Abstract:
Organizations are very often subject to reforms due to changes taking place in the markets or more broadly societal changes. These changes can either have direct or indirect effects on the organizations. In the wake of constant changes, whether to be direct or indirect companies who have developed structural adaptability to those changes have competitive advantage to its competitors. They can maintain their profits during difficult times. This paper aims to review strategic managerial applications of logistics firms for enhancing adaptation to change. Within this review decision making strategies, such as strategic planning, analytical process analysis (Analytical Hierarchy Process, AHP, and Analytical Network Process, ANP), agility approach and several methods such as SWOT, benchmarking are examined and discussed in terms of logistics.

Keywords: logistic management, strategic decision making, strategic applications
1. INTRODUCTION

Logistic and supply chain management is vital for firms operating in the global market place today. Competition is increasing and by logistic competitive advantages can be gained. Different ways of competing through logistics will be examined as well as the management and strategies that need to be implemented in order for the whole supply chain to work. (Harrison and van Hoek, 2005). Especially in the last 20 years of logistics systems simply “moving” is not perceived as, from planning purchase order, inventory standards purchasing, warehousing and packaging or waste management as an area that play an important role in many processes takes place in the business world. This is important because of the logistics function through effective execution of the processes companies can reduce costs, can increase their profits, and in particular the quality of service. That's why many organizations are included in the company's logistics department (Gattorna, 2001; Harrison and van Hoek, 2005).

If supply Chain managers are expected to make difficult decisions in dynamic environments, valuable information must be available at the right place, at the right time, and the right hands of people who approach the problem from different perspectives and with different styles.” (Gattorna, 2001). In the last step of the production location of the logistics during distribution is thought to be. Whereas businesses to compete in the market environment and the role of logistics to be able to plan strategically and from a broader assessment are required. Supply chain planning and controlling all of the business processes -from end customer to raw material suppliers-that link together partners in a supply chain in order to serve the needs of an end customer. In effect, the end customer starts the whole process by buying finished products. It is this behaviour that causes materials to move through the supply chain (Harrison and van Hoek, 2005). One such example is given logistics is the task of coordinating material flow and information flow inside a supply chain. All information and are concerned with material flow and logistics management and logistics so management activities of the organization’s decision-making processes and changing response to market conditions, which are greatly affected.

Organizations in general in the market, the economy, society, environment, in politics, or specifically in the area of services, financial markets, suppliers in any change which occurs other than those caused directly or directly are exposed (Gattorna, 2001). The rapid development of technology, carried out in a short time legal regulations, product-life cycles shortening of the firms they are in the market conditions change quite rapidly and continuously development and continuous cases no longer remain on the card is also reduced (Gattorna, 2001). Very quickly adapt to changing conditions and business processes, allowing companies passing in front of its competitors, is making a profit and stay afloat in the market. Therefore, to enable them to adapt quickly to changes in firms’ strategic applications must execute (Harrison and van Hoek, 2005).

In this paper, the logistics system in the context of decision-making in the organization and exchange processes more efficient methods and approaches used to carry out will be discussed. Logistics and supply chain management in strategic decision making the process most commonly used and most up to date analysis - Analytical Hyerarchial Process Analysis and Analytic Network Process Analysis-will be discussed. Decision making processes developed in parallel to the process of change as a strategic fit used to provide insight and agility planning SWOT analysis, benchmarking in the context of such methods will be discussed.

2. PROCESS ANALYSIS FOR STRATEGIC DECISION MAKING AND ANALYTICAL

Nowadays, logistic processes are subjects of a high variety of change drivers depending on the development of the market situation. The role of the consumer is increasing significantly and continuously such that products have to be more and more individualised and customized resulting in a rapid change from seller's market to buyer's market. This development is leading to the atomisation of deliveries and in consequence to an enormously increased transport volume (Aberle, 2003) as well as a rise of delivery frequencies. The increase of complex internal and external logistic processes needs to be allowed by managing logistic processes, especially, if goods are produced in global supply chains. From the management perspective, this requires the delegation of decision-making competence within logistic processes. In consequence, the management is losing influence on local decisions. To compensate this loss of control new instruments and logics are needed for ensuring reliable process behavior. (Dembski and Timm, 2005). Decision-making and decisions themselves
should be performed rationally and hold to a formal logic, e.g. statistical or economical evidence (Werth, 2004). Generally, there are different approaches of detailing the process of decision-making.

The first step within this simplified decision model is to specify the problem on the basis of internal or external influences. The identification includes historical interpretation of situations as well as expected events. The evaluation of expected events contains risk management. In conventional logistics, the truck driver has to map the current situation (e.g. available offers and costs) to a suitable problem definition, provided by the management.

In the second step alternative solution for the problem are identified (e.g. finding different tours). Generally, this process is divided into retrieval, analysis and formulation of alternatives. Identification of alternatives is based on the predefined assessment model, i.e. not depending on the driver’s deliberation. For the example within conventional logistics, alternatives are derived from the problem definition and adapted to the current situation by operational objectives from the truck driver himself.

Finally, it is necessary to evaluate and assess the alternatives considering utility, risks and chances. Additionally, conflicts of interest have to be solved on the basis of multidimensional utilities. Considering our example in conventional logistics the truck driver would evaluate and assess alternatives using explicit instructions from the management. These instructions leave no choice for decisions, i.e. they are designed with respect to strategic objectives. Decisions generally yield the steps in the process is performed (see picture 1):

2.1 Analysis of analytical hierarchy process,

The AHP (analytical hierarchy process) has become one of the most widely used multiple-criteria decision-making methods, and has been used to solve unstructured problems in different areas of human needs and interest, such as political, economic, social and management science. Many decision-making problems cannot be structured hierarchically because they involve interaction of various factors, with high-level factors occasionally depending on low-level factors (Lee and Kim, 2000). Besides, the analysis of decision-making processes within the group and the debate does not focus on alternative decisions often focus on the purpose of the process. Factors related to the decision of each shape can be discussed in the decision-making process. In addition, continuous structuring of the discussion can be rearranged to support the exchange of ideas. Thus, the idea that every individual in the group and said that a continuing consensus decision-making process is created. The biggest disadvantage of this analysis, the variables included in the decision-making process to address independently of each other and, therefore, is to ignore the interaction between variables.
2.2 Analysis of analytical network process

ANP (analytical network process) has been widely used in solving many complicated decision-making problems. For example, ANP is used in the interdependent information system project selection process (Lee and Kim, 2001); Although analytical hierarchy process analysis in logistics systems more widely used but much more efficient provided from analytical network analysis decision-making process.

In contrast to the analytic hierarchy process analysis, analytic network process in the analysis takes into variables making the relationship between the decision analysis. The ANP feedback approach replaces hierarchies with networks, in which the relationship between levels are not easily represented as higher or lower, dominant or subordinate, direct or indirect (Meade and Sarkis, 1999). For instance, not only does the importance of the alternatives may affect the importance of the criteria (Satty, 1996).

2.3 Analysis of Implementation of analytic hierarchy process to analytic network process

The ANP is a new theory that extends the AHP to deal with dependence in feedback, and utilizes the super-matrix approach. There are some differences between them. The first difference is that the AHP is a special of ANP. Secondly, the ANP is a nonlinear structure, while the AHP is hierarchical and linear with a goal at the top level and the alternatives in the bottom level (Saaty, 1999). In ANP the hierarchical relation between criteria and alternatives are generalized to networks. Many decision problems cannot be structured hierarchically, because they involve the interaction and dependence of high-level elements on lower-level elements. Not only does the importance of the criteria determine the importance of the alternatives as in a hierarchy, but also the importance of the alternatives themselves determines the importance of the criteria. Thus, in ANP the decision alternatives can depend on criteria and each other as well as criteria can depend on alternatives and other criteria (Saaty, 2001). Technically, in ANP, the system structure is presented graphically and by matrix notations. The graphic presentation describes the network of influences among the elements and clusters by nodes and arcs. ANP extends the function of AHP and is a variable method for multi-criteria decision problems that involve interdependent relationship.

ANP process typically consists of the following steps (Sarkis, 1999; Meade and Sarkis, 1998):

1. Problem structure: determine the logical grouping of the elements(clusters) in the problem to be modeled. For example, Formulated in logistics systems which supplier will be selected in this step.
2. Model definition at upper level: created cluster. For example, various suppliers’ costs, quality, and / or prestige comparable.
3. Model definition at low level: Build the nodes (elements) with each cluster.
4. Model Construction: Create the links between nodes in the same cluster or in the other clusters.
5. Data collection: Make judgments in the form of pairwise comparisons with respect to a controlling element. System calculates priorities for decision elements.
6. Solution: Synthesize to prioritize the alternatives with respect to the structure of the whole system.
3. STRATEGIC PLANNING

In the scope of global sourcing, production and distribution, logistics has reached high strategic importance for companies today. Definition of strategic planning is the process of identifying the long-term goals of the entity (where we want to be) and the broad steps necessary to achieve these goals over a long-term horizon (how to get there), incorporating the concerns and future expectations of the major stakeholders. The essential role of strategic planning may be described as anticipating future environmental changes in order to reduce uncertainty in business operations and, based on that, determining the corporate direction. It aims at identifying, evaluating, and selecting the means by which a company may achieve its long-term objectives.

A unified, comprehensive, and integrated planning process to achieve competitive advantage through increased value and customer service, which results in superior customer satisfaction, by anticipating future demand for logistics services and managing the resources of the entire supply chain. The planning is done within the context of the overall corporate goals and plan. (Cooper, Innis & Dickson, 1992, p.4-5).

There are three key elements in this definition. The first element refers to the long-term orientation of strategic planning. A second one addresses the means of achieving the long-term goals. A last element considers the process of achieving these goals.

Logistics managers of the strategic plan in doubtle about how to hear and so they are more resource allocations to strategic planning. Some companies does not allocate resource to do strategic planning, because they are finding it unnecessary. (Harrison ve van Hoek, 2005).
3.1 SWOT analysis

SWOT analysis is a strategic tool that can help companies analyze their situation and conditions they are faced with, summarize their past and make a developing strategy and plan for future life and evaluate. “S” stands for strengths, “W” stands for weaknesses, “O” stands for opportunities, “T” stands for threats. Strengths and weaknesses belong to internal factors and opportunities and threats are external factors. It was firstly introduced by Learned and other famous experts in 1965 and widely used in strategic management field. (Mind tools-SWOT analysis 2009). SWOT analysis is an effective tool. Even though its structure is very simple, it can help deal with very difficult affairs. It can be used when you need to make a strategy of development for the company or analyze competitors and market position. (Mind tools-SWOT analysis 2009).

Internal factors analyze the company functions and activities and include strengths and weaknesses. When we analyze them, we can think about such questions as a start. Internal strengths and weaknesses usually mean the internal factors that the organization can control. For example, the organizational mission, financial resources, technological resources, organizational culture, human resource, product feature and so on. (Mind tools-SWOT analysis 2009).

External factors include opportunities and threats, which indicate the factors in the business environment that the organization usually can’t control in the business environment. For example, it includes demand, competition, economy, politics, law, society, culture, technology, population environment and so on. These external factors usually can’t be controlled by the organization but have significant effects on organizational operation. (Mind tools-SWOT analysis 2009). During SWOT analysis, some simple principles should be obeyed in order to make it successful and exact according to true facts. Firstly, have an objective understanding on the company’s advantages and disadvantages. Secondly, distinguish the company’s current situation and prospect. Thirdly, consider all things in full-scale. Fourthly, compare with the competitors no matter they are better or worse. Finally, keep SWOT analysis simplified and avoid overcomplicating matters and over analysis. The strengths, weaknesses, opportunities and threats are found by using different analyzing methods for instant demand analysis, competition analysis, analyzing the company function etc. (Mind tools-SWOT analysis 2009).

4. AGILITY

Agility is the ability of an enterprise to quickly respond to changes in an uncertain and changing environment. Agility is a supply-chain-wide capability that aligns organizational structures, information systems, logistics processes and, in particular, mindsets. (Harrison & Hoek, 2005).

Agility is the ability of an enterprise to change and reconfigure the internal and external parts of the enterprise - strategies, organization, technologies, people, partners, suppliers, distributors, and even customers in response to change unpredictable events and uncertainty in the business environment.

Kidd (2001) has summarized the main points of the agility paradigm:

- Agility is about the basis of competition, business practices, and corporate structures in the 21st century;
- Agility is not about developing more technology, although technology will play an important role;
- Agility is not another way of referring to leanness, flexibility, computer integrated enterprises, or other current buzzwords;
- Agility is a strategic response, not tactical, and involves building defense against primary competitive forces through cooperation;
- Agility is a holistic concept;
• Agility is primarily about adaptability which is achieved through reconfiguration capability. Processes, structures, organization, people, implementation capabilities, etc are the key issues;
• Agility is a paradigm shift;
• Agility is a step change innovation not an incremental innovation;
• Agility holds the promise of a world based on cooperation.

The challenge for the future is to create agile companies using technologies, organizational forms and people to develop a new form of manufacturing that transcends existing mindsets that are becoming increasingly dominated by the latter manufacturing dogma.

Agile management consists in carrying out the activities connected to strategy of the diversification, to deliver the product, the consumers cannot find elsewhere. The quick response to changes in the demand is most important. This activity in logistic operations involves the use of flexible and agile operations to provide an excellent service level of final customer. (Waters, 2002).

Harrison and Van Hoek (2008) propose such components of agility:
• The agile supply chain is customer responsive, i.e. it responds to the market according customer’s demand and not company’s forecasts.
• The agile supply chain should be viewed as a network of partners, who have a common goal to collaborate together in order to respond to customers’ needs.
• In agile supply chain the network is been viewed as a system of business process, as ‘stand alone’ processes may create penalties in terms of time, cost and quality for the whole network.
• In agile supply chain use of information technology to share data between buyers and suppliers creates a virtual supply chain, which is information-based rather than inventory-based.

5. DISCUSSION AND CONCLUSION

Logistics management decision-making and dynamic to adapt to change has to be more efficient and faster in market conditions (Harrison and van Hoek, 2005). The strategic decision-making and change management analytical process analysis, strategic planning and understanding of agility to adopt the idea that an effective approach is proposed (Gattorna, 1994; Waters, 2007). Strategic planning process, SWOT analysis, benchmarking, scenario development, such as the Delphi technique with various strategic methods should be supported.

Considering all these approaches logistics systems and methods decision-making and understanding necessary to adapt to changes summary of as (Christopher, 1994; Cooper et al., 1992; Gattorna, 2001; Harrison and van Hoek, 2005):
1. Oriented rather than product-oriented to customer service
2. Giving importance to the client’s subjective measurements than performance measurement in the supply chain and logistics systems
3. Management structure must be able to respond quickly to the clients, flexible, coordinated, not to be centralized
4. From domestic activities of the organization many customers to the demands and wishes focus providing to responsive.
5. Environmental change is expected to redefine and to incorporate the strategic plans in change orientation.

Many firms in this environment variable can take new decisions and these decisions to apply mobilizes all resources. (Gattorna, 2001; Harrison and van Hoek, 2005). This system in the short scale is seen as the solution to adapt, but is difficult to the changing environment of the organization. Change as a natural process to make sense again not in everyday decision-making process and to ensure compliance you need to take a step in the planning stages.
REFERENCE LIST