

Collaborative relationship model 3PL & SME

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Abstract: In the today global crisis with the financial problems for the small and medium enterprise, solution of financial liquidity with new global competences for the companies has to be studied. The Logistics Operators called “Third Party Logistics 3PL” are giving these solutions with others alternatives on the absorption of the companies’ logistics. This market area is increasing at the same time that it is giving better solutions to the global Supply Chain of the companies. These new partnership are being successful when they are based on trust and collaboration. A framework model of collaboration, based on industrial cases, is presented in order to ensure the alignment of objectives between the partners.

Keywords: 3PL, SME, DGRAI, PMS-EN

1. Introduction

Outsourcing and subcontracting of services or product is nothing new as it has started with the beginning of the social live (“the blacksmith used to buy his requirements of bowls to the potter”) This specialization and subcontracting

	Empirical	Conceptual
Descriptive	60%	9%
Normative	24%	7%

Fig.1 Classification of 3PL literature in terms of research purpose and nature (Selviaridis, 2007)

movement is online with the social improvement, and it is well documented (McIvor, 2005). Also in today's economy, competitions between companies are largely influenced by how effectively and efficiently integrate their skills and capabilities in their supply chains (Bititci, 2005). Looking at the outsourcing of the supply chain management (SCM) (Selviaridis, 2011) says that one of these processes lies in the outsourcing of transport, warehousing, value added services or global logistics management that offers the called providers 3PL (third party logistics providers). It has to be answered the usual question "do or buy?" where we can find documentation of decision making (Barragan, 2003) or models for the

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purchase process, or models for the process evaluation, but as the work of (Selviaridis, 2011) said, there are few documentations regarding the post-contract period and adaptive interactions between client and service provider.

In the work of (Selviaridis, 2007), with the review of the vast literature on 3PL/4PL between the period 1990-2005, conclude that the researches have focused mainly on presenting empirical studies describing how the market has solved and that there are few conceptual works on the subject. (Fig. 1)

In this work, it is reviewed the improvements offered by 3PL/4PL to the companies (shippers), mainly SME, on the actual crisis in the competitive global market, where one of the biggest problems companies face is their difficulties on financing. The outsourcing process of part of the logistics is more complex and must mobilize more actors at different levels of the hierarchy of both companies that the purchasing of products (Ahlström, 2006)

The paper presents a methodology for the implementation of a collaborative relationship between the shipper and the 3PL by DGRAI modeling tools (Dynamic Analysis of Decision Systems) (Poler, 2002) and the model PMS-EN (Performance Measurement System for Enterprise Network) (Alfaro, 2007) With the modeling of business processes it helps to understand and analyze business process (Aguilar, 2006) providing aspects of function, behavior, information, resources and organization. (Ortiz, 1999)

From the literature reviewed, there has not been an in depth research of the generic method suitable for establishing a fruitful relationship between shipper and 3PL (outsourcing at least the storage and the transport).

This paper reviews first the potential benefits of outsourcing supply chain paragraph 2 and paragraph 3 provides a methodology for establishing a successful relationship between the supplier and the company and finish with the conclusions of their practical usage of the methodology on a local 3PL.

2 Benefits of outsourcing the Supply Chain on a 3PL supplier.

The outsourcing processes have always allowed companies to concentrate their scarce resources on higher value-added processes for their supply chain. As mentioned before the subcontracting process is not new as it is part of the historical process of business unit's specialization. Currently companies have numerous offers of 3PL providers that can perform the full or partial of their supply chain management.

It can be found definitions of 3PL (Vitasek, 2006, Lieb and Randall, 1996;Huo 2008) as the outsourcing of all or part of the company logistics in a specialized company. The term "3PL" was first used in the 1970s to identify intermodal companies (IMCs) in transport contract. Because so far the contracts were only two parts, carrier and customer, the IMCs appear as an interlocutor who accepted loads from carriers so this third party received that name. Today the term has been extended and 3PLs offers a range of services ranging from transportation, warehousing, cross docking, consolidation, distribution, inventory management,

packaging, labeling, handling, returns process, transportation selection, international transport management, border management, information management and so on. (Kim, 2008)

The origin of these organizations can be found from different previous services. For example, from the transport companies, initially shippers subcontracted the transport, so they no longer had fixed assets on own trucks (road transport) (Hertz, 2003), and a cost reduction was obtained with the optimization of shipments and returns by carriers. Afterwards, the carries set fixed routes which ensure that

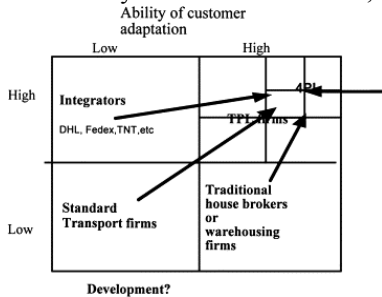


Fig.2 Hertz, 2003 The next step in the movement?

products from a central warehouse were delivered in a short period of time in the destinations, so that companies could centralize their warehouse in a unique one and supply from it. Thereafter, the supplier offered to absorb the management of the warehouse where economies of scale (several customers) would allow a cost reduction. Equivalent evolution could be found in the international services, with the grouping of the several previous partners, including customs agents, shipping agents, stevedores,

shippers, customs warehouses etc in a single figure such as forwarding agent. In these examples we can see the two types of 3PL said by (Tezuka, 2011) those specialized in managing the optimization of the outsourcing in others parties (“non-asset type”) or those with own assets (“asset type”) that optimize its use with multiple clients.

The book (Christopher, 2005) defines the 3PL as organizations specialist in outsourcing the logistics activities to reduce costs and / or improve customer service in the supply chain.

So 3PLs can provide:

- Reducing costs by optimizing the usages of resources.
- A knowledge specialist, therefore a better service quality for the customer.
- Support in certain markets penetration where they have enough turnover to reach it (3PL in specifics countries or in market niches with barriers).
- A fixed cost reduction, providing liquidity to the company (shipper). All expenditures become variable costs, with higher visibility to the shipper.
- Allows enterprise to concentrate in his own higher value added process.
- Better information management.
- A reduction in the shipper structures with the outsourcing of such activities (will be easier to negotiate an employment Redundancy if the employees have the possibility of working in the 3PL).
- Greater flexibility with the 3PL.

But the decision to go for an outsourcing may be negative due of internal and external factors such as loss of control, absence of appropriate technology, lack of trust with the 3PL etc. (Rao & Young, 1994)

To select the most suitable 3PL, one should analyze the different options and choose with the six selection criteria (Vaidyanathan, 2005) Information Systems (IS), quality, cost, reliability, flexibility and financial capacity.

Like in any relationship the parties must translate their intentions into a contract of exchange of services and at this point there is substantial literature that explores the difficulty of these contracts, against the product purchase agreements. (Ahlström, 2006) emphasizes previous relationship problems as important points as the examples of:

- Insufficient communication between partners.
- Conflicts between partners.
- Lack of trust between partners that will generate more conflicts.
- Cultural differences lead to misunderstandings, irritations and misinformation.
- Resistance from employees and organizations.

Identifying that the four problems areas are "The creation of the service contract and specifications, the definition of service processes, implementing service and the control of the service."

This agreement should serve as a frame of the intentions of the parties and as protector of the investments of both companies and clearly establishing the forms of dissolution. (Lambert, 1996)

It must be set the measurable performance criteria (KPIs) such as timely deliveries, preparation errors etc (Wilding, 2004)

The outsourcing on a 3PL part of the logistics chain business must be done from a partnership approach within the SCM rather than a mere buyer-seller contract negotiation opponent (Barragan, 2003) without trust it should not be considerate outsourcing the SC in a 3PL. In order to work the trust, it should not be forgotten the importance of interaction (face to face) as a tool to build it up (Aisha Abuelmaatti, 2008). There must be a mutual flow of information and a fulfillment of the requirements between the parties.

Outsourcing to a 3PL should be seen as a long term decision and not in the short-term costs reduction, make variable the logistics costs or reduce the immobilized, equivalent statements can be found in (Bettis, 1992)

At this point, it should be established a procedure for making confidence and solving conflicts between the two companies as the basis for building trust between parties.

According to the report (2012 Third-Party Logistics Study, Capgemini) it keeps the global trend of increasing the use of outsourcing in 3PL (64%) although there is a 24% that make the way back form 3PL to the shipper. Both sides stand out, 3PL (94%) + Shippers (88%), is the importance of trust, transparency and good communication as basic elements for a successful outsourcing. (Wilding, 2004)

Within the process of integration 3PL and Shipper an essential element, before considering any further development is the integration of the processes of information systems. Knowing the importance of the supply chain to the companies, it must be visible remotely by the shipper and at the same time 3PLs needs to integrate the new client in its operational management standard (this

implies that the 3PL should have standard processes but configurable to each customer requirement as customized documentation, customized packaging, management of specific delivery etc.) (Tezuka, 2001; Vaidyanathan, 2005; Third-Party Logistics Study, Capgemini, 2012)

3 Methodology Shipper-3PL relationship

After reviewing the substantial assistance that can provide 3PL to the SC and the needs of establishing that relationship in the collaborative framework (in the last survey 2011 "Logistics Outsourcing Strategy Report" is exposing still the differences on the perception between Shippers, 3PL) herewith different frames that helps to define the protocol.

Based on the model of PMS-EN (Alfaro, 2007) for performance measurement in network industries, a work plan is established for the relationship between Company (shipper) and the provider (3PL) (Fig. 3)

Following the protocol it is defined 3 working groups at three different levels:

a) Strategic Group, which shall consist with the leaders of the two organizations in the project (3PL, shipper) (based on each company can be managers or those responsible for purchasing or logistics resp ..) who must define the philosophical framework of the relationship (mission-vision) the requirements

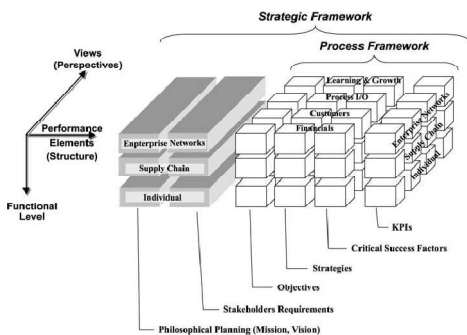


Fig.3 Detailed generic framework: phase 1 (definition)Alfaro, 2007

of the stakeholders (final customers, previous suppliers, owners, employees etc) and an approach of the overall performance measurement indicators following the views of (Kaplan and Norton, 1992) financial, customer, processes, development and also the cyclical reviews of the partnership contract. They set goals and global requirements that will help to integrate both organizations in a collaborative routine. This group should meet on an annual basis to

review progress and resolve any discrepancies of alignment between the two organizations.

b) Process Group, formed by members of the other group together with those responsible of the internal process of both companies. The group should identify the main critical processes and the approach of the elements of performance measurement of those objectives, strategies and critical processes that they have selected. This group could be several teams according to project requirements, who should meet regularly according to the needs of the selected process. (Daily to six months) This group should establish the final customer's specific requirements, the correct product handling, product specification required by both parties, the relevant information that must be handled, the alignment between the

information system, monitoring of operational and incidents, forecasts, managing nonconformities etc... (It can be represented up to this point in the attached DGRAI modeling fig.5)

c) Working Group, within each operating company, that adapts the proposals to the internal processes of each company.

(Example: the codification of the references must take into account the logistics handling unit that will be used, with a clear and visible identification (bar codes or RFID) that the operator can manipulate it without more information required) (example of conflict, two components arrived separately and must be taken together to constitute the sales unit, in this case it is necessary that the operator has different references for each component so that in the process of placing an order the two components are selected, by pre-assemblies or consolidated or picked by the order or etc) And from the three groups we should obtain:

- From the group A, it must be set the more global concepts, such as "the vision and mission" of the agreement, contract, and a number of objectives / strategies / KPIs that will help on the alignment of both parties. By establishing the working

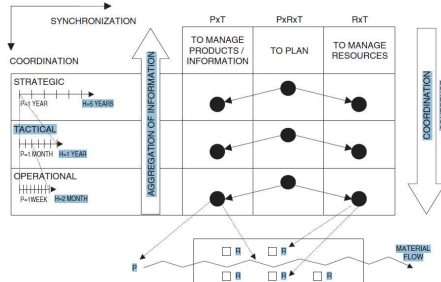


Fig.4 Co-Ordination and synchronisation axes in the GRAI model (Poler, 2002)

objectives will ensure cohesion, trust and collaborative work between both organizations. As always conflicts may occur, this group must also meet to overcome such issues.

- From the group B, it should be established the objectives in the processes that are related to both companies, "Alignment of system information" (both companies should be able to work with

sufficient information of the other party in synchronization), as "product definition" (at the level of logistics and quality), the processes of "demand forecasting" both long term and in the short term, "follow up" establish the protocol for incidences of 3pl or end customers to flow between companies and finally selecting the most appropriate process KPIs to measure the collaborative work between both organizations. On this last point of the measurable is important to note that measurable should reflect the degree of teamwork between the two companies.

- Group C includes the activities within each organization to define internal processes according to the principles defined by the group A and B. The vision and mission of each organization must support the mission and vision defined by group A

After defining the working groups, the timing, deadlines for review and relationships, the specific activities of each group should be determined; the partners to be involved in each process choose the responsible for this activity (3PL or shipper) and define their requirements. All these relationships can be

documented with the program DGRAI (Poler, 2002) that provides the tools to represent the decision-making and the connection between the different activities

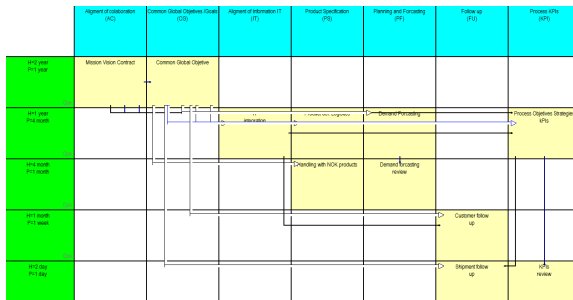


Fig.5 Model with the DGRAI software level 3

or implementation activities that have to be performed by each group. In this representation we obtain the saturation of any partner, the relationships between each group and the coherence of measurable we have selected.

It follows the model process of GRAI (Fig.4)

In the figure 5 it can be viewed the activities of each group that has been comment, together with the relationship between each activity. It is organized by functions and lead times.

En each activity the programs have the detail of the activities and process with the GRAI methodology (information, resource, objectives, decision variable, limitations and criteria).

5 Conclusion

The logistics outsourcing as a whole is a success factor in the positioning of a differential supply chain solution that should be considered by medium and small companies. This process should be done with care to find the appropriate provider for their market target or product niche, in order to find his partner with whom to define common objectives and goals with a future perspective and confidence.

This paper addresses the relationship between both companies in a frame work for the establishment of trust and mutual working relationship. The presented methodology has been used as a working principle in a local 3PL. (30.000 pallet warehouses, national transport from full truck to small package, customs etc)

By using the method it has been shown that high requirements are made to the shipper staff, in hours and information, not always available and its deficiency has marked the improper alignment of certain customers and in many cases the onset of breaking the contract.

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