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Gaining competitive advantage through outsourcing

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Executive Summary

Today's escalating, competitive and demanding environment has forced players in the marketplace to be more efficient, to emphasize on a leaner organization and continuously innovate new procedures to keep ahead of competitors. Adding final consumer value to the product or service in the form of lower prices, quality and better service has become an essential requirement in the global marketplace.

Logistics outsourcing has become an attractive option in order to take advantage of global opportunities, to acquire state of the art logistics capabilities, significantly improve customer service and to enable focusing on core competencies.

The purpose of this study is to present a theoretical framework for outsourcing actions as a guideline for companies on why and how to outsource. It gives a deeper insight on logistical outsourcing as a new and promising trend in the global environment while presenting the main logistical areas of outsourcing as well as the advantages and disadvantages.

In order to effectively implement outsourcing, commitment from top to down management and a wide understanding of all the stages and implications of outsourcing are required. In order to achieve these prerequisites and a successful implementation process, a model integrating the third- party logistics buying process and relationship improvement process is presented. It emphasizes the importance of carefully identifying alternatives, the overall analysis of partner selection with the help of specific criteria, mutual relationship building between logistics service buyer and provider through joint team building and continuous improvement and performance measurement. The relationship positioning tool model can be used for the continuous enhancement and improving of the supplier-customer relationship.

The results and overall reasons of outsourcing should focus on adding value to the final consumer of the product or service. By achieving lower logistical costs and a higher level of quality and expertise these results can be used to add value to the consumer.

The study points out that there is an increasing need for logistical outsourcing as a way to gain competitive advantage and as an instrument to meet the requirements of the company's complex environment.

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1.0 INTRODUCTION

1.1 Outsourcing today

Today's escalating, competitive and demanding environment has forced players in the marketplace to be more efficient and to emphasize on a leaner organization. Enterprises must adapt with increasing speed to market pressure and competitors' innovations. To survive in the 21st century, enterprises are hurrying to:

1) *search globally* for opportunities and resources
2) *focus on core competencies* and mutually beneficial longer term relationships
3) *outsource* those activities that can be performed more quickly and at a lower cost by subcontractors

Outsourcing seems to be an attractive option to take advantage of global opportunities, to acquire state of the art logistics capabilities (often at lower costs), significantly improve customer service and most important to focus on core competencies.

The idea of outsourcing is not new. It has been utilized traditionally, but on menial chores. Now it is currently a very popular strategy, commonly used by many companies. The International Trade Commission reported that the trend is global. It expects the global 12% growth in outsourcing to continue, with revenues reaching US$ 99 billion.

1.2 Logistics Outsourcing

Logistics outsourcing[1] is a significant process. The total costs of logistics in highly industrialized countries reach about 18% to 30% of GNP. More than 50% of the final price of the product consists of logistical cost.[2]

But this function, for many companies, is not a core competence. This meaning that logistics is not the means by which the company differentiates itself. Yet it is a significant operation, because it can show a dramatic return on investment. When there exists an industry segment such as logistics, which is a non-core activity to a large number of companies, there is an opportunity for a marketplace for outsourcing to develop.

Logistics outsourcing is an attractive alternative, because it matches the three characteristics companies are striving for mentioned above (enhance globalization, gain benefits from economies of scale and specialized process expertise). It has clear and objective metrics that can be easily measured by the buyer (inventory costs, inventory levels, the cost of warehousing space and transportation etc). The buyer can understand the benefits received from the outsourcing supplier and so the outsourcing relationships becomes an easy sell in today's competitive market place.

[1] This practice is also known as Third Party Logistics (TPL).
[2] Storhagen, 1995.

Another driving factor for the decision to outsource is that specialized skills required for success in supply-chain management are rapidly becoming more advanced and complex, so it becomes essential to have good expertise at hand. These specialised skills include having the ability to effectively use handling and storage technologies; planning software and supporting infrastructure; data-communications technologies; decision-support; demand-planning and advanced transportation planning and control tools.

Example: Compaq, the world's number one producer of personal computers, estimates it has lost around $1 billion in sales in 1994 because its laptops and desktops were not available when and where customers were willing to buy them. Compaq's chief financial officer argues that his company made the most of what needed to be done in order to be more competitive. Compaq changed the developing, manufacturing, marketing and advertising of products. The only area that was not addressed was logistics.

For most companies products, promotion and price are the competitive ingredients, while time and place have taken a back seat. This relative neglect is now changing. The increase in the geographical distances between production and consumption, and the concentration of production to fewer and bigger units in order to be able to enjoy the economies-of-scale in production has increased the need to store and to transport. Distribution costs, as a percentage of revenue, are greater for international companies than their domestic counterparts. Complexity, long order lead times, unusual product-service requirements and differing legal and cultural factors in foreign countries have combined to create a more challenging operating environment. Many companies are now seeking to exploit their logistical competence. Strategic vision calls for a willingness to offer extra value-adding services. Logistically speaking, it means meeting commitments and shipments arriving when and where promised. Companies committed to the strategic use of logistics usually outperform the competition in speed and consistency of the order cycle. The objective is to be the preferred supplier for key customers. Consequently companies are willing to use qualified external support to outsource.

2.0 Approach

We will approach outsourcing from a theoretical framework by describing the processes and possibilities of outsourcing and finally apply the methods to a practical case.

2.1 Purpose

Our purpose is to present a theoretical framework for outsourcing actions as a guideline for companies on why and how to outsource. With this work we want to give a deep insight on logistical outsourcing, as a new and promising trend in the global environment. We will explain what outsourcing is and which are the opportunities offered in this field and demonstrate how it can create value for the customer. To better show that it is not a risky investment, but a new opportunity, we will propose a framework for the implementation of the outsourcing decisions, describing a possible relationship between a firm that wants to test outsourcing opportunities and a logistical consultant company. We will also apply this theory to a small case to give an example of how the consultant company could work in that situation. Our purpose is to present the theoretical framework for outsourcing actions as a guideline for companies on why and how to outsource.

2.2 Method

The report has been based on a descriptive approach in strive to describe the reality; how outsourcing can create value.

No primary data was used in this report, as we used a case example for background on our example implementation. As such all information is secondary, achieved through studies of relevant literature, books and journals that proved useful to the study.

3.0 Theoretical Framework

This capital will deal with the theoretical framework of outsourcing. Presenting some of the basic reasons why companies outsource and the advantages and disadvantages of the procedure. A model for implementing the practical phases of the outsourcing process is also presented. Finally four possible areas of outsourcing are explored.

3.1 Logistics Outsourcing Drivers

Although logistics outsourcing can vary from one business enterprise to another the basic reasons and driving factors for outsourcing are:

1) **Facilitate and accelerate business reengineering:** outsourcing allows enterprises to realize quickly the anticipated benefits of reengineering. Not only does outsourcing allow enterprises to accomplish rapidly the anticipated benefits of a structural change, but take advantage of already reengineered world-class provider.
2) **Flexibility and reduced risk:** an additional logistics outsourcing driver is risk reduction. Investments of a sizeable amount in a non-core business can have tremendous risks. When enterprises outsource they reduce workload fluctuations, improve flexibility and enhance capabilities to adapt to changing opportunities.
3) **Investment priority:** logistics outsourcing is appealing to business enterprises because they can switch a large proportion of fixed costs into variable costs. This will not only improve the enterprise's balance sheet but also free capital funds for core business areas.
4) **Reduce or control operating costs:** cost reductions and operating cost controls are the most often cited reasons to use third party logistics (TPL). TPL seems to have leaner overhead structures, more expertise, less excess capacity and better control.
5) **Concentration on core business:** to achieve a competitive advantage throughout the logistical activities the company should continuously develop outsourcing, upgrading its resources; but by doing this the company may loose the focus on its core activities. By applying third party logistics it can fill in the lack of expertise and technology knowledge without loosing the focus on its business:
    - **High quality logistics service:** TPL enterprises are medium to large businesses. They tend to have extensive logistics expertise, state of the art equipment and

excellent training for their personnel. The acquisition of these capabilities through an outsourcing arrangement can result in an increase in the quality of logistics service that the contracting enterprise receives.

•**Better and newer technology:** logistics technology requires more often special expertise. A competent logistics provider can relieve the outsourcer of a time-consuming logistics function and a non-core business area that requires the latest technology to be successful.

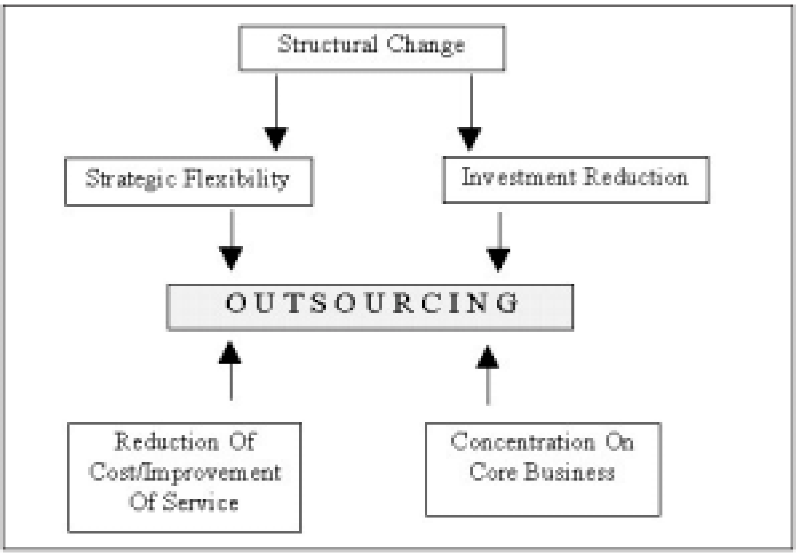

Figure 1: Driving factors of outsourcing

3.1.1. Advantages and disadvantages

By outsourcing the logistical activities the company can achieve great benefits, but it will have to cope with some common issues. The following is a list of the most important ones, to give a useful insight on the convenience of undertaking this decision.

The **advantage** that a company could gain through outsourcing can be seen both from the operational and the strategic point of view. Too often companies look at outsourcing as a mean to lower only short-term direct costs (operational impact). However, through strategic outsourcing, companies can lower also their long-term capital investments and leverage their key competencies significantly (strategic impact). The following is a summarization of the operational and strategic advantages of outsourcing.

OPERATIONAL IMPACTS:

- Cost reduction**:** the outsourcer can experience lower logistics costs due to the increased efficiency of the TPL;
- Improved logistics service**:** the outsourcer can benefit from the third party logistics provider's increased levels of service consistency. This enhances efficiency and can lead to higher customer satisfaction;

- Reduced inventory costs**:** access to state of the art physical distribution systems through outsourcing can reduce the amount of inventory required in the system. This results in lower inventory costs for the outsourcer;
- Capital investment reduction: the outsourcer doesn't have to face the asset investment because it is using the TPL provider's facilities and equipment;
- Upgrade logistics system**:** the outsourcer can gain access to state of the art logistics capabilities, at a fraction of the cost of upgrading its own system, by outsourcing its logistics functions;
- Accommodated seasonal peaks: the problem of seasonal changes shifts from the outsourcer to the TPL provider, so the former doesn't have to cope with it and can achieve great flexibility.

STRATEGIC IMPACTS:

- Access to logistic expertise**:** a strategic goal of the outsourcer could be to acquire and maintain a state of the art logistics expertise. The TPL provider is likely to be aware of current developments in the logistics field such as new regulations, innovations and logistics technology. It will therefore pass on the benefits of its knowledge to the outsourcer as a result of the outsourcing agreement;
- Easier access to foreign markets**:** an enterprise can gain access to foreign markets much more rapidly with the help of a TPL provider than if it tried to set up its own logistics network. By engaging in outsourcing, the outsourcer gains access to the previously established local contacts of the third party logistics provider. It also acquires the ability to resolve local regulatory problems and overcome cultural differences using local expertise with professional accreditation. Possibly most important, however, is the opportunity to enter a new market without the necessary infrastructure costs. This reduced cost diminishes the risk of entering new markets;
- Concentrate on core competencies **:** some enterprises have found out that in order to remain competitive in their field they must reduce the range of functions they perform and concentrate on their core competencies. To do this they must reduce the resources and efforts expended outside their core skills. Many enterprises have made the strategic decision to minimize their involvement in logistics functions. Outsourcing offers enterprises the opportunity to reduce their logistics efforts while maintaining high standards of logistics service;
- Economies of scale**:** for many enterprises logistics economies of scale are not achievable due to the relatively small size of the enterprise. In some cases, a strategic decision can be made to access these economies of scale, not by expanding, but by outsourcing the logistics functions to a TPL, which is already large and efficient enough to achieve the desired economies of scale.

Outsourcing complete or partial activities creates great opportunities, but also new types of risks. The main **disadvantages** that the management can face are:

- Loss of critical skills: if the company doesn't realize that the logistic function in question is a core activity for itself, and it decides to outsource it, it will loose the specific skills that constitute part of its competence;

- Loss of cross-functional skills: communication among the different functional departments is usually difficult enough in a normal company, especially regarding logistics. It is easy to understand that it will be more difficult if the function is taken over by an external company (the outsourcing provider), so one of the main issues in the implementation of the TPL relationship concerns the information system and its interfaces;
- Loss of control over the supply chain: since the logistics functions are being outsourced to another firm, which the parent company has no control over, it may mean a loss of control over the logistics process and the service levels. This may in fact lead to the risk of trusting your partner too much; in fact there are no legal restrictions on the penalties that can be sentenced on vendors for service levels not reached;
- Human resource issues: the outsourcing usually means a reorganization of the work and may sometimes not be accepted by management and employees, which can see the outsourcing provider as an interference. Management should solve this issue by focusing on commitment and employee education;
- Lack of global logistics providers: even though the trend is to have a unique partner in outsourcing in order to achieve better communication and co-ordination, and even though we are going towards the globalization of the markets, the company cannot trust a world-wide logistics network that would completely cover all of the relevant markets.

3.2 The implementation of outsourcing

As with other management strategies the most challenging phase in outsourcing is often the implementing and realization of the change. Converting the theory and ideas into effective practice demands decisive co-operation and synchronizing of efforts. Multiple factors may prevent the successful implementation of the outsourcing plan. The key factors in implementation are commitment and understanding. Commitment for the outsourcing decisions is required throughout the organization from top to floor management. Commitment is also reflected in the level of trust between the participating parties and mutual understanding of the importance of commitment. Company-wide understanding of the partnership-outsourcing concept and the goals set by management are also critical factors.

3.2.1 Model for outsourcing

In order to successfully implement this process, by which outsourcing and partnership is finally achieved, a solid set of procedures and models are required. Therefore we have chosen to present a basic model and framework for the practical actions needed to achieve company goals. This model is an integrated framework of the buying process model[3] and relationship improvement process[4] model, which we found suitable for implementing outsourcing.

This is a presentation of the buying process and relationship improvement model used by customers (the party wishing to outsource some or all of its activities) in relation to the third-party decision and consists of 6 different stages.

[3] Coyle, Bardi, Langley, (1996) The management of business logistics
[4] Macbeth and Ferguson, (1997) Partnership outsourcing

Phase 1: Diagnose and conceptualize needs

This first stage consists of the company realizing and defining its needs for outsourcing logistical functions. Some of the decisive factors (outsourcing drivers also mentioned in 3.1), which may compel a company to choose outsourcing activities as an alternative to independent logistic operations are:

- Capacity/space constraints
- Lack of needed expertise
- Organizational change
- Mergers and acquisitions
- Changing markets and customer requirements
- New products and cost pressure

The benefits of outsourcing are also considered at this point. From an overall view the emphasis should be on taking cost out of the entire supply chain – not just on an individual component. Other benefits deriving from outsourcing, in addition to cost reduction and the facts mentioned in section 3.1.1., are improvement of customer service, ability to focus more on core competencies, reduction of employee base and capital cost reductions.

Phase 2: Internal commitment and team building

As previously mentioned commitment and understanding of the issues involved in outsourcing are crucial factors to the development of the relationship process. Thus management expertise and commitment are essential prerequisites for success. The process itself requires coordinated effort, which is effectively achieved through the building of a cross-functional implementation team. This team has the responsibility of carrying out the outsourcing process, development of collaborative supplier relationships and managing the relationship change program. It should have the following characteristics:

- Stakeholder representation, including key operational people e.g. sales production, engineering and purchasing
- Technical expertise
- Organizational expertise
- High level managers
- Strong leadership
- Right size. Preferably eight to ten members.

From this point on the implementation team plays an important part in coordinating efforts and selecting suppliers.

Phase 3: Identify Alternatives

This stage should be devoted to the determining of selection criteria for a third-party supplier. The needs defined in phase one should act as a basis for defining the characteristics and factors required for the coming relationship between company and third party. The process of identifying possible alternatives should also include a request for proposals from interested suppliers. A pre-screening based on this list of proposals received should identify the relevant suppliers according to the company's specific needs.

Phase 4: Selecting partner

The selecting of a third-party logistics partner is the most critical phase in the outsourcing process. Suppliers that offer the lowest prices are not necessarily the most suitable ones for developing long-term mutual relationships. The emphasis should be on the total acquisitions cost including selection process, implementation and estimated future expenses instead of supplier quoted unit prices. Crucial selection factors include the following:

- Technical capability. Does the supplier have access to technology, which provides basis for customer service and development.
- Existing level of business. Experience of supplier and key figures indicating profit, turnover and healthy levels of investment.
- Design capability. Is the supplier experienced in working with customers in design.
- Capability for development. Does the supplier have processes, which are fully capable now and plans to ensure their effectiveness in the future.
- Organization management. Does the supplier have an organizational structure capably of managing desired processes and a TQM environment.
- Personnel capability. How experienced is the staff and how well does the supplier organize, train and use its people resources.
- Company strategy. Does the supplier have a strategy compatible with forming collaborative, long-term relationships with customers.

The following up and assessing of these criteria's involve visits to each supplier's premises, interviews with key personnel and the building of professional contacts on a personal basis. It is important to achieve consensus on the final selection and ensure that everyone has a consistent understanding of the decision and its implications. A win-win relationship objective is essential.

Phase 5: Supplier commitment and joint team building

After choosing the most suitable supplier, the aim of this phase is to encourage the chosen supplier to buy into the relationship improvement process and the building of a joint team with the supplier in order to carry forward the rest of the relationship building process. It is important that both parties go through a process to develop full understanding amongst supplier management of the coming changes and improvements. The basic requirement is thus the provision of information and education from company to the chosen supplier. This is efficiently achieved through the building of a joint team between the supplier and company, which will direct the rest of the relationship improvement process. The same criteria's and factors as in the team building of phase 2 are important. As a result of this phase mutual goals and commitment should be agreed on as well as sharing of benefits and a statement on expectations set for both partners.

Phase 6: Implementation and continues improvement

This phase covers the actual effort of implementing the goals and commitments identified by the joint team during phase 5. The whole concept of achieving mutual benefits and competitive advantage depend on the successful implementation of agreed plans. Depending on the complexity of the new third-party relationship the overall time needed for implementation and success may be relatively short or extended over a more extensive period of time.

It is important to keep up a continuing feeling of progress through identifying critical targets and time-scales for actions and establishing performance measures to estimate the success in meeting these goals. Continues improvement of the supplier-company relationship should also be considered as a priority. An effective model to measure the relationship is the relationship positioning tool described below (3.2.2). Encouraging “out-of-the-box” thinking and being creative and innovative are important factors affecting the level of success achieved through third party outsourcing.

3.2.2 Relationship positioning tool

In order to measure and continuously improve the relationship between supplier and company a systematic process of rating key elements included in this process is essential. A useful model here is the Relationship Positioning Tool[5], which identifies the effectiveness of the relationship and the critical factors determining it. It is based on a model of customer-supplier relationship shown in figure 2 below.

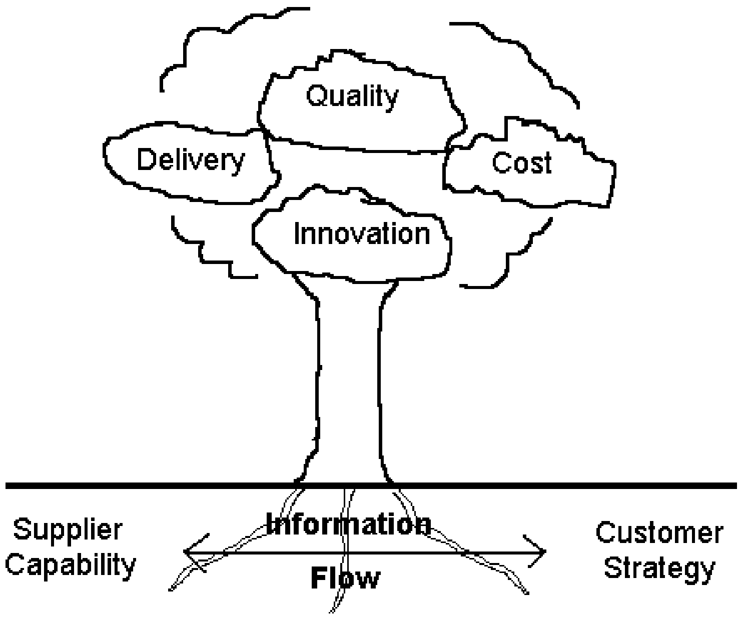

Figure 2: Structure of the Relationship Improvement Tool model

The leaves of the tree in the figure represent the overall health of the relationship, which are divided into four components of performance elements: quality, delivery, cost and innovation. Measured variations from quality, delivery and cost indicate weakness in the performance of the relationship. Similarly the effectiveness is measured by ensuring that continues

[5] SCMG Increasing The Potential for Local Sourcing to OEMs, Report of SERC/ACME grant GR/F68119, Glasgow, 1991

improvement takes place through innovation of the supplied goods and services. However the overall health of the tree is dependent on the strength of its root system which is divided into three major contributing factors between the customer (party buying third-party outsourcing) and supplier (party providing logistical functions). The potential of the relationship is thus dependent on:

- Customer strategy. How well the customer creates the right conditions for a successful relationship with the supplier.
- Supplier Capability. The suppliers raw capability to deliver products/services at a high level of quality, at the right time and the lowest overall cost.
- Information flow between customer and supplier. The effectiveness in which partners create a flow of information between each other providing basis for effective sharing of knowledge and ideas.

The Relationship Positioning Tool framework can be used to provide the basis of measurements on the effectiveness of the supplier-customer relationship. It measures current, visible performance against the business deliverables of innovation, quality, delivery and cost thus acting as an incitement for further and continues improvement. It also examines the factors below the surface giving insight into tomorrow's performance.

3.3 Areas of outsourcing

Outsourcing can be applied to various fields of logistics. The following is a presentation of four core capabilities, which can be considered as important areas for outsourcing. These areas are transportation, warehousing, inventory management and information systems.

3.3.1 Transportation

Transportation is the linkage process in logistics, permitting the flow of goods to the final consumers. Customer satisfaction is achieved through place and time utility; with the physical movement of goods to the place and time desired. As the geographical distance between consumption and production increases in today's global economy, transportation has become an even more important operation.

Transportation issues involve the selection of the transportation mode (air, sea, rail or motor), and then the specific carrier. Company characteristic and philosophy, market structure, product characteristics, customer characteristic and environmental issues are often the strategic issues influencing transportation mode options. Specific carrier selection begins with identifying carrier attributes required to achieve customer service, followed by the ranking of the importance and ended with the evaluation of the potential carrier against the criteria. Transportation decisions are prominent within the company logistic decision due to the trade-off potential existing between alternative transportation modes and carriers.

Decision making in transportation offers 3 alternatives; the company can choose to operate its own transport function, lease the vehicles and manage the service function, or it may opt to use a specialist service company.

To make or to buy transportation often revolves around factors such as financial policy, customer service policy, the control the company requires and the intensity of the competition in the market. For example, the view of how profit objectives are met will be reflected in financial structure decision. Many companies are questioning the ownership of non-essential asset. The decision to lease will eliminate many direct cost items, but increases operating or variable cost. Risk of poor capacity utilization is reduced with a lower level of investment in vehicles, special equipment and service support. Market characteristics and competitive offers influence customer service. Order cycle length and reliability are important factors within the scope of transportation decision making.

Today, there are many large transportation firms, such as UPS Worldwide Logistic, FedEx Logistic Service etc., providing a wide range of logistical solutions. Many companies seek to create synergy by concentrating on their competence and exploiting the carrier provider's competence. A prime example is Drug Transport, Inc., which has carved out a niche in less-than-truckload distribution in the pharmaceutical and office supply fields.

Some examples of services offered transportation service providers:

- planning of shipments and determining the best carrier for each need
- professional assistance in negotiating with commercial carriers for enhanced pricing
- assistance in damage and lost merchandise claims, provision of management reports which enable effective analysis of transportation costs and monitor carrier performance
- consolidation and centralization of pre-audit and payment for all intrastate, interstate, and international freight companies.

3.3.2 Warehousing

Warehousing is defined as the storage (holding) of goods. Warehousing is one possible area for outsourcing. By the year 2000, private warehousing will decrease to 63% and public and in-transit storage will increase to 22% and 13% respectively. As our question is how to create value for the customer through outsourcing, we go directly on to describe what the advantages and the disadvantages are for this action. By using third party warehousing, companies can concentrate on their core competencies like marketing or manufacturing. The contract or public warehouse can not only provide storage, but also provide the logistics services package the user requires to support a firm's logistic channel. Generally at lower output levels contract warehousing is the best alternative. When volumes increase so that companies can spread the fixed costs over the larger output volumes, it might be more efficient to use private warehousing. The contracted party can offer, not only packaging and light assembly, but also freight audits, order entry system operation, inventory management and the picking and packaging of goods. But several other advantages speak for outsourcing warehousing.

First of all the company can compensate for seasonality in products: A contract distributor can handle the peaks and troughs typical in seasonal industries more effectively than a private distributor can. That is to say if the output is not stable the company may have problems to decide over the right output amounts and use its warehouse inefficiently. Nevertheless some companies have multiple-product lines and this helps to stabilise the private warehouse decision.

Additionally with third party warehousing the firm can increase geographical coverage by a network of facilities. A company could have warehouse locations in different regions without investing in numerous private facilities. With a combined private and contract warehouse network, a company can remain in direct control of the centralised facilities, while using the contract warehouses to lower direct labour costs and increase geographical market coverage.

Moreover it can gain flexibility in testing new target markets. Contract logistics flexibility can enhance customer service. Firms promoting existing products or introducing new ones can use short-term contract distribution services to test market demand for the products. Therefor when building an own warehouse knowledge on the best market area will already be acquired (closest to vendors or most dense market area). A further rationale for contract warehousing referring to this is, that when a company builds it establishes a long-term financial commitment. This assumes that the firm has adequately forecasted and located consumer demand and concentration and that technological breakthroughs in construction, transportation, or warehouse systems will not make the facility obsolete, in order for the firm to get the necessary pay-off.

Another point is the obtaining of management expertise and dedicated resources. Contracting out is a unique opportunity to hand a company's logistics function over to a team of managers who are distribution experts. These can provide innovative distribution ideas and cost-reducing product-handling procedures.

Permit off-balance-sheet financing is another advantage. Hiring a contract distributor to perform distribution operations can increase a company's return on investment (ROI), allowing the company to invest only in those assets that support its primary business. In addition these assets represent an opportunity cost to invest funds elsewhere. Contracting out the distribution services takes these assets off the balance sheet, thereby increasing a company's ROI.

Finally, because the contracted firm handles a high volume of products from different client accounts, contract warehouses offer significant freight savings by consolidating freight into full truckloads.

Along with the advantages of outsourcing come some disadvantages.

There is the loose of control of the logistics function. The company exerts less control over personnel, hiring practices, policies and procedures. Companies with high-value products such as pharmaceuticals must be very cautious to reduce employee theft as much as possible. Physical control like security, refrigeration and service control for customers and plants will be lost and certain raw materials and finished goods are highly susceptible to theft, damage or spoilage. Thus hiring an outside company to handle products is more risky than using a private facility. Even if contract warehousing usually has a good reputation, the chances of loss are greater.

Contact costs possibly exceed private costs. Also there may be management and union acceptance problems, lack of product volume, incompatibility with company needs and insufficient understanding of contract warehousing and its value.

Finally, in some regions there might be no contract warehousing possible, because of their hazardous nature or for some other reason, where the loss for the contacted firm would be to great. In this regions private warehousing is unavoidable.

3.3.3 Inventory management

A potential area of outsourcing is the inventory management functions, which are closely related to warehousing. Inventory management is defined as inventory administration through planning, stock positioning, monitoring product age and ensuring product availability.

A recent trend in logistics has been the reducing of carried inventory in order to reduce the overall costs in the entire supply chain. This can be achieved through various alternatives, one of them being outsourcing the inventory management function. Inventory management functions include all the actions between the receiving of each stock-keeping unit until the specific unit is load for transport. These functions are closely related to warehouse operations and thus inventory management is often outsourced in combination with warehousing.

The reasons for outsourcing inventory management include cost pressure due to new products or scarcity of assets. Inventory costs represent a significant component of total logistics costs in many companies and the expanding product range increases the need for multiple types of stock keeping units. Another reason is capacity constraints, which are effectively resolved by buying extra capacity from outside. A third reason is the changing markets and customer requirements. The inventory levels that a company holds directly effect the customer service level and ability to reach the market. All of these factors can be resolved by buying third-party logistical functions from outside which offer a variety of services.

The outsourcing of inventory management has a major affect on the company’s inventory cost which consists of inventory carrying cost, order/setup cost, expected stockout costs and in-transit inventory carrying cost. Of the above mentioned, inventory carrying cost is most important. It consists of capital cost, storage space cost, inventory service cost and inventory risk cost, which may all be significantly reduced or totally removed through outsourcing. Thus the inventory cost may also be used as a decision criteria for choosing an external service provider. If the company’s inventory carrying costs, added with other overhead inventory costs, amount to a higher expenditure than the cost of outsourcing inventory management, then outsourcing should be considered as an effective solution. By calculating the total amount of inventory cost by unit and comparing these numbers with corresponding outsourcing unit prices valuable insight into the decision process can be gained.

From an overall point of view the major effect of outsourcing inventory management is on inventory costs. Thus an essential decision driver in outsourcing inventory management is the reducing of asset investment in order to improve asset productivity. Third-party suppliers offer asset based facilities such as warehouses, which can be combined with inventory management functions and services. Therefor outsourcing will eventually lead to improved asset productivity, measured for example with return on investment, inventory turnover and profit margin. This enables adding additional value to the company’s products and for the final customer in the form of better service and lower prices

3.3.4 Information systems

Driven by information technology's ability to reduce co-ordination costs, business enterprises are designing and implementing inter-organisational links to support commerce activities. These links take many forms, such as Integrated Logistics Information Systems (ILIS), Just In Time systems (JIT), Electronic Hierarchies and Markets and Enterprise Integration. The information systems make available all the information for carrier negotiations, carrier management, shipment control and consolidation, financial reporting and freight in a faster, smarter, and less expensive way by reducing paperwork and redundant processes. But the consolidation of different software programs can lead to problems, so outsourcing can be a good solution to have at the company's disposal resulting in high expertise and a better integration.

The most outsourced activities in the information systems area are freight payment and auditing, cost accounting and control, and logistics management tools for monitoring, booking, tracking, tracing, and inventory management.

To give an exhaustive view of the services usually provided by third-party logistics, we searched information on the web sites of some of the firms included in this category. The following are examples of how different companies have resolved information system procedures and some of the services they offer in the area.

GE INFORMATION SERVICES[6]

- Electronic Data Interchange (EDI)
- Purchasing and supplier management
- Internet/Intranet/Extranet (this includes building trading communities of internal and external business partners, streamlining business processes and leveraging investments in enterprise-wide systems)
- Risk management
- Trading community management services
- Network services (providing local support and customer service in all major global markets)
- Messaging services (e-mail, bulletin board and database management)

CASS INFORMATION SYSTEMS[7]

- Freight invoicing, processing and controlling
- Management reporting
- Client database interface systems
- On-line information retrieval
- Internet delivery systems (a supply chain management system which handles transportation transactions, procurement of materials and supplies, maintenance and reparation of items, utility, and warehousing)

ENCOMPASS[8]

[6] http://www.euro.geis.com/
[7] http://www.primary.net/sites/cassinfo/products.html

- Programming services
- Local area networking (LAN) (design, upgrades/conversions, wide area connect on demand (ISDN), equipment installation, troubleshooting)
- Telecommuting systems
- Real time system and network integration (office automation systems, information/document repositories, license tracking and metering, e-mail systems)
- Needs analysis (needs identification, cost/benefit analysis, migration planning, standards and procedures, disaster recovery planning)
- Training services

4.0 Case example

4.1 Background

Our company is situated in the United States. It supplies medical and diagnostic systems to hospitals, physicians office, clinical laboratories and pharmacies. Since the company has been restructuring its line of business to focus exclusively on health care; during this time several non-health care businesses were divested. Substantial changes in the company's environment demand for a essential rethinking of the logistics system.

The health care system itself is made up of two constituencies: payers (insurers, managed care organisation and government entities) and providers (physicians, hospitals, long-term care and specialty organisations). The soaring cost of health care had plunged the health care system throughout the industrialised world into turmoil. Efforts to control costs created greater pressures for efficiency, technological breakthroughs and actions to widen access to health care systems and to improve the quality of services. The ability to respond efficiently and innovatively became an important basis for competition among medical and diagnostic suppliers. Conflicting pressures of providing quality medical care to all, while controlling the cost of health care products and services challenged the companies.

In an attempt to control drug costs, the fastest growing expense in many health plans, health insurers began to offer financial incentives to providers who selected a lower-priced or generic drug when a choice was available. Insurers made similar efforts to influence a patient's choice of doctors and hospitals. Intervention by insurers in decisions that had formerly rested solely with the doctor and patient marked a major shift in the way people accessed the nation's health care system. As insurers gained more control over the medical choices of individuals, suppliers to the health care industry began to address the economic needs of their customers and adapted their sales strategies accordingly. Purchasers were now more likely to use economic selection criteria in their purchasing decisions. Cost-benefit analyses, consideration of the supplier's distribution systems and the consolidation of vendors took precedence over traditional relationship-building and attention to a product's features and benefits. Group purchasing became widespread and customers began to demand new services such as

[8] http://www.monmouth.com/~dpietrowski/

corporate supply agreements. As hospitals placed greater emphasis on inventory management and purchasing programs with prime vendors, the ability to bundle products together or deliver them at specified times and in prescribed ways became a major factor in vendor selection. Suppliers in turn looked for ways to improve their price position and become more attractive to the hospitals, thus logistics took an important strategic role. Demonstrating value was no longer merely a competitive marketing advantage: it was the factor that sold the product.

The increasing demand by hospitals to centralise and co-ordinate relationships with suppliers to achieve economies that they could pass on to their patients forces our company to react to the demands through better logistic management, in particular outsourcing. Many studies today have argued on the need to focus on core competence. That is, our company should focus on the areas that it can dominate and it consists of elements that are important to the customers in the long-run. This can be achieved by outsourcing through external logistic specialists who can provide a customised solution for the company.

4.2 Outsourcing solution

The following is a description of the practical implementation of outsourcing in the case of the described company with the help of the models and methods presented in this study. The procedure is based on the implementation model described in section 3.2.

The first phase: Diagnose and conceptualize needs

This requires defining the company's needs. It has to know what to outsource and what are the benefits through logistical outsourcing. The possible areas and benefits of outsourcing are identified in the table as follows:

Areas	**Benefits**
Warehousing & Transportation	Geographical coverage High flexibility No capital investment Opportunity to hand function over to a team of expert distribution managers Consolidating freight into full truckloads Geographical coverage

The company has to be clear with the scope of the project and its ultimate objective. Given the importance of time and costs in the pharmaceutical industry and the company's global market, we feel that transportation and warehousing are potential areas for outsourcing. We assume that the company's scope in this particular outsourcing project is to focus on domestic outbound truck transportation and warehousing of medical supplies, thus they will also have to partly outsource their inventory management. We suggest to not outsource "information technology" as it is vital to the company to keep track with the rapid trace of innovation of new medical products and diagnostic systems, thus it contributes significant to its core competence. Therefor it will be useful to keep full control over "Information Technology".

The main objective is to create value for the customer for example by reducing the costs and being more flexible. The company can also benefit from the more general advantages like handing over the logistic functions to experts or extended market coverage. This will lower costs and add value to the final consumer in the form of better service and lower prices.

There are specific advantages for the firm, which are very important to meet the requirements given by the company's environment. First the hiring of the contract distributor allows the company to invest in the assets that support its primary business, as they want to concentrate on their core competencies. These assets represent an opportunity cost to invest funds elsewhere, which is a big advantage as they can relocate the funds to research and development functions, which is fundamental to a company in such a highly competitive and innovative environment.

The contracted firm will handle a higher volume of products from different client accounts. The contracted warehouses offer significant freight savings, especially on an international level, by consolidating freight into full truckloads, thus reducing costs which they can pass on to their customers. This also fits the request by customers for the ability to bundle products together or deliver them at specified times and in prescribed ways.

In addition the increased market coverage along with more flexibility plays an important role in offering better service to their customers as they began to take the supplier's distribution systems into consideration.

Nevertheless, we have to weigh these advantages against the possible disadvantages. First of all the company with its high-value pharmaceuticals must reduce employee theft as much as possible, which might be greater when contracting logistical services. Physical control in the form of security and necessary refrigeration for the medical products will be reduced and service control for their customers and plants could be lost. Additionally there is the risk of damage to products or spoilage. But contract service providers usually have a good reputation, because they also have to navigate in an increasingly competitive environment.

Possibly contact costs will not exceed private costs and there will be no management or union acceptance problems. Neither will the lack of product volume be a problem in our company's case. After our consulting work there will also be a sufficient understanding of contract service and its value.

Finally, in some regions contract warehousing may not be possible, because of the products hazardous nature or for some other reason, where the loss for the contracted firm would be too great. In this regions private warehousing for our company will be unavoidable.

The second phase: Internal commitment and team building

This phase calls for a committed project team with people who thoroughly understand the outsourcing process, objectives, agreed evaluation criteria and resources. The team should include people involved in the outbound truck transportation and warehousing functions.

The third phase: Identify Alternatives

The large number of logistic service providers, offering a wide range of services ranging from order processing to customer service, offer many alternatives for the company. Our company has to identify the alternative suppliers based on its cost reduction objective in outbound truck transportation. Selection criteria will revolve around the common transportation issues of cost, transit time, reliability, capability, accessibility and security. Given the cost objective, potential partners are likely to be those who can provide the service at low cost. Cost issues on rates, minimum weights, loading and unloading facilities, packaging, damages in transit and special service available from a carrier are important.

The fourth phase: Selecting partner

Our company has to reach a decision to choose a partner based on the evaluation of the alternatives. Using the theory of the previous section we suggest evaluating the alternatives mainly on the basis of the specific business requirements. This means finding partners able to handle the sensitive products and the time, place and cost requirements to create final value to the customers which is the overall objective of our company.

The fifth and the sixth: Supplier commitment, implementation and continues improvement

In these two phases the company should proceed according to the given theory. Most important is that there should be commitment between the company and the supplier. An ongoing improvement process should accomplish this.

5.0 Conclusion

In order to effectively implement outsourcing, commitment from top to down management and a wide understanding of all the stages and implications of outsourcing are required. In order to achieve these prerequisites and a successful implementation process, a model integrating the third-party logistics buying process and relationship improvement process is presented. It emphasizes the importance of carefully identifying alternatives, the overall analysis of partner selection with the help of specific criteria, mutual relationship building between logistics service buyer and provider through joint team building and continuous improvement and performance measurement. The relationship positioning tool model can be used for the continuous enhancement and improving of the supplier-customer relationship.

As we pointed out there is an increasing need for logistical outsourcing as a way to gain competitive advantage and as an instrument to meet the requirements of the company’s complex environment. Some of the basic advantages are lower short-term direct costs (operational impact). Through strategic outsourcing companies can also lower their long-term capital investments and leverage their key competencies significantly (strategic impact).

The results and overall reasons for outsourcing should focus on adding value to the final consumer of the product or service. By achieving lower logistical costs and a higher level of quality and expertise these results can be used to add value to the consumer in the form of lower prices and better service.

Our report has presented the possible benefits of outsourcing in four important areas of logistics. All the advantages and disadvantages have to be carefully taken into account before taking the final step in outsourcing. This will help companies to concentrate on their core competence and keep ahead of their competitors.

6.0 References

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