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The role of dominant power in supply chains

Abstract

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. According to the statistical tables the key company of a given supply chain has the goal to deepen cooperation between partner companies but in the same time keeps up its power position. The company with dominant power influences partner firms and encourages them to be competitive. The supply chain will only be then competitive, if mutual advantages arise for all parties. Partner companies must benefit as well. Companies' future goals are clear. They want to work towards an efficient supply chain. Results show that competitiveness is being moved up to supply chain level. Global supply chains compete with each other.

Keywords: supply chain, cooperation companies, revenue and competitiveness, relationship.
JEL Classification: A11, L14, L22, M11.

Introduction

Supplier, producer and buyer companies make up a supply chain. Power position of a company in a chain has effects on partner companies and also influences competitiveness. There is a company with dominant power in every supply chain.

1. Theories of supply chains

Supply chain management developed very fast in the past decades. "The supply chain encompasses all activities associated with the flow and transformation of goods from the raw materials stage (extraction), through to the end-user, as well as associated information flows. Material and information flow both up and down the supply chain. Supply chain management is the integration of these activities through improved supply chain relationships to achieve sustainable competitive advantage" (Handfield, Nichols, 1999). As the term and perspectives developed more aspects came into the definition. "Supply chain management is the design, maintenance, and operation of supply chain processes for satisfaction of end-users" (Ayers, 2001). Newer approaches highlight that supply chain is a network, companies within serve the same customers or consumers. Emphasis is on the value creation for the customer by the end of the chain (Business Dictionary, 2013). Products or services move mainly from supplier to customer, however information and money can move both directions. Supply chain management as a process comprises planning and executing activities that are valid for the companies within the supply chain. Plans contain concepts, modelling, strategies about supply and distribution. Strategic planning in supply chains should also link long and midterm plans and should concentrate on the common connection of the two. Views, missions need to be brought down to actions, the question is when and how this can be realized (Faragó, 2005). A feedback is required in order to have a control on what kind of actions really moved the strategic decisions towards future goals and aims.

2. Supply chains and power position

Power can be characterized as "the ability to act or produce an effect" and the "capacity for being acted upon or undergoing an effect" or it can mean "possession of control, authority, or influence over others" (Merriam Webster, 2013). Furthermore power is a chance that our will can be enforced even against the opposition of others (Weber, 1987). Power can be matched with strength. Power influences the other party as well whether it accepts or rejects the decision. Power structures or power relations come into existence if one party has to give in due to the other's sanctions in the conflicts caused by different interests (Bachrach, Baratz, 1962). Sanctions can be real acts or some kind of threats, the point is that both sides understand the effects of it. Power can be found and works in every supply chain and determines the strongest company of the chain. If chain members understand what it means to have a strongest link then they have possibilities to respond and react.

Chains, frameworks, systems, organizations all have fundaments that rest on common advantages. They are eager to reach win-win situations. Companies in different situations could be changed easily but the entire supply chain would lose time, energy and money compared to the continuous cooperation. Power of a company or its strength in a supply chain can be seen in most of the cases. The firm does not need to stress it. It does not need to highlight power directly, misuse of power is not necessary. Situations, business decisions, simple surroundings all give idea which link is stronger but power can shift from one company to another as companies and business situations change.

3. Dominant power – a case

Power in a supply chain can be in balance among companies or there is a company that has dominant power position. We would like to show an example from the automobile industry where dominant power is present. An international car manufacturer can push several services to its suppliers due to the market position, great quantity of orders and brand image. A supplier can be any kind of company producing metal or plastic components or providing services it is most likely that it depends on the producer. This statement is valid, if the supplier could not diversify its activity, product range and so its own clients. A company in a power position continuously demands from its supplier the given price level according to agreements, the right quality and certain standards in quality checks, precise delivery time and long payment conditions. Accurate delivery or just-in-time delivery has at once four factors that are demanded by the producer (Chikán, 2003). It is important that the transported products arrive in the right place, in the right time, in the needed quantity and in the needed quality. Importance of supply chains lie in the connections within companies; not just selling and buying activities take place but others as well. This practical approach needs to be taken on. Power positions can be weakened by suppliers, if they do regular research and development, renewal of products, work on innovative approaches and techniques. These all can highlight the importance of suppliers. Dependence will be two-sided; partnership within chain members will be longer. Next step is the joint coordination of different projects. Brainstorming is indispensable for the two companies; it is the first phase of such processes. It is important to emphasize that these beginning steps are causing the breakdown of power positions. Several meetings, official gatherings, meals, factory visits, PR occasions and of course building personal connections all show the way towards a strengthening level of trust. If trust evolves between partner companies then the position of power will be pushed to the background. In such situations common work, research activities are based on at least two firms, the aim is the same for both so there is no point misusing power because one could harm itself as well. A producer does not look for another supplier because the common business advantages can lead to strengths of the supply chain (Johnson, Scholes, 1997). If partnership reaches this level then outsourced personnel and experts working for companies show how two companies can cut back on their own company hierarchies in order to save costs and concentrate on cheap solutions for the chain. There is no need to maintain divisions that are duplicated; with trust one department is enough. Personnel working for both companies and having a common interest in mind have to know exactly what is with great advantage for both producer and supplier. Apart from the above mentioned a company using a diversified strategy can supply other producers as well and reach good partnership with more companies in the same time.

4. Competitiveness of supply chains

Competitiveness is an "ability of a firm or a nation to offer products and services that meet the quality standards of the local and world 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 compete-tiveness relies on its performance and talent that result in selling its products or services in the market. If the market accepts and buys the offered goods then the product or service is competitive. Compe-titiveness of a supply chain cannot be simplified to the competitiveness of the end product. The chain consists of several companies with many dimensions and so the whole chain with all of its factors has to be competitive in the market. A continuous development of the processes is needed. One company's competitiveness is not enough for the compe-titiveness of the whole supply chain.

Competitive advantage of a supply chain relies on several factors. Supplier side needs to be on time with delivery, should focus on low unit price of raw materials and should insure the needed amount of inventory of the producer company. Nowadays with just-in-time operations the stock system is even minimized. The accuracy of transportation is more and more important. The supplier is competitive if the company can serve a huge amount of raw materials by maintaining a cheap unit price. Only a well planned production can eliminate extra costs of urgent raw material extraction and unexpected transportation. If such unexpected circumstances occur in the first part of the supply chain then the supplier will pass on the extra costs to its buyer. This also indicates the importance of the planning and the understanding of the same goals of the supply chain. The middle link is the producer. This company adds the most value to the product or service and tries to match the needs of the customer (Józsa, 2005). Manufacturing, human resources, production pro-cesses, technology, new inventions, research and developments are just some of the factors that form the delivered raw material into a market-ready product. Problems could arise, technology could fail, bottlenecks can set back production and work forces can cause mistakes and waste. All the processes should be on time and should show the quality of the product in order to raise desire for the goods in the market. The product life cycle is important, in most of the cases the producer is the significant company in the customer's mind. Customers can be competitive as well. A retailer, wholesaler and the customer itself can be the producer's customer.

Supply chain member companies should think, plan and act together in favor of competitiveness in the market. They work towards the same goal, they create value in each step of the process. Continuously added value in the supply chain causes competitive edge in the market segment (Porter, 2006).

5. Factors of competitiveness within the chain

There are five factors that determine the intensiveness of competition among enterprises and companies in a market segment. These are:

- hazard of competition in the segment;
- threat of new entries to competition;
- potential substitute products;
- strength of the bargain position of customers;
- strength of the bargain position of suppliers (Kotler-Keller, 2006).

Some of these five factors can be related to supply chains. If the supply chain integrates the suppliers and customers, then the competition within the segment can be minimized. An optimal strategy can evolve if all three players of the chain aim at a higher profit. There is no need to get involved in harsh competition and bargaining position within the chain. Further, the selection of several suppliers and customers can result in a fair market price. Price peaks or lows are not common in strong supply chain structures.

There are points of improvement for supply chains in order to be competitive or to raise the level of competitiveness. The strategies are for maintaining existing market share and even extending it. If suppliers, producers and customers of a supply chain agree to grip their chances and focus on competitiveness then the members can agree on lower prices in favor of higher sales. Raising quality level is also a strategy for higher market share. Normally supply chain members have information from market, production and also from raw materials. The linked companies' knowledge, research and development, innovation result in better processes and in many cases it decreases production costs. Technology and differentiated channel strategies in the distribution are essential. Figure 1 shows the factors of competitiveness of supply chains.

Sources: Author's own research.

Fig. 1. Factors of competitiveness of supply chains

To reach better competitiveness innovations and sometimes shock innovations are useful (Morgan, 1999). Innovations can involve business processes, material flow that lead to modified products or even new goods. Creating new consumer desires and communicating certain straight messages are tools that present the whole supply chain in a nicer look. If the consumer is well informed, publicity has its power and then buyers will stick to their choice. Information technology and information flow can speed up work processes of a supply chain. Up-to-date information allows faster reaction to market challenges and also an element of competitiveness. Managing strategic change deals with the unexpected changes that weren't even thought. Changes in such external circumstances are developing differently, competitors emerge, organizational culture can't adopt the strategy, leaders of the firm change or when the global trend shifts are just a couple of examples (Thompson, Strickland, 1996). Supply chains just as companies have stronger and weaker points, the most important factors include products or services, retailers or wholesalers, operations, research and development, costs and finances, leadership. Abilities of a chain such as ability to grow, to react fast, to adapt to new situations and to have endurance can determine competitiveness (Porter, 2006).

6. Research indication, methodology and hypothesis

Competitiveness of supply chains and power of the strongest link in the supply chain have influence on each other and on partner firms. Furthermore competitiveness of the chain might come from the company with dominant power. We set up a hypothesis to find out the relationship of the mentioned two factors. We used a questionnaire with quantitative and qualitative approaches. The methodology of our analysis includes primary research of 221 companies that operate in supply chains. These are suppliers, producers or buyers; they can be seen in Table 1. The questionnaire collects data of middle sized or big firms that operate in Hungary and have connections with other companies on daily basis (Harnett, Soni, 1991).

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

Source: Author's own research.

Beside of the company demographics we use scale questions to understand relationship between different variables (Saunders, Lewis, Thornhill, 2003). According to the questionnaire there were 5 points scale questions about supply chains, competitiveness, and success of companies and goals of partner companies. 1 means that the statement is absolutely false and 5 means that the statement is absolutely true. Companies are well aware of understanding how their supply chain works, they depend on each other when it comes down to competitiveness and they have future goals to reach competitiveness. We use SPSS statistical analysis to support the theory whether it is true that power position of a company influences a company without power in terms of competitiveness. According to the statistical tables conclusions were drawn.

Hypothesis: Supply chain's competitiveness depends on the influence and success of the company with dominant power.

In order to analyze the hypothesis we use five questions of the questionnaire. The statistical evaluation and connection of the answers highlight whether the hypothesis is true or false. In the methodology we use different statistical approaches, frequency tables and correlation tables (George, Mallery, 2005). The answers of the questions point out the logical line of a company's influence and competitiveness. We analyze the company with dominant power and its competitiveness. Table 2 is an SPSS table and it shows the sample size valid for all questions.

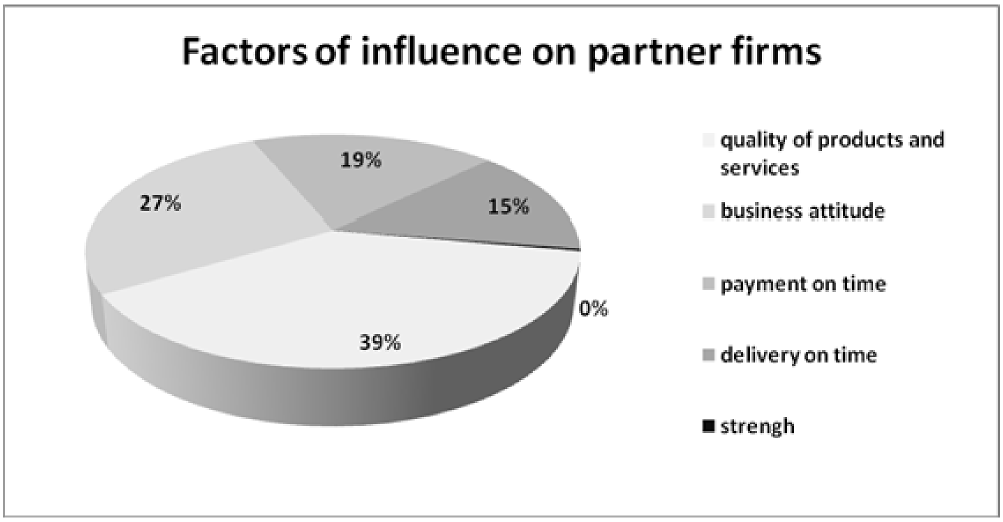
Table 2. Case processing summary of questions – sample size (N)

Cases					
Valid		Missing		Total	
N	Percent	N	Percent	N	Percent
221	100.0%	0	.0%	221	100.0%

Source: Author's own research.

7. Analysis of relevant research questions

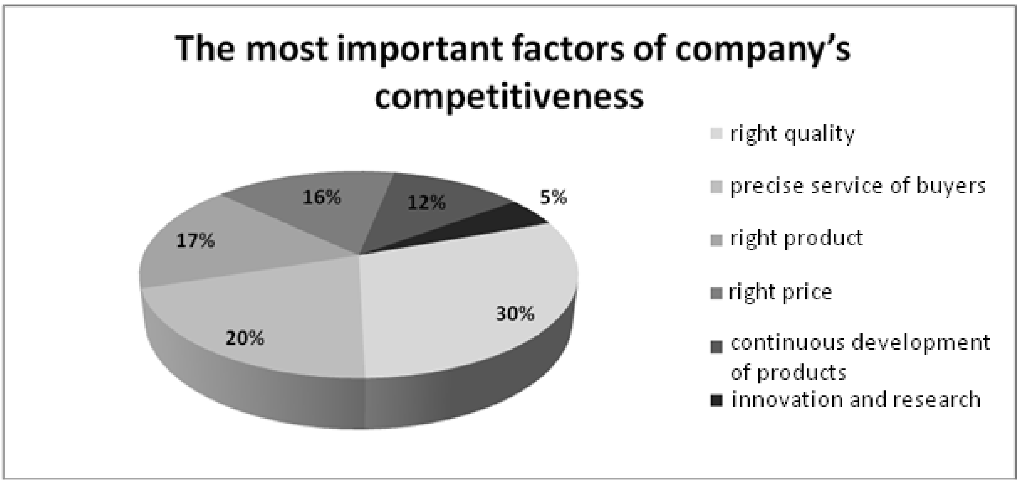
It is important to have information about what companies really mean under influence. What are the factors with a company is able to influence its most important partner firms? The first question can be valid for a supplier, producer or buyer company of a supply chain. Figure 2 shows the exact results. As seen below, quality of products and services reaches 39% and business attitude counts for 27%. It was possible to fill in other factors of influence in the questionnaire and we received one additional factor that is strength. 0% in the diagram means 1 company, in reality it is 0.45% but due to rounding the statistical program uses 0%.



Source: Authors' own research.

Fig. 2. Factors of influence on partner firms

After analyzing the factors of influence the second question goes further on. This question looks for the most important factors of company's competitiveness. We analyzed the questions in this order because the companies of any supply chain did influence each other but they worked together to be competitive. If influencing has a bad direction then this will negatively involve competitiveness. The basis of supply chain competitiveness is the competitiveness of a given company of the chain. Figure 3 shows the gained answers. 30% of them highlight the right quality and according to 20% precise service of buyers are key factors. The connection between the above mentioned two questions is visible. Companies tend to influence each other with the quality of products and services and they influence each other with their business attitude, so how they make business. These are the most important factors of competitiveness as well. It can be interpreted that companies influence each other because of their competitiveness. They understand that right quality and precise services of buyers help the supply chain run successfully in the long run.



Source: Author's own research.

Fig. 3. The most important factors of company's competitiveness

The success of the most important partner firms comes from the company. The third question's meaning is the following. The company works together and is in cooperation with its partner firms and these partner firms will be successful if the company is successful as well. This assumes that partner firms depend on the company. There are suppliers, producers and buyers among those who filled in the questionnaire so the result means whether the company itself or the partner firms cause success in the cooperation. Table 3 shows the answers. After grouping the answers it can be seen that 23.5% of partner firms cause the success for themselves. In contrast to this 47.5% of the companies know that the success of the company affects partner firms, so if the company itself is successful then more likely that the partner firm will be successful as well. This conclusion is right because the answers come from rather big companies. One should think of that a supplier of a multinational company depends on the big company.

Table 3. The success of the most important partner firms comes from the company

		Frequency	Percent	Valid percent	Cumulative percent
Valid	absolutely false	14	6.3	6.3	6.3
	false	38	17.2	17.2	23.5
	neutral	64	29.0	29.0	52.5
	true	61	27.6	27.6	80.1
	absolutely true	44	19.9	19.9	100.0
	Total	221	100.0	100.0	

Source: Author's own research.

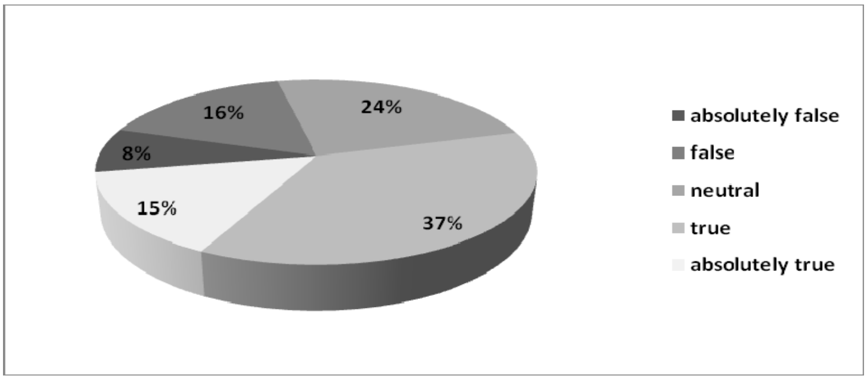
According to question 4 the company has all information about its products' competitiveness. Table 4 indicates the answers. After adding the answers one can easily recognize that 81.4% of companies know their products and have all information about their competitiveness. This is important because the company recognizes the advantages of its products and positions them according to the products of the competitors. The information is given and can be easily collected. Any company in a supply chain can have information about competitiveness but should pass it on to chain members because these companies are interrelated.

Table 4. The company has all information about its products' competitiveness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	absolutely false	3	1.4	1.4	1.4
	false	4	1.8	1.8	3.2
	neutral	34	15.4	15.4	18.6
	true	119	53.8	53.8	72.4
	absolutely true	61	27.6	27.6	100.0
	Total	221	100.0	100.0	

Source: Author's own research.

The fifth question is the following. Magnitude of revenue of a company indicates the level of competitiveness of the company. We analyzed this question on a scale. Figure 4 shows the answers. After summing the answers altogether 51.6% of companies agree 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 oppose this relation, according to them there can be other aspects of competitiveness as well. We will compare these results with other data in order to get more information about competitiveness.



Source: Author's own research.

Fig. 4. Magnitude of revenue of a company indicates the level of competitiveness of the company

8. Factors of influence and competitiveness

We analyzed the relationship of the gained answers of the two questions with factors. The results were very similar so we concentrated on the common sections.

- ♦ The company can influence its most important partner firms with the quality of products and services and also with business attitude. These two factors are valid for 66% of the companies.
- ♦ The first two factors of competitiveness are right quality and precise services of buyers. The two are valid for 50% of the companies.

These factors could be seen as more or less the same. The important relationship between the factors is the following. If a company influences another partner firm then the factors are suitable for maintaining competitiveness. In other words the company with dominant power position, so the strongest link in the supply chain puts pressure on its partner companies because of the competitiveness. With the same factors supplier, producer and buyer companies can be successful together.

9. Source of competitiveness and success of a company

Correlation is a statistical tool to indicate 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.

- ♦ The company has all information about its products' competitiveness.
- ♦ The success of the most important partner firms comes from the company.

The two statements relate to each other because if a company has information about its products and knows why they are competitive, then this competitiveness influences the partner firms. The partner firm will be successful due to the competitiveness of the company. Sample size is $N = 221$. According to the results of correlation table there is a significant relationship between the variables, the strength of the relationship is middle, sign is positive, exact value is $r = 0.307$. The more the company has information about the competitiveness of its products the more it causes success in its own company. The partner company can take away from this success, to be precise this partner company realizes that a competitive product positively influences its firm.

10. Relationship of company revenue and competitiveness

Results of correlation table show the relationship between two questions. The research emphasizes the presence of the connection. We treat the statements as two separate variables:

- ♦ Magnitude of revenue of a company indicates the level of competitiveness of the company.
- ♦ The success of the most important partner firms comes from the company.

If revenue is higher the company is more likely to be competitive, the company with higher revenue and competitiveness is the source of the success of partner firms. This assumes that there is a bigger company that has dominant power and able to influence other partner firms positively, so competitiveness will appear also in the partner firm. So supply chain as a whole will be more competitive. Sample size is $N = 221$ and there is a significant relationship (0.000) between variables. Strength of relationship is middle as $r = 0.356$. Positive mathematical sign is legible in correlation table. Table 5 shows exact details. The higher the company revenue is, the more competitive a company can be and with this it can positively affect its partner firms. The company with dominant power position and high revenue has a positive effect on the operation of partner firms and causes competitiveness.

Table 5. Relationship of company revenue and competitiveness

		The success of the most important partner firms comes from the company.	Magnitude of revenue of a company indicates the level of competitiveness of the company.
The success of the most important partner firms comes from the company.	Pearson correlation	1	.356**
	Sig. (2-tailed)		.000
	Sum of squares and cross-products	299.828	105.457
	Covariance	1.363	.479
	N	221	221
Magnitude of revenue of a company indicates the level of competitiveness of the company.	Pearson correlation	.356**	1
	Sig. (2-tailed)	.000	
	Sum of squares and cross-products	105.457	291.864
	Covariance	.479	1.327
	N	221	221

Note: ** Correlation is significant at the 0.01 level (2-tailed).
Source: Author's own research.

11. Verification of hypothesis

Based on theory and definitions we looked for relevant data during the research analysis and statistical evaluation of five questions. We could highlight the relations between variables and all gained data were significant. The company can influence its most important partner firms with the quality of products and services and also with its business attitude. These factors are also important elements of a company's competitiveness. According to statistical analysis the company with dominant power position has rather higher revenue and this indicates the level of its competitiveness. The company knows about its products and information that can cause competitiveness and so the company can pass these on to its partner firms. We underlined that partner firms will be more competitive because the most competitive company of a supply chain affects positively the competitiveness and success of partner firms. There is significant relationship between the two variables. Suppliers, producers and buyers of a supply chain need to be competitive together. The source of their competitiveness can come from any of the companies but the factors have to be shared among partner firms. Member companies of supply chain will be competitive this way. We conclude the analysis. Influence and competitiveness of a company with higher revenue and dominant power position affects competitiveness of partner firms cooperating in supply chains.

Supply chain's competitiveness depends on the influence and success of the company with dominant power. According to the research findings we accept it to be true.

Conclusion

Competitiveness of a supply chain has many factors that influence competitiveness of companies within the supply chain. There is a company with power position in the supply chain; 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 solid power. Supply chains compete globally. The essential point is to increase competitiveness of the whole chain. If necessary, the company with power needs to drag smaller companies and this action influences competitiveness. Competitive edge has to be maintained in the long.

References

1. Ayers, J. (2001). *Handbook of Supply Chain Management*, St. Lucie Press, Boca Raton.
2. Bachrach, P. and Baratz, M.S. (1962). Two faces of power, *American Political Science Review*, 56, pp. 947-952.
3. Business Dictionary (2013). www.businessdictionary.com/definition, Download: [16.01.2013]
4. Chikán, A. (2003). *Enterprise Economics* (In Hungarian), Budapest: Aula Publishing Co.
5. Faragó, L. (2005). *Social Techniques of Future Formation* (In Hungarian) Budapest and Pécs: Dialóg Campus Publishing Co.
6. George, D. and Mallery, P. (2005). *SPSS for Windows Step by Step*, Boston, Pearson Education Inc.
7. Handfield, R.B. and Nichols, E.L. (1999). *Introduction to Supply Chain Management*, Upper Saddle River, Prentice Hall.
8. Harnett, D.L. and Soni, A.K. (1991). *Statistical Methods for Business and Economics*, Reading, Addison-Wesley Publishing Company.
9. Johson, G. and Scholes, K. (1997). *Exploring Corporate Strategy*, Upper Saddle River, Prentice Hall.
10. Józsa, L. (2005). *Marketing Strategy*, Budapest, Akadémiai Publishing Co.
11. Kotler, P. and Keller, K.L. (2006). *Marketing Management* (In Hungarian), Budapest, Akadémiai Publishing Co.
12. Merriam Webster Dictionary (2013). www.merriam-webster.com/dictionary, Download: (16.01.2013)
13. Morgan, A. (1999). *Eating the Big Fish: How Challenger Brands Can Compete Against Brand Leaders*, New York, John Wiley & Sons.
14. Porter, M. (2006). *Competitive Strategy* (In Hungarian), Budapest, Akadémiai Publishing Co.
15. Saunders, M., Lewis, P. and Thornhill, A. (2003). *Research Methods for Business Students*, Harlow, FT-Prentice Hall.
16. Thompson, A. and Strickland, A. (1996). *Strategic Management: Concepts and Cases*, Chicago, Irwin.
17. Weber, M. (1987). *Contribution to Basic Concepts of Sociology by Max Weber's Work (1919-1920)*, In: Weber, M. Economy and Society (In Hungarian), Budapest, Közgazdasági és Jogi Publishing Co.