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E-logistics as an Element of the Business Model Maturity in Enterprises of the TFL Sector

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Abstract

The aim of the paper is to compare the maturity of business models in two groups of companies in the TFL sector (transport-forwarding-logistics). The division into two groups was based on the use (or non-use) of e-logistics. The maturity of the model is assessed based on the financial ratios of the surveyed companies. To achieve the research objective, the ANOVA method was used. Statistical tests dedicated to this method made it possible to assess the presence of statistically significant differences in the assessment of the maturity of business models used in companies of the TFL sector, depending on the utilization or non-utilization of e-logistics in their business.

1. Introduction

The description of a business profile with the use of a business model is gaining wider recognition in management sciences. The vast majority of the authors interpret the term 'business model' as a brief description of the activities of a company, defining its key sources of profit, the way to achieve them, and above all, the value for the customer. The result of greater maturity of a business model is the better financial condition of a company. E-logistics means broad application of the latest information technologies for the support of enterprise logistics management (e.g. manufacturing, warehouse management, handling order processing cycles) and to assist the board with its business environment, especially the supply chain (e.g. supply, distribution). Providers of e-logistics services can organize the

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whole process of order processing (from the moment of its filing to the confirmation of execution of the delivery), therefore they are the integrators of logistics services. They can also act as e-markets that associate the available services to address the needs of suppliers and recipients in the supply chains of market goods.

The aim of the paper is to compare the maturity of business models of companies in the TFL (transport-forwarding-logistics) sector, perceived through the prism of the financial health of companies, within the groups of enterprises utilizing and not utilizing e-logistics in their activity. A zero hypothesis was also formulated, saying that the use of e-logistics in the business activities of enterprises from the TFL sector significantly differentiates the companies in terms of financial health. The verification of the hypothesis was performed with the use of the ANOVA analysis and statistical tests of dedicated to this method.

2. Business models and their maturity

A business model defines the way in which a company provides value to customers, prompting them to pay for that value and converts those payments into profits. That, which the consumer needs, the manner he wants to receive it, and the best way for a company to meet these needs generate payments and profits [1]. A business model illustrates the logic of a company’s operations, shows how a company behaves and how it creates value for its shareholders [2] – it is a specific blend of three key streams for the business. These include: value stream for business partners and customers, revenue stream and logistics stream [3–5]. A business model should evolve with the development of the internal market and the business environment – and at the same time stay ahead of the market expectations [5]. According to Chesbrough and Rosenbloom [6], a business model includes exactly the organizational and “financial architecture of the business”, mediates in the process of combining technological innovation and the creation of market value.

The survival and growth of companies necessitates broad-based innovation, not only in the meaning of products and technologies, but also the strategy and the business model of companies [7, 8]. The innovativeness of a business model is often considered to be the main growth factor of comparative advantage [9, 10] and when the current model turns out to be ineffective in realizing the market value, a need for “radical” innovation in the model arises, which amounts to the development of a new business model [11]. The thing that currently attracts the most attention of entrepreneurs is building a company’s ability to adapt its business model to the rapid and violent changes in market expectations.

The TFL sector companies operate in a changing environment and need to adapt the services offered to the customers’ needs in order to provide them with the greatest benefit. The TFL sector is developing rapidly, more and more companies are appearing in this sector, and this causes an increase in competition in the logistics market. It is important, therefore, to guide the development of the company in such a way that will give it a competitive advantage [9, 10, 12, 13]. A carefully matched set of logistics services, including offering e-logistics services, makes a company become more competitive and to better meet the needs of customers [14].

When reviewing the literature on business models in the TFL sector, it is possible to distinguish five types thereof: provider of standard TFL services, traditional operator of TFL services, operator of niche TFL services, leading operator of TFL services, and integrator of TFL services [15–17]. Thus, the providers of logistic services form certain classes of business models, ranging from simple models to the classes of new models, often based on cooperation.

E-logistics is one of the areas of functioning of logistics. It is related to the use of the Internet and various information systems in logistics processes, and constitutes a part of the concept of e-SCM (electronic Supply Chain Management), [18].

In practice, e-logistics is not associated with the physical transport of raw materials and products, as it concerns entirely the “virtual” planning of the supply chain and the coordination of all logistics processes, so in other words the efforts to maximize automate, and streamline processes through the use of computer networks for this purpose.

E-logistics emerged as a result of the development of the logistics market, related to the broadly understood distribution and transport. The increasing demands of the market and the increasing competition forced the use of innovative solutions maximally supporting the logistics processes. E-logistics often affect the organization the entirety of these processes, from placing an order to its implementation.

In addition to sophisticated solutions based on Electronic Data Interchange a number of applications appeared that communicate with the business environment through standard web browser and portals on websites. Internet portals
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