

## **USABILITY OF INTANGIBLE RESOURCES IN LOGISTICS CENTRES STRATEGY**

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**Abstract:** Business stability of the logistics centres in the twenty first century highly depends on the kind and quality of intangible resources. As the variety of services outsourced to logistics and distribution centres increase, success strategies for these companies should be revised. This study explores and illustrates a framework to evaluate the intangible resources in logistics and distribution centres as well as in their partnership companies through a strategic view. The intangible resources at the strategic level are weighed from the usability point of view.

**Key words:** intangible resources, logistics and distribution centres, usability.

### **1. Introduction**

Increasing requests for logistics services imposed a strategic role for the logistics and distribution centres. It has been emphasized that supply chain will not be effective unless logistics centres do not monitor the supply chain performance in a flow of intangible resources. The article take the issues of usability of intangible resources considered in logistics centres.

### **2. Definition of logistics centres**

Logistic centres sometimes are a factor of stimulating increased investments and increased profits. They promote best global solutions aiming at ordering and streamlining goods flows [1]. Y. H. Cheng, Y. L. Tsai defined distribution centre as “...being virtually identical with the warehouse, since most goods in a warehouse are in organization’s distribution system. In distribution channels, warehouses represent storage facilities between suppliers and manufacturer and between manufacturer and industrial customers.” [2] A logistics centre can be described as a place, where the operations of manufacturing with land, sea, air transportation, storage, and port and customs operations are combined in order to get efficient distribution of goods [2].

Conditions of logistic centres are determined by the agreed basic assumptions. P. Liston claimed that the term logistic centre is applied to mean such an enterprise which offers the whole palette of logistic services [3]. The services may include contract warehousing, transport management with consolidated spedition and distribution management. Naturally each of the services will determine different conditions for a logistic centre. I. Fechner distinguished a different set of determinants of a modern logistic centre; they include the following [4]:

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- increased level of customer response,
- time pressure,
- decreased cost pressure,
- globalization,
- organizational integration.

Naturally each of those components will determine presence and functioning of a different logistic centre. Two of the factors determine most significantly the processes of the logistic organization; they are the time pressure and globalization. The need to reduce time taken by some of the logistic processes in the centre and its environment develops both: the management and the internal integration in the organization. The two mentioned elements are obviously also the determinants of a logistic centre of their own.

It is also evident that the main operations such as inbound logistics, conversion and outbound logistics are sustained by the execution of the following five logistics activities [5]:

1. Transportation function: It includes, inbound traffic, out-bound traffic, international traffic, carrier selections and mode selection.
2. Facility structure function: It includes warehouses, material handling and packaging.
3. Communication/information function: It includes order processing, demand forecasts and production scheduling.
4. Supply chain function: It includes inventory and logistics management.
5. Corporate function: It includes fleet management, strategic negotiation and strategic sourcing.

All five logistics activities determine the direction of strategy creation.

### **3. Strategy for logistics centres**

Each is vital and each is found at every stage of the system. In the logistics centre it is considered four perspective levels such as “Financial”, “Customer”, “Internal Business Processes”, and “Learning and Growth” for all the five functions. The functions with the perspective of BSC (Balanced Scorecard) for logistics centre are depicted in Figure 1.

It is to be noted that logistics centres develop strategies on levels and in order to act in such a way they need all kinds of resources. The better use of all kinds of resources (material, human, financial and information) help to develop logistics services in effective way [6].

Logistics centres are looking for partners in supply chain of certain sizes in certain industries that are interested in developing collaborative and long-term relationships [7]. As a result of this selectivity, logistics centres build strategies at financial, customer, internal and growth perspectives. It is a very important issue to identify the most important and the most useful intangible resources while choosing strategy in logistics centres. The good strategy should be based on four basic issues, which are: range, distribution of resources, competences and synergy [8]. All strategies which are developed in logistics centres include all these components with special attention paid to intangible resources.

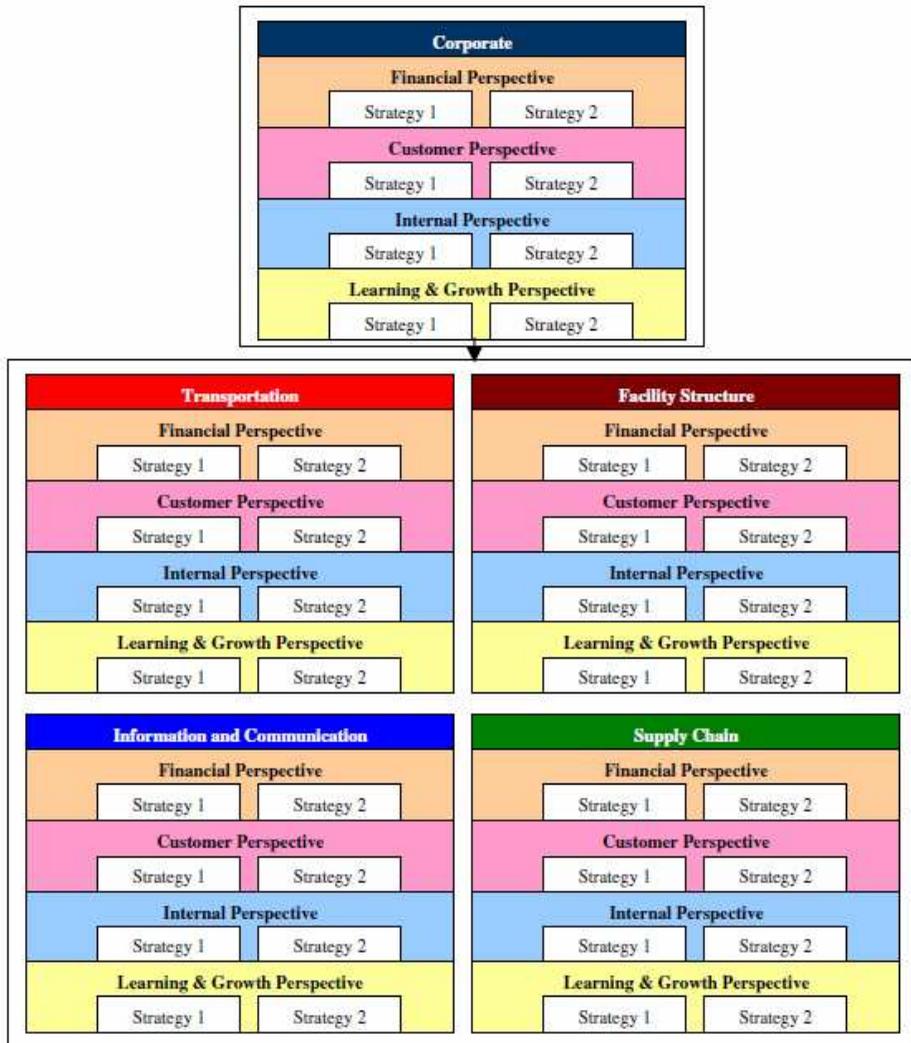


Figure 1. Balanced scorecard (BSC) strategy map for logistics centre  
Source: [5 pp. 272.]

#### 4. Research of usability of intangible resources

The attempt of establishing hierarchy and describing degree of intangible resources usability was conducted on the base of questionnaire. The research was conducted between 67 different logistics and distribution centres and their supply chain partners. There were 22 logistics and distribution centres and 45 partners in supply chain. The questioned persons had to choose importance of the resource (scale from 1 up to 5, where 5 is the most

important resource) and describe the degree of usage of given resource (scale from 1 to 10, where 10 is maximal usage of given resource).

Intangible resources in logistics centres were divided into five groups:

- Knowledge,
- Employees attitudes
- Formal relationships
- Informal relationships
- Company's image.

In order to calculate usability of given resource, such formula was used [9]:

$$C = A \cdot B$$

where

- C – usability of resource,
- A – percent share of first choice resource,
- B – degree of resource usage.

In the Figure 2 there is a percentage share of pointing the first row of given intangible resource in all firms (a) and in logistics and distributions centres (b).

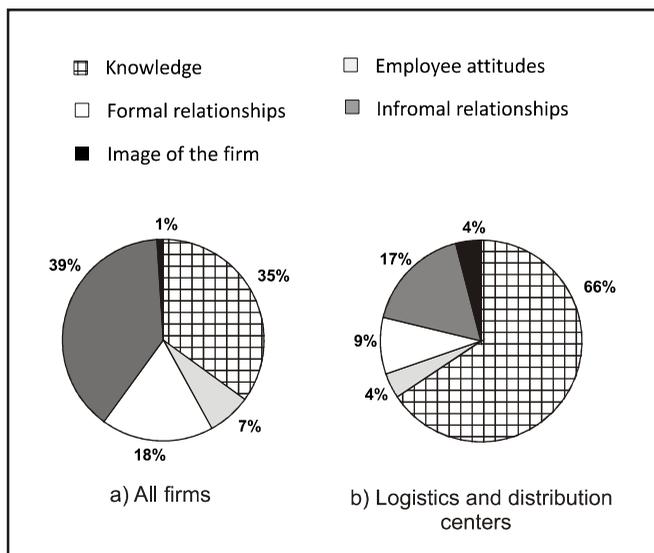


Figure 2. Percentage share of pointing the first row of given intangible resource (A) in all firms (a) and in logistics and distribution centres (b)

Source: authors' own elaboration.

In the Figure 2 b) it can be observed that the most important resource in logistics centres is knowledge (66%). The next resource is informal relationships (17%) and the third one is formal relationships (9%). The last position of least recourse is the firm's image (4%). These results were compared with results from all firms. It is possible to notice that there is

a the differences between results achieved from all companies and only logistics centres. Two the most important intangible resources in all companies (Figure 2 a) are informal relations (39%) and knowledge (35%). The next two intangible resources are formal relations (18%) and employees attitudes (7%). The least important intangible resource in all firms is companies' image (1%).

The results in the two groups all companies and logistics centres are different. It can be observed that knowledge in small and medium companies is less valuable asset than in logistics and distribution centres. This could be the reason why logistics centre are more innovative than small and medium firms.

Table 1  
Average usage of given intangible resources at strategic level  
in logistics and distribution centres (B)

Kind of intangible resources	Utilization of intangible resource in logistics centres [point]
Knowledge	7,00
Employee attitudes	6,00
Formal relationships	6,43
Informal relationships	5,26
Image of the firm	6,65

Source: authors' own elaboration

In the Table 1 there is a comparison of average values of usage of given resource in logistics and distribution centres at strategic level. As it is possible to observe the data in the Table 1, the highest level of resource usage has knowledge and the smallest level has informal relationships.

Table 2  
Usability of the intangible resources at strategic level in logistics centres (C)

Kind of intangible resources	Usability of the intangible resources at strategic level in logistics centres (product of the percentage indicated supremacy of the resource and the utilization of its potential)
Knowledge	$0,66 \times 7,00 = 4,55$
Employee attitudes	$0,04 \times 6,00 = 0,24$
Formal relationships	$0,09 \times 6,43 = 0,58$
Informal relationships	$0,17 \times 5,26 = 0,89$
Image of the firm	$0,04 \times 6,65 = 0,26$

Source: authors' own elaboration

Description of usability of given intangible resource in logistics and distribution centres is introduced in Table II. The most useful intangible resource is knowledge with the highest result equal to 4,55. The second position of usability in the Table 2 has informal relationships with result 0,89. The rest three kinds of intangible resources has very small impact on creating strategy.

## 5. Summary

Logistics and distribution centres play an important role in supply chains. They build strategies for themselves as well as for whole supply chain. Logistics centres influence in a positive way on small companies and on infrastructure and all kinds of resources but mainly on intangible resources. Logistics and distribution centres create functionality of supply chain through maximization of knowledge and employees experience and attitudes. To sum up it is possible to claim that knowledge and informal relationships are the basic elements of creating strategy.

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