

Joanna Kłosińska

<https://orcid.org/0000-0001-9870-357X>

Uniwersytet Łódzki, Wydział Zarządzania, Katedra Marketingu

Marta Raźniewska

<https://orcid.org/0000-0002-2438-7137>

Uniwersytet Łódzki, Wydział Zarządzania, Katedra Logistyki

Piotr Sosnowski

<https://orcid.org/0000-0002-3573-6718>

Uniwersytet Łódzki, Wydział Zarządzania, Katedra Logistyki

Autorka do korespondencji: Marta Raźniewska, e-mail: marta.razniewska@uni.lodz.pl

GREENING THE ORGANIC SUPPLY CHAIN IN THE CONTEXT OF RELATIONSHIP MANAGEMENT

Abstract: The aim of this article is to determine the role of relationship management in the context of greening the organic supply chain.

The introduction of environmental activities in supply chain management is a current topic due to the increasing environmental awareness of final customers. Nowadays, the customer is the central link around which economic activity takes place. As it is an inseparable element of a company's success and its market position, it is necessary to compete by taking care of customer satisfaction and loyalty in order to build long-term customer relationships which might be dependent on relationships with suppliers.

Firstly, the concept of greening the organic supply chain is presented. Secondly, the possible role of relationship management is outlined. The authors focus on relationships with suppliers and customers with special interest on the perspective of organic food distribution companies. Next, the research methodology is described. Finally, the results, conclusions and recommendations for future research are given.

Anticipated results refer to premises of greening the organic supply chain in the context of managing relationships with suppliers and customers. The following scientific methods were used: literature analysis and a survey performed using a Computer Assisted Telephone Interview and an Individual In-depth Interview.

Keywords: organic supply chain, greening of supply chain, customer relationship management, supplier relationship management.

JEL codes: O13, O44, Q56.

ZAZIELENIANIE ORGANICZNEGO ŁAŃCUCHA DOSTAW W KONTEKŚCIE ZARZĄDZANIA RELACJAMI

Streszczenie: Celem tego artykułu jest określenie roli zarządzania relacjami w kontekście zazieleniania łańcucha dostaw ekologicznej żywności.

Wprowadzenie działań środowiskowych w zarządzaniu łańcuchem dostaw stanowi aktualny temat ze względu na rosnącą świadomość środowiskową odbiorców końcowych. W dzisiejszych czasach klient jest centralnym ogniwem, wokół którego odbywa się działalność gospodarcza. Ponieważ stanowi on nieodłączny element sukcesu firmy i jej pozycji na rynku, konieczne jest konkurowanie długoterminowych relacji poprzez dbanie o jego satysfakcję i lojalność, które mogą być zależne od relacji z dostawcami.

Na początku przedstawiono koncepcję zazieleniania łańcucha dostaw ekologicznej żywności. Następnie opisano rolę, jaką może odgrywać zarządzanie relacjami. Autorzy koncentrują się na relacjach z dostawcami i klientami, ze szczególnym uwzględnieniem perspektywy przedsiębiorstw zajmujących się dystrybucją żywności ekologicznej. Dalej opisano metodologię badań. Na koniec podano wyniki, wnioski i zalecenia dotyczące przyszłych badań.

Oczekiwane rezultaty dotyczą przesłanek zazieleniania łańcucha dostaw ekologicznej żywności w kontekście zarządzania relacjami z dostawcami i klientami. Zastosowano następujące metody naukowe: analizę literatury i ankietę przeprowadzoną przy wykorzystaniu techniki wywiadu telefonicznego wspomaganego komputerowo oraz indywidualnego wywiadu pogłębionego.

Słowa kluczowe: łańcuch dostaw ekologicznej żywności, zazielenianie łańcucha dostaw, zarządzanie relacjami z klientami, zarządzanie relacjami z dostawcami.

Introduction

Increasing customer expectations and legal regulations result in the improvement of business activities regarding the environment, including those involving cooperation and collaboration with suppliers and customers in the supply chain, including greening practices in the organic supply chain. This is crucial due to the key importance of the agri-food sector to the EU economy (Iakovou, Vlachos, Achillas, & Anastasiadis, 2014, p. 1). As far as the matter of relationship management is concerned, the importance of this concept was

indicated in the food supply chain by Folinas, Aidonis, Triantafyllou, & Malindretos (2013, pp. 416–417) and in the organic food supply chain by Kottila and Rönni (2008, p. 376). The main goal of this article is to determine the role of relationship management in the context of greening the organic supply chain. In order to do so, we need to take into account the environmental aspect of greening the supply chain, supplier relationship management and customer relationship management.

1. Greening the organic supply chain

Green practices have been conducted by many enterprises for many years. This led to environmental cooperation between suppliers and buyers in many links of the supply chain. Srivastava defined Green Supply Chain Management (GSCM) as “integrating environmental thinking into supply-chain management, including product design, material sourcing and selection, manufacturing processes, delivery of the final product to the consumers as well as end-of-life management of the product after its useful life” (Srivastava, 2007, pp. 54–55). GSCM includes such fields, as: internal environmental management, environmental performance management, environmental collaboration, environmental supplier evaluation, green purchasing and green information systems and eco-design.

Green, Zelbst, Maecham, & Bhadauria (2012, p. 299) argued, that one of the strategic imperatives of GSCM is the adoption of environmental sustainability in order to develop processes and deliver products and services in a way that is environmentally friendly and communicated throughout all levels of the organization. They also state that cooperation with customers might directly impact environmental performance.

Diabat and Govindan (2011, p. 665) provided a partition of drivers of implementing GSCM: certification of suppliers environmental management system, environmental collaboration with suppliers, collaboration between product designers and suppliers to reduce and eliminate product environmental impacts, government regulation and legislation, green design, ISO 14001 certification, integrating quality environmental management into the planning and operation process, reducing energy consumption, reusing and recycling materials and packaging, environmental collaboration with customers and reversed logistics.

The significance of an environmental management system – in this case ISO 14001 – in GSCM is supported by the study performed by Darnall, Jolley,

& Handfield (2008, p. 42). It is shown, that organizations that implement ISO 14001 are more likely to implement GSCM practices.

Every driver is the subject of cooperation or collaboration between supplier and customer. Zhu, Sarkis and Lai (2008, p. 12) underlined the importance of external GSCM, understood as relationship management with suppliers and customers aiming at fulfilling GSCM goals. Sarkis (2012, pp. 209–210) identified five flows present in GSCM: a flow of materials, services, finances, information and waste. He also expressed (Sarkis, 2012, pp. 203–204) the significance of relationships with suppliers and customers in managing those flows.

Tundys and Rzeczycki (2015, p. 46) argued, that organic food supply chains involve local producers collaborating in order to promote their products on local markets. This might result in decreasing the costs and environmental impacts of transport and distribution. The weakest point of greening the supply chain is its cost-efficiency (Testa and Iraldo, 2010, p. 961) and the higher price of the final product (Ghosh and Shah, 2012, p. 578). The low cost-efficiency of greening the supply chain may derive from the high cost of recycling (Srivastava 2007, p. 59). However, cost savings are seen as one of the major benefits of greening the supply chain (Rao & Holt, 2005, p. 912). The question that remains to be answered is regarding the possibilities of achieving reliable cost-efficiency of the green supply chain.

High prices were also identified as hindrances of the growth of the organic food market by Kottila and Rönni (2008, p. 377). Furthermore, environmental aspects are pointed out as one of the main reasons for customers to buy organic food (Sirieix, Kledal, & Sulitang, 2011, p. 676).

2. Supplier relationship management in organic supply chain

In the light of greening the supply chain, the significance of the process of sustainable development, including the social and environmental responsibility of supply chains, has been identified. (Urbaniak, 2014, pp. 52–61). While the organic food market has not reached the maturity level, its growth and development give substantial opportunities (Dovleac, 2016, p. 325). According to the literature the following problems in organic supply chains could be seen: high operating costs, lack of alignment between supply and demand, poor reliability of supply, lack of collaboration among chain members, different values and motivation among different actors in the chain, and lack of information flow (IFOAM, 2016). Referring to the concept of greening supply chains, the

supplier relationship management could play the role to improve this collaboration on the strategic level by helping to establish common environmental goals, motives and manners. More precisely a company can, for example, seek suppliers and cooperate with those, how low energy, water and soil consumption (Blome, Hollos, & Paulraj, 2014, pp. 32–49), ask suppliers to commit to waste reduction goals (Ocicka & Raźniewska, 2018) or participate in the eco-design of products for disassembly, recycling or reuse (Sarkis, 2014, p. 10). From the strategic point of view, the management of supplier relations has an impact on the competitiveness and value of enterprises (Blaskovich et al., 2014, pp. 33–36).

In the wake of supply chain environmental performance excellence the supplier development concept is prominent. Companies can engage in close cooperation for the greening of its supply chain with a limited number of suppliers, rather develop than abandon suppliers if they do not meet the set environmental standards and provide suppliers with capital for new investments in green technology and acknowledges suppliers' ecological performance through training along with others and awards (Blome et al., 2014, pp. 32–49). The following operations can be implemented: visiting supplier plants and helping them to improve environmental performance, timely and frequent communication on green performance matters and acknowledging green supplier performance (Krause and Scannell, 2002, pp. 13–21). Moreover, sustainable reporting is as an instrument of performance management in all economic sectors, including organic food retailers (Lukić, 2016, p. 149). It is important especially in long channels like retail chains, where one company can be a leader for example in greening the supply chain. For organic food, this kind of distribution system adds value through price and high distribution intensity. Whereas, short channels like (direct from producers) add value through their production methods and sustainable practices (Hamzaoui-Essoussi & Zahaf, 2012, p. 145).

3. Customer relationship management in the organic supply chain

Current conditions and changes in the market require more commitment from companies, and more intensified and conscious adaptation to the needs of customers. Organizations need business supply activities to maximize the customer base and gain a competitive advantage in the market. It is important to understand that the logistics contribute to customer satisfaction by fulfilling the customer needs in the best possible way. Retailers used to be

intermediaries in the supply chain and played rather a passive role. Now we can observe a power shift from manufacturers to retailers because of various value additions offered by retailers (Ramanathan et al., p. 2017b).

In relationship marketing, the perception of the product changes. In the traditional approach, the product is one of the marketing instruments that is shaped according to the needs of customers. However, in partner marketing, the relationship is the product. As Kotler (2018, p. 70) mentions - smart companies do not sell products, they sell benefits packages. They do not only offer purchase value but the value of use. Kotler believes that "customer values represent all the benefits it can bring when purchasing and using a product or service" (Kotler, 2018, p. 70). It is a general and capacious way of perceiving values - through the prism of material and non-material benefits that are widely understood and perceived by the client. A more specific approach to the issue of value for the client is presented by Doyle, who indicates that creating value for the client must take into account three principles (Doyle, 2003, p. 85):

- the customer chooses the supplier, which in his opinion will offer him the greatest value;
- the main motive for the customer is the ability to meet the need (solution to the problem), not the product itself;
- it is better to build long-term relationships rather than individual transactions.

Customer's value, in the understanding of Doyle, depends on its subjective assessment by the buyer. The customer, based on this assessment, chooses the supplier who will provide him with the highest value. Understanding the value goes beyond the product or service. It is not the product itself that motivates the customer to choose a given seller but the ability to meet the need. Much more beneficial, from the point of view of value for the customer, are long-term relationships established with the supplier rather than single transactions (Doyle, 2003, p. 85). "In the modern world, the client must be appreciated for his skills, knowledge, lifestyle, interests, for what and who he loves, etc. The client needs to experience something new, learn how to teach himself and others, including the company he is already bound or wants to bind" (Krawiec, 2016, p. 50).

The Internet takes a special place in managing customer relationships. According to Czarniewski (2014, p. 38), „the use of modern information technologies gives a new dimension to the company's relationships with clients [...] The Internet has become a space enabling multilateral communication, searching for information, entering into transactions and even co-creating value". Companies decide more and more to build relationships with their partners

on the Internet. Customers make use of the internet to preview retailers and their products. This behaviour represents an entirely different experience to shoppers who prior to the internet age, could only gain an insight by actually going to the store (Ramanathan et al., 2017a).

Thanks to mobile technologies, a company can now be aware of the client's context and knowledge of contact aspects such as: the device used by the client, its location, products and forms that he/she viewed before establishing a connection with a consultant, and increase work efficiency (Forbes, 2015). Technology provides the ability to retrieve accurate information about consumer purchasing behaviour and thus allows for more precise communication with them. With the emergence of the Internet and huge information resources in the form of comments, posts and other forms of activity, new methods of research are becoming more important - netnography (community research using social media) or iterative experiments in which a significant role is played by social networks (they enable the involvement of a group of users) (Śłupińska & Sz wajlik, 2018, p. 93). The collected data and then its thorough analysis, allows formulating a response to the needs and expectations of customers and introducing valuable changes not only in the product but in the whole marketing strategy.

The use of the Internet has improved the research process, first of all it made it possible to reach the surveyed group, and also shortened the time of obtaining information from users, which is a key element determining the efficiency of the innovation development process (Śłupińska & Sz wajlik, 2018, p. 95). A company can carry out the analysis of the created product at every stage, properly shape it, and consult the process with the target group.

Therefore, the approach to building relationships also changes. This created a new wave of customer loyalty patterns to retain present customers and also to attract new ones. Further to the introduction of loyalty schemes pressing the need to analyse customer data to enhance business benefits in terms of creating sales and designing services. This analysis has helped to create a clear connection between operational planning and marketing strategies (Ramanathan & Ramanathan, 2013).

The Internet gives more opportunities to build relationships with clients but also to manage the entire long-term process. In the group of 121 surveyed companies, the largest number of respondents (98%) indicated online advertising (Google Ad words, Facebook Ads, etc.) as the element that has the greatest impact on building customer loyalty. It is also a tool used by respondents most often (58% of companies). For the most effective tools, chosen in the process of building loyalty, the surveyed companies consider (most often), content

marketing (e.g. in the form of a blog), in second place - 75% of companies and in fifth-place social media (maintaining a company profile on social networking sites) – in 70% of companies. It is worth noting that thanks to the digitalization of the 21st century, one unsatisfied customer generates the opinions of hundreds, or even thousands of potentially dissatisfied customers, which affects the opinion about the company. Likewise, the reputation of satisfied people on the web spreads. This transfer of information on the Internet is almost instant and goes to the thousands of people who rely heavily on the opinion of friends, family, loved ones and sometimes even strangers. Such openness results in people distributing the brand. That is why the proper building of the basics of gratitude economics and effective branding on the Internet can bring us many benefits.

To summarize, the customer relationship management of today is mainly related to online and mobile marketing and communication. This also applies to the organic food supply chain.

4. Research methodology

The goal of the study was to identify the premises of greening the organic supply chain in organic food distribution companies. The research method used in this paper is a survey. The research technique used is a Computer Aided Telephone Interview. The study was conducted on a group of 120 companies that distributes organic food in Poland and that employ more than 10 people. The respondents were selected from personnel responsible for environmental cooperation with suppliers, e.g.: quality managers, sourcing managers, etc. The study was conducted in the fourth quarter of 2017.

The research questions were the following:

1. Do organic food distribution companies plan their environmental goals?
2. Do organic food distribution companies monitor their environmental impacts, e.g. use of fuel and energy?
3. Do organic food distribution companies monitor the environmental impacts of their suppliers?
4. Do you reduce your environmental impacts according to the listed areas?

There are several possibilities of the reduction of environmental impacts listed in question 4:

- reduction of fuel usage,
- reduction of energy usage,
- reduction of the usage of packaging materials.

The surveyed companies that answered positively were also asked about the scope of significance. The main hypothesis is the following:

There is a relationship between monitoring the environmental impacts of the company and monitoring the environmental impacts of its suppliers.

Those questions are supposed to illustrate the premises of greening the organic supply chain. It can be assumed, that companies answering positively for all those questions will provide the right conditions for greening the supply chain.

5. Results

The results of the study regarding research questions are presented in Table 1.

Table 1. Results of the study I

Questions	Answers (%)	
	Yes	No
1. Do organic food distribution companies plan their environmental goals?	45	55
2. Do organic food distribution companies monitor their environmental impacts, e.g. use of fuel and energy?	33	67
3. Do organic food distribution companies monitor the environmental impacts of their suppliers?	26	74
4. Do organic food distribution companies reduce environmental impacts according to the listed areas?	27	73
Answer "YES" to all four questions	13	87

The detailed results of the study regarding research question no. 4 and including only answers given by companies that answered positively are shown in Table 2. Results of the study II.

No more than 50% of the surveyed companies either plan their environmental goals, monitor the environmental impacts of their own or of their suppliers or reduce their environmental impacts. Nevertheless, in every case, more than 25% of the surveyed companies perform at least one of the described activities. However, only 13% of the surveyed companies gave positive answers to all four questions. It means, that 13% of the surveyed organic food distribution companies provide the supposed right conditions for greening their supply chain. Furthermore, the majority of companies that answered

Table 2. Results of the study II

Area of reduction of environmental impact	Scope of significance (%)		
	Major significance	Minor significance	No significance (we do not reduce this impact)
Reduction of fuel usage	79	18	3
Reduction of energy usage	76	21	3
Reduction of the usage of packaging materials	79	18	3

Table 3. Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Ch-Square	34,413 ^a	1	0,000		
Continuity correction ^b	31,725	1	0,000		
Likelihood ratio	32,134	1	0,000		
Fisher's Exact Test				0,000	0,000
N of valid cases	120				

^a 0.0% cells (0) have expected count less than 5. The minimum expected count is 8,45.

^b Computed only for a 2x2 table.

positively to question no. 4. described their scope of the significance of the reduction of an environmental impact as being major.

Calculations related to verification of the hypothesis are given in Table 4.

Table 4. Monitoring environmental impacts

		Monitoring the environmental impacts of the company (%)	
		Yes	No
Monitoring the environmental impacts of the suppliers	Yes	68	32
	No	13	87

In the group of companies that monitor the environmental impact of their suppliers, 68% of companies monitor their own environmental impacts and 32% do not. In the group of companies that do not monitor the environmental

impacts of their suppliers, there are statistically fewer organizations that use the environmental impact measurement (13%) than those who do not use such measurements (87%) and statistically significantly less than in the group that performs such an activity (by 55 percentage points).

Conclusions and recommendations for future research

There were several assumptions regarding an organic food distribution company ready to green its supply chain. Only 13% of the surveyed companies fulfilled all of them. Given that, only 13% of the surveyed companies are able to green its supply chain at the time of research. However, there are statistically more companies that monitor both their own environmental impacts and those of their suppliers (Pearson's Chi-square 34,413). Those organizations possess the information necessary to set joint environmental goals with their suppliers and might develop stronger relationships and build partnerships. There is no reason to undermine the accuracy of the hypothesis. One question that remains unanswered is: will companies disclose information necessary to build a green supply chain?

There is one main recommendation for future research: study regarding environmental cooperation and collaboration in the organic food supply chain that will reveal the scope of joint activities between different supply chain participants, including the use of different relationship management tools.

References

- Blaskovich, J., Ferrer, A., & Easton, S. (2014). Procurement-power business performance. *Assessment of Excellence in Procurement Study*. AT Kearney, 7.
- Blome, C., Hollos, D., & Paulraj, A. (2014). Green procurement and green supplier development: antecedents and effects on supplier performance. *International Journal of Production Research*, 52(1), 32–49. doi: 10.1080/00207543.2013.825748
- Czarniewski, S. (2014). *Komunikowanie wartości dla klienta*. Warszawa: Oficyna Wydawnicza – Szkoła Główna Handlowa w Warszawie.
- Darnall, N., Jolley, J., & Handfield, R. (2008). Environmental management systems and green supply chain management: complements for sustainability. *Business Strategy and the Environment*, 18, 30–45. doi: 10.1002/bse.557

- Diabat, A. & Govindan, K. (2011). An analysis of the drivers affecting the implementation of green supply chain management. *Resources, Conservation and Recycling*, 55, 659–667. doi: 10.1016/j.resconrec.2010.12.002
- Dovleac, L. (2016). An overview on the supply chain for European organic food market. *Bulletin of the Transilvania University of Braşov Series V: Economic Sciences*, 9 (58), 2, 325.
- Doyle, P. (2003). *Marketing wartości*. Warszawa: Felberg SJA.
- Folinas, D., Aidonis, D., Triantafyllou, D., & Malindretos, G. (2013). Exploring the greening of the food supply chain with lean thinking techniques. *Procedia Technology*, 8, 416–424. doi: 10.1016/j.protcy.2013.11.054
- Forbes. (2015). *Aplikacje mobilne zrewolucjonizują obsługę klienta?*. Retrieved from <https://www.forbes.pl/technologie/aplikacje-mobilne-zrewolucjonizuja-obsluge-klienta/ctgjc2n>
- Ghosh, D., & Shah, J. (2012). A comparative analysis of greening policies across supply chain structures. *International Journal of Production Economics*, 135, 568–583. doi:10.1016/j.ijpe.2011.05.027
- Green, K. W. Jr, Zelbst, P. J., Maechem, J. & Bhadauria, V. S. (2012). Green supply chain management practices: impact on performance. *Supply Chain Management: An International Journal*, 17(3), 290–305. doi: 10.1108/13598541211227126
- Hamzaoui-Essoussi, L. & Zahaf, M. (2012). Production and distribution of organic foods: Assessing the added values. In P. Konvalina (Ed.), *Organic farming and food production*. CC BY 3.0. Ch. 7, 145. Retrived from <http://dx.doi.org/10.5772/52445>
- Iakovou, E., Vlachos, D., Achillas, Ch., & Anastasiadis, F. (2014). Design of sustainable supply chains for the agrifood sector: a holistic research framework. *Agriculture Engineering International: CIGR Journal, Special issue 2014: Agri-food and biomass supply chains*, 1–10.
- IFOAM (2016). *Organic in Europe. Prospects and developments 2016*. Retrieved September 19 2018 from http://www.ifoam-eu.org/sites/default/files/ifoameu_organic_in_europe_2016.pdf
- Kotler, Ph. (2018). *Marketing*. Poznań: Rebis.
- Kottila, M., & Rönni, P. (2008). Collaboration and trust in two organic food chains. *British Food Journal*, 110(4/5), 376–394.
- Krause, D. R., & Scannell, T. V. (2002). Supplier development practices: Product- and service-based industry comparisons. *Journal of Supply Chain Management*, 38 (2), 13–21. doi: 10.1111/j.1745–493X.2002.tb00125.x
- Krawiec, W. (2016). Zaangażowanie środowiska internetowego a budowanie relacji z klientem. *Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach*, 255.
- Lukić, R. (2016). Sustainable reporting in the retail food, food markets. *Nova Science Publishers, Inc*, 149.
- Ocicka, B., & Rażniewska, M. (2018). Food waste reduction as a challenge in supply chains management. *LogForum* 14 (4), 549–561. <http://dx.doi.org/10.17270/J.LOG.2018.303>

- Ramanathan, U., & Ramanathan, R. (2013). Investigating the impact of resource capabilities on customer loyalty: a structural equation approach for the UK hotels using online ratings. *Journal of Services Marketing*, 27, 5, 404–415.
- Ramanathan, U., Subramanian, N., & Parrott, G. (2017a). Role of social media in retail network operations and marketing to enhance customer satisfaction. *International Journal of Operations & Production Management*, 37, 1, 105–123.
- Ramanathan, U., Subramanian, N., Yu, W., & Vijaygopal, R. (2017b). Impact of customer loyalty and service operations on customer behaviour and firm performance: empirical evidence from UK retail sector. *Production Planning & Control*, 28, 6–8, 478–488. doi: 10.1080/09537287.2017.1309707
- Rao, P., & Holt, D. (2005). Do green supply chains lead to competitiveness and economic performance?. *International Journal of Operations & Production Management*, 25(9), 898–916. doi: 10.1108/01443570510613956
- Sarkis, J. (2012). A boundaries and flows perspective of green supply chain management. *Supply Chain Management: An International Journal*, 17(2), 202–216. doi: 10.1108/13598541211212924
- Sarkis, J. (2014). *Green supply chain management*. New York: Momentum Press.
- Sirieix, L., Kledal, P. R., & Sulitang, T. (2011). Organic food consumers' trade-offs between local or imported, conventional or organic products: a qualitative study in Shanghai. *International Journal of Consumer Studies*, 35. doi: 10.1111/j.1470-6431.2010.00960.x
- Ślupieńska, K., & Sz wajlik, A. (2018). Jakościowe metody badawcze w procesie rozwoju innowacji produktowej a możliwości wykorzystania mediów społecznościowych. *Studia Oeconomica Posnaniensia*, 6, 5, 90–103. doi: 10.18559/SOEP.2018.5.7
- Srivastava, S. K. (2007). Green supply-chain management: A state-of-the-art literature review. *International Journal of Management Reviews*, 9(1), 53–80. doi: 10.1111/j.1468-2370.2007.00202.x
- Testa, F., & Iraldo, F. (2010). Shadows and lights of GSCM (Green Supply Chain Management): determinants and effects of these practices based on a multi-national study. *Journal of Cleaner Production*, 18, 953–962. doi:10.1016/j.jclepro.2010.03.005
- Tundys, B. & Rzeczycki, A. (2015). Construction of green supply chain for organic products. *Operations and Supply Chain Management*, 8(1), 37–47.
- Urbaniak, M. (2014). The role of implementation of sustainable development in building relationship with suppliers. In M. Kaźmierczak, & A. Matuszak-Flejszman (Eds.), *Current trends in commodity science*. Poznań: Poznań University of Economics.
- Zhu, Q., Sarkis, J. & Lai, K. (2008). Green supply chain management implications for “closing the loop”. *Transportation Research Part E*, 44, 1–18. doi:10.1016/j.tre.2006.06.003