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Article

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The effects of economic crisis to logistics outsourcing

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Abstract

The aim of this paper is the investigation of the effects that the economic crisis has on the logistics services sector in Greece. It presents and analyses the findings of a research, which, via a questionnaire, asked managers at the examined sector first to identify the effects and second the practices and approaches that the managers suggested to confront with these effects. The findings of the research revealed that the logistics' service providers have been significantly affected by the crisis and these effects have influenced all the main functional areas of the logistics management (procurement, warehousing, inventory management, transportation and distribution). Moreover, they are not optimistic about the future as they believe that the sector will be significantly decreased in the next few years and the competition will be increased. Performance measurement and optimization of their logistics' processes and functions and the decrease of the operation costs are considered to be their weapons to this battle. This research can be considered as a pilot study, as the Greek economy has been seriously affected during the global financial crisis. Worldwide, 3pl companies can use the findings of this study in order to overcome potential difficulties that might face in near future.

Keywords: logistics, outsourcing, 3PL's, economic crisis, Greece

1 INTRODUCTION

The global crisis has had a huge impact in major sectors of the national economies such as banking, insurance companies, car industries, real estate but most of all the trade (IMF, 2009; Shah, 2010). During the last 5 years a great number of businesses at national level went bankrupt and closed, unemployment increased, inflation rose, commodities became more expensive, taxes were increased, currencies were devaluated, and people are being socially impoverished. Greece was among the first countries that was directly affected and succumbed to the devastating effects of this economic downhill (Stournaras, 2010; Petsas, 2009).

The economic crisis in Greece has created -first of all- a serious crisis in demand. On the other hand the existence of large layoffs and taxation led to short cash flows. This led to low consumption and therefore to low demand creating a repeating circle which has critical side effects. These effects have influenced every aspect of the Greek market; the consumption was dramatically decreased, every form of trade was downscaled and production was downsized to a desperate degree and, inevitably, shipping and export were seriously damaged.

One of the pillars of the trade (and the consumption) is the management of logistics activities. Logistics' management includes the effective and efficient management of all the activities for the storage, handling and movement of products from the point of origin to the point of consumption.

Due to the criticality and complexity of the management of the logistics activities many companies decided to outsource them to third parties; the Third Party Logistics (or simply 3PL's) (Christopher, 2005; Power, Sharafali & Bhakoo, 2007). These are firms that are defined as "trade organizations, which provide services in the fields of logistics, execution of separate operations or complex logistics functions (warehoused stock, transportation, order management, physical distribution, etc. and accomplishment of integrated management of logistics chains of the client-organization" (Parashkevova, 2007).

According to the Council of Supply Chain Management Professionals the total global 3PL revenues last year (2011) were approximately US\$370 billion (CSCMP, 2012). Moreover, the findings of the 18th Annual Survey of Third-Party Logistics Providers released at CSCMP Annual Global Conference revealed logistics companies experienced improved economic conditions in the last 2 years. Key findings of the survey include: 1) Logistics' companies experienced improved economic conditions in 2010, with 88 percent of companies surveyed in North America meeting or exceeding their revenue projections, as compared with only 50 percent in 2009, and 2) In Europe, economic conditions continued to be challenging for third-party logistics companies with only 55 percent of companies surveyed meeting or exceeding their revenue growth projections for the year.

Although the penetration of 3PL services has increased in a global level, only 10% of Greek companies use the services of this industry. This general data shows that logistics' services outsourcing is not yet a common practice among Greek companies (Gotzamani, Longinidis & Vouzas, 2010). Furthermore, during the last years the 3PL market seems to have grown in complexity. As Selviaridis and Spring (2007) point out "Logistics providers operate across a wide range of industries and many of them appear to have developed expertise in multiple markets. They increasingly expand their offerings beyond core logistics services in order to differentiate themselves from competitors and secure higher profit margins". At the same time 3PLs worldwide have been operating already on a restraining environment. Gross (2009) identified a number of restraining factors such as the high competition, the constantly increasing fuel costs, and other social and political issues such as environmental regulations, infrastructure issues, terrorism and security. All the above factors can be also applied in the Greek 3PL's market. But it is obvious that the most critical factors which are now threatening the 3PL industry sources from the impacts of the current economic crisis and the drastic reduction of consumption.

The aim of this paper is the investigation of the effects that the economic crisis has on the logistics services sector in Greece. It presents and analyses the findings of a research, which via a questionnaire asked managers at the examined sector first to identify the effects, second to predict the future of the sector and third to present the practices and approaches that the managers suggested to confront with these effects.

The remainder of this paper begins in section 2 with a presentation of the key results of similar researches at global, EU and national level. These results will help to attain a good picture of the problems that organizations of the examined sector have faced in the last 5 years as the financial economic crisis is a global phenomenon. The next section describes analytically the findings of the research in Greece. Section 4 presents the discussion of the findings while the paper concludes in the Conclusions' part with arguments arising from this study, useful managerial insights and definition of future research challenges for the authors.

2 RELEVANT WORK

The effect of financial economic crisis to the global and national markets has been the subject of many research initiatives. There have also been researches focused on the logistics and the supply chain sector. Specifically, there have been studies targeting either to logistics services providers (3/4 PL's) or to operations / logistics managers of companies in various business sectors. In this section the findings of researches at global

and EU level are synoptically presented. The findings are revisited and further discussed in the last section after the analysis of the findings of the research in the Greek logistics sector.

The following table presents in chronological order the title, the year of publication or announcement, the institution or the company that undertook the research, the sample and the key findings of the previous studies.

Table 1: Synopsis of previous researches

Title	Year	Institution	Sample	Key findings
European 3rd Party logistics Market Report 2008	2008	Eye for transport	Managers of 400 3&4 PL's in Europe	<ul style="list-style-type: none"> • 75% believe that growth will be lower the next 5 years • 40% believe that the recovery in global level won't come before 2011
Crisis dominates supply chain agenda in 2009	2009	Capgemini Consulting's	Managers of 300 enterprises (62% in Europe, 16% in USA & Canada, 13% in Asia and 5% in Latin America	<ul style="list-style-type: none"> • 65% argue that their companies' strategy have been affected by the economic crisis more than any other factor • More than one-third postponed investments in ICT
The Smarter Supply Chain of the Future	2008	IBM	Managers of 400 enterprises in USA, West Europe and Asia	<ul style="list-style-type: none"> • There are 5 factors that characterize today's SCM: lower control of cost, need for information visibility, high risks, need for closer relationships with other members of the SC and a globalized market • Moreover, the research emphasize the high pressure that the logistics and SC managers face today due to the complex and dynamic business environment and the high cost of inter-enterprises logistics processes
Flexibility in Times of Crisis-2009 / An extended edition of PRTM's "Global Supply Chain Trends 2008-2010"	2009	PRTM Consulting's	Managers of 350 enterprises in USA, West Europe and Asia	<ul style="list-style-type: none"> • One to two managers consider that the main hurdles in the pursuing of profits are the variability of markets and the inability of making reliable forecasting of demand • The majority of managers (more than 85%) argue that the complexity of markets and supply chains will get higher the next years • Moreover, there are 5 challenges that the managers need to face today: 1) Customers are less loyal and more sensible to specific brands; this lead to a high variability. 2) Companies look for foreign markets trying to serve the global customer. 3) Companies try to reduce and control of cost. 4) Companies / members of the SC have to cooperate, and 5) the majority of SC are not totally integrated
The European logistics third party industry in 2009: The provider CEO perspective	2009	Lieb and Lieb (under the support of Penske)	10 CEO's (Chief Executive Officers) of the largest EU 3PL companies	<ul style="list-style-type: none"> • All the CEO's argue that their companies have limited profitability while 6 of them state that their companies haven't achieved their targets. • 6 of them declare that their customers moved their industries / manufacturing units from China to West and East Europe so as to decrease their transportation costs while 9 of them believe that this trend will get higher the next years

				<ul style="list-style-type: none"> • 5 of them say that their companies move to mergers and acquisitions the last years • 7 made job layoffs at 11.5%. Nine to 10 has made limited recruitments, while only 2 to 10 reduce their training programs • 9 of them state that their companies decrease their prices due to the economic crisis
Global chief supply chain officer strategy	2011	Eye for transport	Managers of major companies	<ul style="list-style-type: none"> • There are 5 challenges that the managers need to face today: 1) Demand variability. 2) Ways to reduce costs. 3) Visibility across the SC. 4) Effective inventory management, and 5) Increased customers' needs • 41% declare that they won't make any new employments • 24% keep low their work force

Furthermore, there are several research initiatives regarding the investigation of the effects of the economic crisis in the Greek market. Even though these researches were not directly focused on the examined sector useful conclusions have emerged regarding the trade activities which strongly interrelated to logistics activities. Specifically (organization's websites: www.sbbe.gr/en/, www.gtp.gr, and www.sbtke.gr/)

According to the findings of the research that the Federation of Industries of Northern Greece (FING) had carried out during May 15 and June 10 of 2009 the majority of companies in Northern Greece (more than 80%) strongly believed that the economic crisis had negatively affected all the business activities.

During the same year another research by the Chamber of Small and Medium Sized Industries of Thessaloniki produced similar results. Specifically, more than 50% of the respondents were pessimistic about the future while the higher percentages came from the services sector (almost 70%).

The findings of the research that the Federation of Industries of Thessaly and Central Greece had undertaken, at the first semester of 2011, confirmed the critical effects of the economic crisis on the Greek market. More than 45% declared that there had been reduction in orders at 30%, while the 9.09% declared reduction at 40%.

3 RESEARCH METHODOLOGY

This study is part of a large on-going research which has been conducted during the last 2 years. The purpose of the main survey was to investigate the influence of the economic crisis to the logistics services sector in Greece. The process of analysis revealed that the 3PL's have been significantly affected by the crisis and these effects have influenced all the main functional areas of the logistics management (procurement, warehousing, inventory management, transportation and distribution) as well as the main logistics philosophies and practices. These findings gave birth to two central questions:

To what extend and how did the crisis affect logistics management? Although the influence at global and EU level is well documented from several previous researches (see Section 2), the investigation at national level is an unexamined research territory.

To what extend and how did the crisis specifically affect the key functional areas of the logistics management? The above question remains unclear.

To answer these research questions, one structured questionnaire (see Appendix 2) was used as a survey instrument. It included a series of open and closed-ended questions, in a combination of structured and semi-structured interviews. This approach, called "mixed method" or "mixed research", was resulted in a collection of both quantitative and qualitative data. Descriptive statistics were employed in order to provide a basic overview of the quantitative data. Qualitative data were analyzed with respect to their nature and the principles of the analysis of such data.

The questionnaire was submitted to the logistics or operations managers of the Third Party Logistics providers in Greece. The initial list of 3PL's was taken from the online catalog of the e-journal of plant-management online journal (www.plant-management.gr). This catalog consists of approximately 150 companies that operate in this sector. Finally, 51 companies agreed to participate in this research. A corresponding number of interviews were arranged with the managers of these companies from the 5th of September 2011 to the 25th of March of the next year. There were 2 companies in which 2 managers were accepted to be interviewed; thus,

the final number of the interviews was raised to 53, which can be considered sufficient. The questionnaire that had been used included 19 questions and it was organized in the following 5 parts:

Part A: this part consists of questions that try to sketch the profile of the examined companies. It includes questions about the place (town or area) of the company's headquarters, the existence of branches and the logistics services that the 3PL's provide to their customers.

Part B: in this part managers were asked at first, to identify the effects of the economic crisis to the core business activities, and second, particularly to the main logistics functional areas (procurement, warehousing, inventory management and transportation and distribution).

Part C: this part includes questions focused on each of the above logistics areas. There were both open and closed-ended questions so as to obtain a more complete view.

Part D: in this part managers were asked to make their predictions about the future trends (next 1 to 2 years) of their companies and the logistics services providers sector.

Part E: in this part we asked the managers to present the decisions they will be taking in the next 1 to 6 months regarding Logistics Management and Supply Chain Management issues in order to confront with the negative effects of the economic crisis.

For all of the above, quantitative statistical analysis methods were applied except Part C in which both quantitative and qualitative statistical analysis methods were conducted.

4 FINDINGS

4.1 Part A: Profile of the sample

According to the responses the majority of the companies are located in Attica (55 percent) while the rest are located in Thessaloniki (33 percent) and other regions (such as Volos, Theva and Eveia). This was expected because of the population of these areas, the high intensity of commerce activities and certainly because in both of them the central ports, railway and aviation facilities of the country have their operations. Furthermore, 45% of them have branches in other towns providing their logistics services to other geographical areas in Greece; for example if the 3PL is located in Attica it has a branch in Thessaloniki and vice-versa. Moreover, most of them (72%) provide logistics services to other countries such as to the Balkan countries, Italy, Russia and Turkey. The above findings justify the expansive strategy of the examined companies and the central role of the Greek companies in the above area.

According to the results (multiple answers per participant were allowed) the main logistics services that the companies of the sample offer to their clients are: Transportation (88%), Distribution (88%), Warehousing (83%), Customs activities (50%), Packaging (48%), Insurance services (42%), and Coding / Labeling (42%). These finding are expected and aligned with the findings of the last ICAP sector report (2009).

4.2 Part B: General effects on logistics and supply chain management

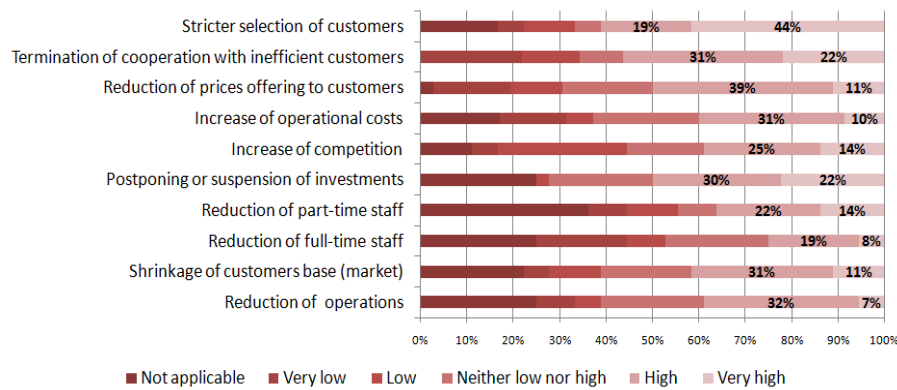
Then, the managers were asked to identify the general effects of the economic crisis to the Logistics and Supply Chain Management. According to the results (Figure 1) managers have applied more strict procedures and criteria for the selection of customers (more than 60 percent indicated this as of a "Very high" or of "High" importance). This is critical due to the fact that almost half of them have terminated the cooperation with customers that have been proved inefficient during the financial crisis period. The reduction of prices for the provided services to the market was reported as the second most significant effect ($M=4.246$).

Furthermore, the means of the following: the shrinkage of their customers' base, the postponing or suspension of investments and the overall reduction of operations were more than 3,9 (in a 5-point scale) so they appeared to be important effects for the supply chain and logistics managers. On the other hand the reduction of staff (both part-time and full-time) present the lower mean (Table 2).

Table 2: General effects on logistics and supply chain management (means)

Logistics and Supply Chain Management	Mean
<i>Stricter selection of customers</i>	4,310
Reduction of prices offering to customers	4,246
Shrinkage of customers market	4,056
Postponing or suspension of investments	3,949
Reduction of operations	3,888
Increase of competition	3,900
Termination of cooperation with inefficient customers	3,528
Increase of operations costs	3,371
Reduction of part-time staff	3,020
Reduction of full-time staff	2,917

Figure 1: General effects on logistics and supply chain management (percentages %)



To the question “In which degree the main logistics functional areas has been negatively affected by the current economic slowdown?” half of the respondents answered that all the functions have been significantly impacted (as illustrated in Table 3 and in Figure 2). Procurement (more than 75 percent) and Warehousing (more than 70 percent) seemed to be the areas that have been mostly affected.

Figure 2: General effects on key logistics areas (percentages %)

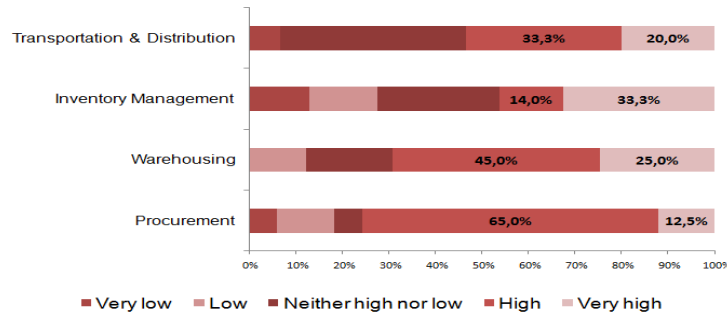


Table 3: General effects on key logistics areas (means)

Logistics area	Mean
Warehousing	3,811
Transportation and Distribution	3,662
Procurement	3,633
Inventory Management	3,404

4.3 Part C: Effects on specific logistics activities

Subsequently, managers were asked to concentrate to each of the following key logistics functional areas: 1) Procurement, 2) Warehousing, 3) Inventory Management, and 4) Transportation / Distribution in order to assess how they have been affected by the economic crisis. At first, using closed-ended questions, they were asked to determine the effect to specific and pre-defined effects at each area. Secondly, using open-ended questions to express their opinion -but in this case- based in any other effects that they believe were significant.

Answers to Closed - Ended Questions

Procurement: More of the participants list the pursuit of cheaper suppliers (more than 90 percent agreed that the effect was “Very high” and “High” with the mean of 5,341 in a 6-point scale) as the leading consequence of the economic crisis in the Procurement area. They also reported the continuous monitoring and performance measurement as the result of the reduction of the demand (cited by 85 percent with the mean of 5.00 in a 6-point scale). Table 4 illustrates the effects of the economic crisis in the Procurement activities (means and percentages in the Likert scale).

Table 4: Effects on specific logistics activities (means)

Area	Level of effect	Mean
Procurement	Finding less expensive suppliers	5,341
	Continuous monitoring and performance measurement	5,012
	Development of close relationships	4,571
	Stricter selection of suppliers	4,380
Warehousing	Reduction of suppliers	3,855
	Fewer commodities per order	4,557
	Lower profits per order / per customer	4,442
	Reduction of operations	3,800
	Reduction of part-time staff	3,621
	Increase of frequencies of receivings	3,322
Inventory management	Drastic reduction of inventory	4,710
	Prevalence of pull philosophy	4,222
	Reduction of management costs	4,156
	Inability of reliable demand forecasting	3,821
	Non keeping inventory stock	3,541
Transportation and Distribution	Reduction of orders size / lot size	4,988
	Finding alternative transportation mean	3,980
	Planning of distribution network based on the demand	3,436
	Completeness is not the highest priority	2,915

In the Warehousing the responses were more widely dispersed (Table 5). “Fewer commodities per order” was the item that the managers believe it is the most significant effect of the economic crisis (55 percent). Furthermore, one-third of respondents reported the lower profits per order / customer has been significantly affected by the weakening of demand for goods (Table 4).

The radical reduction of inventory levels is the main result of the economic crisis according to the logistics and operations managers. More than two-thirds evaluate it as “Very high” and “High”. The dominance of Pull philosophy that transitions the organizations from forecasting demand to pulling based on actual customer demand was their second choice. This was expected because Pull practices aims to reduce both cycle time and inventory to improved customer service levels. Furthermore, more than 60 percent reported the reduction of management costs as one of the most critical effect of the economic crisis in the Inventory Management (Table 4).

According to the responses (more than three to four managers) the reduction of orders and / or lot size is the main effect of the economic crisis into the Transportation and Distribution area (Figure 7). The research for other transportation means is the second most significant effect (more than 55 percent). On the contrary to have a full truckload is not the highest priority (only less than 25 percent of the respondents believe that with the mean of 2,915 as it presented at Table 4).

Answers to Open Questions

In order to have a clear picture regarding the impacts of economic crisis to the key logistics functions we asked managers to provide their thoughts about how the daily activities and the corresponding decisions have been affected. After synthesizing the answers of the respondents Table 5 is developed highlighting the key findings.

Table 5: Effects on specific logistics activities (key findings)

Area	Key findings	Importance
Procurement	Partnerships with a small number of strategic suppliers	High
	Prevalence of cost as the main criterion	High
	Decline of the phenomenon of economies of scale	Medium
Warehousing	Implementation of Just-In-Time and pull practices	High
	Drastic reduction of inventory levels	High
	Raise of the frequency of orders and the receipt of smaller quantities	High
Inventory management	Drastic reduction of inventory levels	High
	Prevalence of pull philosophy	High
	Unreliable forecasting of demand	High
Transportation and Distribution	Find alternative and cheaper transportation means	High
	Redesign of distribution networks	Medium
	Need of higher capacities, facilities and expertise	Medium

It is stated that the most critical effect of the global crisis is the reduction of demand. According to Tanaka (2009) and Yi (2009) every time that the G.D.P. is reduced by 1 unit the global trade is also reduced by 1 unit.

Since the last 2 years the G.D.P. has fallen by 2 units the global demand has been analogically reduced. This automatically led to the reduction of the quantity of products that are produced, transported, stored, distributed and traced. Therefore, the reduction of demand led to the decrease of the logistics system as a whole. Regarding each logistics functional area managers reported the following views:

Procurement

Three key impacts have been reported by the managers: first, their will to have a small number of strategic suppliers, second the prevalence of cost as the main criterion for the selection of the suppliers and, third the decline of the phenomenon of economies of scale (costing less per unit if many units are ordered). The suppliers' base is being reduced; the chase for better and cheaper suppliers is becoming a high priority, as well as, the constant monitoring of their performance and the establishment of close (win-win) relationships. As a manager argued "these relationships will support the collaborative planning and introduction of new products and services in the markets and the sharing of risks".

Furthermore, the majority of the respondents consider the cost management (cost reduction) as a number one priority (or "key target" as one manager stated). Smaller number of respondents identified the decrease of the practice of economies of scale; maybe it would not be beneficial to longer-term competition to aggregate or bundle all requirements together in a way that results in sourcing from a single supplier or a small supplier-base. The majority of managers believe that China and India are still considered as the main markets for procurement. This creates the problem of high transportation costs and lead times. At the same time, the trend of the de-globalization is getting higher. According to managers many multinational companies move their manufacturing facilities / plants and distribution centers to the West and/or East European countries in order to be close to the areas of higher demand.

Warehousing

The implementation of pull philosophy and the practices of Just-In-Time, the drastic reduction of inventory levels and the existence of close relationships between customers and suppliers lead to the raise of the frequency of orders and the receipt of smaller quantities. Therefore, with decreasing rotation, decreasing amount of additional services, and low stock levels many managers argued that "the warehouse space becomes only a cost". As a result -as most managers reported- the staff at the warehouses works more hours and the productivity of warehouses is declined especially during peak times. Hence, managers try to find ways in order to increase the productivity and, simultaneously, to minimize the operational costs of warehouses.

Inventory Management

During the economic crisis Greek consumers re-evaluate their spending habits. The decrease in their consumption has led to a significant decline in national trade, severely affecting the logistics industry. Overall, the crisis lowered production and reduced the need for transport and storage. The radical reduction of inventory levels and the corresponding costs as well as the dominance of the pull philosophy are the two most important impacts of the economic crisis in the inventory management tasks and decisions. Inventories are created based on customers' demand and not to set up safety stocks. The dynamic and volatile business environments and the globalised market do not support reliable forecasting of demand. Although managers noted that they understand the key role of demand forecasting, only a small minority of them noted that they plan to develop alternative systems in order to predict the future demand. This reluctance to apply more sophisticated methods of demand forecasting relies both on their inability to spend money (in order to hire specialized employees) and the complex market situation, which makes difficult the forecasting of customers' needs. As a participant explained "It is difficult to predict the demand even for the loyal customers". Since most of the customers attribute -due to the economic uncertainty- higher importance to the price rather than to the other service relationship attributes, it is difficult for companies to create customer loyalty and retention. Under such circumstances, the inventory management becomes more difficult, especially for the companies located in the large urban centres, where the competition among firms is greater.

Transportation and Distribution

Market demand (both consumer and business) for goods and services inevitably translates into higher demand for transport and logistics services. Consequently, economic crisis caused decrease of trade volumes and has a severe impact on the transport and logistics industry. Most managers pointed out the reduction of orders' size and the need of small lots as the two most effects of the economic crisis to the transportation and distribution area. Most 3PL's try to find alternative and cheaper transportation means and to redesign their distribution networks in order to be closer to the areas with the higher demand.

Moreover, the majority of the managers recognize the constant increase in fuel costs and the toll prices as two of the most critical factors that affect negatively the transportation and management activities. It is worth stating that 2 managers predict that the possible rise of the outsourcing approach will lead to the need of higher

capacities, facilities and expertise regarding warehousing and especially the transportation and distribution. This will probably increase the mergers and acquisitions of SME's in the examined sector. Furthermore, the inability to find capital and get funded by the banks will lead to the shrinkage of the sector.

4.4 Part D: Predict the future trends of the logistics services providers

In this part managers were asked to identify their predictions and expectations about their companies and sector in the next 2 years.

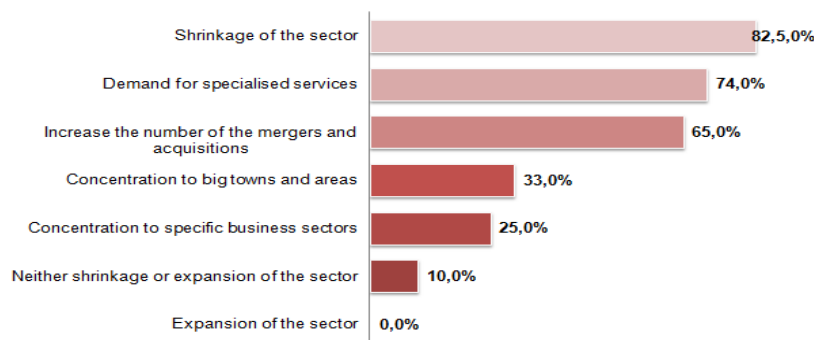
First, to the question "Which are your predictions for your company for the next 1-2 years?" almost 70 percent of the managers reported that the competition will increase, as well as, the transportation costs (62 percent) due to the increases of fuel prices. They also believe that there will be a shrink of activities / operations in the Greek market due to the overall shrink of demand. Less than half of respondents expect to outsource some of their functions and to concentrate to foreign markets. Next to that the decrease of the number of suppliers is considered to be as the next most significant expectation (Figure 3).

Figure 3: Predictions for 3PL's for the next 1-2 years



Next, managers were asked to make their assumptions about the logistics services' sector for the same -as the above question- time-period (1-2 years). As illustrated in Figure 4 the vast majority of the respondents (almost 83 percent) report the shrinkage of the sector as the most expected fact that will happen in the next few years (while no one believe that the sector will be expanded!). Moreover, managers argue that there will be an increase of the demand for specialized services (almost 750 percent). This, apart for other reasons, will raise the number of the mergers and acquisitions at the examined sector (65 percent). Most managers claim that the consolidations will support their companies to expand their companies' capabilities across many sectors and regions. Some managers of SME's argue that for their companies the consolidation may be crucial to their survival.

Figure 4: Predictions for your business sector for the next 1-2 years?

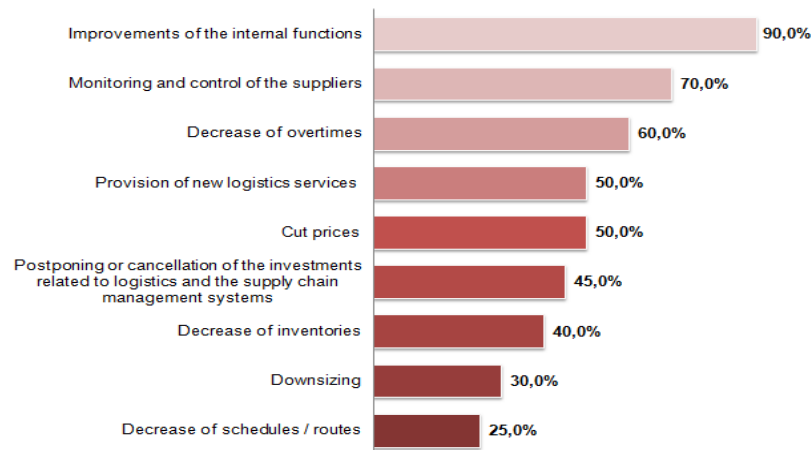


4.5 Part E: Strategic decisions

In the last part of the questionnaire we asked managers to identify the decisions they will be making in the next 1 to 6 months about Logistics Management and Supply Chain Management issues in order to confront with the negative effects of the economic crisis.

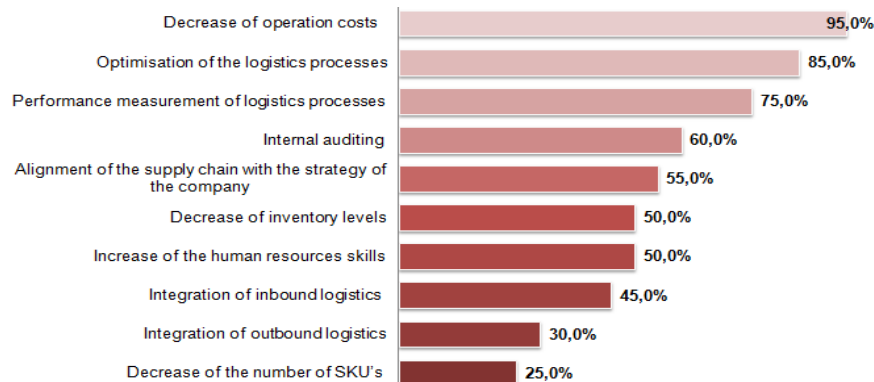
Since multiple answers per participant were allowed, the managers proposed a number of practices and approaches. Ninety percent reported that the decisions that will be taking in the next 6 month will be concentrated to the improvements of the internal functions in terms of cost, time, errors and quality (Figure 5). That means that Logistics managers concern themselves with the goal of continuous improvement, which can have a significant impact on a company's bottom line. A significant part (70 percent) is going to monitor and control the suppliers with awareness. Almost one-third will decide for the decrease of overtimes (60 percent). Provision of new logistics services and the cut off prices are follow as there are stated by half of the respondents.

Figure 5: Decisions that managers will make in the next 1 to 6 months about Logistics Management and Supply Chain Management issues in order to confront with the negative effects of the economic crisis



Finally, in the question "In which areas the strategy of managers' companies about Logistics Management and Supply Chain Management issues will concentrate to", almost all of them report the decrease of operation costs. Next to the above, the optimization of the logistics processes and their continuous performance measurement are both high on the 3PL's agenda. Moreover, internal auditing and the alignment of the supply chain decisions with the strategy of the company are of a great interest. All the answers are presented in Figure 6.

Figure 6: Over the next two years, the strategy of the 3PL's about Logistics Management and Supply Chain Management issues will concentrate to:



5 CONCLUSIONS

The findings of various researches continue to validate the Logistics service providers' critical role in today's global and national markets. During the last decades the supply chain has become more complex and fragile. The outsourcing paradigm can bring many benefits to the effective and efficient management of companies' supply chain and today -more than ever- 3PL's are not just contractors they are strategic partners.

The global economic crisis has led to many changes of the logistics service providers' sector and the Supply Chain Management in general. However, at the same time it has encouraged managers of both fields to find new ways and practices to address current concerns and position themselves for the recovery. So, there is a two-fold paradox: downturn has drastically affected the Logistics and Supply Chain Management but simultaneously the Logistics and Supply Chain Management can help companies to overcome the problems.

In this paper we investigated the first part of the above paradox by trying to identify the effects that the economic crisis has on the logistics services sector in Greece. The key findings of a research among managers of 3PL's are the following (Most of them are aligned with the findings of the previous researches that were presented in the Section 2):

Logistics providers are stricter to the selection of their customers. That simply means that their managers seek to cooperate with effective and more reliable customers who have the ability to fulfil their financial commitments as the problem of cash liquidity is getting more and more intense. Further more, 3PL's provide cheaper services so as to be aligned with the press of their customers and the market. They aim to improve their competitiveness in a very dynamic business environment. Therefore, shrinkage of their customers' market is a reality because 3PL's cannot maintain the required balance among cash flow's inputs and outputs.

As a result, logistics providers in Greece restrict their business activities and investing. They are concentrating to the core logistics and business activities for their survival. Some of them reduce their staff both part-time as well as full-time. Similarly, Logistics providers seek cheaper suppliers but on the other hand they are selecting them under stricter criteria and continuously monitor their performance! Even if that sounds strange this is common practice during an economic crisis period when companies try to balance their cost with the level of quality they offer.

In warehousing the main effect of the current economic slowdown is the need for less products / commodities per order and per customer. Instead of logistics providers in West European countries who are facing a radical increase of the frequencies of the receipts that makes more intense the problem of reduced volumes that are transported or distributed. Moreover, companies in the logistics sector try to reduce their inventory levels by completely applying the Pull philosophy and Just-In-Time practices. Managers prefer not to keep safety stocks; instead they try to safeguard the amount of their sales. Logistics providers as they battle against the reduction of lot sizes, the high fuel prices and tolls are planning to re-design their distribution strategies re-plan their distribution networks and try to find cheaper transportation means.

Managers are not optimistic about the future of both their companies and of the overall sector; they believe that the sector will be significantly decreased in the next couple of years and the competition will be much higher. For example, they predict that the demand of the Greek market will be decreased more. Moreover, they believe that the number of the consolidations will be significantly raised.

Finally, there are two main strategic aims for the companies of the examined sector: first, the performance measurement and optimization of their processes and functions, and second the decrease of their operations costs. These findings were expected because they are also the main objectives of the Logistics and Supply Chain Management. Decrease of overtimes is proposed by two-third of the companies. This may cut off costs but at the same time will increase the workload. Another interesting result is their unwillingness to invest in new systems, infrastructure for supporting Logistics Management and Supply Chain Management activities and tasks.

To conclude, it is vital for all companies that wish to keep on existing, to occupy a significant part of the market, to maintain a competitive advantage over rivalry and to make a considerable profit; they also need to understand and realize that investing money on logistics and supply chain management can be a lifesaver, especially in cases when domestic and foreign markets are in danger that the economy of a country or even the global and social life is threatened.

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