and Society,* 5(4), 369-382.
  - https://doi.org/10.1016/0361-3682(80)90036-7
- Grimaldi, M. & Rogo, F. (2013). A theoretical framework for assessing managing and indexing the intellectual capital. *Journal of Intellectual Capital*, *14* (4), 501-521. https://doi.org/10.1108/JIC-03-2013-0032
- Gu, F. & Lev, B. (2001). *Intangible assets measurement, drivers, usefulness*. Boston: Boston University and New York University. Retrieved from http://pages.stern.nyu.edu /~blev/intangibleassets.doc
- Gudas, S. (2012). Knowledge-Based Enterprise Framework: A Management Control View, New Research on Knowledge Management Models and Methods. In Huei, T. H. (Ed.), *New research on*

- knowledge management models and methods (pp. 179-218). Rijeka: Intech.
- Guthrie, J. & Dumay, J. (2019). Intellectual Capital Accounting Research Analysed Over the Past Two Decades. In European Conference on Intangibles and Intellectual Capital (pp. 389-392). Kidmore End (May 2019).
- Guthrie, J., Ricceri, F. & Dumay, J. (2012). Reflections and projections: A decade of Intellectual Capital Accounting Research. *The British Accounting Review*, 44(2), 68-82.
  - https://doi.org/10.1016/j.bar.2012.03.004
- Harangozó, T. (2007). Az intellektuális tőke mérése és ennek lehetséges magatartási vonatkozásai. *Vezetéstudomány, 38*(12), 18-34.
- Harangozó, T., Bodnár, V., Szűcs N. & Dankó, D. (2010).
   Intellectual Capital Management in Crisis The Case of a Hungarian knowledge-intensive SME. In Proceedings of the 2nd European Conference on Intellectual Capital (pp. 289-300). Lisbon, Portugal.
- Hislop, D. (2009). Knowledge Management in Organizations. A Critical Introduction. Oxford, UK: Oxford University Press.
- Horváth, P. & Möller, K. (Eds.) (2004). *Intangibles in der Unternehmenssteuerung*. München, Germany: Verlag Franz Vahlen.
- Islam, M. & Kellermans, F. W. (2006). Firm and Individual-Level Determinants of Balanced Scorecard Usage. *Canadian Accounting Perspectives*, 5(2), 181-207. https://doi.org/10.1506/74LJ-CMWM-FUAD-NMUT
- Ittner, C., Larcker, D. F. & Meyer, M. W. (2003). Subjectivity and the Weighting of Performance Measures: Evidence from a Balanced Scorecard. *The Accounting Review*, 78(3), 725-758. https://doi.org/10.2308/accr.2003.78.3.725
- Juhász, P. (2004). Az üzleti és könyv szerinti érték eltérésének magyarázata Vállalatok mérlegen kívüli tételeinek értékelési problémái (PhD-dolgozat). Corvinus University of Budapest, Budapest.
- Juhász, P. (2016). Management under limited information: The measurement of off-balance sheet assets at Hungarian firms. *Central European Business Review*, 5(4), 23-33.
- Kaplan, R. S. & Norton, D. P. (2005). Stratégiai térképek. Hogyan alakulnak át az immateriális javak pénzügyi eredménnyé. Budapest: Panem.
- Kasurinen, T. (2002). Exploring management accounting change: the case of balanced scorecard implementation. *Management Accounting Research*, *13*(3), 323-343. https://doi.org/10.1006/mare.2002.0191
- Kaufmann, L. & Schneider, Y. (2004). Intangibles A synthesis of current research. *Journal of Intellectual Capital*, *5*(3), 52-63. https://doi.org/10.1108/14691930410550354
- Kennerley, M. & Neely, A. (2002). A framework of the factors affecting the evolution of performance measurement systems. *International Journal of Operations and Production Management, 22*(11), 1222-1245.
  - https://doi.org/10.1108/01443570210450293

- KPMG BME Academy & Pannon University (2006). Tudásmenedzsment Magyarországon 2005/2006. Budapest: KBA Oktatási Kft.
- Kremer, K. (2018). HR analytics and its moderating factors. *Vezetéstudomány*, 49(11). 62-68. https://doi.org/10.14267/VEZTUD.2018.11.07
- Leitner, K. H. (2011). The effect of intellectual capital on product innovativeness in SMEs. *International Journal of Technology Management*, 3(1), 1-18.
- Lev, B. & Zambon, S. (2003). Intangibles and intellectual capital: an introduction to a special issue. *European Accounting Review, 12*(4), 597-603. https://doi.org/10.1080/0963818032000162849
- Lev, B. (2004). Az immateriális javakban lévő versenyelőny fokozása. *Manager Magazin*, (Dec), 39-44.
- Mahn, K. (2015). The Stock Market Is Fairly Valued. *Forbes Magazine*. Retrieved from http://www.forbes.com/sites/advisor/2015/08/31/the-stock-market-is-fairly-valued/2/#4c7a51b86f3b
- Martin, K. (2013). A vállalatok piaci értéke és könyv szerinti értéke közötti eltérést befolyásoló tényezők vizsgálata Magyarországon (A study of factors influencing the deviation between companies' market value and book value in Hungary) (PhD. dissertation). Corvinus University of Budapest, Budapest.
- Mehlarian, G., Nazari, J. A. & Ghasemzadeh, P. (2018). The effect of knowledge creation process on organizational performance using the BSC approach: the mediating role of intellectual capital. *Journal of Knowledge Management*, 22(4), 802-823. https://doi.org/10.1108/JKM-10-2016-0457
- Németh, K. & Dőry, T. (2019). Influencing factors of innovation performance in family firms Based on an empirical research. *Vezetéstudomány*, 50(5). 58-71.
  - https://doi.org/10.14267/VEZ-TUD.2019.05.06
- Ocean Tomo LLC (2015). *Annual Study of Intangible Asset Market Value*. Retrieved from http://www.oceantomo.com/2015/03/04/2015-intangible-asset-market-value study/
- Önhon, Ö. (2019). The relationship between organizational climate for innovation and employees' innovative work behavior: ICT sector in Turkey. *Vezetéstudomány*, 50(11), 53-64.
  - https://doi.org/10.14267/VEZTUD.2019.11.04
- Pandey, I. M. (2005). Balanced Scorecard: Myth or Reality. *Vikalpa*, *30*(1), 51-66. https://doi.org/10.1177/0256090920050105
- Pfeil, O. P. (2004). Earnings from Intellectual Capital as a Driver of Shareholder Value. Bern: Haupt Verlag AG.
- RICARDIS (2006). Reporting Intellectual Capital to Augment Research Development and Innovation in SMEs. Final report. European Commission. Retrieved from http://ec.europa.eu/invest-in-research/pdf/download\_en/2006-2977\_web1.pdf
- Roos, G., Pike, S. & Fenrstrom, L. (2005). *Managing Intellectual Capital in Practice*. New York, NY: Butterworth Heinemann.

- Sánchez, P., Castrillo, R. & Elena, S. (2006). *The Intellectual Capital Report for Universities. Prime OEU Guide The ICU Report.* Autonomous University of Madrid, Published in the Published at the Conference of European Ministers Responsible for Higher Education in Bergen, Norway. http://www.prime-noe.org/
- Serenko, A. & Bontis, N. (2013). Investigating the current state and impact of the intellectual capital academic discipline. *Journal of Intellectual Capital*, *14*(4), 476-500. https://doi.org/10.1108/JIC-11-2012-0099
- Simons, R. (2002). Performance Measurement and Control systems for Implementing Strategy. New York, NY: Prentice Hall.
- Statista (2017). Statista The portal for statistics. Immediate access to over one million statistics and facts. Retrieved from https://www.statista.com
- Stewart, T. A. (1991). Brainpower: How Intellectual Capital is Becoming America's Most Valuable Asset. *Fortune Magazine*, June 3, 44-60.
- Stewart, T. A. (1997). *Intellectual Capital: The New Wealth of Organizations*. New York, NY: Doubleday.
- Stocker, M. Gy. (2012). Value creation in Knowledge Intensive Companies (PhD. thesis), Corvinus University of Budapest.
- Szabó, Zs. R. (2005). Tanulás és stratégiaalkotás kis- és középvállalatokban (Learning and strategy development in small and medium sized enterprises). Research Report, Corvinus University of Budapest, Institute of Management, Budapest.

- Sveiby, K. E. (2001a). A knowledge-based theory of the firm to guide in strategy formulation. *Journal of Intellectual Capital*, *2*(4), 344-358. https://doi.org/10.1108/14691930110409651
- Sveiby, K. E. (2001b). *Szervezetek új gazdagsága: a menedzselt tudás*. Budapest: KJK-Kerszöv.
- Sveiby, K. E. (2010). *Methods for Measuring Intangible Assets*. Retrieved from http://www.sveiby.com / articles/IntangibleMethods.htm
- Tari, E. (2019). Last 25 years of the strategic management's international evolution Theoretical tendencies and science perspectives. *Vezetéstudomány*, 50(12), 74-89. https://doi.org/10.14267/VEZTUD.2019.12.07
- Teece, D. J. (2000). Managing Intellectual Capital. Organizational, Strategic and Policy Dimensions. Oxford, UK: Oxford University Press.
- Tirnitz, T. (2015). Értékorientált kiegészítő beszámolás a Budapesti Értéktőzsdén jegyzett társaságok körében (PhD. dissertation). Corvinus University of Budapest, Budapest.
- Tóth, Zs. E. (2008). Az intellektuális tőke mérési lehetőségeinek vizsgálata önértékelési modellek alapján (PhD-dolgozat). Budapest University of Technology and Economics, Budapest.
- Vajda, É. (2019). Perceived justice as a crucial factor of performance management systems. *Vezetéstudomány*, 50(5), 25-37.
  - https://doi.org/10.14267/VEZTUD.2019.05.03