Risks in Supply Chains

[1]HORVÁTH, M., [2]HORVÁTHNÉ, K. A., [3]PAKAI, K.
[1,2,3]College of Szolnok, Hungary

Abstract
Members of supply chains, as the name implies, come as links connected together. Their operations are to get profit, market share and be able to grow. Each member has an impact on the operation of other members of the chain. They cooperate, help each other and work to have confident consumers at the end of the supply chains.
But there isn't just a sunny side, risk factors appear on the dark side. We would like to review these points and factors with the results of a quantitative research.

Keywords
Risk, Management, Supply Chains, Crisis

I. Introduction

In this paper we would like to present the basic contact between risks and supply chain management because it is an actual question in this business area. Because of the crisis the role of risks has been increased.
We would like to highlight the Hungarian characteristics of risk management in the supply chains.

II. Literature Review

The risks that occur in our daily life concept raises any situation where a decision must be made. Risk of all walks of life encounter these risks arising from the hazards. So I think it can be stated without exaggeration that the risk is mostly a negative concept, being given a negative image in the public consciousness [6].
In the past, the knowledge and experience of the future based on, but for the future, these are basically the decision-making situations, which affect the risk. All decisions, whether personal or corporate are risky.
The uncertainty in the risk, which is directly proportional to the uncertainty of time, that continues to grow over time [8].
Ivan Bélyácz corresponding member of the Hungarian Academy of Sciences said: „The risk and uncertainty is one of the most controversial phenomenon in economics. They never disputed that both are affected by the economic decisions, but the effects are felt in regard to the significant change that has taken place in the last few decades. The twentieth century up to the sixties and seventies in both categories were seen as a moderating influence on the estimated value. The main reason for the future decision-makers saw the limitations of knowledge."
Kindler (1997) formulation of an action version of the risk of potential negative consequences of the rated full description of the gravity of the consequences and the likelihood of Show as well [6].
In the specialist literature, there are a number of risk stratification, depending on that in what topic we look at. Different risks occur in business or private life, others in agriculture or in industry. Basically, I would like to be recognized and listed the most common economic and agricultural land classification principles and types of risks.
The literature shares two major groups of the expected effects, which are the following.
The first group is pure risk:

- The damage or occur, or there will be no adverse event, so the initial state is maintained.

Pure risks are among the natural events - storms, rain, earthquake or fire - accident or machinery, rolling stock failures.
The other main group is speculative risk:

- Uncertainty can also bring positive results (losses occur, profit, or remain in the original state).

Approach to other types of risks can also be grouped according to the principle of grouping them according to the company's underlying factors that influence the risk or not. According to differentiate between internal and external risks.
Internal risk may occur, if the company can not influence these risks within own sphere of authority. Such risks may include the depreciation of machinery and the improper maintenance of equipments. [7]

- Financial risk
- Operational risk
- Technology risk

External risks, the Company is unable to have a say in this, it cannot influence the factors. Environmental factors such as competitors or unexpected steps.
Economic risks

- Environmental risks
- Legal risks
- Political risks
- Market risks
- Social risks

The following figure (1. Figure) shows the external and internal, namely the relationship of micro and macro risks.

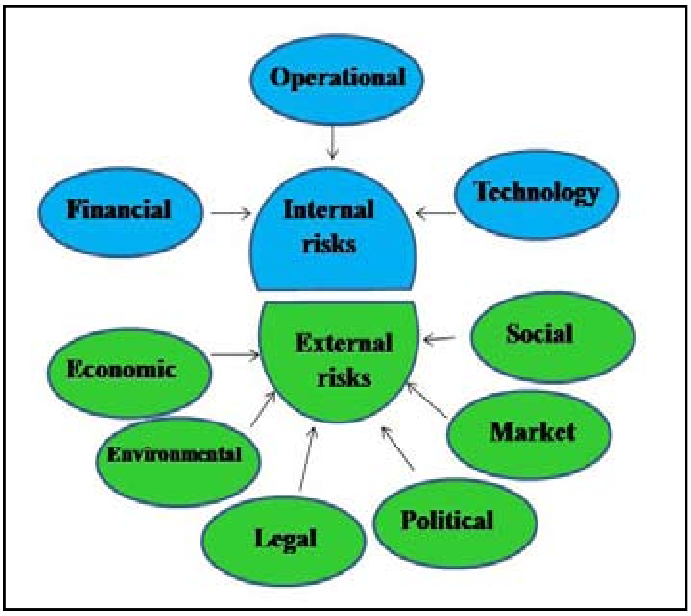

Fig. 1: Types of Risks [7]

A. The Risk Management

The literature suggests that there are different level risk management, which are shown in the following figure (2. Figure):

 ISSN : 2230-9519 (Online) | ISSN : 2231-2463 (Print)

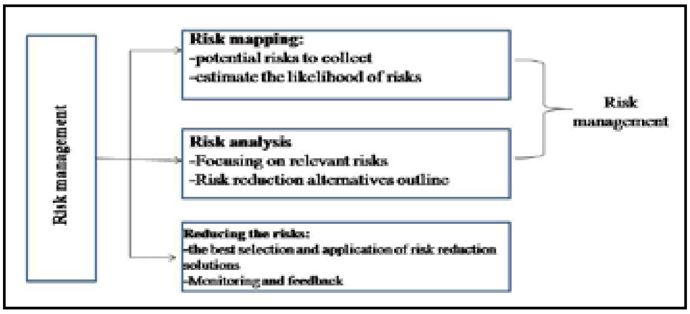

Fig. 2: Risk Management and Management Levels [8]

The objective of risk management is to identify the threats affecting the company, and that the occurrence of hazards which could have negative consequences. In the process of risk identification and analysis of these, it will be to prevent the damage that the company how to respond, or if the power to protect it, the damage has occurred [3].

Risk management is that the underlying hazard risks, some tools, actions we try to prevent, reduce the possibility of the occurrence, or the risk of damage has occurred can be averted.

Holmes (2002), Risk management is adherence to well-established procedures that allow for the possibility of financial loss to ourselves substrate recognition factors, quantify, and control. As a result, risk management is a decision for the future and judgments based on assumptions [1].

The fact that we are dealing with risks of, and how to choose a number of factors. The different categories of risk different response modes, means and intensity of attentional demand, which includes Enterprise risk management philosophy.

Risk management strategies:

- Risk aversion
- Risk reduction
- Risk sharing, risk transfer, risk ranking.

The seven-step risk management process consists of the following steps as shown in fig.

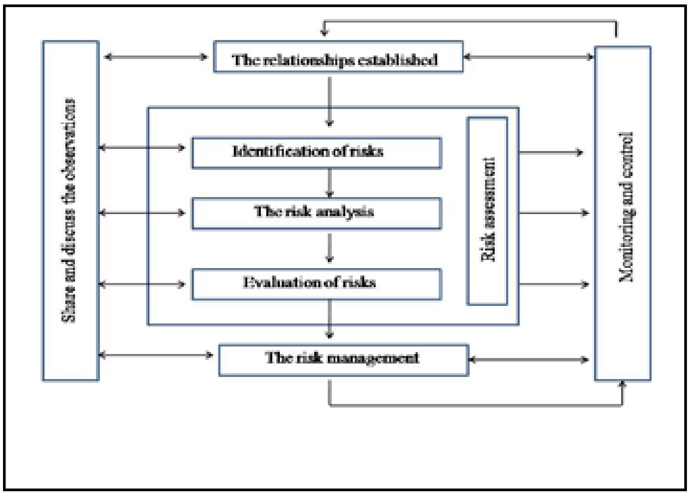

Fig. 3: The Risk Management Process [7]

Risk management is the first step in the evaluation context, which is identified by the so-called situation assessment. Situation analysis of the company's external and internal environment analysis of the situation occurs. The next step is to identify the risks that any element of force, which is a risk for the company, be counted and be sure to create a list [7].

The counting after a risk analysis follows, when the risk of occurrence probability and the occurrence of severity is determined after evaluating the risks is that the center of the risks are to manage the existing risk management practices are not suitable. The fifth step is to manage the risk does occur, the tools and methods of selection, which is best suited for the purpose.

And last but not least, the monitoring and verification takes place, a process stage, the company's decision-making of the previously defined risk management plan is approved, the implementation is, and this aspect at every stage monitor, so no prior good selection of risk management methods, it can be replaced, they can fix the problem [2].

The last step of the comments and sharing are discussed. The final step is an important part of the decision-makers and other parties are in a constant exchange of information, all parties should be informed about the same through the entire process. The decision will facilitate the success of the whole, or nearly the complete information condition.

B. The Risk Management in Supply Chains

In the business there are lots of risks. The companies know that these are necessary, but in these complex systems the companies always affect each other / like stock exchange or crisis/.

There are some specialty in risk management in supply chains:

- In co-sourcing, outsourcing, insourcing,
- Technologies in manufacturing,
- Lean processes,
- Value added processes,
- Environmentally friendly processes,
- Costs,
- And others.

The risks are in close connection with industry, culture and position in the supply chains. The bigger usually analyze their risks and risks of others and concentrate on avoiding them. The smaller ones do not spend a lot of money on calculating, planning avoiding risks as usual. This is a competitiveness for bigger and more dominant ones.

III. A Hungarian Example

In our research we used qualitative methodologies to know more about the retailers' review on crisis management, risks and supply chain management attitudes. 42 expert interviews were conducted in 2012 and 2013. A sampling was based on simple random, the geographical demarcation was Eastern Hungary [4].

Most of the managers have quite similar opinion about the Hungarian crisis characteristics, the difference mainly due to the market position of the company can be discovered.

A typical characteristic of crisis processes is the following ones based on the expert interviews:

- Reduce the number of players, it is mostly observed not only in the case of suppliers,
- This is a typical period for retails to more and more gain strengthen against the independent retailers (this has also contributed to reducing the number of market operators),
- Some of the retailers had to change the product portfolio based on changed consumer needs (cheaper products are included in the product range while trying to maintain quality),
- The purchasing power decreases and shifts towards more price sensitive,
- Decreasing sales of businesses,
- One of the most common tool of crisis management is restructuring and / or downsizing the workforce,
- The liquidity problems, rising costs, some economic policy measures specifically compounded for crisis management

and keeping pace with competitors as well.

Based on the above-described groupings of risks we can typify the risks in the Hungarian retail trade supply chains by the following, focusing the retailing by the interviewees:

- Financial risks are in close connection with crisis problems in Hungary, most of the supply chains have problems with liquidity and in Hungary the other problem is the value of Forint (the national currency); the retail chains are the dominant members in Hungarian chains, but the independent retailer's role is really weak that is why they really depend on the other members of the supply chains.
- Operational risk – the outsourcing is not common in retailing, mostly the some of retail chains use this solution in transporting and warehousing; The human resource is really important in the operation of retailing because it takes the most of the costs.
- Technology risk – in supply chains real-time information flow or information sharing solutions are appearing, but not really in Hungarian supply chains (except for the use of POS devices), so it will be another risk how to be competitive without new technologies.

On the other hand, the companies can affect on external factors: Economic risk – the crisis affects on the Hungarian markets, so the common risks are reducing demand, changes in consumption, inflation.

- Environmental risk – it is not important for the members, but it is necessary to use the alternative energy-saving technics or programs for the consumers.
- Legal risk – there are two laws affecting directly the Hungarian chains,
- Since 2012 the building of retail units has been regulated by the current law. This law is called 'plaza-stop', because retail units cannot be established or more dimensions cannot be expanded if the floor area is greater than 300 m2. Investors may request a waiver, but it slows down the pace of investment. This law regulates the opportunity of sustainable retailing, the investment's effects on the city and its country and environment or other market conditions.
- The 'hamburger-tax', the fat-tax was introduced in 2 steps in 2011 ans 2012. It does not really change the product range, most of the producers make the 'old' products by an other receipt, [9]
- Political risk - the value added tax has been increased which effects on consumer price,
- in 2013 the government regulates the retailing of cigarette, so in Hungary only the 'National Tobacco Shops' can sell these products, it became a state monopoly. [5]
- Market risk – the most significant risk is the changes in consumption, the demand has been changed and reduced.
- Social risk – because of the crisis time, there more social problems affecting the supply chains (most of the Hungarian households are concerned in inflation and currency crisis because most of their loans are in CHF).

These are some of the common risks in Hungarian markets in the retailers' point of view. But it seems it is really important to analyze and know the risks, the risk management usually depends on the role of the member, the size of the member and the management.

Mostly it is atypical to think as a member of supply chains not alone.

V. Summary

This paper is a short summary of risks and their roles in supply chains. In business it is necessary to manage these risks as they can.

We introduce a Hungarian example, highlighting the most important and determined risks.

There are common risks in all the supply chains, but there are some specials because of the different characteristics of the markets and the different habits in B2B and B2C markets. But the risk management is really actual, although the analyzed companies do not treat or manage the risk with strategies, but they know the role of risks. We think that there will be more and more rational and conscious processes in the Hungarian market, mostly because of the crisis time.

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Marianna Horváth is an economist and a PhD student in Szent Isván University in Hungary. She teaches as a lecturer assistant in Szolnok College, she is specialized in logistics and supply chain management.

ISSN : 2230-9519 (Online) | ISSN : 2231-2463 (Print)

Annamária Kökény Horváthné is an economist too and a PhD student in Szent Isván University in Hungary. She teaches as a lecturer assistant also in Szolnok College, she is specialized in macroeconomics, savings and saving habits.

Katalin Pakai received her Bachelor in Commerce and Marketing. She works as a retail manager, specialized in logistics and risk management.