INNOVATION IN LOGISTICS OUTSOURCING RELATIONSHIP – IN THE SEARCH OF CUSTOMER SATISFACTION

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ABSTRACT. Background: Nowadays LSPs face an increasingly competitive environment in which a strategy to focus on existing customers by satisfying and sustaining them has been proved to be more successful than trying to get the small share of customers that have not yet outsourced any logistics activities. To be able to keep and grow the customers, LSPs have to overcome a number of barriers, align with customers and innovate. However, there is still a lack of understanding when, with what type of customers, and how LSPs can effectively leverage customer integration within Innovation Alignment for successful innovation. The purpose of the paper is to: present the concept of logistics innovation and its role in creating customer satisfaction, point a number of barriers to LSPs’ innovativeness, and analyze the role and characteristics of relationship innovation alignment when developing and implementing innovative logistics services.

Methods: The research adopts a two-stage effort, with Stage 1 being focus groups with LSPs and their customers, and Stage 2 being a theory-testing survey. Up to now, focus groups, survey development, and survey pre-tests with LSPs senior executives have been completed. Conducting the survey and collecting data is in progress. To illustrate the preliminary findings from the American market, case studies in the European surrounding, describing cooperation between LSPs and their customers on logistics innovations, were prepared.

Results: Aligning with a customer when pursuing something new is a crucial success factor in logistics sector, especially when pursuing and developing a radical tailored service innovation. The Innovation Alignment should embrace managerial as well as relational mechanisms.

Conclusions: LSPs, compared to other industries, are not very innovative. However, logistics managers should try to overcome barriers and proactively develop and implement logistics service innovations. The preliminary results of the research have already shown that integrating customers into the logistics innovation process could increase their satisfaction and enhance the innovation performance of LSP.

Key words: innovation, logistics service provider (LSP), partnership, alignment, customer satisfaction.

INTRODUCTION

In the modern business environment, characterized by demanding customers, tough competition, and uncertainty, innovation is cited as a major contributor to a firm’s long-term success and growth [Grawe et al. 2009, Chapman et al. 2003]. The importance of innovation was also highlighted in the Boston Consulting Group’s 2015 survey “The Most Innovative Companies 2015”, showing that innovation is a top-three priority for 79% of CEO-respondents.

This article concentrates on the innovativeness of logistics service providers (LSPs) — companies that perform logistics activities on behalf of others [Delfman et al. 2002]. According to a recent study by Langley et al. [2015], LSPs face an increasingly competitive environment, which is due to the ongoing trend of outsourcing logistics activities to LSPs by about 80 percent.
of industrial companies, as well as a still very low concentration of LSPs’ market. In this context, focusing on the existing customers by keeping and growing them, has proven to be more effective strategy than trying to get the small share of customers that have not yet outsourced any logistics activities [Wagner 2008]. To be able to sustain the customers, LSPs have to deliver value to the customers on a permanent basis and additionally, innovate as the service that provides high value today may not be sufficient in the future for retaining customers, extending their business, or generating referrals [Flint et al. 2005]. Furthermore, innovation has been argued to be a strong driver of customer satisfaction in the service industry in general, and in the logistics industry in particular [Daugherty et al. 2011]. However, according to different studies [Tether and Tajar 2008, Wagner 2008, and Busse 2010], the logistics industry stands at the low end of innovativeness, compared to other industries. The number of barriers to LSPs’ innovativeness, such as mostly reactive innovations, ineffective transfer of knowledge from customers to LSPs, as well as among different LSP’s branches, a high risk of new service development and no patents for logistics services, caused customers not to be accustomed to LSPs showing a high level of innovation [Oke 2008, Cichosz 2016].

The purpose of this article is to present the problem and preliminary findings from the study aimed to overcome the limitations of low LSPs’ innovativeness. The study is conducted by T.J. Goldsby, A.M. Knemeyer, D.F. Taylor, and M. Cichosz. The research project is sponsored by National Center for the Middle Market. Within the framework of the study we proposed forming Innovation Alignment (IA) – i.e. close long-term cooperation between an LSP and its customer, which is aimed at not only achieving innovation success, and strengthening LSP’s relationships with existing customers, but also helping LSPs to replicate innovation with new customers to fuel business growth.

LITERATURE REVIEW

LSP Innovation

Logistics innovation, which can occur within any service, process, or social system [Schumpeter 1934], is defined as “a new, helpful idea, procedure, or practice in logistics operation that is different from a company’s current practice” [Grawe 2009]. Logistics innovation can range from very basic to very complex, and can be applied to internal operations (focused on the increase of efficiency of the LSP and its operations) or services with business partners [Flint et al. 2005].

The most notable classification of innovation relates to its degree of novelty and embraces incremental and radical innovations. Incremental innovations represent small changes or further optimization. They generally occur within the process of efficiency improvement. They bring cost savings that allow the LSP to either lower prices or to enhance the LSP’s profit margin. Radical innovations, also called breakthrough innovations or disruptive innovations, represent significant changes and reset the current norms with respect to the object of innovation. They are noticed by customers and have direct impact on them. An example of radical logistics process innovations would be the introduction of the standardized container on a mass scale in international trade, developing cross-docking, introduction of Vendor Managed Inventory (VMI), or Collaborative Planning Forecasting and Replenishment (CPFR) when working with FMCG producers. Among technological logistics innovations are Material Resources Planning (MRP) systems, Electronic Data Interchange (EDI), Global Positioning Systems (GPS), bar coding, RFID tags, etc. Incremental innovations as well as radical ones are not only aimed at cost and time reduction, but also at the increase of consistency and flexibility of logistics operations. They are the important source of differentiation and LSP’s competitive advantage.

Often an innovation in the logistics outsourcing relationship arises as an ad hoc response to a customer request and

Dissatisfaction with existing service [Flint et al. 2005, Wagner 2008]. However, the results of Wallenburg [2009] survey reveal that proactive improvement, understood as a customer-oriented relationship specific innovation by LSP, developed for latent customer needs, is a strong driver of customer satisfaction and all core dimensions of loyalty (retention, extension, referrals) and LSPs should be more proactive in innovation development. It is observed that LSPs which are leading global market players, such as Deutsche Post DHL Group (DP DHL Group), had just noticed a need to present themselves as more innovative companies. DP DHL established The DHL Innovation Center and in 2012 developed “Logistics Trend Radar” – a tool which became an inspiring benchmark for strategy and innovation in the logistics industry. It has triggered a number of successful, award-winning pilots both inside and outside of DP DHL Group. Some of them were developed in close collaboration with its customers and partners [DP DHL Group and Detecon Consulting 2016]. The examples of such LSPs’ proactive innovations offered to e-commerce industry are described in the case studies presented further.

The Role of LSP Innovation in Customer Satisfaction

While literature on this topic contains significant differences in the definition of satisfaction, all of them share some common elements. J.L. Giese and J.A. Cote [2000] examined 20 definitions of customer satisfaction used during a 30-year period and identified three general components:

1. satisfaction is a response (emotional or cognitive),
2. the response pertains to a particular focus such as expectations, product or service, experience, and
3. the response occurs at a particular time (after choice, consumption, or based on accumulated experience).

In the logistics outsourcing relationship, customer satisfaction could be defined as “the degree to which an organization’s customers continually perceive that their needs are being met by the organization’s services” [Anderson et al. 1994]. The clue in this approach to customer satisfaction is the perceived discrepancy between prior expectations (or some norm of performance) and the actual performance of the product. The prior expectations are related to the needs of customer. Some needs which are expressed could be satisfied with reactive service innovations (developed in response to the needs), while others are latent customer needs which could only be satisfied with proactive service innovations (developed in advance). Thus, creating (or co-creating) knowledge about customer needs stands to be crucial. Integrating customers into the innovation development process could increase customer satisfaction and enhance the innovation performance of LSP. Customers expect their providers to show an interest in their needs and find solutions for their specific problems [Deepen et al. 2008], and expect their feedback to be integrated in new products [Flint et al. 2005].

The other critical issue related to the customer needs is that not all needs and not all service attributes responding these needs are equally important for achieving customer satisfaction. The Kano model offers the best explanation why certain service attributes recall different levels of satisfaction for different groups of customers [Shen et al. 2000]. This model classifies customer preferences into three basic categories: must-be attributes (also called dissatisfiers), one-dimensional attributes (satisfiers), and attractive attributes (delighters), which are presented in Figure 1.

Must-be attributes are taken for granted when fulfilled, but result in high dissatisfaction when not fulfilled (e.g. the lack of a sufficient number of trucks to arrange all agreed deliveries). One-dimensional attributes create satisfaction when fulfilled and dissatisfaction when not (e.g. service price reduction over long-term contract). Attractive attributes can be described as not normally expected. They provide high satisfaction when achieved fully, but do not cause dissatisfaction when not fulfilled. Proactive logistics innovation, as well an incremental as a radical one, is an attractive attribute in the Kano model. They tend to come as something extra in LSP-customer relationship and may create customer delight.
It means that a positive nexus is observed relating proactive innovation to high customer satisfaction.

![Kano model](image-url)

Source: Shen et al., 2000

**Fig. 1. Kano model**

Rys. 1. Model Kano

Being innovative on a regular basis is crucial for LSP success and long-term growth. Innovation within the logistics outsourcing relationship with customers may deliver extra value, which allows LSP to keep and to grow a customer. Innovation has been argued to be a strong driver of customer satisfaction in the logistics industry [Chapman et al. 2003, Daugherty et al. 2011, Bellingrodt et al. 2015].

As emphasized by Flint et al. [2005], to stay efficient and effective in the management of innovation creation and adaptation, LSPs need to establish a logistics innovation process. It is very important to incorporate the current customer needs and how they may develop as a service that provides a high value today may not be sufficient to drive future customer satisfaction which is crucial antecedent of customer loyalty [Cahill et al. 2010].

**PROBLEM STATEMENT – BARRIERS TO INNOVATION IN LOGISTICS INDUSTRY**

As stated in the previous sections, innovation is a critical success factor for many firms, including LSPs. However, many research studies [Tether and Tajar 2008, Wagner 2008, and Busse 2010] and everyday practice show that LSPs are not very innovative. It could be related to the characteristics of the relationship between LSP and a customer. It is usually based on the contract and the LSP is payed for delivering service in accordance with Service Level Agreement (SLA). If there is any innovation, in most cases it appears as a reaction to the problem and has to offer immediate results. Thus, LSPs end up spending a lot of time working on incremental improvements, instead of developing long-term radical innovation that changes the rules of the game. Besides this, LSPs often lack internal competencies for innovation and look for innovations in their supply chains. However, knowledge transfer
between supply chain partners and among different locations of LSP could be challenging. Still another barrier to LSPs’ innovativeness is the fact that they are often afraid of taking risks when creating, developing, and testing new services with their customer. It is mainly because they typically have few, but focused, business customers, and they do not want to blemish their relationship when problems with a new service appear. Despite this, a new logistics service is not secured with patents, and very often it doesn’t pay off for the LSP to be a first-mover with an innovation. It is safer to adopt a “wait-and-see” strategy, which in the end translates into low innovativeness for the whole logistics industry.

To overcome these barriers, close cooperation between an LSP and its customer has been proposed by the research team. This cooperation we call Innovation Alignment (IA), and it is aimed at achieving innovation success, such as incremental service improvements and radical service innovations. The resource-based view (RBV) serves as the guiding theory for this study. According to RBV, a business (LSP) creates value by combining and exchanging resources with a collaborator (customer) [Penrose 1959].

There is little doubt that close interactions with customers are beneficial for LSPs in respect to developing and introducing innovations [Bellingkrodt and Wallenburg 2013]. As already stated, customers are a source of knowledge and ideas for innovation; they may also act as partners in the innovation development process, and can help assess the outcome of the innovation process. Further, according to the social exchange theory, by showing commitment the LSP makes a customer feel obliged to reciprocate in the form of more information and expertise, which in turn feeds the learning and innovating process.

While some studies reveal that customer integration is beneficial and enhances companies’ innovation success [e.g. Bellingkrodt and Wallenburg 2015], others show that customer integration can harm companies’ innovativeness [e.g. Christensen 2000] because being in a long-term relationship with the customer may discourage the LSP from trying harder to please them. Thus, there is still a lack of understanding of when, with what type of customers, and how LSPs can effectively leverage customer integration within Innovation Alignment for successful innovation. It is believed that choosing a compatible partner for alignment is extremely important. But aligning with a customer requires also investing in a “non-threatening environment for customer interactions and formal managerial training for managing customer interactions” [Flint at al. 2005, p. 138]. Thus, the goal of this research is to better understand how innovation occurs in LSP relationships and what aspects may enhance performance, whether it be incremental or radical service improvements. We aim to examine customer and LSP attributes as well as the relationship characteristics that contribute most to innovation which will satisfy customers.

**RESEARCH METHODOLOGY**

This research adopts a two-stage effort, with Stage 1 being focus groups with LSPs and their customers, and Stage 2 being a theory-testing survey. Focus groups were conducted following the norms and rigor suggested by Krueger and Casey [2009]. Participants for the focus group were key informants with decision-making authority pertaining to innovation (e.g. business owners, CEOs, account managers). The aim of conducting this focus group was to further refine the theoretical and pragmatic insights to the innovation in logistics outsourcing beyond what was learnt from the literature review. Focus groups were organized around semi-structured questions on innovation management in logistics outsourcing relationships, with questions on its antecedents, and its influence on firm innovation performance, financial performance, and relational performance with customer satisfaction and loyalty.

The insights from the focus groups, complemented by a more thorough review of the literature relevant to service innovation, helped to frame the type and number of questions, as well as the response choices, to be included in the theory-testing survey. The
goal for a questionnaire survey was to target 40 LSPs in the US market in total, and to have these LSPs provide access to account managers for 8 distinct relationships, equating to a targeted sample of 320 relationships.

Up to now, focus groups, survey development, and survey pre-tests with senior executives have been completed. Conducting the survey and collecting data is in progress. The next step will be to analyze data. At this stage, only the findings from focus groups are available. Thus, to illustrate these preliminary findings from the American market, case studies in the European surrounding describing cooperation, or in some cases even closer relationships which could be called partnerships [Lambert and Knemeyer 2004] or collaboration [Daugherty 2011, Świtała 2015], between LSPs and their customers on logistics innovations were prepared. Case studies, being a perfect method when conducting exploratory research, were based on companies’ documents analysis, as well as on in-depth interviews with key informants for the innovation. They describe services developed for retail industry. The first case study describes solution developed by Rhenus Logistics and IKEA – a furniture retailer whose sales are mostly still generated through brick-and-mortar stores. The other two examples regard the alignment of DP DHL Parcel and pure e-tailers – Zalando and Amazon.

FINDINGS AND DISCUSSION

The preliminary research, i.e. focus groups as well as case studies, have revealed that aligning with a customer when pursuing something new is an important success factor, especially when developing radical service innovation. Focus groups helped to define Innovation Alignment (IA) as structural and relational congruence between the LSP and its customer, i.e. “seeing the same picture”, as it relates to the pursuit of innovation, how innovation is achieved, and the allocation of benefits and risks. Focus groups’ respondents spoke about the dual structure of IA – formal and relational. This formal structure embraces managerial mechanisms such as senior leadership support, planning and feedback, benefit and risk sharing, as well as contractual governance with metrics, and last but not the least, communication and Information Technology. On the other hand, according to respondents, IA performance heavily depends on relational mechanisms including mutual trust, relational embeddedness, and relational commitment. Mutual trust refers to the confidence that each party will fulfill its obligation and behave as expected. Relational embeddedness defines the degree to which social attachments and interpersonal ties drive alignment relationships. And finally, relational commitment captures the partners’ intent to establish an enduring, reciprocal obligation in their IA. As partners become increasingly vested in an innovation project, they support mutually beneficial activities, which can enhance alignment performance and satisfaction.

But, according to respondents, it is not possible to have close, long-term relationships with all customers. That is why logistics providers build innovation alignment only with key customers. Generally, key customers are the biggest ones with a high contribution to a company’s income, they are also strategic customers for LSP, and LSP is a strategic partner for them. This balance in a relationship secures reciprocity. Regarding industries, the most innovative customers come from: pharmaceutical, automotive, FMCG, and e-commerce industries. Usually they have quite big R&D budgets and they are open for innovations, including logistics ones. Willingness to take risk (especially with radical service innovations) is crucial, and it stems from an organizational climate and culture directed towards innovation.

These observations from focus groups are supported by case study analysis. Case studies illustrate LSP and customer cooperation and collaboration at different stages of the logistics innovation development process. The first example is Rhenus Logistics and IKEA collaborating on tailoring “Home delivery” service. Rhenus, as one of the first logistics providers in the Polish market, has offered a “Home delivery” service that combines transport and the carrying of heavy, large and unwieldy products, such as mattresses, furniture, home appliances, or gym equipment directly to the location requested by the
customer. To create more value for IKEA customers, Rhenus Logistics aligned with IKEA and broadened “Home delivery” service by e.g. click and collect, assembling and installing furniture (including kitchens), electric, gas, and water installation preparation and verification, installation of electrical appliances, recycling dismantled equipment and electro-wastes, etc. Collaborating on the new “Home delivery” service companies had to redesign processes and LSP’s operations, such as hiring employees with electric, gas, and water qualifications and licenses, and scheduling one specialist in two-person delivery teams. However, additional value delivered by extra service attributes translated into IKEA’s customer satisfaction.

The other examples of logistics innovations are services developed and tested by DP DHL Parcel and its e-commerce customers to cope with “last mile” challenges. Although they are just pilot projects, they have already received a lot of consumers’ attention as they create their convenience. Worth mentioning is “PaketButler” – a fireproof bag that is placed outside the customer’s house and can be accessed by the deliveryman. The bag has an integrated NFC sensor so that nobody else but the customer and the deliveryman can open it. “PaketButler” is used to receive as well as return a product without having to be present at home. In 2015 the innovation was tested in several districts of Berlin in cooperation with Zalando, one of the biggest European fashion e-tailers, and T-Mobile – telecommunication operator [https://www.paketbutler.com/]. It was a triadic relationship innovation alignment.

The other triadic relationship innovation alignment is collaboration of DHL Parcel, Audi, and Amazon on a joint project – car trunk delivery [First time in Germany 2015]. Partners have developed and tested a brand new service that will allow car owners to use their cars as mobile delivery addresses for their parcel shipments. Close long-term collaboration was crucial to ensure high security standards for both merchandise and automobiles. Using a specially developed smart phone app, the DHL delivery agent receives the exact location of the car as well as access to the vehicle’s trunk. After the deliveryman has placed the item in the trunk and closed its door, the car is locked automatically. DHL receives confirmation via the app and the car owner is informed of the successful parcel delivery via email. Using the car as a mobile delivery address is very attractive for people who park in the company parking lot or at a Park & Ride lot. The postman can use the app to locate the automobile and place the item securely in the trunk of the car. The project is ongoing, and partners plan to conduct more joint pilots over 2016 in the greater area of Munich.

With DHL Parcel’s logistics services, customers receive attractive service attributes which let them to enjoy more convenience and flexibility in controlling the delivery of their orders. In addition, the services promote efficiency as they allow avoidance of unsuccessful attempts to encounter customers at the specified address and therefore reduce the amount of traffic caused by repeated deliveries. Both of these personal and environmental aspects of service positively affect customer satisfaction and can lead to LSP’s customer loyalty with its retention, extension and referrals.

CONCLUSIONS

Logistics service providers, compared to other industries, are not very innovative. However, logistics managers should try to overcome barriers and proactively develop and implement logistics service innovations. The preliminary results of the research have already shown that integrating customers into the innovation process could increase their satisfaction and enhance the innovation performance of LSPs. Thus, aligning with key customers when developing and implementing innovation (especially tailored one) is crucial and can fuel future business growth of LSPs. The Innovation Alignment should embrace formal managerial as well as relational mechanisms. Managerial mechanisms such as senior leadership support, planning and feedback, benefit and risk sharing, as well as contractual governance with metrics, and Communication and Information Technology are very important for shaping formal structure. However, Innovation Alignment
performance in service sector heavily depends on relational mechanisms including mutual trust, relational embeddedness, and relational commitment. Relational mechanisms are critical when developing radical tailored innovations changing rules of the game. The further research on relationship Innovation Alignment of LSPs and their customers is needed. A comprehensive, integrative theory of IA with resistors and enablers to guide development of a proven path to logistics innovation should be developed and tested.

REFERENCES


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INNOWACJE W RELACJACH OPERATORÓW LOGISTYCZNYCH – W POSZUKIWANIU SATYSFAKCJI KLIENTA

STRESZCZENIE. Wstęp: Współcześnie operatorzy logistyczni funkcjonują w bardzo konkurencyjnym środowisku, w którym strategia koncentracji na dotychczasowych klientach, zaspokojeniu ich potrzeb i dzięki temu zatrzymaniu ich, okazuje się być bardziej skuteczna niż próba pozyskania nowych zlecienników, którzy nigdy wcześniej nie współpracowali z operatorami logistycznymi. Praktyka pokazuje, iż, dążąc do zatrzymania i zwiększania udziału w kieszeni klienta, operatorzy logistyczni muszą pokonać szereg barier, wejść w sojusz z klientami i stać się innowacyjni. Głównym pytaniem badawczym jest kiedy, z jakiego typu klientami i w jaki sposób operatorzy powinni współpracować, aby osiągnąć sukces innowacyjny. Celem artykułu jest: zaprezentowanie koncepcji innowacji logistycznych oraz ich roli w kreowaniu satysfakcji klienta, wskazanie na liczne bariery na drodze do innowacyjności operatorów logistycznych oraz przeanalizowanie roli i elementów składowych relacyjnego sojuszu innowacyjnego, gdy operator rozwija i wdraża innowacyjne usługi logistyczne.
INNOVATIONEN IN DEN RELATIONEN ZWISCHEN LOGISTIKDIENSTLEISTERN – IN DER NACHSUCHE NACH KUNDENZUFRIEDENHEIT


Codewörter: Innovation, Logistikdienstleister, Partnerschaft, Kundenzufriedenheit