

THE WEST-HUNGARIAN UNIVERSITY

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Doctoral School

**THE EXISTENCE AND LACK OF INTELLECTUAL
CAPITAL INFLUENCES ON THE COMPANY'S
COMPETITIVENESS WHAT CAN BE REVEALED DURING
KNOWLEDGE AUDIT**

Doctoral (PhD) theses

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1. Objectives and Hypotheses

Apart from tangible assets, beyond possessing intellectual capital, increasing attention is turned to how intellectual capital within an organization can be identified, detected, assessed, valued and transferred.

Man is the only renewable intellectual resource of an organization. Unlike products or technologies, intellectual assets are not easy to duplicate or copy by competitors because intellectual capital is rooted in the individual or specific knowledge of people and organization – therefore it can be a source of sustainable competitive advantage.

It is important that company management know the available intellectual capital, be aware of its ability and depending on the output market strategy, provides the necessary resources, elements of intellectual capital and the possibility for continuous development.

This dissertation focus on the identification of evaluation and role of intellevtual capital within the company strategy based on the knowledge audit. During the research, the aim was to ascertain to what extent the intellectual capital of enterprises has influence on a company's competitiveness trough the company strategy and in what form this can be revealed during knowledge audits.

Using knowledge audits gives the opportunity to develop action plans that will help the flow of knowledge within the organization to improve the efficiency of the use of external knowledge elements and thereby contribute to increasing the competitiveness of the particular companies as well. In the spirit of this recognition, through the linking of practical experience and examples a hypothesis system has been designed and set up, the central component of which was the intellectual capital and its impact on corporate strategy discovered and identified during knowledge audits

The primary research originates from the following hypotheses:

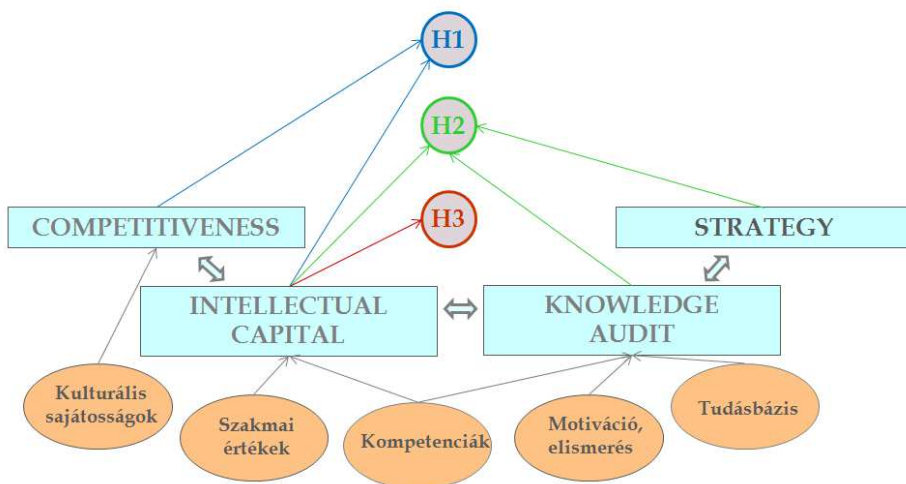
H1: Independently of the strategy represented by a company, **the presence or absence of intellectual capital affects the competitiveness of companies.**

H2: The regular knowledge audits conducted to identify the intellectual capital and to assess resource requirements **provide the space for establishing an intellectual capital-based strategy.**

H3: The excessive accumulation of **intellectual capital may limit the company's future chances to break out.**

The system of hypotheses to be investigated is demonstrated in Figure1.

1. Figure: Hypotheses – Correlation System



Source: own edit

2. The Content, Methodology and Rationale of the Research

2.1. The Population and Sample of Investigation

The target group for this research thesis in addition to small and medium sized businesses covered large companies as well.

The available data include the results from nearly 350 companies. From a statistical perspective, it serves as a disproportionate stratified sample, which, due to its peculiarities can be considered as a random sample. Nevertheless, due to possible denial of responses, the representativeness of survey data is questioned in any empirical analysis.

This problem is expected to be reduced by the fact that the research has been limited to the examination of relationships between different variables exclusively.

The questions covered a wide spectrum. The purpose of this was to provide a broad range of analysis options.

To ensure the representativeness, the collected data has been compared to the Central Statistical Office data only after assessing sectoral distribution of the companies surveyed.

The survey was conducted on companies satisfying the following conditions:

- The number of employees is at least 5 persons
- Have a VAT number in Hungary.
- Be a profit-oriented organization
- The main activity amounts to a minimum of 70% of the company turnover;

2.2. The Data Survey Tool and Method

The most effective method for testing the hypotheses proved to be the questionnaire data survey.

To test the hypotheses the questionnaires reached the stakeholders through the internet. The prepared questionnaire could be completed via the following link: <https://www.surveymonkey.com/s/tudasaudit>

Among non-probability sampling techniques, the application of snowball sampling has been implemented: the respondents forwarded the questionnaire for further completion to their available acquaintances in the target group.

The questionnaire was sent to 578 addresses and was filled in by 392 employers; there were 346 completed questionnaires available as the research basis, as due to inaccurate or incomplete filling 46 questionnaires were not used.

The web portal provided the following features to simplify the evaluation:

- interface for filling in the questionnaire
- full administration: the anonymous registration of companies involved in research, monitoring the completion of the questionnaire
- pre-screening the data: isolation or deletion of data coming from inconsistent respondents, screening out multiple completion
- charts from real-time data, and using diagrams to provide comparative analysis

The cover letter and the questions have deliberately avoided to draw the attention to knowledge capital.

Previous experiences have shown that if the purpose of research is emphasized in the cover letter, the majority of respondents distort their answers in accordance with the expectation.

To avoid this, the target has been defined as a strategic, rather than an intellectual capital research.

The depth interviews representing the *qualitative* research took place between 01 October 2013 and 10 January 2015.

The qualitative research methods serve primarily the understanding, and are based on relatively small samples. To confirm the questionnaire survey, further research was needed, and the in-depth interview method has been chosen for this.

The purpose of an in-depth interview to understand in-depth the opinion and views of the respondents concerning a specific question.

The purpose of structured in-depth interviews was that any remaining issues still open were answered after the questionnaire survey and to confirm and support the statistical methods used for analysis.

In all cases, the respondents were from the leader's circle

It is a common practice using an approach based on case study in the field of knowledge management research. The role of case study in this dissertation was to support exploratory research, and to provide the basis to confirm or refute the hypotheses.

By applying the combination of quantitative and qualitative methods, the goal to implement an authentic and accurate research could be achieved.

2.3. The Research Method

The research was based on the *quantitative* analysis method, which has provided an objective attitude. By supplementing the research with *qualitative* research methods, in-depth interviews, it has become fully completed.

The fact, that the human attitude can be quantified and thus it is relatively easy to analyze by statistical methods played an important role in selecting the method of the research.

Assuming this, although the results of a research carried out on insufficient number of samples is not representative, it still provides reliable data.

The types of scientific research:

- *primary*: finding new information
- *secondary*: applied, use of existing information

The research aims to describe the secondary research results completed with and based on the primary research.

Research work consisted of discovery of data collected from the internet and searching of library resources. The utilization of knowledge obtained at national and international conferences played also an important role.

This thesis uses the specific characteristics of both exploratory and descriptive research.

Observation and exploration constitute the part of exploratory research, as a more precise definition of the problem was the objective for that.

Descriptive research elements may be used in the testing and feedback phase as the primary intent of these is the recognition of business properties and corporate functions concerning knowledge management, and the results of the descriptive research serve the preparation of a corporate decision making.

The step of research is summarized in the following table 1:

1. Table: Step of Research

	Step of Research	Date interval
1	The nomination of companies participating in the research	2010 - 2013
2	Collecting secondary research data	2011 - 2013
3	Qualitative researc: Establish of questionnaire in order to define hipoteses	2013 february - 2013 september
4	Questionnaire to be sent and filled out (graduate specialist, middle management, managers)	2013. september - 2013. september
5	Qualitative researc: In-Dept Interviews	2013. october - 2015. january
6	Evaluation of research findings	2014 october - 2015 january
7	Comparison and collation of primary and secondary research	2015 january - 2015 march

Source: own edit

3. Summary of The Results of The In-Depth Interviews

The **leaders** consider uniformly the **importance of creation and continuous improvement of a knowledge base**

The leaders are able to envisage continuous improvements only by proper communication and support from the company management.

The opinion of the respondents was unified in the sense that the quality of a knowledge base basically determines its use. **According to the company's profile, various guiding principles are needed for setting up a specifically usable company knowledge base of good quality.**

If the leaders consider important the knowledge audits, and discovering the knowledge base, then employees will also feel the importance of the knowledge base continuous updating. This would also be a possibility for more companies by aligning the company's annual audit plan with the preliminary planning of eventual knowledge audits.

The **teamwork and the support of knowledge sharing** have positive impact to the knowledge management system. For the optimal usability of the potentials in a specific organization, the **management supporting approach is necessary.**

Most leaders entering a new position try to adapt their aspirations taken from the previous work experience into the new organization, and then form the organization's unique identity adjusted to the specific power relations, and develop the organizational culture itself by the optimal usage of the available intellectual resources.

After the leaving of "an old biker" colleague **the lack of improperly fixed knowledge is noticeable**, but it can be replaced over time. In case of a smaller organization or less-documented knowledge, this may be a serious loss.

It is better to **strive that the "useful knowledge" be documented in a way to ensure**, – e.g. by written educational material or by illustrating a practical good example – **that a new employee coming next will be able to make up the deficiency as easily as possible.**

It is a common phenomenon in bigger organizations the over-regulation, which limits the possibility of the optimal usage of intellectual resources. There are large multi-companies, where the knowledge management "means monopolizing knowledge", while a home medium enterprise can be equipped with a well-built "smoothly working" knowledge management system.

The building of an **effective knowledge management system** implies serious investment both in time and money, but it definitely worth the investment, because the effective operation will produce sooner or later **the expected return** at the given organization. **If a company's intellectual capital is difficult to replace and** hard to copy, then this gives the guarantees for long-lasting competitive advantage in terms of its protection, depending on which type of capital is represented. The availability or lack of intellectual capital **strongly influences the competitiveness.**

Regarding knowledge transfer the surveyed executives had a homogeneous position: **knowledge transfer should definitely be promoted.** This effort is important to both knowledge transferring and knowledge accepting parties. In several cases the motivating nature of support for the knowledge transfer manifested itself: for example, there is a possibility of expert's appointment to support the knowledge transfer by giving a wage supplement to employees for regularly held educations.

The existence of a company's intellectual resource contributes to increase the organization's competitive advantage, if the management recognizes the importance of personal experiences that positively affect the future aspirations and help the achievement of strategic goals.

4. Summary of Theses

H1: Independently of the strategy represented by a company, the presence or absence of intellectual capital affects the competitiveness of companies.

H1: Accepted

T1: The high level of the intellectual capital has a positive influence on the competitiveness of the company if it is in accordance with the strategy represented by the company. That is, if a company has a great strength of intellectual capital, then, as it is difficult to copy, there is a greater possibility to ensure the protecting of durable competitive advantage. If the existence of intellectual capital is confined, and the strategy becomes authoritative, the company can be copied easily and its competitive advantage will be terminated.

H2: The regular knowledge audits conducted to identify the intellectual capital and to assess resource requirements provide the space for establishing an intellectual capital-based strategy.

H2: Partially accepted

T2: The companies implementing regular and efficient knowledge audits recognize and identify the intellectual resources required for the strategy represented by the company. During the elimination of the deficiencies found, the mentality and the actions of the employees are moved towards the achievement of the strategic goals. The knowledge audits also point out, that the lack of knowledge or the necessary resources can lead to problems, namely in addition to the identification of intellectual capital and the assessment of the need for resources, the retention of knowledge is also one of the pillars for the building blocks of the strategy.

H3: The excessive accumulation of intellectual capital may limit the company's future chances to break out.

H3: Rejected

T3: The company that is committed to building a knowledge intensive position bearing in mind intellectual values - though resigning some strategic alternatives - increases the company's future breakout possibilities.

5. New and Innovative Scientific Results

As for the results of research, it has been proved that **the more optimal utilization of human resources and the respect of spiritual values play serious role in increasing the competitiveness of the companies.**

In general, as a summary of the research results, the following conclusions can be drawn:

The examined synthesizing model can be interpreted, on the one hand, in a strategic approach and, on the other hand, it represents the process of how the intellectual capital becomes a real value.

The data providing the study of the hypotheses, in many cases made the formulation of consistent statistical statements impossible. The collected sample didn't prove to be representative in regional sense, though it included enterprises from the whole area of the country, it mainly concentrated on the Dunántúl area.

The message of the research is equivalent to the meaning of the model used: **the integrated approach is required, as the reality can only be understood in its complexity.** One of the basic conditions for the creation of the intellectual value is that at least one output market strategy be implemented for the company.

If a company is capable to set up mobility constraints, it can be more competitive in the short term, and this provides a basis for the more optimal utilizing of the available intellectual capital.

If the strategy is provided by difficult to reproduce, rare and irreplaceable intellectual resources inside the organization, then **the company** obtains thereby stronger and **durable competitive advantage**.

6. Conclusions and Recommendations

Today, the competitiveness can be improved particularly by increasing the knowledge content and information value of the creative work. The modernization is intended mainly to make the human resources playing a major role in economic development suitable to catch up for knowledge-intensive, information-centered societies.

As for the fundamental values - in addition to quality, innovation and customer orientation - it is especially **important to focus** on the respect of the intellectual capital, to recognize and acknowledge the emphasized role of the key people, to identify and develop the individual competencies without regretting the time and effort. The usage of recognition and motivation elements, providing a good working environment, the application of a management style increasing the intellectual value, rewards options, selecting a customized career path **can help the company in the successful and effective operation**.

To ensure the organized work it is recommended that small business leaders strive for the implementation of a variety of internal management systems. It is important the encouraging, inspiring atmosphere, the application of employees who can identify themselves with their work.

These indirectly contribute to the competitiveness of the company, and in addition are able to move the mentality and the actions of the employees imperceptibly towards the achievement of the strategic objectives.

The innovative, high-productivity, development bearing in mind companies can pull out and retain above-average performance from ordinary people by sustained motivation.

It is important to realize for the management of the company, that the strategy represented by the specific organization **should be clearly seen** and the suitable resources, intellectual capital items should be provided depending on this.

It **would be advisable** to **extend** the research internationally, so the opportunity is created to assess the various affiliates of the same parent company.

For the long term, **it is worth linking** more and **more disciplines of the Hungarian higher education to the objectives of the business sector.**

The development of human resources, the maximum utilization of the existing and acquired knowledge should be kept in mind already during the education of the future professionals.

Existing experience and knowledge in higher education, as well as the training needs of the private sector can be fruitful for both sides. The globalization of education, the demand for continuous evolution, the scientific and technical progress **make** necessary **the practice oriented education.**

The social expectations require the willingness to change while providing the possibility of continuous development; **for keeping the competitive advance on the market, the permanent development and learning are required**

7. List of Publication Related to Dissertation

- MARKÓ, G -BOGA-POHL, P: Relevance of knowledge audit and intellectual capital in line with the company competitive advantage *Minőség és Megbízhatóság* 2012/4. szám, (p. 187-190) ISSN 0580-4485
- MARKÓ, G- BOGA-POHL, P-: Significance of knowledge audit and intellectual capital referring to the company's competitive advantage. *Humánpolitikai Szemle* 2011. december, (p. 3-8) ISSN 0865-7009
- MARKO, G: „Kincs, ami van – Fókuszban az Egészségturizmus” Nemzetközi Konferencia Tanulmányok CD, NYME AK, Győr, 2011.április 11-12., (p. 258-268) ISBN 978-963-7287-26-8
- MARKO, G: The significance of knowledge audit in line with keeping competitive advantage; *Változó Környezet – Innovatív Stratégiák Nemzetközi Tudományos Konferencia a magyar tudomány ünnepe alkalmából*; Sopron, 2011. november 2. (p. 174) ISBN 978-963-9883-84-0
- MARKO, G: Role of knowledge audits in companies s competitive advantage evaluation. III. Nemzetközi tudományos konferenciájának Tanulmánykötete CD – Selye János Egyetem 5-6.09.2011 Komárno (p. 787-794) ISBN 978-80-8122-017-3
- MARKO, G: Human capital and knowledge audit as the competitive advantage of companies. *Net Journal of Social Sciences*. April 2013, vol. 1(1), (p. 1-4) ISSN - 2315-9774
- MARKO, G: Monitoring different management cultures in the light of knowledge audit /Managements systems of various cultures in examining as the aspects of knowledge audits. *TALENT AND CREATIVITY IN THE SCIENCE” INTERNATIONAL SCIENTIFIC CONFERENCE*; Sopron, 2012. május 22. (p. 86-96) ISBN 978-963-9883-92-5