

Influence of company's power position on Competitiveness in supply chains

Tamás Brányi

Doctoral School of Regional and Economic Sciences, Széchenyi István University, Győr, Hungary.

László Józsa

Kautz Gyula Faculty of Economics, Széchenyi István University, Győr, Hungary

Andrea Sólyom

Kautz Gyula Faculty of Economics, Széchenyi István University, 9026 Győr, Hungary.

Abstract

Supplier, producer and buyer companies make up a supply chain. The aim of this paper is to highlight that within each supply chain one company will occupy a power position which influences partner companies in supply chain but also influences competitiveness. However, while the competitiveness of companies in the chain is tied to the strongest link there are possibilities for smaller companies in the supply chain to act and ease dependency. In this paper, we describe these power elements as a positive influence on the supply chain, except in those circumstances where the holders of that power abuse their position through considering only their own outcomes.

Key words: Supply chain, Cooperation, Power structures, Competitiveness

Introduction

Supplier, producer and buyer companies make up a basic supply chain in which partnership, power structures and competitiveness are all key elements. In an optimal case the companies within a supply chain are well integrated; partnership rests on trust which results in common strategic decisions leading to competitiveness. Often a supply chain has a key company with a position of power or dominance over the other firms. This research analysed how competitiveness of partner companies and supply chains can be influenced by the power position of the strongest link in a supply chain. Our analysis surveyed 221 medium to large firm domestic and international firms, including many from Japan, Korea or China, located in Hungary. We found that while cooperating with supply chain partners, companies also had to cope with power differences within the chain and tend to look for solutions to ease dependency. We

also found that while the key company within a supply chain has the goal of deepening cooperation between partner companies it also simultaneously works to maintain its power position. Positive power influences partners and encourages them to be competitive but the supply chain will only be competitive if power remains positive and mutual advantages arise from it - the positive outcomes from competitiveness must also benefit partner companies. There are significant managerial implications from this understanding of using or misusing power in supply chains. Our research focused on medium to large companies but a deeper insight is now needed on specified industries or sectors. Power structures will be discussed and the methodology section will explain how the hypothesis is evaluated. SPSS statistical calculations prove that competitiveness can be targeted by a power position. Managerial implications are drawn..

Supply chains and background theories

Supply chain management has rapidly evolved during the past few decades and is now seen as fundamental to success for many industries. For this research we first define a supply chain as all activities, including materials and two-way information flows, associated with the movement and transformation of goods from raw materials through the vertical dimension of an industry in order to deliver value to the end-user. Secondly, we define supply chain management as the integration of these activities through improved supply chain relationships to achieve sustainable competitive advantage (Handfield-Nichols, 1999, p2). This is taken further by Ayers (2000, p3) where the focus of supply chain management and processes is the *satisfaction* of end-users. A key elements here, is that the flow is often two-way - while products or services move mainly from supplier to customer, information and value can move in both directions. Further, successful supply chain management may require intense levels of cooperation and strategic alignment between firms throughout the chain including concepts, modelling, and strategies about supply and distribution (Fargó, 2005).

Power position in supply chains

Power can be found in every supply chain. Power can be in balance among companies or there may be one actor in the chain that has dominant power position. Power in supply chain relationships can be characterised as the ability to act or produce an effect. It also can mean possession of control, authority, or influence over others or that the will of one partner in the chain can be enforced even against the opposition of others (Weber, 1978). Power structures or power relations come into existence if one party must behave contrary to its own best interests due to the sanctions available to another party in the supply chain (Bachrach-Baratz, 1962). Dominant power exists where an international car manufacturer, for example, has influence over companies both higher and lower in the supply chain due to its market position, brand image, or the great quantity of orders. The intensity of power increases where a supplier or distributor could not diversify its activity, product range nor significantly develop alternate clients. In our example, the car manufacturer may demonstrate its power through demands on design, prices, quality, delivery times and long payment conditions.

Successful supply chains often contain a company that has sufficient power whereby its continuous demands benefit the competitiveness of the entire chain through increased innovation and cost-effectiveness. This company may demand agreements from its suppliers that may not only include pricing and quantities but also specific quality standards and precise delivery times (Chikán, 2003).

Conversely, others in the supply chain can increase their own power by providing unique services and capabilities such as innovative designs or new manufacturing techniques, or through joint coordination on projects. A feature of supply chains is the development of often very long term personal relationships between individuals immersed in connecting firms. If trust evolves between partner companies, or individuals within the companies, such as with joint research activities or closely knit joint projects then the power position becomes less restrictive and the common business advantages can lead to strengths in the supply chain (Johnson and Scholes, 1997). Firms with diversified suppliers or customers may be less impacted by power in a particular supply chain.

Power can be misused through, for example, commercial restrictions, threats of decreased orders or through late payments. In most cases, these misuses of power are not required as the firm's position of power and strengths are clearly understood by other actors in the chain. Power can shift from one company to another in different projects where an actor that is normally a lower player in the structure develops a specialist knowledge that cannot be substituted. In the best chains there is active and ongoing seeking and sharing of new capabilities that benefit the entire structure through better competitive offerings (Bencsik, 2009).

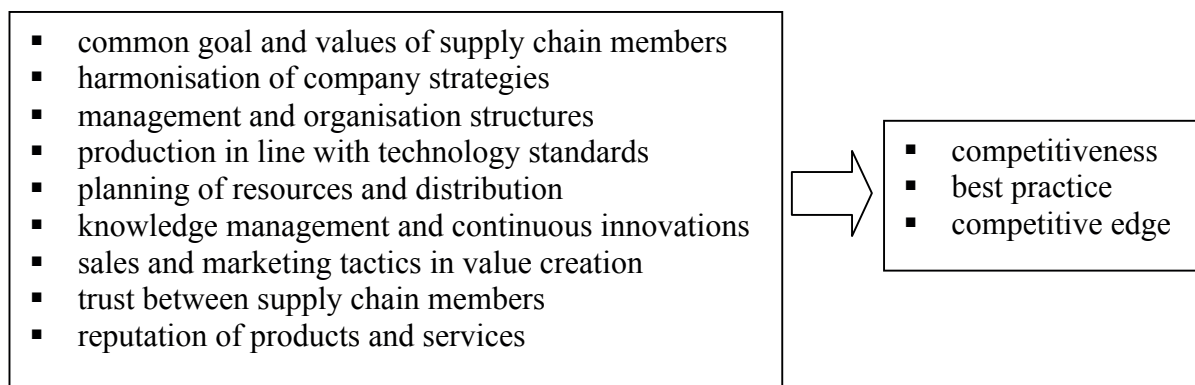
Factors of competitiveness of supply chains

Competitiveness is an ability of a firm to offer products and services that meet the quality standards of its markets at prices that are competitive and provide adequate returns on the resources employed or consumed in producing them (Business Dictionary, 2013). A firm's competitiveness relies on its performance and talent that result in selling its products or services in the market. Each of the companies in a chain contribute to the final product's competitiveness. From this it can be derived that one company's competitiveness is not enough for the competitiveness of the final product. A key factor in any product's competitiveness is the competitiveness of the whole supply chain as each link creates value in each step of the process. Continuously added value in the supply chain causes competitive edge in the market segment (Porter, 1985).

Competitive advantage of a supply chain relies on several factors. This may include design and manufacturing capabilities, human resources, and production processes, but will also feature logistics capability to routinely enable on-time delivery, lower unit prices of contributory materials, and inventory management. Successful supply chains will include joint planning and understanding of the supply chain goals both up and down stream from the principal producer. The principal producer adds the most value to the product or service and tries to match the needs of the end customer (Józsa, 2005). The greater the interdependency through the sharing of information and alignment of company values, directions and strategies, the more competitive and successful the entire supply chain tends to be. This may include, for example, a

competitive strategy based on lower prices. While the power organisation in the supply chain may initiate these competitive changes and demand alignment from other links in the chain, the success of the competitive strategies depends on effort from throughout the whole supply chain. A supply chain normally does not cut down on its quality standards with the price reduction because it would not serve the integration of the chain: (Ellram, 2002). A key strength of an integrated supply chain is the increased potential for innovation along the chain leading to new business processes and new or adapted products for specific market needs, (Morgan, 1999) Continuous evaluation of experiences of the supply chain members leads to new ideas. The power organisation in the chain is often the hub of this knowledge integration. Diagram 1 shows the factors of competitiveness of supply chains.

Diagram 1. Factors of competitiveness of supply chains



Research indication, methodology and hypothesis

Our hypothesis focusses on the two-way influences of the market competitiveness of the power organisation in a supply chain and the overall aggregated competitiveness of the supply chain. Furthermore competitiveness of companies with lack of power might depend on the competitiveness of the company with power in a given supply chain. We set up a hypothesis to determine the relationship of these two factors. We employed quantitative and qualitative approaches. Our questionnaire collected data from 221 middle-sized or large firms that operate in Hungary and have connections with other companies on daily basis, and which operate in supply chains (Harnett-Soni, 1991). The firms include multinational companies from China, Japan and Korea, mainly operating in electronic, IT and transport industries. This range of suppliers, producers and buyers is presented in Table 1.

Table 1. Statistical categories of companies in the questionnaire

		Frequency	Percent
Valid	supplier	53	24.0
	producer	91	41.2
	Buyer	77	34.8
	Total	221	100.0

We used scale questions to understand relationship between variables. (Saunders-Lewis-Thornhill, 2003) The questionnaire asked questions about supply chains, competitiveness, success of companies and goals of partner companies presented in a

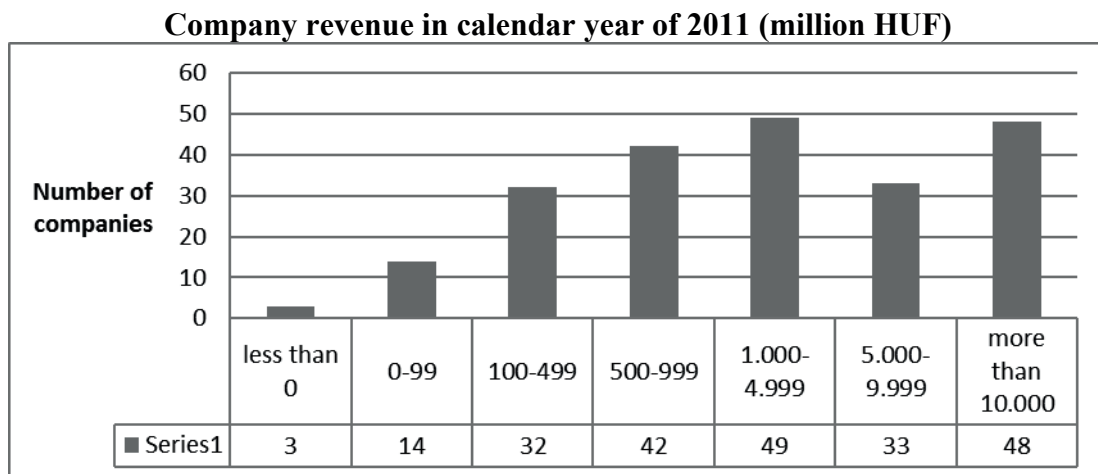
Likert scale model of 1-5 whereby 1 means that the statement is absolutely false and 5 means that the statement is absolutely true.

Companies very much understand how their supply chain works, they depend on each other when it comes down to competitiveness and they have future goals to reach competitiveness. Our Hypothesis states: the competitiveness of a company without power position in a supply chain depends on the competitiveness of the company with a power position.

In order to analyse the hypothesis we used five questions of our questionnaire. The statistical evaluation and connection of the answers will highlight whether the hypothesis is true or false. In the methodology we used different statistical approaches, frequency tables and correlation tables (George-Mallery, 2005). The value of sample size is N=221 and there are not any cases missing. The sample size is valid for all questions in our research.

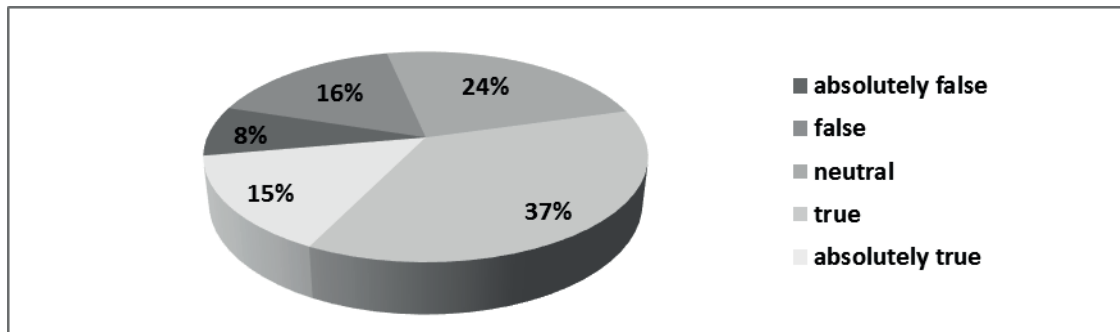
Analysis of relevant questions from questionnaire

To get an insight on company size and performance, the questionnaire first asked a general question on company revenue in calendar year of 2011. The chart below illustrates the size of the large multinational companies involved. Only 1.4% of the companies reported losses, however the research period covered a financial downturn in Europe which significantly impacted on overall commercial performance.



Power can have several reasons or motives but upon the gained results of several questions we will analyse revenue and demonstrate market power with it. Of the companies surveyed, 58.8% had a revenue higher than 1 billion HUF in 2011, so from the seven possible revenue categories they are in the largest three seen in the chart. The magnitude of revenue of a company indicates the level of competitiveness of the company. Altogether 51.6% of companies agreed that revenue and competitiveness relate to each other, most probably the higher the company revenue is, the more the company tends to be competitive. In contrast 24.4% of companies opposed this relation, according to them there can be other aspects of competitiveness as well.

Magnitude of revenue of a company indicates the level of competitiveness of the company.



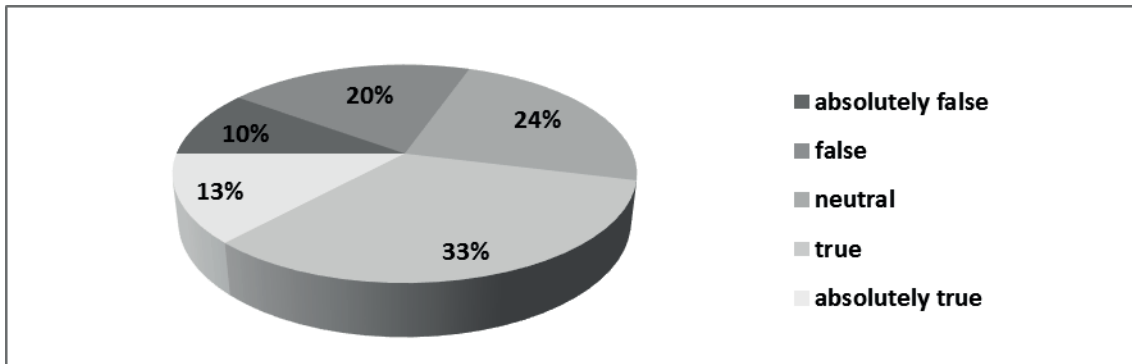
We asked whether competitiveness of one key company of an industry influences the business results of other companies in the given sector. Some 37.6% of the companies said this statement was true and 38.5% find it false that company competitiveness can influence business results of partner companies. A concrete result cannot be drawn from this question because the ratio of answers is almost the same. More analysis is needed in order to explore these influences. We compared these results with other variables.

Competitiveness of one key company of an industry influences the business results of other companies in the given sector.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid absolutely false	34	15.4	15.4	15.4
false	49	22.2	22.2	37.6
neutral	53	24.0	24.0	61.5
true	61	27.6	27.6	89.1
absolutely true	24	10.9	10.9	100.0
Total	221	100.0	100.0	

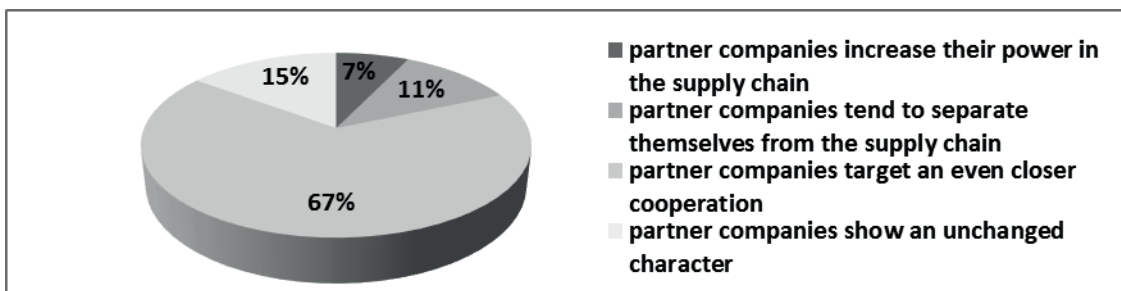
The fourth question collects data about the company and its business sector in which success means a positive business result is achieved. We asked whether based on one successful company in a given industry, more companies can be successful. According to 46.1% of the companies, this was correct. If a company in the supply chain transfers information, knowledge, best practice to partner companies in the same sector as they work together then the partner company can learn from the sometimes bigger and more successful company. This results in positive effects in its businesses. The statement above might refer to competitors as well but in this case we deal with vertical integrations so partner companies are “above” or “below” each other.

Based on one successful company in a given industry, more companies can be successful.



Question five analyses the attitude of companies working in supply chains. The question asked whether in the case of increasing competitiveness of supplier-producer-buyer troika what most characterises the partner companies? If a supply chain is competitive and this originates from the competitiveness of its companies then an increasing competitiveness tends to force member companies to strengthen cooperation with each other or at least keep up the same status. However 18% of the companies would rather be independent from the chain or increase their own power. We had similar answers in earlier research and this proportion is the same where 10-15% of companies can be characterised by dissension or they are not yet well integrated in the supply chain.

In case of increasing competitiveness of supplier-producer-buyer troika what most characterises the partner companies?



Influencing competitiveness of a partner company and its relation to revenue

Correlation is a statistical tool to prove linear relationship between two variables. It shows if one variable changes, then the other variable changes in the same way. The two variables are two questions from the questionnaire.

- Company revenue in calendar year of 2011.
- Competitiveness of one key company of an industry influences the business results of other companies in the given sector.

However, both questions need to be considered as variables in the correlation table. There is a significant relationship (0.012) between the variables, the strength of the relationship is weak: the exact value is $r=0.168$. It can be stated, that a company's competitiveness with higher revenue can more likely influence the business results of partner companies. There is usually one key company in a given supply chain. This company's increasing revenue causes increasing competitiveness that can influence partner company's competitiveness and efficiency because the company with power position forces its partner companies to follow desired aspects that result in effective processes and concentrated competences. It is also possible that a company misuses its power position and exploits partner companies, in this case it still influences business results but in a negative way. This is not the aim of supply chains because in the midterm new partner companies would be needed to substitute the exploited partner companies and in the long run such supply chains would break up. As a conclusion we emphasise that influencing is meant to be positive in supply chains operating in the long run.

Successful company and successful partner company

We applied correlation to analyse further statements where the presence of relationship and its mathematical sign is important.

- Magnitude of revenue of a company indicates the level of competitiveness of the company.
- Based on one successful company in a given industry, more companies can be successful.

There is a significant relationship (0.000) between the two variables, the strength of relationship is $r=0.313$ and the mathematical sign is positive. These all mean that if a company has high revenue and is competitive in the supply chain then this success can influence its partner companies. The higher the revenue of the company is, the more competitive it can be. With its efficiency and positive results the company can influence partner firms so they have the chance to be successful as well. The more companies are successful in a network, the more likely each will be competitive and then the supply chain is also competitive.

Company's competitiveness and success

We treated these statements as two separate variables:

- Competitiveness of one key company of an industry influences the business results of other companies in the given sector.
- Based on one successful company in a given industry, more companies can be successful.

Strength of relationship is $r=0.533$. These firms without power position are rather smaller companies, they depend on the key company with power but due to the successful key company they can be successful as well. This proves also that competitiveness of a bigger company with higher revenue can influence

competitiveness of smaller partner companies. We highlighted in the above analysis that it is important to have a positive cooperation between the company and its partner firms because the findings are not valid in case of direct misuse of power and exploitation.

Table 4: Correlations

		Competitiveness of one key company of an industry influences the business results of other companies in the given sector.	Based on one successful company in a given industry, more companies can be successful.
Competitiveness of one key company of an industry influences the business results of other companies in the given sector.	Pearson Correlation Sig. (2-tailed) N	1 221	.533** .000 221
Based on one successful company in a given industry, more companies can be successful.	Pearson Correlation Sig. (2-tailed) N	.533** .000 221	1 221

** . Correlation is significant at the 0.01 level (2-tailed).

Verification of hypothesis

We looked for relevant data during the research analysis and statistical evaluation of our five questions. We highlighted the significant relations between variables. We proved that the size of a company based on its revenue is related to its level of competitiveness. The company with power position is more competitive than its partner companies. If the subject of analysis is a key company in a given sector, then its competitiveness influences the business results of its partner companies. This influence can be positive or negative but in case of supply chains only positive influence can keep a functioning supply chain successfully. The success of a sector influences partner companies as well. Increasing competitiveness of suppliers, producers and buyers encourages partner companies to strengthen their cooperation.

Conclusion

Data was collected from companies working in supply chains in a wide variety of sectors, in which the questioned companies were middle or large-sized organisations in Hungary. These include multinational companies. Competitiveness of a supply chain has many factors that influence competitiveness of companies within the supply chain, however, there is invariably a company with power position in the supply chain and usually it is the company with the biggest revenue. Partner companies tend to depend on the company with power position. Competitiveness of weaker companies also depends on the competitiveness of the firm with power. Supply chain members interact for as long as the competitiveness of the whole chain is advantageous for all members. Supply chains compete as an integrated whole and is dependent upon increasing competitiveness of the whole chain. If necessary, the company with power needs to drag up less effective chain members – usually smaller companies.

Competitive edge has to be maintained in the long run and this generally relies on cooperation and emphasis of common value of supply chain members.

Implications for Business Marketing Practice

All companies have to be competitive but almost every firm competes as part of a supply chain, which means competitiveness relies on suppliers, producers and buyers. Every supply chain has a company with power position; usually this is the biggest company or the one with specialist knowledge. Normally this company is the core of the supply chain. Partner firms that work with such companies with power are pulled in a positive sense - the aim is to share competitiveness in order to gain market share. Competitiveness of a company without power position in a supply chain depends on the competitiveness of the company with power position. This link between power and competitiveness might be developed as a model following further research. Our most important findings are:

- the company with power position is more likely to be competitive than its partner firms;
- the company with power position intends to keep up its power in the long run;
- the competitiveness of key company in supply chains influences the business results of its partner firms;
- positive influence of company with power position can keep a functioning supply chain successfully together;
- success of a sector influences partner firms to strengthen their cooperation and go for a deeper integration ; and
- in about 10-15% of the cases supply chain members do not share competitiveness, and power is used for exploitation of partner firms. In these cases supply chains split up or change so rapidly that core competences cannot evolve.

Companies within the supply chain have to cope with power structures while cooperating with each other. They tend to look for solutions to ease dependency. Smaller firms intend to cooperate with the company with power position, if competitiveness and advantages are shared. Alternative strategies to ease power position are needed only if power is misused. Diversification of processes, new products and new markets of partner firms might be solutions but they can lead to break-up of the supply chain. An optimal point needs to be found to maintain mutual advantages based on profit for all companies of a supply chain.

Acknowledgements:

This research is supported by the Talentum Project (TAMOP-4.2.2./B-10/1-2010-0010 and TAMOP-4.2.2.A-11/1/KONV-2012-0010).

Reference

- Ayers, J. (2000) "A Primer on Supply Chain Management." *Information Strategy: the Executive's Journal*. Auerbach Publications, CRC Press LLC, New York.
- Bachrach, P., Baratz, M. S. (1962) "Two faces of power." *American Political Science Review*. Washington D.C. 56. p. 947-952.
- Bencsik A. (2009) *A tudásmenedzsment emberi oldala. – The human face of knowledge management*. Z-Press Kiadó, Miskolc.
- Chikán A. (2003) *Vállalatgazdaságtan. – Corporate economics*. Aula Kiadó, Budapest.
- Ellram, L. M. (2002) *Strategic Cost Management in the Supply Chain: A Purchasing and Supply Management Perspective*. CAPS Research, Tempe.
- Faragó L. (2005) *A jövőalkotás társadalomtechnikája. – The sociological technology of future creation*. Dialóg Campus Kiadó, Budapest– Pécs. p. 126.
- George, D., Mallery, P. (2005) *SPSS for Windows Step by Step*. Pearson Education Inc., Boston.
- Handfield, R. B., Nichols, E. L. (1999) *Introduction to Supply Chain Management*. Prentice Hall, Upper Saddle River.
- Harnett, D. L., Soni, A. K. (1991) *Statistical Methods for Business and Economics*. Addison-Wesley Publishing Company, Reading.
- Johnson, G., Scholes, K. (1997) *Exploring Corporate Strategy*. Prentice Hall, Upper Saddle River.
- Józsa L. (2005) *Marketingstratégia. – Marketing Strategy*. Akadémiai Könyvkiadó, Budapest.
- Kotler, P., Keller, K. L. (2011) *Marketing Management*. 14th edition, Prentice Hall, Upper Saddle River.
- Merriam – Webster Dictionary*. (2014) www.merriam-webster.com/dictionary, Download: 2014.01.22.
- Morgan, A. (1999) *Eating the Big Fish: How Challenger Brands Can Compete Against Brand Leaders*. John Wiley & Sons, New York.
- Porter, M. (1985) *Competitive Advantage*. The Free Press, New York.
- Saunders, M., Lewis, P., Thornhill, A. (2003) *Research methods for business students*. FT Prentice Hall, Harlow.
- Thompson, A. – Strickland, A. (1996) *Strategic Management: concepts and cases*. Irwin, Chicago.
- Weber, M. (1978) *Economy and Society: An Outline of Interpretive Sociology*. University of California Press, Berkley