



Sustainable development in business models of logistics providers

Author : Ewa Płaczek

Abstract

The current super dynamic and ultra-competitive market requires logistics service providers to innovate in order to improve their competitive edge. Looking at their efforts a trend emerges of businesses putting their weight behind finding areas which could give them long-term competitive advantage. Some of them foresaw sustainable development as the concept of the future. This paper sets out to address the question "does implementation of and practices consistent with the concept of sustainable business translate to competitive advantage of logistics service providers." This question is addressed with help of real-life cases of logistics companies.

Keywords: business model, sustainable development, sustainable logistics business
JEL L21, M11, Q01

Introduction

The logistics industry has become a litmus test indicating the health of the economy. It reacts avidly and very quickly to market fluctuations, often lending a new perspective on business. The new business perspective entails effective and efficient management achieved through new managerial concepts such as the sustainable development concept, which are to guarantee achieving long-term goals, including strong position in the market by competitive advantage and increasing company value. In order to reshape the business, some preemptive actions with regards to market competitors need to be embedded in current business models. This paper sets out to address the question "does implementation of and practices consistent with the concept of sustainable business translate to competitive advantage of logistics service providers." This question is addressed

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with help of real-life cases of logistics companies.

Business models of logistics service providers

Companies operating in the logistics industry are engaging in a market game which in the long-term is supposed to yield them a prevalent position. That prevalent position is identified with achieving a market success characterised by: strong competitive advantage, increasing company value, higher profit-making and margins as well as loyal patrons who would make the aforementioned possible. However, before victory celebrations, logistics providers need to address one, tremendously difficult issue, which is answering the questions: "how to run the business to achieve the set-forth goals." There is no universal answer to a question posed like that. Each logistics provider considers "doing business" to be something else. The common denominator of "business" is perception of economic

activity or an idea which makes money (Kozłowski 2004: 123). Hence a business model means a profit making model i.e. action model in the profit zone (Slowotzky et al. 2000).

According to Slywotzky et al. (2000: 17-31) there has been a shift in how business is perceived. Thus far, market share was the ultimate indicator of success. Companies used to focus on product development and achieving economies of scale. Most prevalent was the view that high market share guarantees strong revenue streams in line with the slogan "get that market share, profits will follow." Now, however, when competition is fierce, technology advances at vast rate of knots as does IT, many companies enjoying a high market share were not able to convert it into high profitability. These realities made managers aware that current management practices and the entire concept of management needs updating, otherwise companies could be exposed to incurring losses (no profit zone) which could lead to its bankruptcy. In order to ensure longevity of the business, its core business model needs ongoing adjustments and focus on profit zones, as only they can ensure continuous growth and increasing company value. In the new economic reality (competition, imbalance), concentration on profit zones has become instrumental to achieving success.

This perception of business model requires each logistics providers to develop an original and unique business model, since they each operate in environments known to themselves and own different assets (including skills and competencies). Hence it may be fair to say that a business model is a strategy for running a business including company-specific assets, processes and relationships combined together to increase profitability and value of the company and make it competitive (over long-term) in given area.

Logistics providers have been concentrating their efforts on survival mechanisms and continuous growth. Traditionally, business success has been evaluated based on profits taken (sales revenues) essential for sustaining ongoing operations and owned assets. Today, however, profits gradually become less central to

a business and a key accounting measure³¹, although historically it gave a comprehensive indication of company health.

The very understanding and perception of development has been undermined lately. Literature begins to see increasing number of views on new management concepts, where growth normally very changeable and dynamic over time, should be identified with company market value and value represented for the customer. Receiving more attention are measures aimed at profit-making through more efficient use of company potential, which over long-term contributes greater company value. This new approach to business development is consistent with the concept of increasing value. It poses a new type of challenge to logistics providers and through activating adequate motivational mechanisms helps building a strong and stable business with good prospects for long-term growth.

Sustainable development

Companies are fully aware of complexity of relationships within and influence of external environment on their operations through adopted business models. The perception of that influence does not focus solely on the business side (profit, market share), but also increasingly often on the social side (social sensitivity, sustainable development, corporate social responsibility). Including social elements in business model gives a company the opportunity to distinguish themselves from competitors. One of fundamental social elements helping one stand out is the concept of "sustainable development"³² often referred to as the

³¹ Book profits are retrospective, reflective of past performances. Subject to the balance sheet law, it is not fully representative of true company value (Zadora 2005: 13).

³² The subject matter literature gives a wide range of different definitions of sustainable development. The very first one appeared in Declaration of the United Nations Conference on the Human Environment also referred to as the Stockholm Declaration was adopted June 16, 1972 which among other set out to define sustainable development in the context of politics, environment, economics and society. It report on proceedings "sustainable deve-

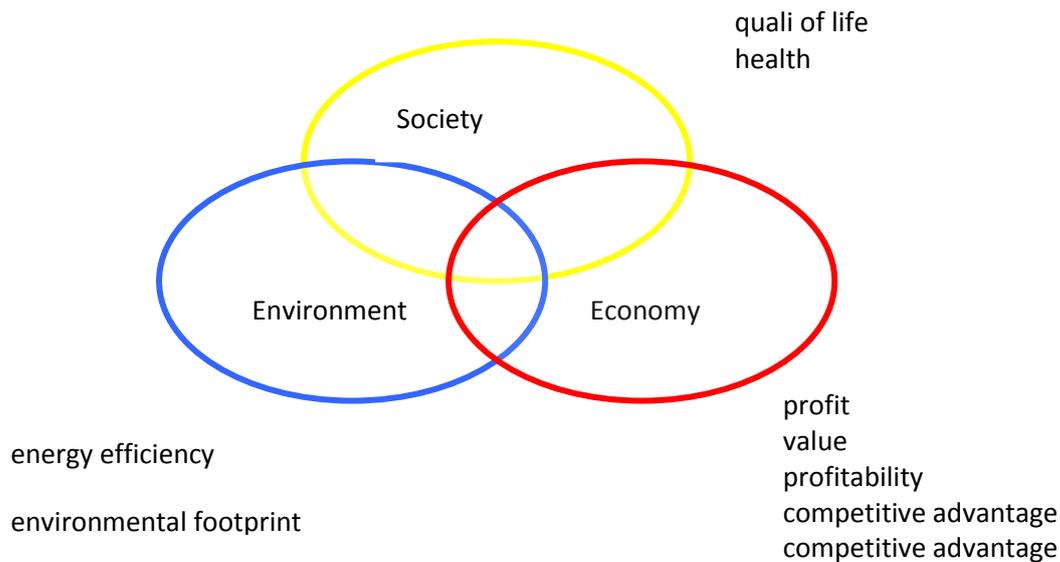
concept of "permanent development", "self-supporting development" or plainly "eco-development".³³

In general, sustainable development is a theory which in a comprehensive manner addresses the issue of long-term economic growth abiding inter-generational justice. The characteristic multi-faceted nature of the term is indicative of its interdisciplinary character, manifesting the need for integration in key areas: economy, society and environment (Fig.1).

lopment” was defined as achieving economic, environmental, and social development that “meets the needs of the present without compromising the ability of future generations to meet their own needs. According to that definition, present generations should not prioritise their own economic, environmental and social development over future generations' who will have the same right, by depleting non-renewable resources and damaging natural environment (see WCED 1987). The concept of sustainable development was officially passed into implementation on the second Earth Summit which took place in June 1992 in Rio de Janeiro. Two key documents were passed back then: *Rio Declaration* – formulating the philosophy of sustainable development and *Agenda 21* – a non-binding, voluntarily implemented action plan of the United Nations with regard to sustainable development (see Płaczek 2012: 79).

³³ Note, however, that the aforementioned terms are different in their scope and subject matter. Regardless, however, of the term we use, the common denominator of all definitions is that they put at the heart developing mechanisms and deriving ways of continuous development respecting and nurturing natural environment and social and economic human aspirations (Skowroński 2006).

Figure 1: Aspects of sustainable development



Source: author's own elaboration based on WCED(1987).

Pursuant to current legislation, “sustainable development means social and economic development which integrates political, economic and social activities while maintaining natural balance and permanence of basic natural processes in order to guarantee the possibility of satisfying basic needs of particular communities or citizens of the existing generation and the generations to come (Ustawa ... 2001).”

For businesses, sustainable development means a new quality of conscious, responsible personal and social life in harmony with social and natural environment as well as green issues and social expectations. It translates to managing social, environmental and economic aspects of business, whose overarching goal is to achieve a permanent and safe position in the market through profit-maximising activities and greater social and environmental efficiency. On the grounds of the aforementioned, sustainable development is the new paradigm of building business based on synergy of economic, environmental and social aspects.

Sustainable logistics provider

Logistics providers aspiring to be successful, i.e., to have competitive advantage over other market participants and increase company value, should align their business models with

the concept of sustainable development. Hence logistics providers take measures aimed at developing a sustainable business and management. Sustainable business³⁴ is a catalogue of standards and business tools allowing the company (logistics provider) to achieve over long-term environmental and social benefits guaranteeing continuous increase in company value. It means a business in its long-term strategy should strive towards balance between economic, environmental and social aspects consistent with set out objectives. These goals, however, should be optimised to create mechanisms of obtaining intended end results.

In most general terms, a sustainable logistics provider is a company which operates in line with the concept of sustainable development. It focuses on becoming successful in achieving perfection in social, environmental and financial aspects of the business. Reality proves that difficulties in operating a business in a sustainable manner mainly stem from finding the right balance on which the competitive advantage is based. Moreover, finding that balance requires service providers to quickly react to external and internal events and ad-

³⁴ Sustainable business is also recognised as a popular social movement with global reach addressing businesses with their demands concerning sustainable development.

opt by introducing changes addressing client and market expectations.

Once the company finds that balance it could be referred to as sustainable logistics provider. In Author's opinion this term describes:

- a logistics provider that owns appropriate assets (tangible and intangible) and operates in line with the concept of sustainable development,
- a company capable of providing logistics services in line with sustainable development in environmentally and socially friendly manner and thus delivering to its clients above-average offering,
- a logistics provider whose business model is based on the concept of sustainable development. In other words, a logistics provider operating a sustainable development model.³⁵

Growth-share matrix for logistics providers - research results

The growth-share matrix³⁶ was used to find logistics providers which based their competitive advantage on pro-social and eco-friendly image. Company values as per 2012 were analysed. The author researched the question whether operation in accordance with principles of sustainable development:

1. leads to a competitive advantage for the logistics operator,
2. translates into developmental opportunities through an increase in the value of the company in the long term,
3. when the answer is positive, then which logistics operators find themselves in position

Q1 (see Fig. 2), i.e., development through an increase in the company value.

In a pilot project, 45 companies providing logistics services in Polish TFL (Transport, Freight Forwarder, Logistics) market, whose declared turnover is at least 50% came from TFL, were investigated. The analysed companies varied substantially in net revenues and company value. On average, the turnover was 316,738 thousand PLN, whereas company value average 217,279 thousand PLN.³⁷ Figure 2 shows that in analysed group of logistics providers:

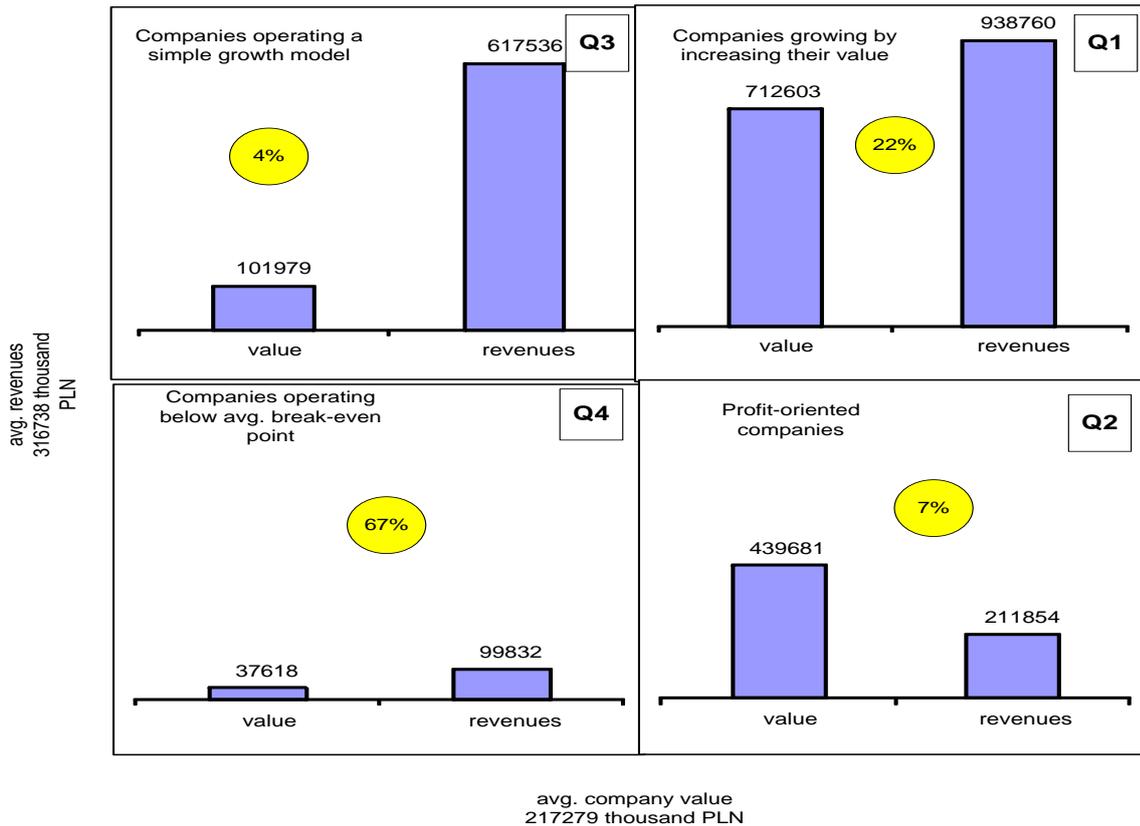
- the most desirable position in the growth-share matrix (Q1) was achieved by only 22% of businesses. They managed to generate above-average financial results compared to remaining population. Those companies can be referred to as developing through growth (increasing value).
- the mostly populous group (67%) were companies operating below average the breakeven point (Q4). Those businesses have low revenues and equally low value. For many of the companies finding themselves in that group is a disadvantageous situation necessitating immediate action aimed at improving competitive edge.
- companies placed in two remaining areas (Q2, Q3) make up a small part of the entire population (7% and 4% respectively). They are usually showing above-average results in one of the areas - either revenue growth (Q3), or company value growth (Q2).

³⁵ A sustainable development model is "a representation in given business place, time and space of inter-connected factors that guarantee satisfying current internal and external needs of a stakeholder, which makes available achieving competitive advantage and gives a platform for future growth assuring business continuity (Jabłoński 2013: 19)."

³⁶ Main attributes of logistics providers when building the matrix were core activity revenue growth and increase in company value. It was also assumed that the main goal of each service provider is to be positioned in top right corner what would be representative of capability to achieve long-term business growth through increasing value (profits).

³⁷ The exchange rate in November 2014 was more than PLN 4 for 1 euro.

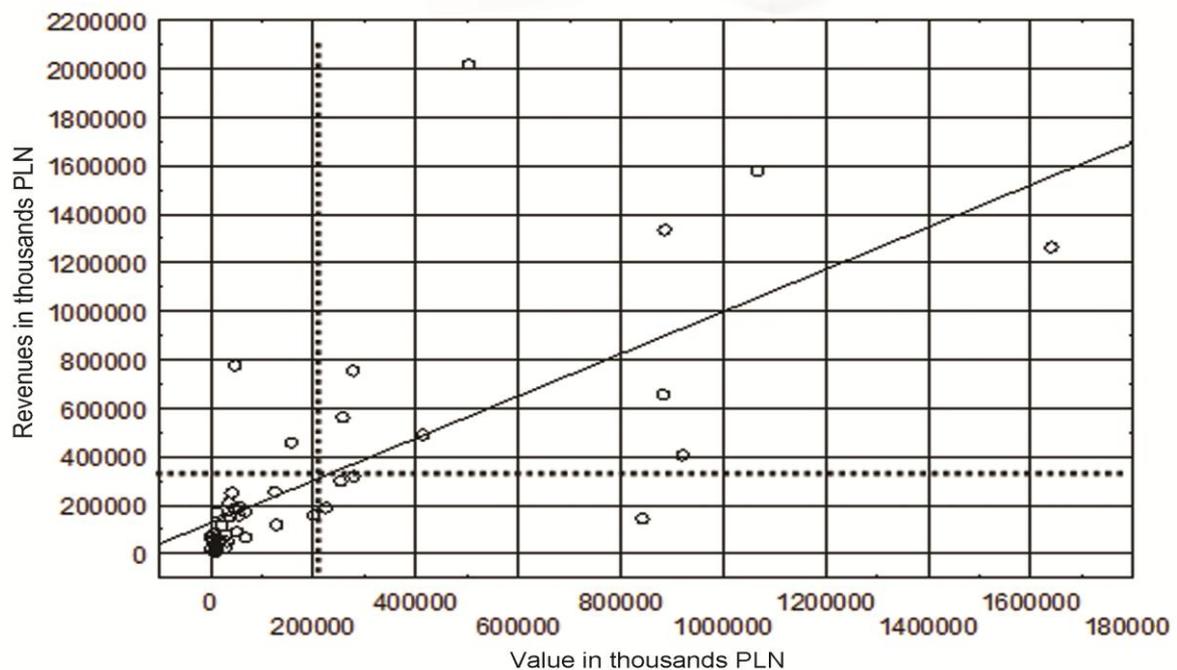
Figure 2. Growth-share matrix for logistics providers



Source: author's own elaboration.

Scatter analysis of the investigated businesses was carried out to drill-down into findings of growth-share matrix (Fig. 3). Scatter pattern concentrated in Q4 (companies operating below average breakeven point) suggests that companies with similar offering are entangled in fierce competition (battle for the customer). Two companies ranked in the Q2 area (profit-oriented companies) were bordering with other areas. Either worsening or improvement in one of the areas would change the growth-share matrix.

Figure 3: Scatter plot of growth-share matrix for logistics providers

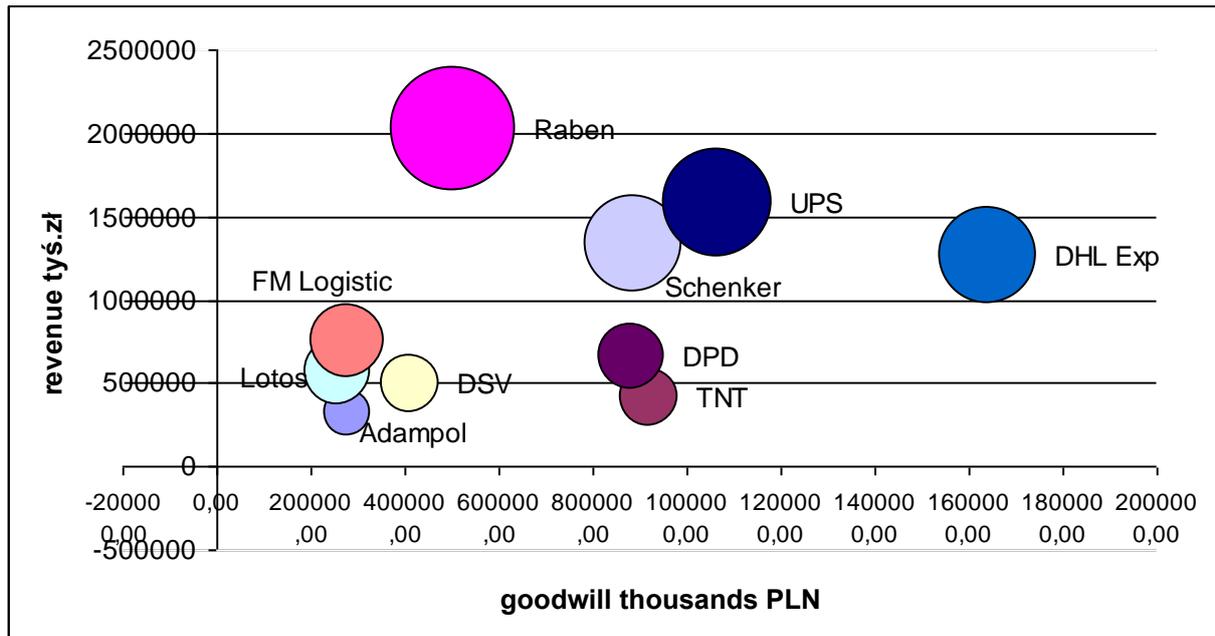


Source: author's own elaboration

Note there are a few companies in each of the areas, which if were to either improve or worsen their revenues and/or company value would move into a different area. It is also fair to say that "border-line companies" could in coming years move to a different area of the matrix by implementing new business models. The most interesting distribution of logistics providers in share-growth matrix by company growth was obtained in Q1 area (companies growing by increasing their value). Most companies ranked as Q1 businesses have dominating and stable position in the logistics services market. One could presume they are the companies referred to as third-party logistics (3PL) or lead logistics providers (LLP) with global reach.

In order to answer the question "What types of companies were classified in Q1 area", scatter analysis of the growth-share matrix was carried out in the mentioned area - companies growing by increasing their value (Fig.4). An additional question was posed "did logistics providers/logistics operators improve their position and growth rate by implementing sustainable development."

Figure 4: Scatter plot of Q1 area of growth-share matrix



Source: author's own elaboration.

The obtained results unequivocally provide evidence for the hypothesis that Q1 area incorporates 3PL global logistics operators with a strong and dominant position in the market. These companies have been operating for many years on the market (e.g., Schenker, DHL, TNT, which over the years have created and developed a business network structure. They have access to proper material and immaterial resources, including specific competences and skills, enabling them to provide high quality tailor-made logistics services for individual clients. However, in order to win or maintain more and more demanding customers and obtain a competitive advantage, most of the companies introduced new competitive elements in their business models and day to day practice. These include operations in accordance with principles of sustainable development, which should lead to an increase in customer satisfaction.

Table 1 shows an example of sustainable development activities in which logistics operators engaged. It can be observed that most activities focus on the environmental aspect of sustainable development. Pro-environmental activities are applied in the field of products, processes as well as management systems. The pro-environmental policies may quickly lead to results not requiring large investments by stakeholders (e.g., cost reduction leading to

increased profits). Also social and economic aspects are addressed, as without human capital and a positive attitude towards change (financial incentives³⁸ are one of the most important one) it is difficult to deal with new challenges. However, we can only consider development in business models of logistics providers to be sustainable when all three of the elements of sustainable development are dealt with, based on the principle of communicating tubes.

³⁸ However, financial incentives are likely to differ for different stakeholders.

Table 1: Example sustainable development activities of logistics operators

Name	Program	Year	Goal
DHL Express Polska	1. GoGreen – global pro-environment project	2008	- lower CO2 emissions to 30% - optimise car fleet and network - improve energy efficiency of buildings - implementation of innovative technology
	2. Green supply chain management	2011	1. Fleet compliant with EU emission standards 2. Periodic inspection and optimisation of courier routes: - optimum number of vehicles per area - no empty runs - optimum route utilisation
UPS	1. One million UPS trees	until 2013	- plant 1 million trees globally
	2. Green Fleet		1. Fuel efficiencies - alternative fuel fleet (hybrids, electric vehicles, LPG powered vehicles e.g. Cargo Cruiser) - Boeings 767 with vortex diffusers
	3. Packaging and recycling		- reduction of waste - introduction of DIAD (Delivery Information Acquisition Device)
	4. ENERGY STAR@ Milion Monitor Drive		- software optimisation
DB Schenker Logistics Polska	1. Green Road		1. CO2 emissions reduction of 20% by 2020 - efficient driving training for couriers - fleet modernisation, - optimum vehicle space utilisation and no empty runs - inter-modal services
	2. Green Helping Time		- eco employee education - volunteering schemes - employee friendly workplace
	3. Green Stations		- recyclable and utilisation-fit waste collection

Source: author's own elaboration based on TSL Biznes 2013/12, pp.28-3

Conclusion

All in all, logistics providers offering their services based on sustainable business model are a minority (10 companies - 22%). These companies dominate and have a strong competitive advantage, while possessing considerable capital and competences. Operating in line with the concept of sustainable development allowed those companies to achieve market success by increase in sales caused by changes in customer preference and growing

company value. The following measures were also a contributing factor (Jabłoński 2013: 119):

- quality of eco-friendly products, services and technology,
- green innovation meaning the ability to develop innovative solutions for target market place in line with external green trends and internal limitations,

- flexibility tailoring eco-friendly products to customer needs in relation to marketing mix,
- eco-friendly, green company image in relation to green product/service offering,
- operating costs cutting through eco-friendly management.

The results do not imply necessarily that smaller logistics providers, e.g., second-party logistics providers, cannot develop business models based on principles of sustainable development. Activities of competitors provide incentives for solutions in accordance with new trends in management. It needs to be kept in mind that the small enterprises have less opportunities and possibilities than large ones. Thus, in case of second-party logistics providers (2PL) and third-party logistics providers (3PL), activities are carried out on a smaller scale, with often less visible results than in case of large logistics operators. Hence, it seems to be fair to conclude that sustainable business is positively received by both the market and end consumer.

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Zrównoważony rozwój w modelach biznesu usługodawców logistycznych

Abstrakt:

Hiperdynamiczny rynek wymusza na usługodawcach logistycznych poszukiwania nowych sposobów mających na celu poprawę pozycji konkurencyjnej. Obserwując dotychczasowe działania usługodawców logistycznym można zauważyć, że podejmują oni liczne próby poszukiwania obszarów zapewniających im długookresową przewagę konkurencyjną. Niektórzy z nich swoją przewagę konkurencyjną dostrzegli w koncepcji zrównoważonego rozwoju. W artykule podjęto próbę odpowiedzi na pytanie „czy wprowadzenie i działanie zgodnie z koncepcją zrównoważonego biznesu wpływa na pozycję konkurencyjną usługodawców logistycznych”. Na poparcie tezy przytoczono przykłady działań wśród operatorów logistycznych.

Słowa kluczowe: model biznesu, zrównoważony rozwój, zrównoważony usługodawca logistyczny