The importance of logistics and supply chain management in the enhancement of Romanian SMEs

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Abstract

The globalization and the development of the economy as a process enable the creation of a single market and in this process logistics is an important tool. A market with well-organized logistics and supply chain management facilities has a qualified advantage over other economies, whereas improving logistics infrastructure may serve as a competitive tool and is also effective in rising market share. More than a few studies show that the small and medium sized enterprises (SME) are working on these improvements. Moreover, we believe that trade logistics and supply chain management are needed by emerging countries in order to improve their competitiveness as by obtaining the advantages of globalization they will be able to address shortage issues more efficiently in the entire world. The success in combining international supply chains starts with the capability of companies to move goods across borders faster, in a more consistent manner and cheaper. The Romanian economy aims to join worldwide trends and development, rather than successively joining the Romanian market to the European one and then towards the world market. This paper aims to investigate how logistics can be considered as a tool for developing the activity of small and medium sized Romanian enterprises that in turn will enhance the good organization of the business and create an additional business chance.

Keywords: Global mark; small and medium enterprises (SMEs); logistics; supply chain management (SCM)
1. Introduction

The effect of the 2008-2009 world economic crisis is perceptible in Romania: high unemployment rate, while the Romanian Leu (RON) is weak. Companies have to face the fact that not paying notice to their costs and performance will not allow them to stay on the market. The clients’ needs are consistent and possibly more challenging than before. The use of logistics tools and supply chain management is regarded as among the best ways to improve business. (Lakatos & Németh, 2013).

The present background is that of great business opposition and of a gradually, dynamic, and globalized economy; companies need to find procedures and management methods that increase the development of efficient organization with enhancing results. This paradigm has been the subject of several studies, which focused their attention to the the purpose and the different effects as well as the meaning of each of the companies’ competitive achievement (Stock et al., 2000; Banon & Sanchez, 2002; Norek et al., 2007).

Supply chain management is a holistic advance to request, source, and purchase logistics process administration. It is a network which consists of all parties concerned directly or indirectly. This includes the company, supplier, seller, client and so forth, in producing and delivering goods or services to final clients both on upstream and downstream level. (Thoo et al., 2012). The field of supply chain management has been evolving fast. Currently, it focuses on internal integration, as both supplier and client seek to reach high levels of performance.

As the world’s economies become more unified and supply chains expand worldwide, attention in transportation mode selection for cargo is gaining the interest of scholars and practitioners. The administration of transport in the organizations aims on making decisions about how to move resources and finished goods between several points of certain businesses’ network. As a part of logistics, prospect about the performance of transport services have become more intricate. The perception of high level service was tied with the efficient movement of raw materials and finished goods between various geographical points (Ricardo S. M et al., 2010).

The transport activity may represent from one third to two-thirds of total logistics costs. Thus, an important part of business competitiveness is in the correct design and implementation of transport strategies, with greater or less impact, depending on the type of business. Additionally, such a strategy of operations should be aligned with corporate strategy. This aims on deciding alternatives for service levels (frequency and pre-arranged time for loading and deliveries), ownership of the fleet (own transport or use of third parties’), and how to consolidate loads (lots and location of operations).

Small enterprises, simultaneously, are the enterprises that are dynamic, innovative, and assessing their chances in time. In this matter SMEs play a balancing character to the economies of most emerging nations between the outlook of generating employment and economic growth (Şentürk et al., 2008). For small and medium-sized enterprises (SMEs), transport generally involves the largest logistics costs and challenges. Initially, the shippers offer small volumes to operators, which means, besides direct question of bargaining power in negotiations on price and service levels, higher unit operating costs to the operator (Ricardo S. M et al., 2010).

The importance of the issue which involves the transportation activity and its effects on the logistics of enterprises is developed in the aspects of outsourcing and the hiring of operators. Today, important gaps have not been recorded until concerning the description of the inner processes which take to the shape of demand for transportation services, as well as to their specifications for small and medium-sized enterprises (Holter et al., 2008). All processes related to material and information flows, that include planning, implementation and monitoring, are the mark of logistics. The capability of logistics has been deformed from the time when the materialization of new technologies and strategic associations that participated on suppleness as well as to directness. The increasing importance of logistics begins from businesses becoming globalized to raise access to the new markets (Bowersox et al., 2007). The process of achievement of transport services is involved in the traditional trade-off between quality and cost, which leads to obtain a better process as a whole. On the other hand, the management of transport focuses on monitoring obtained and desired service levels, which transcends the boundaries of the company, this involves management relationship with the operator’s needs and proficient logistics services that can move their freights at the right place, at the right time, in the right circumstance, and at the right rate (Christopher, 1992; Bowersox & Daugherty, 1995; Bowersox & Closs, 1996). As a result, the success of small company has a direct effect on the national economy.
This paper seeks to include new forms of information by giving new data and closely observing into the relationship between logistics practices and performance of SMEs in the field of services in Romania. The aim of selecting this subject is to encourage the advanced scientific analysis of the logistics of small and medium-sized enterprises. Additionally, it helps to show that paying more attention to this area is a way of enhancing the SMEs and expanding the market of logistics service sources. Considering that the strength of the SME’s is a significant topic for research in many countries and is of ever greater significance in a country like Romania where 99.5% of the developed companies are classified as small and medium sized.

2. Definitions of Small and Medium-Sized Enterprise (SME)

Today, micro or small enterprises are no longer equal with companies that have failed. This new condition is different from that of the past. Any firm can be successful and it can be the case of the small sized as well (Şentürk et al., 2008). The definition of SMEs and their size criterions is a divisive subject. There are various opinions about SMEs and their size and determination criteria (Dinçer, 1994).

In anticipation of January 1996 the small and medium enterprises were measured those enterprises whose whole number of workers encompassed less than 500 people, with the following sectors, micro-enterprises (1-9 employees), small enterprises (10-99 employees), and medium enterprises (100-499 employees). The type of definition established, firmly on a single principle the number of people employed in enterprises determined the extinction of its use in the current statistics of the European Union. In 1996, the European Commission establishes a new explanation of small and medium enterprises based on four quantitative criteria (EC. 1996):

a. The total number of employees in the enterprise;

b. The annual volume of the turnover;

c. The total of the assets in the enterprise balance;

d. The degree of independence of the enterprise or the ownership over it.

As a result, Table 1 shows that the European Commission (2003) defines SMEs as enterprises which employ less than 250 persons and/or have an yearly income not greater than EUR 50 million, and/or an yearly stability sheet total not exceeding EUR 43 million (Amoako et al., 2014).

<table>
<thead>
<tr>
<th>Number of employees</th>
<th>Annual net sales</th>
<th>Balance sheet total</th>
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<tbody>
<tr>
<td>Micro enterprise</td>
<td>&lt; 10 persons</td>
<td>max. EUR 2 million</td>
</tr>
<tr>
<td>Small enterprise</td>
<td>10-49 persons</td>
<td>min. EUR 2 million, max. EUR 10 million</td>
</tr>
<tr>
<td>Medium-sized enterprise</td>
<td>50-249 persons</td>
<td>min. EUR 10 million, max. EUR 50 million</td>
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</table>

Source: Gecse (2012)

3. Structure

SMEs and entrepreneurs play an important role in all economies and they are the key generators of service, income, and drivers of improvement and growth. In the OECD area, SMEs employ more than half of the labor force in the personal part. In the European Union, they account for over 99% of all enterprises. Furthermore, 91% of these enterprises are micro-firms with less than 10 workers. This specifies their significance in all economies and the fact that they are necessary for the economic development (OECD, 2009). In ‘normal’ economic conditions governments have documented that, to survive and grow, SMEs need detailed policies and programs. Therefore, there was a complete range of SMEs measures presently in place across the OECD members. However, at that time, SMEs had not been hit so hard by the universal crisis.
These firms are more helpless now for many reasons: not only has the conventional face of accessing financial means increased their challenges, but new, mainly supply-side, difficulties are currently apparent. It is important to acknowledge the fact that SMEs are commonly more at risk in times of crisis for several reasons:

- It is more difficult for them to make savings given that they are already tiny;
- They are independently a smaller amount spread in their economic activities;
- They have no a stronger financial structure (i.e. lower capitalization);
- They have no credit or a lower rating;
- They are heavily dependent on credit and
- They have no higher financing options.

SMEs in worldwide rate chains are yet extra helpless as they often bear the substance of the difficulties of the huge firms (Sedej & Justinek, 2012).

4. The SME Sector in Romania

Compared to the population of approximately 20 million people, Romania has a number of economically active and small enterprises. Between January to November, (2013) 56.722 companies were registered and 57.589 compared to 2012, registering a slight decrease of only 1.51% (NTRO, 2013). The statistics in approximately all the countries confirm that the SMEs are the main player in the economy, as more than 99% of all the companies have substantial influence on achieving the gross domestic product and the provider of jobs (Savlovschi & Robu, 2011).

Simultaneously, it shows that the number of active enterprises has increased by about 8% in November (2013) compared to the annual average of the period (2008-2012), which indicates a pronounced pace of recovery of the SME sector in Romania. From 95.757 in (2008), the number of registered companies fell to 52.990 in (2009), rebounding a little to 64.753 in (2011) and to 56.722 in the first 11 months of 2013 (NTRO, 2013).

The sectors with the highest share in the structure of business individual were: in terms of interest, small and medium enterprises in Romania are oriented mainly in services is prevalent, with a total percentage of 76.5% and in the comprehensive and retail trade and repair of motor vehicles. SMEs in the manufacturing sector ranks third overall with a share of 10% in the number of firms. Between SMEs, medium-sized enterprises dynamic in the manufacturing combines a higher percentage 38.6%, while micro-enterprises have the smallest divide of only 8%, corresponding to low technological capability of these companies. Industries are mainly active operators in the food industry, bookkeeping accounts for 16.7% of the SMEs active in the fabrication part;

<table>
<thead>
<tr>
<th>Table 2. Annual situation SMEs during the period (2009-2013)</th>
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<tr>
<td>Regsistrations</td>
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<td>Suspensions</td>
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<td>Dissolution</td>
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<tr>
<td>Cancellations</td>
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<tr>
<td>Companies active</td>
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</table>

Source: NTRO, 2013

The largest percentage in the number of employees opted for the construction sector 8.7%, hotels and restaurants 8.2% and in transportation and warehousing 7% (NTRO, 2013).

Almost 99% of the companies in Romania are registered as small and medium enterprises, employing nearly 55.6 % of the employees in the private sector. According to the main activity registered, Enterprises from industry, construction, trade and other services 52.9% Private entrepreneurs 32.8%, Private administration approximately 10% and Agricultural holdings 1.9% and Public administration 1.6 % and Financial and insurance companies 8%.

The Romanian Government puts a high priority on the development of the SME sector, it focuses on measuring the activities to support the development and competitiveness of SMEs, and it improves the business environment in general (NTRO, 2013).

Currently, SME is increasingly taking a part in the worldwide business network and contributes in many
interlinked supply chains (Hvolby & Trienekens, 2002). SMEs have significant effects on supply chains that show the roles of suppliers, distributors, producers, and clients (Hong & Jeong, 2006). SMEs usually focus their activities on precise position markets by their exclusive competences in the supply chain. They can participate within the supply chain to get competitive positions in terms of either low cost operations or value added operations (Simchi-Levi et al., 2003).

Chapman et al. (2000) believe that SMEs can take advantage of the supply chain management strategy for different reasons:

- SMEs are critical links in several supply chains.
- SMEs are very flexible; many SMEs still young and developed and it is consequently easier for them to re-engineer existing business processes and adopt a supply chain management advance than for large organizations with a long-standing organizational structure and customs. The included approach is fundamentally division and package of SMEs:
  - SMEs pursue an integrated approach by nature.
  - Computer software programmes are more SME friendly.
  - SMEs can also advantage from worldwide rivalry. Supply chain management supplies a method of addressing the competitive faces in front of business today.

Technology is increasingly reasonable and available to help SMEs take benefit of supply chain strategies because of the competitive pressures that facing small businesses it is critical for them to use supply chain viewpoints and connected strategies to create synergies with supply chain partners in order to succeed in the global competitive environment. SMEs are now increasingly taking a part in the global business network and participating in many interlinked supply chains (Marra et al., 2012).

5. The Significance of Efficient Logistics and Supply Chain Management in Romanian SMEs

In current years, successful logistics and supply chain management have been recognized as key opportunities for improving the success and the competitive performance of the companies. In addition, in the last few years, a significant progress in the field of small and medium enterprise development in Romania has been noticed.

SMEs normally focus their activities on specific function markets by their unique competences in the supply chain. They can compete within the supply chain to get competitive positions in terms of either low cost operations or value added operations (e.g. new product and service development). The high flexibility in organization and rapid decision making provide SMEs the ability to adopt competitive advantages learnt from large enterprises and collaborate efficiently with other SMEs. (Li et al., 2005).

Logistic and SCM has both the positive and negative effects on the appearance of SMEs. On one hand, SCM can supply quality, cost, client service, leverage and even risk reduction repayment for the SMEs. On the other hand, it exposes the SME to greater management and control hazards whilst reducing its private differentiation benefits (Arend & Wisner, 2005).

SC performance will be a key indicator of overall corporate success in the upcoming period and center advantage when entering foreign markets and competing with low cost countries. SMEs with efficient logistics and SCM will be able to maximize their success and improve their competitiveness. The large companies in Romania, although they exist in a small number, have developed logistics and SCM systems. This is particularly the case with the companies that were privatized during the evolution stage and where a foreign investor is a dominant shareholder. Frequently in these companies the main advantage is that they use the knowledge, the experience and the benefits from the before now well recognized logistics and SCM system in the parent company, located in some overseas country (Pulevska-Ivanovska et al., 2013).

The success obtained by organizations that achieve strategic supply chain management will surely have a positive effect on the status of the approach and will develop a trend towards implementing the supply chain management approach by increasingly more organizations. This expected trend will definitely impact small and medium-sized businesses (SMEs) and these challenges happen mostly from the devolution of production systems, leading companies to move towards the growth of primary skills and the need to apply well-organized and successful parts of logistic activities (Mansidão & Coelho (2014).
6. Overview on the Logistics Market in Romania

In making this point, we started from the fact that the implementation, expansion and development of SCM within the Romanian companies have as a starting point the logistics improvement. Although Romania’s positive geographical position, we can argue that the logistics part is not yet properly developed, although it has made some progress. This is due to poor transport infrastructure, public policies, and the economic crisis (Moanţă, 2008).

The logistics market in Romania started to grow principally after the accession to the European Union, because as foreign investors entered in various fields of activity (attractive due to lower costs of production factors) there was a real need to increase logistics facilities. This did not hinder developers to become visible which is justified by the presence of large international groups. This has seen an upward evolution until 2008, followed by a strong decrease during the economic crisis. Currently, there are slight tendencies of recovery (Ţarăvulea & Petriariu 2013).

The logistics sector development is unbalanced, but consistent with the evolution of the Romanian economic environment, characterized by concentration in few centres of Bucharest, Arad, Cluj-Napoca, Constanta, and Ploieşti (Felea, 2008).

In 2007 and 2008, the command for logistics spaces was increasing and the volume of business on the logistics market reached 250,000 m², of which 200,000 m² in area of the capital and over 50,000 m² close to other cities, such as Timişoara, Arad, Ploieşti and Piteşti.

The communications logistics strongly found in these areas were funds in economy, which were mainly foreign. However, modern and well-equipped logistics stages appeared, on the same level as those of companies from developed countries in Europe and the United States of America. Additionally, in 2007, the occupying rate for logistics spaces was 98%.

According to (Lasalle, 2008) it was reported that the Romanian logistics market continued to grow due to demand from companies who had relocated part of their supply chain, with the aim of reducing costs in order to survive through the economic crisis.

The large developers in the Romanian logistics market like Cefin Real Estate (Italy), ProLogis (United States) and Portland Trust (Belgium) constant to invest around Bucharest, and new investors as Eyemaxx (Austria), CTP Invest (Czech), Warehouse de Pauw (WDP-Belgium) and the European Future Group (UK), have shown attention in other areas of the country particularly the west (Belu and Ţarăvulea, 2009).

Transport of goods is characterized by the strong dominance of highway (around 58% of total goods transport) as can be seen in (Table 3) and (Figure 1). Rail represents less than 19% of goods transport, even though it benefits of a widespread but out-dated infrastructure. The main port is Constanta (around 12% of total goods transport), where international flows start to produce. River transport is still under-exploited although Romania has the largest share of the Danube on its territory, with around 9% of goods transported in 2011 and carry out around 2% of goods transported in 2011.

International operators coexist within the logistics sector in Romania, contribution complete logistics, 3PL type (about 3% of the companies transport and storage) with very diverse national operators. There are several large Romanian companies, which tend to be 3PL type and many small companies, focusing particularly on transport operations (Table 3) and (Figure 1).

Sector heterogeneity has led to several associations of transport: Railway Transporters Association of Romania (AFTER), Confederation of Licensed Operators and Transporters of Romania (COTAR), Romanian Federation of Transport Operators (FORT), National Union of Road Transporters from Romania (UNTTR) etc. and only a single association of logistics - Romanian Logistics Association (ARILOG).

Number of active companies in the transportation and storage area is characterized by the strong dominance of micro enterprise (around 91.42% of total active companies in the transportation and storage area) as can be seen in (table 3) and (Figure 2) small enterprise represents less than 7.11% of total active companies, and medium enterprise represents less than 1.18% of the total transportation and storage companies. In the latter, we find that large enterprises represent a very small percentage 0.27% of the total transportation and storage companies in 2009. 99.7% of the total transportation and storage companies in 2009 were small and medium enterprises.
Table 3. Capitals, assets and revenue in listed banks

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railway</td>
<td>68.929</td>
<td>68.772</td>
<td>66.711</td>
<td>50.595</td>
<td>52.932</td>
<td>60.723</td>
</tr>
<tr>
<td>Road</td>
<td>340.870</td>
<td>356.669</td>
<td>364.605</td>
<td>293.409</td>
<td>174.551</td>
<td>183.629</td>
</tr>
<tr>
<td>Fluvial</td>
<td>15.627</td>
<td>14.976</td>
<td>14.971</td>
<td>24.743</td>
<td>32.088</td>
<td>29.396</td>
</tr>
<tr>
<td>maritime</td>
<td>91.000</td>
<td>49.000</td>
<td>0.000</td>
<td>36.021</td>
<td>38.118</td>
<td>38.883</td>
</tr>
<tr>
<td>Air</td>
<td>6.000</td>
<td>5.000</td>
<td>5.000</td>
<td>25.000</td>
<td>26.000</td>
<td>27.000</td>
</tr>
</tbody>
</table>

Figure 1 Fig. 1.: percentage of transport of goods by different type of transportations in 2011 (% in tone-thousand)

<table>
<thead>
<tr>
<th>Company type</th>
<th>0-9 employees</th>
<th>10-49 employees</th>
<th>50-249 employees</th>
<th>250 employees and more</th>
<th>Total</th>
<th>Foreign Capital</th>
<th>SMEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>32059</td>
<td>2494</td>
<td>416</td>
<td>95</td>
<td>35064</td>
<td>1053</td>
<td>34696</td>
</tr>
</tbody>
</table>

Source: Adaptation from the National Institute of Statistics, 2009

It is estimated that official statistics do not indicate distinctly the logistics services. In addition, logistics activities in Romania are carried out both in specialized companies and in companies with different profiles. However, logistic activities tend to be increasingly outsourced to specialist providers (Dinu, 2008).
7. Conclusion

This study investigates the management of SCM and logistics services market in Romania that can be useful to both profile companies operating in this market. In order to face the competition it is indispensable to pay particular attention to the logistics and supply chain management procedure, because modern technology provides us with tools to make the most of market opportunities. Success in assimilating worldwide supply chains starts with the ability of companies to move goods across borders, consistently and inexpensively. In order to connect the Romanian economy to the world trends and processes and connect the Romanian market to the European and the world market, the highest priority should be given to the improvement of logistics and supply chain management in Romania. SMEs with well-organized logistics and SCM will be able to take full advantage of their abundance and develop their competitiveness. There are large companies in Romania, although present in small number. Typically the main improvement of these companies emphasis is made upon using this experience; they know how to benefit from the already well-established logistics and SCM system in the parent company. The position of the Romanian SMEs regarding the SCM is not comparable with the big companies. If we have in mind the fact the SMEs dominate in the Romanian economy, we can say that the development of the Romanian economy is based on the development of the Romanian SMEs.

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