

Outsourcing and Logistic Centres

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Abstract

This contribution will be divided into two connected parts:

Part one: Introduction of Project Solved on Jan Perner Transport Faculty of University Pardubice: The aim of this project is suggestion of appropriate methodology and decisive criteria for outsourcing operation. Solution is focused on transport-logistic processes with the aim of theoretical assumptions determination for outsourcing operation of these processes. Solver team has processed the first stage named „Basic Philosophy Determination of Transport-logistic Processes Outsourcing Use“ so far.

Part two: Outsourcing Services Providing in Logistic Centres: The contribution in this part deals with logistic centres that can offer outsourcing of transport and logistic services within their activities. Building of these centres in CR is planned close to bigger cities where they simultaneously will be able to participate on city logistics solution.

1. Procedures on Solver Workplace

The main goal of this project was set suggestion of appropriate methodology and decisive criteria for operation of outsourcing of transport-logistic processes. Solution was focused on transport-logistic processes with the aim of theoretical assumptions determination for outsourcing operation of these processes. Team has already processed examinations and analysis of available domestic and foreign materials connected with:

- outsourcing defined generally and outsourcing of transport – logistic processes,
- process management and transport-logistic processes,
- logistics (focused on business logistics),
- financial and economical problems.

Then basic philosophy of transport-logistic processes outsourcing use was determined, advantages and disadvantages of outsourcing were processed including outsourcing operation influence on organizational structure of enterprise and impacts on employees.

Team of solvers made basic characteristics of transport-logistic processes in enterprise inclusive definition of the most used logistic systems.

Analysis of factors with influence on particular transport-logistic processes was also proceeded - the factors working on basic processes in enterprise and related to business logistics. We worked on process approach, it means on priority orientation to processes.

Within financial and economical analysis, determination and analysis transport-logistic costs in enterprise were carried out. Then outsourcing influence on costs reduce and analysis of risk and costs and benefits were processed. This is crucial question for enterprise in case of outsourcing.

Outsourcing efficiency investigation was carried out regarding given costs.

2. Plan of Works for Next Year

Nowadays (in the second year of solving) solvers begin working on proposal of appropriate methodology of transport-logistic processes outsourcing operation.

On basis of experiences gained in the first stage, relations to enterprise environment and external providers will be analysed with the aim to identify basic steps of outsourcing operation. And then the flow chart of sequence steps of transport-logistic processes outsourcing operation will be created.

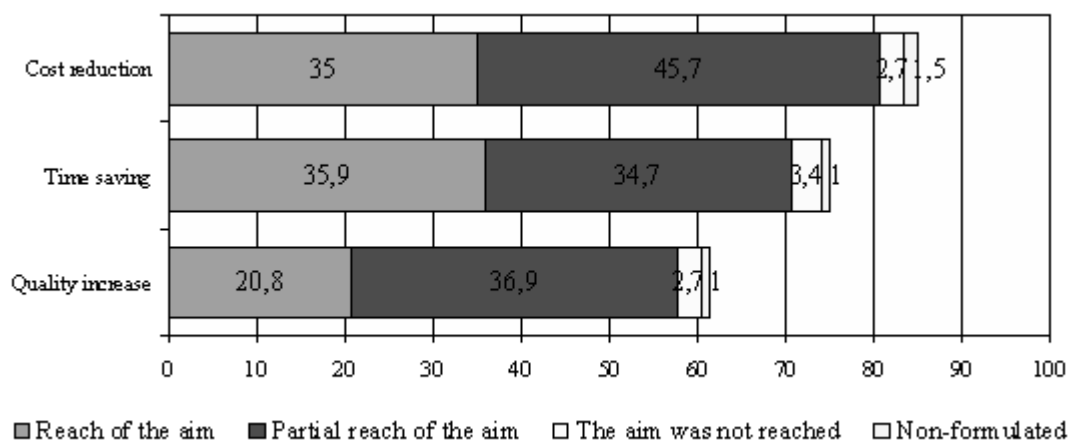
The objective is also critical path modelling by transport-logistic processes outsourcing operation and modelling of selected partial activities and processes.

3. Outsourcing

Outsourcing is universally accepted as economically much profitable way both for companies using it and for providers of services, which can be also LC's. Outsourcing of side activities enables companies to concentrate fully on their own core bussines and to optimize it. Side outsourced processes given to specialized firm will be superior but in many cases also paradoxically will be even cheaper. On the whole, the efficiency of firm processes will increase [5].

In the picture no.1 you can see how companies which made outsourcing of transport and distribution processes (research American Management Association - AMA) assessed single benefits in relation to selected criteria [6].

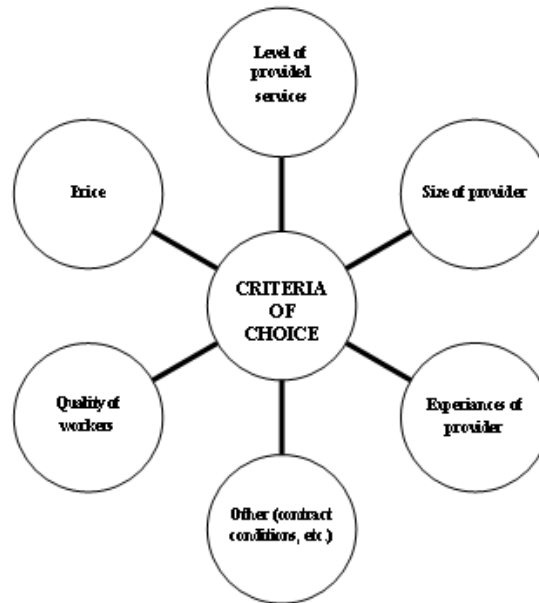
Picture no. 1: Benefits of Outsourcing [%]



Source: AMA

It is evident that permanently more companies look for the way how to transfer the care of supportive processes on external providers. Companies choose providers on basis of criteria determined according to their requirements and needs (in the picture no. 2 are the most used criteria) [2].

Picture no. 2: Criteria of Choice



Source: Author

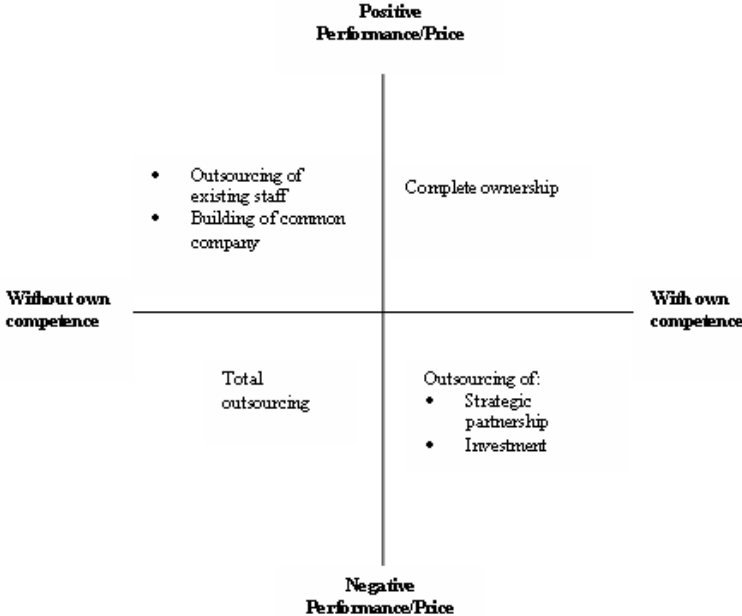
Transfer of the care of processes on external provider will bring to enterprises the performances of service or process in guaranteed quality and for prearranged price. Concern can concentrate only on development of processes which will bring them competitive advantage. By this way firm strengthen up its position on market which results in additional profit [2].

Advantages of outsourcing are especially:

- transition of management problems (sometimes also responsibility) of risks to supplier,
- lower costs,
- professionally ensured systems operation, their maintenance and development,
- possibility of resources use according to needs,
- quick reaction on market situation,
- operation costs instead of investment,
- using of experiences of outsourcing firm from big number of extensive projects,
- elimination of problems with human resources management,
- concentration of firm management on main object of activity.

All supportive processes can be outsourced if they will fulfill some criteria, for example possibility of the absolutely clear definition of interface of outsourcing process. In picture no. 3 is simplified position diagram demonstrating when and what range of outsourcing services is appropriate for firm [6].

Picture no. 3: Position Diagram of Outsourcing

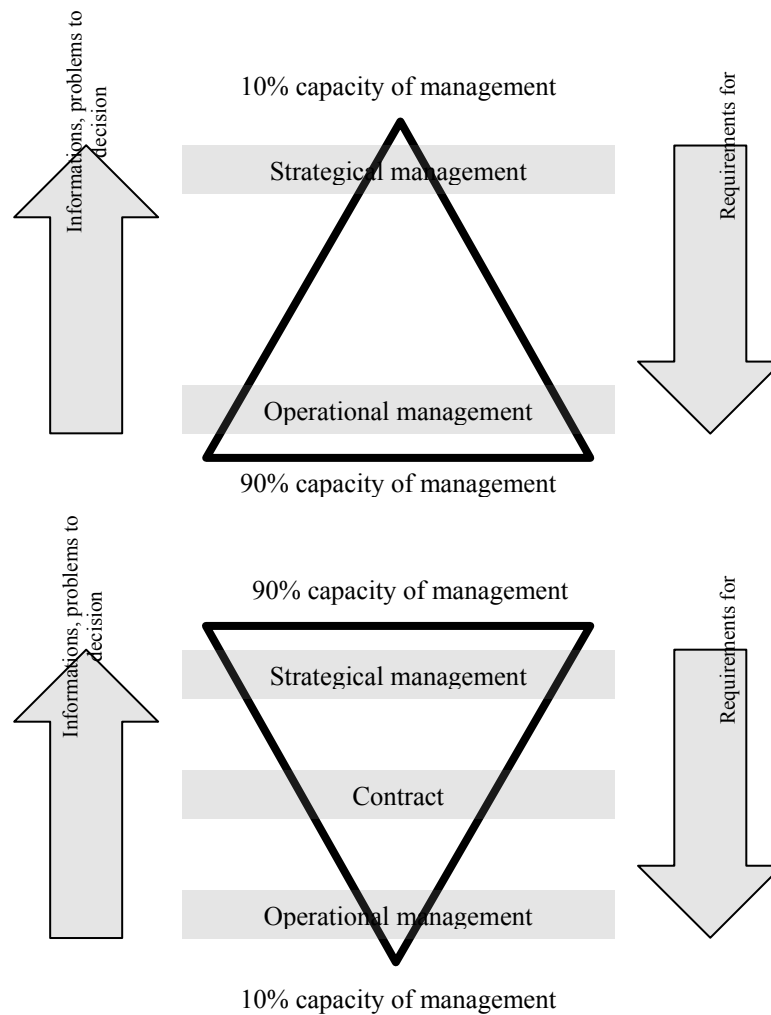


Source: AMA

3.1 Outsourcing Benefit for Management

Outsourcing benefit for firm management (concentration of firm management on main object of activity) is illustrated on following model. Particular departments of firm usually solve the whole range of problems connected with immediate impact on firm. Long-term problems are often put off. Capacity distribution of certain department and its priorities corresponds to situation in upper pyramid. But if operational problems are successfully transferred to suppliers, the situation will turn over with the highest probability.

Picture no. 4: Model of Outsourcing Benefit for Management



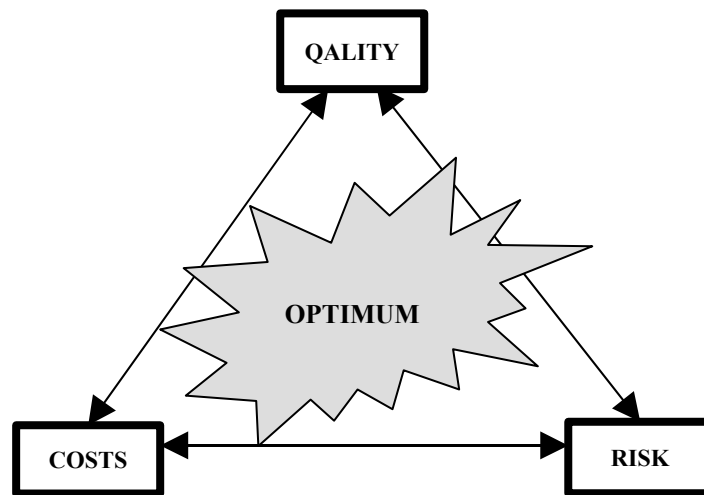
Source: The Finance Magazine

Management introduces outsourcing for immediate and long-term costs savings. If management selects appropriate partner, profits advantages not only in costs saving (improved ROI) and higher services quality, but also in more flexible changes of system and in access to top know-how which specialized outsourcing firms have.

Management of course do not have to forget risks that outsourcing can bring. Outsourcing risks can be divided to these areas:

- legal (business secrets),
- supervision (fulfillment of conditions),
- financial (financial stability of supplier),
- tax (outsourcing taxation),
- firm reference (solutions of cases of operational disfunctions)
- operational and others.

Picture 5: Magical Triangle Outsourcing



Source: BPO

Then there are three factors which influence risks – processes, people and technology. All these areas are necessary to devote them attention by outsourcing, because they can importantly influence management, shareholders and clients.

4. Logistic Centres

Activities connected with logistics, transport and storage are the basic activities of logistic centre (LC).

The LC is indispensable part of logistic chains from raw materials through production to consumption. Participants of the LC-carriers (railway transport, road transport, water transport and air transport), shippers, forwarders, packers, warehousemen, logistic companies and service companies can together take advantage of communication, information and controlling systems and all services and advantages provided within LC.

LC's join together traffic flows and support the cooperation between particular carriers and transport modes. LC's are both contact points of combined distance transport and contact points of local, regional and public transport. LC's allow to utilize advantages of railway transport efficiency for long traffic distances of huge volume of goods and flexible road transport for attraction territory service.

Main functions of the LC are [1, 3]:

- freight (railway, road long-distance transport, water transport and air transport),
- reloading of goods in goods units of combined transport (containers, road semitrailers, replaceable bodies, bimodal semitrailers...),
- reloading of piece goods, goods on pallets, goods in non-standard packing,
- storage of goods of different kinds (mass substrates, goods on pallets, hazardous goods, goods with special storage conditions, etc.),
- goods collection and distribution in the LC's area (regional road transport in succession to storage),
- economical effects in goods (packing, storage, fixation, palletization),

Supportive functions of LC's [1, 3]:

- maintenance and repairation of means of transport and mechanization means,
- leasing of means of transport and handling equipments,
- information support of transported and stored consignments through the rotation time,

- distributive services for city logistics,
- garages for vehicles, containers, reloading apparatuses, etc.,
- offices for service personnel (drivers, customs officers, agents),
- security services, information services, communication services (e.g. conference room), consultation services, general services (customs, service, insuring, ...) etc.

Under the terms of logistic centres is one new service for customers. It is outsourcing of transport-logistical processes. In table no. 1 are types of services offered by providers of services. The plain fact is that LC's within their activities can also offer such services.

Table no. 1: Logistic Outsourcing Services

Classical outsourcing	Improved services
Storage	Assumption and packing
Transport	Shipment completion
Shipment	Safe conduct
Delivery documents	Goods coding
Other services	Complex financial services
Complete services	
Order process	Delivery planning
IT systems	Invoicing
Payment processing	Consultation
Consignment monitoring and controlling	Material planning
Financial consultancy	Investment management

Source: BPO

Logistic centres can strengthen their position in supply of transport and logistic activities by means of outsourcing. It means that outsourcing of transport and logistic processes can be offered as new service within logistic centres.

Customer requires complex solution of his transport needs. So the problem solution is based on using more modes of transport, where the railway transport will make use of all its technical and technological advantages (big traffic performance efficiency) and will be the backbone of the transport chain and road transport will utilize its flexible attraction territory.

Logistic centres will enable to combine utilization of single modes of transport by realization of transport, so the ideas and requirements of both shippers and particular carriers and other entrepreneurial subjects participating on centre operation (forwarders, logistic companies, etc.) will be fulfilled. The aim is to realize the transport according to the customer needs.

The global aim is reaching of optimal level of services to customers by logistic costs minimization.

4.1 Freight Transport

The railway freight transport in logistical centres has big growth potential. Railway must participate on transport chain in main and longest part of the transport chain so called combined transport. Emphasis is primarily put on international transport, because non accompanied combined transport is effective from hauling distance about 700 km and more.

Therefore it is necessary for railway companies to cooperate with other logistical centres on domestic and foreign level. The aim of railway companies should be also creating of logistical centres network that will be served by these companies.

Building of logistical centres is sure perspective area of transport business. For railway transport it is possibility to fortify its position on transport market. Presumption is the conception of railway transport as standard business activity including all required steps. That is the way how standard economical and marketing tools known from private sector can fully apply in railway transport mode.

Partial interests of single segments of railway company must be harmonized so they can reach universal profitable entrepreneurial effect. Considering increasing road transport volumes, there is purposeful to look for technical elements and new technologies that will interconnect particular transport modes. Possibility of collaboration arises here in absolutely new conditions, close cooperation or establishing of alliances. Collaboration should reach:

- competitive conciliation in traffic volumes of particular transport modes,
- effective utilization of transport means of particular transport modes,
- reduction of investment costs of building of freight transship points for vertical reloading,
- reduction of social tension in society,
- removing of congestions and lightening of road communications.

These objectives can be fulfilled also by logistic centre.

4.2 Logistic centres in CR

Czech Railways have processed strategic goal of logistic centres building and its object is traffic volume increase on railway and lightening to overloaded roads. For the first instance there is a problem of transition of transport of bulk substrate and goods with low tone price to railway. Nowadays these aims of Czech Railways are responsible for exchange of rolling stock of goods wagons for modern vehicles filling strict quality and safety requirements. On the basis of results of studies dealing with location problems of logistic centres in CR, it is recommended building of 8 public logistic centres mutually distant 100 up to 150 km. Locations of presumed objects are planned on basic transport infrastructure (railway, road and water transport). Criteria for concrete location consider access to transport infrastructure (according to AGTC), transport infrastructure efficiency, traffic flows, accessibility of airports and ports, potential customers and their time availability, property relations to pieces of land, areas and possibilities of their enlargement, impacts on environment and other circumstances. On the basis of introduced priorities, the following places was selected: Plzeň, České Budějovice, Praha, Lovosice/Ústí nad Labem, Pardubice/Hradec Králové, Bohumín, Přerov, Brno/Břeclav. It is important to build these multifunctional logistic centres in developed and prospering industrial zones where arising and removing goods flows are assured and simultaneously interconnection with logistic centres abroad as well.

Conclusion: Relation to City Logistics

Utilization of advantages of particular transport modes is realized in transport chain in range of cases when more transport operators participate in transport of passengers/goods. For instance this can be built integrated transport systems or developing system of combined transport.

Services in logistic centres are provided on basis of intermodal transport systems, it means that transport is realised by more than one transport system. If we consider that characteristic feature of contemporary requirements on transport is their variability and complex service of customer by one subject, then it is logical, that importance of logistic centres and intermodality continually increase.

Use of logistic centres by realization of transport process enables to combine utilization of particular transport modes to fulfill ideas and requirements both of customer and particular

carriers and also other interested people (forwarders, logistical firms etc.) participating on logistic centre operation.

Important occasion for logistic centres is transport-logistic processes outsourcing. Nowadays permanently more companies look for the way how to transfer the care of supportive processes on external providers. Huge possibility arises here (in CR conditions) for railway and road transport to strengthen mutual cooperation within logistic centres as providers of transport-logistic services.

But logistic centres problems also relate to city logistics that can be effectively solved with outsourcing utilization. Building of these centres in CR is planned close to bigger cities where they simultaneously will be able to participate on city logistics solution.

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