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## **AIMS AND THE STRUCTURE OF THESIS**

My dissertation was motivated by a personal experience. I grew up in a family business, which could be described as a knowledge-based firm. Indeed, our business had all the characteristics that can fit to a typical knowledge-based company. Of course in the late 80s and even in 90s, the concept of knowledge-based company was known neither in Europe, nor in the USA. Not surprisingly, because this concept has not existed at that time. In my opinion, several companies used this knowledge-based business model without which they could recognize and could articulate the essence of this strategy. Without doubt, we must name this business model knowledge-based strategy, although these companies had only an intuitively developed business pattern, not an explicitly written corporate strategy (Mintzberg [1998]).

The Resource-based View (RBV) is one of the mostly accepted framework of strategy nowadays. This theory can provide a reasonable explanation for the relationship between intellectual (knowledge) capital and business strategy. According to this framework, companies can be run successfully, if they can accumulate strategic resources. If a company has valuable, rare, inimitable, and non-substitutable resources it can achieve sustainable competitive advantage.

On the basis of my own personal experience, I can deny the theses of Resource-based View, because the focusing only on the internal resources and capabilities - such as the resource-based theory suggests – reduce the chance to take the market factors into consideration. Our family business fell into this typical resource-based trap, when applied a knowledge-based strategy. The focusing on internal strengths distracted the attention from the market factors. In the meanwhile, the competitors created their own mobility barriers, and our company could not keep pace with the market, although it did not lose its resources.

In my dissertation, I examine the role of knowledge capital in corporate strategy, however I do not restrict the theoretical framework to the today's fashionable resource-based approach, because in my view, this suggests only a biased perspective. Considering my own experience, I had to realize that the positioning school – by Michael Porter – can explain the strategic role of knowledge capital beside the resource-based view. All these motivated me not to investigate the intellectual capital with the support of resource-based theory. I looked for a more complex framework, that can explain the performance of companies better. I hope I could develop a more powerful explanatory model in my dissertation, which will provide a better understanding of corporate strategy.

My primary goal was therefore to process the literature of positioning school, as well as the resource-based theory of strategic management. The secondary research clarified that both of the mentioned theories do not describe two different worlds, but they are complementary. As a result, I integrated both of the theoretical schools with each other. I hope I could create a consistent model, which eliminates the weaknesses of each theoretical school. My model synthesizes the elements of RBV and positioning schools and it is appropriate for explanation of value creation process of resources. That is why I call it value enforcement model.

Of course, a strategic researcher cannot stop after the creation of models, but he would like to check the validity of them. As a result, I designed and prepared the system of hypotheses based on my resource value enforcement model. The main focus was on intellectual capital, how it affects the corporate strategy. The strategic model and my former interest on knowledge management meet at this point. As mentioned earlier, the most important element of the tomorrow's strategy is the knowledge capital, which can be explained excellently by the value enforcement model.

The structure of my dissertation is slightly unusual: I begin to introduce the most important empiric results of the two strategic schools. After this, I expand the Resource-based view in chapter no. 2. I introduce the emergence, the axioms and the theses of RBV. With emphasis on separating of the underlying theses and the management approach, the two mentioned theses do not contradict to each other. I close the chapter with the criticism of RBV approach, which is the starting point of synthesizing model.

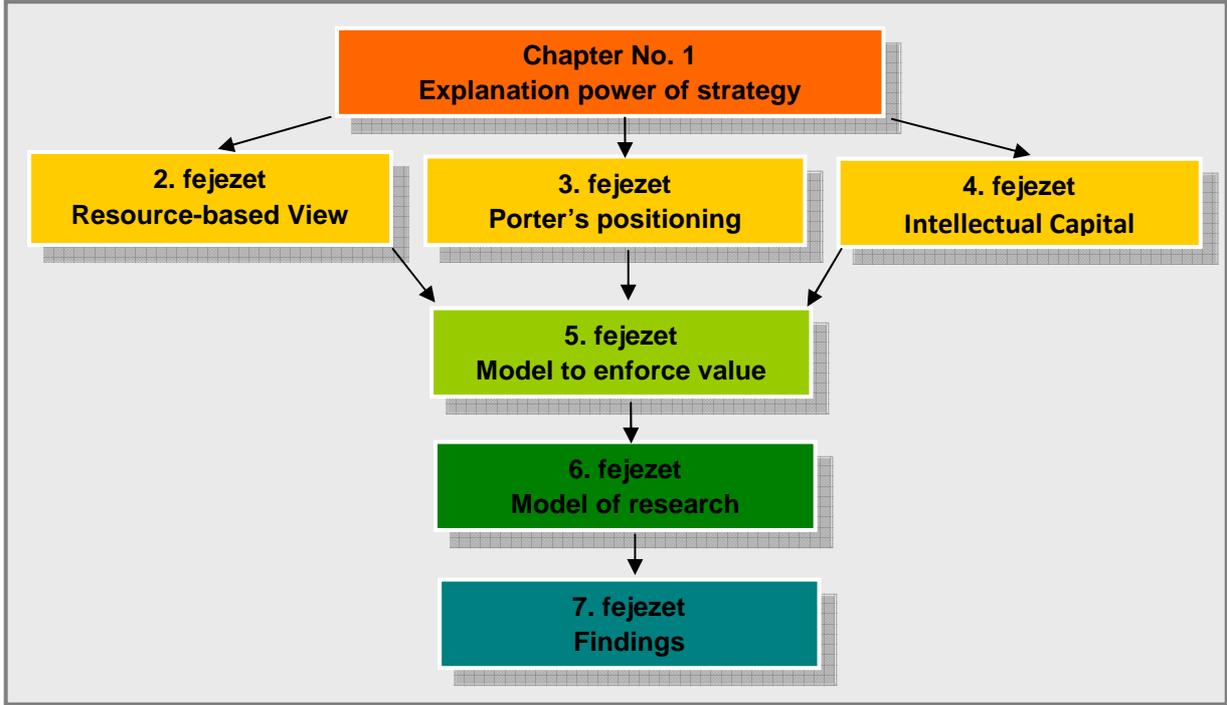
After presenting the theory of RBV, I go back to the positioning school by Porter. In my dissertation, I would like to argue in favour of integrated approach which denies the classic knowledge management approach based on RBV. This thesis suggest that only the resource-based strategies can be responsible for the success of companies. The mainstream knowledge management supports this way of thinking, and it states that more intellectual capital means more profitability.

The intellectual capital - as third pillar of the dissertation - is introduced in chapter 4. A brief summary of definitions and classifications are discussed. I investigate the relationship between intellectual capital and resource-based view. At the end of the chapter, I review the concepts of measurement on intellectual capital, because it defines the basis of the empirical research.

As closing the introduction of theoretical chapter, I have developed a theoretical synthesis approach based on positioning school and resource-based view, which can be an appropriate framework for explaining knowledge-based strategies. The resource enforcement model eliminates some conceptual shortcomings of RBV and positioning schools. After the description of axioms and theses of the model, some knowledge-based strategies are shown based on my previous researches.

The structure of empirical section follows the common logic of deductive argumentation: after the introduction of survey design, the model of research is shown which follows the logic of value enforcement model. The operationalization of variables and the methods of measurement are introduced. Finally, the statistical tests and the economic consequences of theses are shown.

**Figure 1: The Structure of the Dissertation**



Source: own construction

## **THEORETICAL FRAMEWORK**

As previously mentioned, neither the RBV nor the Porter's strategic is appropriate to describe the real business processes. There are several reasons and weakness against both of individual schools which reduces the reliability of these models.

There are three main sources of criticism against RBV: first, the model's theoretical weaknesses has to be mentioned, secondly the weaknesses of approach, and thirdly the low explanatory power may be invoked. Concerning the weaknesses of the theoretical model, I agree with the repeatedly expressed view, that RBV approach is a self-justifying theory. This tautology is caused by the „valuable” condition. The value of resources stems from the fact that they enable companies to implement output market strategies. This way of thinking means that resource-based theory is unsuccessful in itself, because it contends that the resources which are appropriate for improving the competitiveness, they can improve the competitiveness in some circumstances. Despite of all these self-justifying features of the model, some meta-analyses showed that the explanation power of RBV is below 30 percent concerning the performance of companies.

This logic raises the question why RBV has such a low explanatory power. Barney composes the key sentence for this question: the RBV approach does not take into account the fact how the corporate strategy is realized. With other word, we can contend that implementation is completely ignored by the model (Barney [1991]). Barney thought draws our attention to the output market strategy which is ignored by the common resource-based approach. Similar to this, the definition and the measurement of competitiveness is problematic. Several authors also acknowledge that the concept of competitiveness has shortcomings in theory (Newbert [2008]). As a result many researchers ignore this element, and the relationship between performance and resources are examined directly. Even though a clear definition of competitiveness is used by Barney<sup>1</sup>, it remains unclear for the practical scientists, who want to operationalize the concept.

The so-called resource heterogeneity approach within the resource-based view draws the attention to the problem of different business models. For example, the innovation-based firms and the companies with cost leader strategy are influenced by the human capital in different ways: high level of human capital supports the innovation-based strategy, but it can ruin the cost leader strategy. If a cost leader company invests huge amounts of money into its human capital, then this inconsistent decision can destroy the performance, because the proper

mobility barrier – based on cost leadership - can be ruined. As a result, different resources must be valuable, concerning the output market strategies by Porter.

The positioning school has more unsolved problems. There are not operationalization problems in this theory, but the empirical evidences of generic strategies call the relevance into question. The sharpest criticism of Porter's framework focused on the „stuck in the middle” strategy. It is contended, if a company cannot choose between cost leader and differentiation strategy, it will stuck and the performance will be reduced, because they are mutually exclusive strategies. This hypothesis proved inconsistent and it is accepted nowadays that "mixed" strategies can be more profitable in some situations, than pure generic strategies.

The generic strategies can be used as classification, but it has only limited ability to explain the whole performance of companies, like the resource-based view. This fact might lead to the fall of empirical researches by this time.

The approach of positioning school can be criticized from the aspect of partiality. As long as RBV focuses mainly on intrinsic characteristics of companies, Porter's framework is dominated by market factors. The most serious question in connection with positioning school is the weak explanatory power. Meta-analyses showed that the classification of generic strategies by Porter has only a modest impact on corporate profitability. This impact cannot be detected even in some situations.

Strategic researches, however, draw our attention to the fact that business strategy can explain the performance of firms better than the two mentioned theory suggest. Long-term firm specific factors are responsible for more than 30-60% of profitability. The explanatory power improves by 50-80%, if we take the role of industry into account. It is worth comparing the aforementioned 50-80 percentage explanatory power of strategy with the explanation power of Porter's framework (barely detected) and with the power of RBV (less than 30%). There is a huge gap between the two numbers. Given this comparison, we can contend that the two common model (RBV and positioning school) cannot explain firm performance perfectly.

The previous argumentation shows that positioning school and the resource-based theory represents divergent approaches. The former focuses on markets, while the latter on resources. As the weaknesses of the two mentioned models are the opposite of each others, this fact raises the question whether the theories can be synthesized or not.

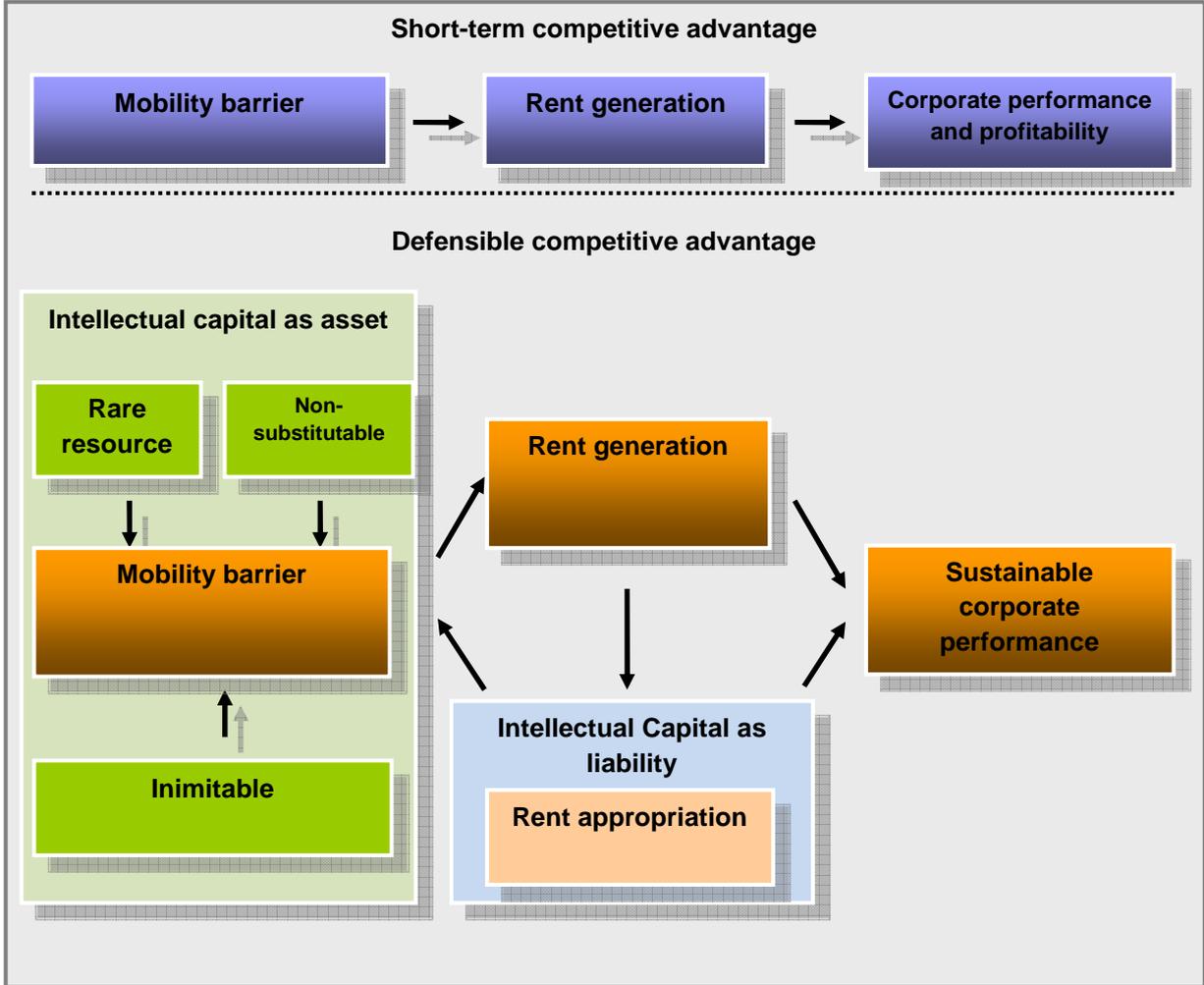
My answer is yes, and because there is no mention in the literature of the integration of these models, therefore I developed my own theory, which is based on a synthesis of these two schools. I call this theory „value enforcement mode of resources!”.

The positive side of value enforcement model that it can be considered as the expansion of Porter’s model as well as improvement of RBV approach. As a result, I used the conditions of both underlying theories. The axioms of the model can be summarized in 5 points:

1. Bounded rationality and imperfect information; managers have limited amount of information, they search for a satisfactory solution and not for microeconomic optimum.
2. Aims of companies and the objectives of owners are the same: to achieve an acceptable level of profitability.
3. Resources of firms are heterogeneous; the value enforcement model adopt the approach of RBV, thus capabilities and resources play more important role as in Porter’s model.
4. Resource immobility; resources are linked to companies - such as in the RBV approach, therefore they are copied imperfectly. Companies are able to gain Ricardian rent.
5. Companies are able to restrict the output markets, thus they are able to gain a monopoly rent.

The value enforcement model is based on two key concepts which have appeared in positioning school and in RBV: imitation and mobility barriers. The scheme of value enforcement model is shown in Figure 2.

**Figure 2: Model to enforce value**



Source: own construction

Given the logic of synthesis model, companies have idiosyncratic resources, but by itself, it is not required to be a valuable resource. If a company is able to build strategies that are surrounded by mobility barriers, then it can generate monopoly rent, improving the profitability. The position, defended by mobility barriers, cannot derive only from the three generic strategies by Porter, but it can be mixed as well. The value enforcement model can be interpreted as an empiricist positioning theory in the short run. My framework contend that there is only one way to generate competitive advantage: companies should implement strategies which are surrounded by mobility barriers. The mobility barriers can steam from resources as well as from other sources.

Mobility barriers, however, cannot guarantee permanent competitive advantage and high profitability. Companies need to combine their mobility barriers with imitation barriers in order to maintain their competitive advantage in the long run. With different words, firms

need to have resources that are rare, inimitable and non-substitutable in order to protect their strategy based on mobility barriers. If these requirements are met, there is a defensible competitive position for companies. As a result firms with defensible positions can reach a higher profitability due to limited competition, and this profitability must be maintained in the long run due to imitation barriers. On the other hand, owners of companies have to pay for these resources based protection. In practice, shareholders (owners) of companies face the concept of rent appropriation. In practice, companies which have higher level of human capital, can reach higher competitiveness, but they have to pay higher wages for the employees, because they have stronger bargaining power due to their valuable human capital. This effect can cause a lower profitability for firms, despite of stronger competitiveness.

My model has another consequence which is parallel with the concept of organizational rigidity (it is known as core rigidity as well). Companies surrounded by mobility and imitation barriers have narrower scope for action in strategic meaning. In extreme situation, the chance for changing strategy can be completely hindered. This phenomenon can be called „path-dependence” that means, the company must bear a lot of cost in order to give up the current strategic position and build up another one. The higher the mobility and imitation barriers are, the more costly the position changing is.

The previously introduced value enforcement model eliminates the bias in RBV and in positioning school, on the other hand it compensate the theoretical and conceptual weaknesses. The essence of value enforcement model is summarized in 10 points:

1. The model explains the differences of profitability within strategic groups. This concept is completely supported by empirical results: scholars pointed out that only one or a few companies generate especially high value. These companies can reach double rate of return (Kim, Mauborgne [1997]; Gadiesh-Gilbert [1998]). Hawawini and his colleagues also found that there is one or there are two specific companies per industry which has/ have extremely high performance. The performance of rest of companies converges with each other. (Hawawini et al [2003]).
2. The model takes into account that companies with special resources have to face the rent appropriation.
3. In statistical sense, the adoption of value enforcement model means that explanatory power derives not only from the addition of RBV and positioning

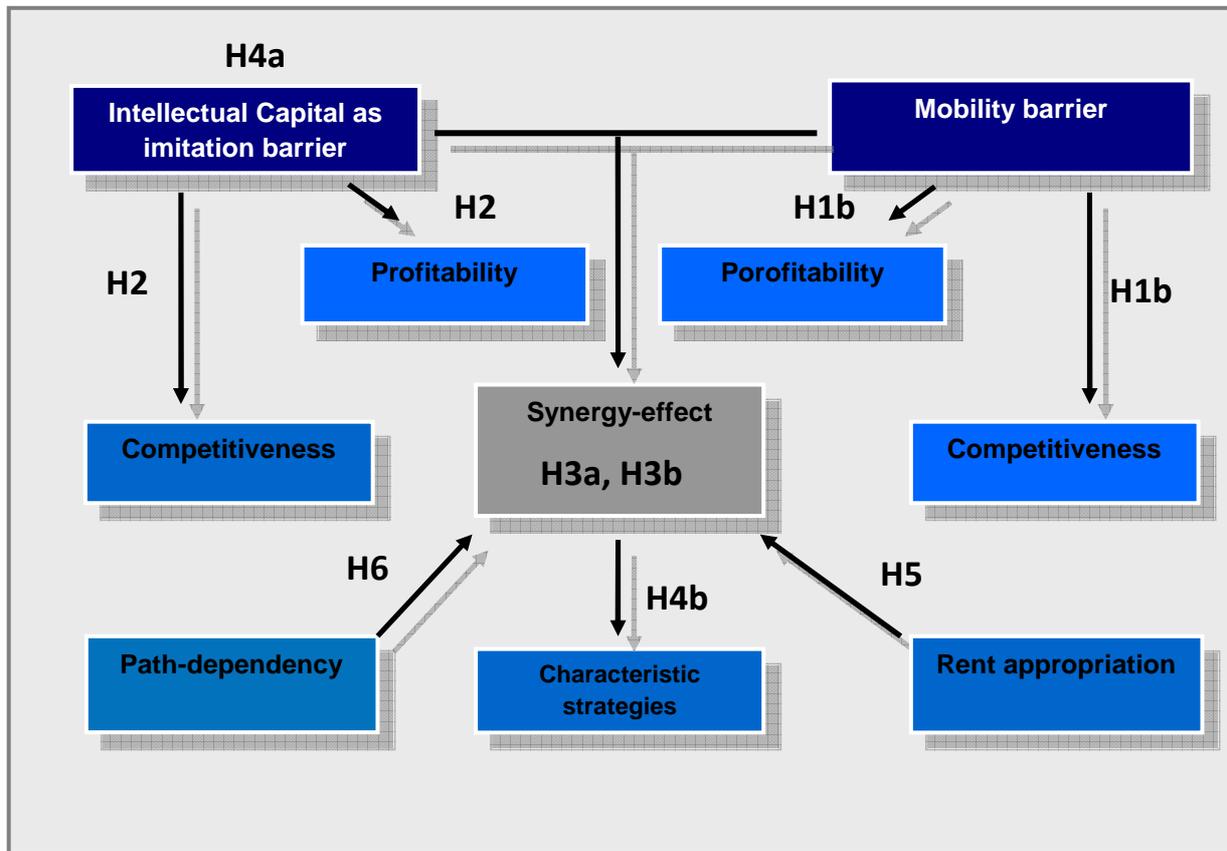
school, when we examine the profitability, but there is a chance of improve the explanatory power due to the interactions of intrinsic and extrinsic factors.

4. The model is able to distinguish short-term and long-term rent, i.e. my model can explain why some companies are more profitable in the long run, and why they can lose their profitability without loss of any resources.
5. The model is able to focus on market and internal factors at the same time, maintaining the consistency of theory.
6. The „valuable” constraint in RBV disappears, which can reduce the numbers of operationalization problems.
7. Also the concept of competitiveness disappears from the model, which is changed by the mobility barrier. The thesis can be simplified: if a company has a mobility barrier, it can expect a higher profitability at least in the short run.
8. The resource heterogeneity approach can be used without any problems, because the model takes into account that strategies can be different.
9. The value enforcement model draws the attention of corporate governance to external opportunities and internal resources as well. Important to note that the model biases the vision of the company's neither to internal capabilities, nor external factors. Only the resources are worth developing which can be transformed into mobility barriers.
10. More accurate and more detailed classification of strategies can be introduced.

## **SYSTEM OF HYPOTHESES**

My research model is based on value enforcement model, which relies on two pillars: they are the positioning school and the resource-based view. In my thesis, I do not want to verify the global value enforcement model, but I use it as a kind of conceptual framework for the analyses of connection of intellectual capital and profitability. In my opinion, RBV cannot explain the role of knowledge alone in corporate strategy. In other words, the resource-based approach itself is only one side of coin, and thus it cannot provide sufficient explanation power. We have to consider the output market strategy as well.

### 3. Figure: A system of hypotheses



Source: own construction

In the first step, in my dissertation, I examine the forms of output market strategies in the Hungarian economy (H1a). I check what kind of impact these strategies have on profitability and competitiveness (H1b).

Based on the value enforcement model, not only the output market strategies, but the direct impact of intellectual capital on competitiveness and profitability should be tested (H2). The value enforcement model suggests more than a simple additive model, namely that the relevant output market strategy combined with the adequate resources results synergetic explanatory power (H3a, H3b).

Typical knowledge-based strategies are detected in hypothesis H4a, while positioning and knowledge-based strategies are examined in hypothesis H4b.

The value enforcement model takes the phenomenon of rent appropriation into account like simple RBV, therefore hypothesis H5 tests whether the human capital intensive strategy increases the level of rent appropriation.

Finally, I examine whether mobility barriers and imitation barriers (for example intellectual capital) can narrow the scope for action in strategy, or not.

The system of hypotheses is summarized in Table 1.

**Table 1.: The system of hypotheses**

<b>H1a: Typical output market strategies can be identified within Porter's strategic dimensions. This classification can verify the concept of mobility barriers, which defines distinct strategic positions for companies.</b>
<b>H1b: There is a significant relationship between output market strategies and corporate competitiveness / profitability.</b>
<b>H2: The volume of intellectual capital improves the competitiveness and profitability of companies.</b>
<b>H3a: The concept of mobility barriers, derived from positioning school, and the intellectual capital as imitation barrier together can explain the competitiveness in a higher degree than the simple addition of the two factors due to the effect of interaction. A company can achieve synergetic improvements in competitiveness, if it can combine these barriers appropriately.</b>
<b>H3b: Different elements of intellectual capital can improve (or diminish) the competitiveness and profitability in case of different generic strategies.</b>
<b>H4a: Typical knowledge-based strategies can be detected in Hungarian corporate sector.</b>
<b>H4b: Knowledge-based strategies can be detected within the position surrounded by mobility barriers. The profitability and the competitiveness of intellectual capital intensive strategies differ from the traditional strategy.</b>
<b>H5: Companies based on human capital have to face a higher degree of rent appropriation in terms of expenditure on wages.</b>
<b>H6: Companies surrounded by high mobility and imitation barriers can protect their position on the one hand, but they narrow their scope for action in strategy on the other hand. As a result they have to face the phenomenon of path-dependence which restricts the ability to change strategy in the future.</b>

Source: own construction

## **METHODOLOGY OF RESEARCH**

The hypotheses were tested with a survey, in accordance with international standards. As the IT system was implemented by me, it was much more personalized than the traditional commercial solutions. The web portal had several features which have been used very rarely in similar researches. For instance, my portal could filter inconsistent data, and it provided respondents the ability to compare their company with the competitors with the help of real-time generated diagrams.

The technical novelty of this survey was that the measurement level was higher than the common five- or seven-point Likert-scale. I exploited the opportunities of internet, and I used a slider which is well known in IT. The finer scales provided by sliders could offer a great opportunity to operationalize and measure my variables on proper interval scales.

The interactivity was certainly the greatest novelty of the system. Respondents were able to compare the data of their company with the data of direct competitors, industry and the whole economy. They could use real-time diagrams. Respondents took the occasion, and each participant looked at 3.2 responses on the average.

The questionnaire included 4 pages and 12 groups of questions. The covering letter and the questions did not focus directly on the role of intellectual capital, because I wanted to avoid the bias of responses. My aims were identified as strategic objectives, not as knowledge-based research.

The questionnaire measured the following factors:

1. The value of knowledge capital within the company;
2. The assessment of elements of knowledge with the help of scorecard method;
3. The power of competition within the industry;
4. The most important data of companies;
5. Mobility barriers used by the company;
6. Inside-out, outside-in approach in managerial thinking;
7. Competitiveness and profitability;

As shown in the list, the questions covered a wide spectrum. I have mentioned before, that I wanted to reduce the opportunity of bias in this way, and improve the possibilities of different analyses on the other hand.

The data received from respondents were completed with the data of profit and loss account and balance sheet for 2007 and 2008. As a result, a very reliable database was available.

## **EVALUATION OF HYPOTHESES**

The empirical chapter of my dissertation can be considered as the test of value enforcement model, and as a tool that can provide a deeper understanding of strategic role of intellectual capital. The system of hypotheses encompasses all the elements of the value enforcement model.

**Table 2.: The system of theses**

<b>T1a: Typical output market strategies can be identified within Porter's strategic dimensions. This classification verifies the concept of mobility barriers, which defines distinct strategic positions for companies.</b>
<b>T1b: There is a significant relationship between output market strategies and subjective corporate competitiveness / profitability perceived by managers. The objective competitiveness and profitability do not differ from each other.</b>
<b>T2: The volume of innovation capital, customer capital, human capital, partner capital, capital encapsulated in corporate culture and the management capital improve the competitiveness of companies. The capital encapsulated in corporate culture and the management capital influence the profitability.</b>
<b>T3a: The concept of mobility barriers, derived from positioning school, and the intellectual capital as imitation barrier together explain the competitiveness in a higher degree than the simple addition of the two factors due to the effect of interaction.</b>
<b>T3b: Different elements of intellectual capital improve (or diminish) the competitiveness and profitability in case of different generic strategies. Knowledge management needs a differentiated approach which can take the generic output market strategies into account.</b>
<b>T4a: Typical knowledge-based strategies can be detected in Hungarian corporate sector.</b>
<b>T4b: Knowledge-based strategies can be detected within the position surrounded by mobility barriers. The profitability of intellectual capital intensive strategies do not differ from the traditional strategy, the competitiveness differs from each other in some special generic strategies.</b>
<b>T5: Companies based on human capital have to face with a higher degree of rent appropriation in terms of expenditure on wages.</b>
<b>T6: Companies surrounded by high mobility and imitation barriers can protect their position on the one hand, and in addition, they can widen their scope for action in strategy on the other hand.</b>

Source: own construction

Thesis T1 could demonstrate that the framework by Porter is also relevant today. My thesis has verified that the output market strategies can be classified in mixed form. In this regard, the empiricist approach is verified, according to which there are mixed output market strategies. This thesis also confirms the concept of mobility barriers. I could successfully demonstrate that the exploitation of mobility barriers can guarantee a greater competitiveness, but not better profitability.

Thesis T2 tested the RBV orientation of value enforcement model. I could reveal strong relationships between the volume of intellectual capital and the competitiveness / profitability. Thesis T2 proved that the type of intellectual capital is important also, because they influence the performance differently.

Hypothesis H3 was the proper test of value enforcement model. The elements of positioning school and RBV were integrated in this thesis. I investigated whether the two mentioned approaches can explain the competitiveness in a simple additive or synergetic way. Thesis T3 confirmed that there are significant statistic interactions, i.e. the integrated approach is a useful theory. As a result, we cannot ignore the analyses of positioning school.

Thesis T4 showed that there are knowledge-based strategies in case of each generic strategy. This thesis proved György Boda's hypothesis that contend that each company can be run as knowledge-based firm, independently from industry (Boda [2005]).

Thesis T5 demonstrated that knowledge-based companies face significant threats, because the high level of human capital and the high value of management have to be paid in form of expenditure on wages. With this finding, I could verify the fact of rent appropriation based on a statistic analyses. The thesis supports the hypothesis that the possession of valuable human capital can improve the competitiveness of the company, but in spite of this, the profitability can be even worse.

Hypothesis H6 examined the corporate inflexibility on a strategic level. I hypothesised that companies with higher level of intellectual can restrict their scope for action due to the sunk cost derives from building up mobility and imitation barriers. The statistical analysis denied the hypothesis. According to this, the higher intellectual capital the company has, the greater opportunities are available.

## **CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH**

I set the aim to examine the role of intellectual capital in corporate strategy. The strategy was not interpreted according to the popular resource-based approach, but I attempted to synthesize a model that integrates the former Porterian school and the approach of RBV.

In my opinion, the synthesizing value enforcement model provides not only a framework for the interpretation of the thesis, but it was confirmed with empirical tests. As a result it can be interpreted as a second-generation approach of RBV which can explain the corporate profitability better than its predecessor.

The main strength of a synthesizing model is that it is not biased, i.e. it pays attention to the market and to the internal resources of firm. The framework offers a solution to the open questions of RBV, such as eliminating the conceptual problem derived from „valuable” condition. This valuable condition causes the self-justification in common RBV. Hereby, similar solution is offered for the ambiguous concepts of Porter’s generic strategies.

According to the value enforcement model, competitiveness and profitability are determined whether companies can build mobility barriers or not. A company can be successful, if it can use its intellectual capital to strengthen its mobility barriers. If it is unable to build a mobility barrier, its volume of intellectual capital will be irrelevant. On the other hand, if a company is unable to strengthen its mobility barriers with imitation barriers, its competitive advantage will be temporary. As a result, companies can achieve proper and sustainable competitive advantage, only if they use consistent mobility and imitation barriers.

The synthesis model is beyond the interpretation of Porter's strategy. The value enforcement model does consider more than the three generic strategy. In this regard, these output market strategies are considered as tools not as aims. This tool can be appropriate to translate the market positions into profitability. It is obvious on the other hand that intellectual capital has a very important role, because this resource can be exploited as an imitation barrier.

After the conclusions, I have to present the limitations of research. The size of statistic sample was the biggest limit of my research. The data of the 350 firms restricted the statistical methodology significantly. Although I could detect significant results concerning each hypothesis, the argumentation would have been stronger if I could increase the size of my sample.

My sample was not representative in spatial sense. Although companies were involved from the territory of whole country, the majority was concentrated on Transdanubia and Budapest. The lack of international results hindered my research, because it was the first attempt to integrate these two approaches. There is a strong request for researches that can confirm my findings. However, the model logic and the results, presented here, must be a useful framework for further researches.

The strength of the research was that financial and subjective managerial indicators were included. This methodology has improved the reliability of my research. Unfortunately, the financial data were not available for each company, partially due to the operating form, and in part due to the fact that some companies do not perform the obligation to report to the data. As a result, the database was not complete in regard of financial data.

It should be noted that the "intelligent web-based questionnaire" system might be the most successful element of research despite the modest IT background. My research persuaded me that the web-based "smart" questionnaire was a great solution, and it has only advantages against the traditional paper format. The benefits of improving of interactivity might be in the first place. The feedback from the managers convinced me that they response question from which they can receive some pieces of information.

The message of my dissertation might be the same with the value enforcement model: there is a need for an integrated approach, because the reality can be understood only in its own complexity.

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