Analysing the marketing conditions of the micro- and small enterprises on the residential energy saving market

Theses of the Doctoral Dissertation

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1. RESEARCH OBJECTIVES

1.1. INTRODUCTION OF THE TOPIC AND THE RESEARCH OBJECTIVE

The research analyses the marketing conditions and marketing characteristics of the micro- and small enterprises\(^1\) that play a primary role in satisfying the needs of the energy saving residential building energetics\(^2\) investments\(^3\). Enterprises operate both on the residential and corporate market. Although I focus on the residential market, but in many aspects these two market segments can not be completely separated from each other. At the residential level the energy saving attitude has become more important during the past decade, however, high costs make the conscious customer base shrink primarily based on the income situation. Complex macro and market level conditions and sustainability requirements affect the realisation of the investments (both on the demand and supply side) which requires certain marketing features from the enterprises.

Energy saving investments have many stakeholders. Beyond the direct stakeholders’ (households and enterprises) interest in the individual investment projects, the strategic and coordinating role of the state; the building energetics know-how of the micro- and small enterprises; the background infrastructure; and the environmental, technological and market characteristics of the different energy sources can ensure the success of the residential energy saving investments. The main question at the corporate level is, to what extent enterprises are aware of the macro-economic and market conditions, the direct and indirect stakeholders of their operations, and how their strategies and marketing tools influence their success.

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\(^1\) Micro-sized Enterprise: it is defined as an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million (~HUF 550 million). Small-sized Enterprise: it is defined as an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million (~HUF 2,75 billion). Source: (Act XXXIV of 2004: Small and Medium-sized Enterprises and their Development Act).

\(^2\) Building Energetics: it includes all building industry products and services (electrical, mechanical, etc.) that actively or passively influence the energy consumption of the building.

\(^3\) Residential Building Energetics Investments: building energetics products and services that are purchased by the households for long-term use.
Although, I used the concept of energy saving / building energetics project\(^4\) as the framework for the realisation of the energy saving building energetics new or replacement investments carried out by micro- and small enterprises in the residential and corporate market segment, my research did not follow the main aspects of project marketing (Veres, 2009). Project marketing requires high level of marketing professionalism from the enterprises. However, the results of the primary qualitative research disproved the assumption that the analysed enterprises have such a deep knowledge in marketing.

**I made the following assumptions during the elaboration of the topic:**

(1) There is a knowledge gap between the necessary and the available basic information to identify the realisation conditions – regarding the analysis of the macro environmental conditions and the market of energy saving – of the Hungarian residential building energetics investments.

(2) It is essential but not sufficient to consider only the traditionally examined factors, as the research and literature do not, or inadequately cover some of the necessary research questions. There is lack of information in the following fields:

- the analysis of the different groups and interests of the stakeholders, and their relations to the projects;
- the development of a national and industry level energy policy strategy based on the systematic use of information, the use of effective management methods (e.g. technology roadmap) during the planning process;
- analysing customer behaviour;
- identifying the strategic and marketing tools that are key to business success, identifying the success factors, and the problems and inadequacies in this field

**The main objective of my research** is to reveal the building energetics market and the stakeholders of the micro- and small enterprises that provide energy saving products and services with a strategic

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\(^4\) **Energy Saving / Building Energetics Project**: in a narrower definition – based on the management theory – it is a definite and detailed plan of the realisation/installation of the investments, which includes the (usually complex) tasks stated in the order or contract to fulfil the individual requirements of the clients. In a broader definition – based on the characteristics of the research area – in the field building energetics it refers to the new or replacement energy saving investments carried out by micro- and small enterprises in the residential and corporate market segment.
analytical and marketing approach; to systematically organise the available information with the help of different methods and models; and to draw conclusions regarding practical feasibility.

During the elaboration of the descriptive and factual information I tried to arrange the wide-ranging factors of the research topic into illustrative figures and comprehensive tables and models. All of these have great novelty value in this field and help to provide a better overview on understanding and the conditions of decision making.

1.2. THE RELEVANCE OF THE TOPIC

The analysis of this market segment in Hungary based on the above-mentioned research questions can be considered entirely novel. The importance and relevance of the research topic are supported by the following factors:

The existing information is not available in a systematic way, that is why stakeholders encounter difficulties in interpretation and synthesis to fully understand the context and the processes. The literature is yet to organize the information into systems and subsystems.

(1) Energy industry has become a leading industry in the world in terms of its strategic importance and the aspects of sustainable development. The macro environmental effects that influence energy production and consumption have increased the importance of energy saving in the residential sector as well. Household stakeholders, however, due to common misconceptions, lack of information, bad experiences, scarce financial sources and short-term thinking often hinder their energy saving efforts themselves. Meanwhile, energy prices and comfort requirements are rising steadily and residential energy saving have a more considerable impact on the national economy.

The national and industry level coordination of the residential energy saving investments – fulfilling the sustainability criteria – arise lots of problems. The lack of a comprehensive strategic plan with concrete goals and national guidance is obvious in the building energetics industry.

(2) The needs of the energy saving projects are primarily met by such building energetics micro- and smallenterprises whose management knowledge is limited, that is why they are not able to successfully support the development of the market and the full realization of the targeted investments. Building energetics micro- and smallenterprises have to operate continuously under difficult circumstances due to uncertainty in the energy prices, subsidy systems, economic condition and social attitude. Competition is increasing, which requires strategic thinking, marketing approach and the use of marketing tools in the corporate functions.

Due to their specific market position, the marketing activities of the building energetics micro- and smallenterprises differ from the marketing of the standard products and services. One of the most
obvious differences is that due to the company size these businesses do not have access to such amount of financial assets to be able to carry out marketing operations similar to the large companies. Small business marketing is based on the concept that small enterprises differ from the large companies not only in size. The owners of the micro- and small enterprises have different goals and tools from a manager in a large company. The success of the building energetics enterprises (and the energy saving investments) depends on the specialization in certain products, services or market segments; the sales and communication tools; and the differentiation from the competitors. In the dissertation I use this approach to describe the main marketing tools that are required for the strategic planning.
2. RESEARCH METHODS AND ELABORATION OF THE TOPIC

I used the following research methodologies to elaborate the subtopics:

- I described the macro environmental and sustainable aspects of the topic based on secondary literature sources. I used both secondary sources and primary information to analyse the market structure and the main participants (customers and enterprises). Primary information was obtained from in-depth interviews with experts and executives (I carried out 23 personal – qualitative – interviews regarding this subtopic). I summarized the retrieved information in a technology roadmap (Phaal – Farrukh – Probert, 2004) which actively shows the environmental, economic and social changes; the necessary energy policy guidelines; and the technology development tendencies.

- I used secondary (literature) and primary (in-depth interviews) sources to reveal the stakeholders’ interests and relationships, and organized the gained information based on the “stakeholders of environmental investments” method developed by ODA (1995). On this subtopic, I conducted 17 in-depth (qualitative) interviews with experts and executives.


- The detailed analysis of the building energetics micro- and small enterprises, and the energy saving investments was carried out through online (quantitative) questionnaires. The objective of the research was to reveal the market position, strategies, management knowledge, customer value and success of the building energetics micro- and small enterprises, and to compare the results in different segments. 212 questionnaires were analyzed altogether.

During the elaboration of the descriptive and factual information I tried to arrange the wide-ranging factors of the research topic into illustrative figures, and comprehensive tables and models.
3. NEW SCIENTIFIC RESULTS

3.1. 1st THESIS – BASED ON THE 2nd CHAPTER OF THE DISSERTATION

In the second chapter of my dissertation (Analysing the energy saving market) I revealed the macro environmental conditions and sustainability aspects of the residential energy saving investments based mainly on literature sources. In order to actively use the gained information, I combined all the relevant information in a technology roadmap. Industry roadmapping is a flexible management technique that can widely be used to develop strategies both for national and corporate level, and for long-term planning. As a result of the strategic planning process, technology roadmap is a figure containing several bars and a timeline that shows the market, product, technological and other information, and their relationships. The layers of my own roadmap contain such macro environmental and sustainability factors that can provide long-term foresight.

(1) Based on the available literature sources I assumed that the method can be used to describe the complex conditions of the Hungarian residential building energetics investments, and support their realisation.

(2) During the elaboration of the information and the development of a methodological model, I assumed that nowadays the technological and macro level information is (at least partly) available. A model developed based on this information can pursue a long-term and coherent energy policy and strategy.

(3) Moreover, it was obvious from the methodological aspect that due to some limitations and knowledge gaps a comprehensive roadmap can not be developed within the frame of this dissertation.

1st THESIS

The realisation conditions of the Hungarian residential energy saving investments can be represented on an industry level technology roadmap by taking into account the macro environmental factors, the sustainability criteria and the technology development tendencies. In practice, technology roadmaps can be used for foresight at national and industry level.

(Related own publications: P1, P4, P5, P8, P9)

In the dissertation, Figure 2.17 shows the technology roadmap of the Hungarian residential energy saving investments.
The developed technology roadmap provides practical guidelines primarily for national strategy-making, and the market participants of the building energetics products and services.

Technology roadmapping is a widely used method all over the world for developing economic and social policies, making environmental decisions, introducing legislations, and laying down R&D guidelines that contribute to the national level energy policy. 159 publications are listed in the literature (Phaal, 2009), which support the application of technology roadmapping in the field of energetics. At corporate level, roadmaps can be used for identifying the R&D directions, and the technology and product portfolios. Due to business secrecy only a few literature sources contain corporate examples (Baker – Smith, 1995; BPA, 2006; Lee – Kang – Park – Park, 2007; Phaal, R. – Farrukh – Probert, 2004; Phaal – Farrukh – Mitchell – Probert, 2003; Willyard – McClees, 1987). The available sources, however, typically provide general statements or (often outdated) case studies.

I made the first technology roadmap on the Hungarian residential energy saving, which can be used as a source of a more detailed elaboration in the future.

I developed the layers of the roadmap myself, after having studied the structure of some other types of foresight roadmaps (Institute of Applied Energy, 2005; Phaal – Farrukh - Probert, 2004).

The roadmap in its present form contains some mapping incompleteness. It does not show the directly related existing / emerging factors that are prerequisite to each other, or the interactive concrete linkages. I only indicated the typical linkages among the layers and the direction of the spill-over effects. Due to the limitations of the applied roadmap drawing software, the map is not to scale.

Another limitation is that the development of a comprehensive roadmap can only be carried out in a multi-disciplinary team of experts. This is far beyond the knowledge of an individual expert.

The technology roadmap is not complete in its present form. In order to improve it, I collected the most important elements of the knowledge gap.

I identified the following knowledge gaps:

- new energy policy strategic programs, directives, elements of fiscal policy;
- need for radical innovations or such new technological trajectories that are not yet visible or are still in the critical experimental phase;
- the separation of the factors that change extrapolative and normative way with time;
- breakpoints and nodes that determine the occurrence of future events;
• new cultural effects that considerably influence the energy consumption and the range of energy sources in the future. The roadmap contains the estimations based on the previously known consumption habits and behaviours.

• regional characteristics that influence the range of applicable technologies and the energy strategy guidelines;

• concrete priorities (the roadmap contains in general the different technological and energy policy areas);

• representing concrete linkages and relationships on the map;

• future trends and counter-trends, and potential but unexpected events (mainly in case of the environmental, economic and social factors) that can influence the foresight and cause a shift in any field;

• changes in attitudes, motivation and resources required from the stakeholders with time, and their collective and investment risks;

• systematic analysis of the customer types, environmentally conscious thinking, and energy saving attitude in Hungary.

It is worth highlighting that the main problem lies in the lack of a residential energy saving strategy. Currently, Hungary does not have a comprehensive, detailed, and coherent energy strategy with concrete objectives (supported by figures and feasibility studies). The available guidelines and concepts are not adequate. The regulating and coordinating role of the state, as well as the market liberalisation are essential for the next steps. The state has to be the top-level owner of the industrial roadmap, without which no serious result can be achieved. This can be predicted based on the corporate examples (Nobuo, 2009; Pataki – Szalkai – Bíró-Szigeti, 2010a, 2010b; Phaal – Farrukh – Probert, 2004).

3.2. 2nd THESIS – BASED ON THE 3rd CHAPTER OF THE DISSERTATION

In the third chapter of my dissertation I analyse the stakeholders of the residential energy saving investments. In the next phase of the research my aim was to reveal and identify the interests and synergy effects of the participants/stakeholders in the building energetics market, which can also influence the success of the energy saving investments. I used the stakeholders’ analysis method developed by the Overseas Development Administration (ODA, 1995) and gained the necessary information by conducting qualitative interviews among experts.

The second thesis of the dissertation is based on three assumptions:
Firstly, (in relation to my initial assumption, see chapter 1 and 3) enterprises face a huge market knowledge gap in order to realistically plan and successfully undertake the energy saving residential building energetics projects. Moreover, there is lack of more accurate information on the stakeholders of the investments.

Secondly, in order to obtain and analyse the missing information about the stakeholders, it is worth choosing an internationally known and used, relevant method/model.

Thirdly, the interests and relationships (within which the planning, realisation and functioning of the building energetics projects take place) of the stakeholders of the residential building energetics investments can be revealed with the help of relevant models.

2nd THESIS

I identified the realisation conditions and the motivational factors of the investments based on the ODA stakeholders’ analysis method. I revealed that the potential stakeholders, which get in touch at different levels of the residential energy saving investments, have both mutual and contradictory interests regarding the project objectives. I described their motivations and resources, evaluated their importance and influence in the projects, and identified their project risks and relationship network. All this information can help to increase the number and rate of the successful residential energy saving investments.

(Related own publications: P2, P3, P7, P12, P13, P14, P16)

The thesis is proved by figures 3.2. and 3.3., and the systematically arranged information in tables 3.1., 3.4., 3.6., and 3.7.

I carried out the analysis based on the following steps:

1. I identified the direct and indirect stakeholders of the residential energy saving investments and I grouped them based on their role in the investments (primary, secondary stakeholders and third party);
2. I revealed the interests, confrontations, motivations and resources of the stakeholders;
3. I analysed the influence and importance of each stakeholder and arranged the gained information in a matrix;
4. I described the positions of the stakeholders compared to each other, and their connection points;
5. Finally, I defined the collective and project risks of the stakeholders, and described their relationship network.

In my opinion, the results and conclusions of the analysis of those stakeholders, which can help to increase the number and rate of the successful residential energy saving investments, can be used:

- to overcome more efficiently the obstacles that appear due to potential conflict of interests (Baros et al., 2004; Bíró-Szigeti – Vágási, 2009; Lányi – Persányi, 1992; Szirmai, 1996), and ensure the necessary motivational factors for the realisation (Bíró-Szigeti, 2009b);
- to organize a “lobby” for the building energetics micro- and smallenterprises to help them successfully reach their goals (Bíró-Szigeti, 2008);
- to increase the social acceptance and recognition of the investments (Giber, 2005; Groó, 2005; Szigeti, 2005, 2006c; Takács, 2006; Vágási, 2004);
- to develop the communication strategy of the state and the enterprises (Rodics, 2003; Mayer, 2006; Száraz, 2006; Szigeti, 2004) to avoid or lessen the resistance due to insufficient awareness, correct the misconceptions, and help the realisation of the investments.

3.3. 3rd THESIS – BASED ON THE 4th CHAPTER OF THE DISSERTATION

One of the main areas of my research is to identify the strategic methods and marketing conditions of the enterprises operating in the building energetics sector by exploratory research and analysis. In the fourth chapter of my dissertation (Revealing the marketing operations of the building energetics micro- and small enterprises) I focused mainly on how the marketing concept and tools can be adapted and implemented by the micro- and smallenterprises.

Market information was primarily gained from in-depths interviews with the owners and executives of the building energetics micro- and small enterprises, and external experts. The aspects of the analysis are based on the relevant basic concepts and models in marketing management. In connection with my preliminary theoretical assumptions I studied four main areas of the residential energy saving market.

(1) Firstly (assuming the importance of knowing the competition conditions), I studied and revealed how enterprises perceive and evaluate their competitors and the competition conditions that influence their own business, and how they take these into consideration in their operations.

(2) Secondly (based on the value concept in marketing theory and assuming its practical importance), I examined how enterprises can benefit from the value-driven marketing concepts and theories, especially from Doyle’s differential advantage model (Doyle, 2002). The study covers how business
success relates to the successful differentiation from the competitors and specialization, and the elements of a successful price offer from the customers’ point of view.

(3) Thirdly (based on the importance of taking into consideration the information on consumer behaviour and buying decision when developing strategies and using marketing tools), I identified the customers’ needs, the consumer behaviour, as well as the steps and decision making roles in the buying process that are typical in this sector.

(4) Finally, I examined and evaluated the typical marketing strategy and practice of the enterprises with the STP-strategy (segmenting, targeting and positioning) and tools.

3rd THESIS

The analysis of the information gained from the exploratory qualitative research based on the current marketing concepts and models shows that many elements of the strategic attitude, and the modern marketing concept and tools are used in the operations of the micro- and small enterprises operating in the Hungarian building energetics sector. However, due to lack of knowledge, these elements are used on a low level, and usually not consciously and systematically.

(Related own publications: P6, P11, P15, P16)

1. I identified the following main characteristics of the competitors based on Kotler’s five forces model. There is no cooperation among the competitors on the residential market. When launching a new technology or product, aggressive position-taking can be seen region-wide to deter the competitors. The enterprises are continuously making price comparisons and have different missions and objectives for their operation fields. Their main business objective, however, is the same (winning orders and generating profit).

2. During the analysis of the building energetics micro- and small enterprises, the following results were obtained based on Doyle’s model for creating differential advantage (classical marketing theories by Kotler (2004), Meyer (1997), Treacy and Wiersma (1995)):

   - There is lack of a conscious corporate strategy among the enterprises, however, they adapt successfully to the changing environment. They mainly use basic marketing tools; word-of-mouth has a significant role when doing business. They do not know or realize the added-value of their products or services.

   - There is a tendency in the building energetics sector that the profit of the businesses will be attributed to the selling of the physical products at a diminishing rate. Currently, most of the micro- and small enterprises is willing to do business with anyone who is paying for their
products and services. In this way, the enterprises get a large number of customers with low profit margin. Furthermore, they lay more emphasis on the short-term benefits than long-term profits.

- The factors of the customer value analysis to determine the value offer can be divided into two groups. Among the high-income customers, the sense of prestige dominates and the return on investment is a secondary criterion, whereas among the middle-income customers, the sense of a positive step for the sake of the future generations dominates. However, high expectations that are attached to high prices can create substantial customer value in both categories.

- Even if the enterprises are able to name some of their target groups, they usually do not use different communication strategies for addressing them or marketing tools for attracting them. Based mainly on their knowledge on human nature, they communicate and behave differently depending on the personality of the salesman and/or the contractor. Their strategic tools are quite similar to the ones used for mass marketing.

3. I used Doyle’s categorisation of existing, latent and incipient needs to reveal the customers’ needs. I analysed the buying decision process (Engel, 1973; Nicosia, 1966) and the buying centre, as well as the consumer behaviour (Töröcsik, 2003; by Vágási, 2000; Vágási et al., 2003) based on the classical marketing models. The following statements support and supplement the thesis:

- Due to time and resource limitations the enterprises do not analyse the customer needs. Moreover, it was difficult for them to formulate a need they could not possibly satisfy, because it would cause a competitive disadvantage for them.

- I changed the classical model of consumer buying decision process (Engel) to a 0+5-step model, which is very similar to the Nicosia-model. Most of the time, the decision maker is a person with technological and economic background, but the other family members, even friends, acquaintances and colleagues can influence the decision making. It can be assumed that the buying decision is made based on some product characteristics.

- I studied the characteristics of the consumer behaviour based on the consumption trends listed by Töröcsik. I came to the conclusion that the traditional consumer behaviour has to be replaced by the environmentally conscious consumer behaviour to a greater extent in order to increase the number of successful investments. I identified the environmental levels of the (energy) consumption behaviour in terms of the preservation of natural resources.
4. I revealed the applied corporate and marketing strategies (STP) and tools based on standard marketing models and theories. I identified the criteria for market segmentation based on Vágási’s (1998, 2001) aspects, the marketing conditions of positioning by Rekettye (2007), and the steps of positioning by Doyle (2007). I determined the criteria by which the target groups make their decisions on the market based on Antal-Mokos et al. (1997) and Vágási (2001, 2007). I revealed the competitive advantages in the two most common segmentation groups on the building energetics market. I analysed the criteria of customer selection among the building energetics enterprises based on Whitney’s (1996) aspects. The following conclusion supports the thesis regarding this subtopic:

- The results showed that only a small part of the analysed building energetics enterprises do conscious segmentation on the residential market. Most of the time, the segmentation is built on a certain technology and rarely on the information obtained from the analysis of the consumer behaviour, or the values that the customers expect. Segmentation is usually done in one step, i.e. the enterprises categorise the customers based on only one criterion.

3.4. 4th AND 5th THESIS – BASED ON THE 5th CHAPTER OF THE DISSERTATION

The aim of my quantitative research is to deepen the understanding of the strategic methods, and the marketing and success conditions of the building energetics enterprises and market sector. The research findings can be read in the fifth chapter of the dissertation. I devised my quantitative empirical research plan based on the results of my former secondary and exploratory primary research to address the arising research questions. I did this to be able to draw more reasonable and general conclusions from the results regarding the market success factors and the marketing operations of the building energetics micro- and small enterprises. I prepared questionnaire(s) in order to address the research problem and the main marketing problem.

I undertook the research based mainly on two assumptions:

(1) The critical market success factors – under certain environmental conditions – of the micro- and small enterprises that undertake building energetics investments are of management types. Due to the fact that strategy and marketing have a more dominant role, the success factors are worth considering from these aspects.

In order to reveal the market characteristics and success of the enterprises I regarded the empirical research of the following factors as necessary: identifying and evaluating the marketing operations (tools and strategies); the quality and price of the product and the income situation of the customers; the number and characteristics of the products and business operations; mission;
customer loyalty; subjective and objective success factors; price sensitivity; and the importance of energy saving.

(2) The characteristics and success factors of the enterprises differ (or do not differ) significantly depending on their operation on the corporate or the residential market. A definitive statement can only be made after analysing the conditions and characteristics of the business operations in both markets.

I used the following variables to measure success: the turnover and the profit of the business and its number of customers within the past three years.

The broader research questions relate to the following two major marketing problems:

(1) What characterises the market expectations, position, marketing strategies and tools of the building energetics micro- and smallenterprises? (4th thesis)

(2) What characteristics can be identified on the residential market and at the companies operating in this segment? (5th thesis)

4th THESIS

The market success factors of the enterprises are of strategic and marketing types and are related to the market situation. The analysis of the success factors showed that they do not differ significantly from each other on the corporate and the residential market.

(Related own publications: P6, P10, P11, P15, P16)

This thesis is proved by the information systematically arranged in tables M.23., M.24. and M.25. The results of the analysis that the success factors are non-market dependent can be found in tables M.24., M.25. and M.28.

I empirically analysed the following factors in order to reveal the market success and marketing management characteristics of the micro- and smallenterprises undertaking building energetics investments: identifying and evaluating the marketing operation (tools and strategies); the quality and price of the product and the income situation of the customers; the number and characteristics of the products and business operations; mission; consumer loyalty; subjective and objective success factor; price sensitivity; and the importance of energy saving.

4/a The more successful building energetics micro- and smallenterprises use marketing strategies and tools that are based on the differential advantage concept, follow a focus strategy, and offer high quality products in the medium or high price category.
The more higher-level and extended marketing operations a business undertakes, the more successful it can become. Based on the variables included in the analysis, it can be stated that this increases the importance of the differential strategy. Among the marketing operations, positioning for product quality plays a crucial role in increasing success. I discovered connection between the product quality and the price level. In conclusion, the most successful strategy is to offer high quality products for high or medium price.

The research results in tables M.23., M.25. and M.28. support my statements on corporate strategy.

4/b Customer loyalty and relationships, brand name and subjective (not easily measurable and quantifiable) factors dominate among the marketing tools of the successful building energetics enterprises. Moreover, their product portfolio and field of operations are characterised by increasing market demand and margin.

Successful building energetics enterprises are optimistic about their future prospects. They consider the market to be continuously expanding and their increasing margin reflects a rising demand. Their customers are loyal, which indicates adequate sales and communication activities and assumes branding. Among the success factors, the usage of subjective factors (they are not easily measurable and quantifiable, or they build on emotions) proved to be the most successful marketing tool. Indirectly, this can relate to the conscious and wide-ranging marketing activities of the businesses.

My statements on the characteristics of successful enterprises are supported by the research results shown in tables M.24., M.25. and M.28.

Moreover, through the quantitative questionnaires I identified the market dependent corporate characteristics and business operations. The fifth thesis of my dissertation gives a statement on the specific characteristics of the residential market in Hungary.

5th THESIS

The residential market shows specific characteristics in market expectations, price sensitivity, energy saving orientation, marketing tools for sales, and the range of products and services.

(Related own publications: P6, P10, P11, P15, P16)

This thesis is proved by the systematically arranged information in tables M.26., M.27. and M.28.

The recession has exerted a more dramatic impact on the demand of the residential market. Due to this fact the enterprises see their future on the residential market more pessimistic. Based on the opinion of the survey respondents, the energy saving motivation is more dominant in this market segment that can be considered as an important factor when developing a strategy that builds on the
costumers’ (stakeholders) motivation. In the residential market, marketing tools play a more significant role in sales and can be used much more efficiently. Moreover, enterprises have developed different communication and sales strategies for their target groups. The primary stakeholder groups identified in the residential customer segment are less price sensitive than the corporate segment. This partly contradicts the “standard” marketing concept that consumers are price sensitive, whereas corporations – mainly business corporations – are not, or less, since they internalise their costs into their product and make their customers pay for them. Moreover, based on the research results it can be stated that the supply of the enterprises operating on the residential market includes wider range of products and services and is more complex.

My statements on the specific characteristics of the residential market are supported by the research results shown in tables M.27. and M.28.
4. UTILIZATION OF THE RESULTS AND POSSIBILITIES FOR FURTHER RESEARCH

The dissertation uses a specific approach to describe the current situation in the Hungarian building energetics market and contribute to the field of residential energy saving investments. The study of the topic from a marketing point of view can be considered entirely novel and it fills a gap in the Hungarian market and in the field of energy policy. The approach provides a systematic and market (strategic) attitude for the stakeholders of the energy saving market.

The research results provide practical information for the enterprises involved, and the state or other institutional actors. Moreover, they can be used for supporting energy saving residential building energetics policy decisions (regulations, subsidies) and to evaluate their efficiency.

The research is worth continuing in the following fields:

- Extending and developing the qualitative research among the successful enterprises based on the project marketing aspects, focusing on the corporate market.
- Extending the analysis of certain stakeholder groups – e.g. different consumer segments, media – regarding their role of importance in the investments/projects.
- Developing the comprehensive technology roadmap of the residential (and corporate) energy saving investments in Hungary in a panel of experts, by bridging the knowledge gaps described in the explanation of the first thesis.
5. PUBLICATIONS

THE LIST OF OWN PUBLICATIONS RELATED TO THE TOPIC OF THE DISSERTATION:

Articles in an edited book

A technológiai üttérképezés első hazai alkalmazási tapasztalatai (The experiences of using technology roadmapping in Hungary for the first time)

P2. Szigeti Sz. (2006a)
Az innovációmarketing kérdései a szélenergia beruházások döntéshozatala és érintettei szempontjából (The innovation marketing questions of the wind energy investments in terms of their decision making processes and stakeholders)
Könyvfejezet/Tudományos [49418]

A vállalatok társadalmi felelőssége a fenntartható fejlődés és az érintettek szempontjából (Corporate social responsibility in terms of sustainable development and the stakeholders)
Konferenciakík/Tudományos [49427]

Articles in journals

- Article in a foreign language published in an internationally edited, peer-reviewed journal

Technology Roadmapping in Hungary: Some Practical Observations

- Article in Hungarian published in Hungary

P5. Pataki B., Szalkai Zs., Bíró-Szigeti Sz. (2010b)
Some organizational issues of technology roadmapping experienced in Hungary
Folyóiratcikk/Szakcikk/Tudományos

Environmental analysis in building energetics sector from aspect of micro- and small enterprises
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