Abstract: The widespread introduction of information technology leads to strengthened network relationships. On this background, communications with consumers to reach target segments and delivering information about products intensify competition. This theoretical article concerns the case of transport logistics companies. It is shown, that the development of relationship marketing in digital economy ensures the company’s competitiveness in the market.

Key words: logistics companies, digital economy, relationship marketing, logistics companies, transport logistics, logistic services, transport corridors, customer satisfaction, internet of things, cyber-physical systems, internet of services, smart factories, information technologies, competitive advantage, market leadership, customer retention, transport modes.

I. Introduction

Digital economy has an impact on changing existing forms of relationships. Increased flexibility in data analysis and decision making in marketing leads to the issue of choosing a path of interaction with customers between transaction marketing and relationship marketing. This article argues that digital economy provides oppor-
opportunities of increasing the competitiveness of logistics companies based on relationship marketing. Although transaction marketing can also be implemented, its function is secondary and the main instrument of customers’ management is relationship marketing. The aim of the research is classification of ways to use digital technologies in marketing relationships of logistics companies. The main results: three broad ways (spatial, socio-economic and infrastructural) are presented in Table 2. To achieve this aim, the following tasks were realized: conducting a literature review in marketing and network cooperation concepts, identifying the specific features of the transport and logistic industry and formulating ways to use digital technology in the logistics business.

Modern information technologies lead to the elimination of distances in information flows. One of the main transport logistics business functions is delivery at the right time to the right place and in right condition. It uses information technologies for efficient management of freight flows. Big data analysis supports the decisions made by relevant indicators. Those logistics services, which are based on multicriteria conditions, can satisfy wider variety of customers’ interests and, as a result, provide higher marginal revenue. Thus, Relationship Marketing is of particular importance for logistics companies as it allows analyzing numerous indicators, and offering timely customer-centered solutions. Devices, connected to the Internet in the so called Internet of Everything allow the provision of services with higher value added. Internet of Everything opens opportunities to use functions of different objects in a mix to satisfy customers’ interests. For example, French railway company Europorte provides port customers with the ability to monitor the status of their network on a tablet device transparently and in real time. As it is mentioned in the Groupe Eurotunnel’s Annual Report 2016, customers appreciate technology-based innovations along with high standard level of services. Thus the company won all tenders to serve a number of major French ports.

ляют повысить конкурентоспособность логистических компаний на основе маркетинга отношений. Хотя транзакционный маркетинг также может иметь место, его функция скорее останется вспомогательной, а основной рычаг управления клиентоориентированностью останется за маркетингом отношений. Целью проведенного исследования является классификация направлений использования цифровых технологий маркетинга отношений логистических компаний, результаты представлены в Таблице 2. Для реализации данной цели решены следующие задачи: проведён обзор литературы по маркетингу, сетевому взаимодействию, сформулированы специфические черты транспортно-логистической отрасли, а также сформулированы способы использования цифровых технологий в логистическом бизнесе.

Современные информационные технологии приводят к устранению расстояний в обмене информацией. Транспортно-логистический бизнес, функцией которого является доставка в нужное время, в нужное место и в нужном состоянии, использует информационные технологии для эффективного управления грузовыми потоками. Анализ больших данных позволяет подкреплять принимаемые решения соответствующими показателями. Логистический сервис, учитывающий многокритериальные условия на основе больших данных, позволяет удовлетворить интересы клиентов в большей степени, чем самый приводит к более высокому маржинальному доходу. В этой связи, маркетинг отношений приобретает особое значение для логистических компаний, поскольку позволяет на основе сбора и анализа данных разработать и своевременно предложить наиболее клиентоориентированные решения. Подключённые устройства к сети интернет, формирующие пространство Internet of Everything, позволяют оказывать сервис с более высокой добавленной стоимостью. Например, французская железнодорожная компания Europorte предоставляет портам возможность в реальном времени с планшетного устройств отслеживать состояние железнодорожной сети на припортовой площадке. Как указано в годовом отчете компании за 2016 г., такая клиентоориентированность наравне с высоким уровнем оказываемых услуг позволила выиграть все тендеры на обслуживание крупнейших
Long-term customer relationships rather than transactional approach allow creating customer-centered solutions.

The aim of this paper is to answer the question how marketing can strengthen company’s competitiveness in digital economy. Based on concepts evolution of marketing, it argues that relationship marketing is highly relevant in digital economy. The example of logistics companies demonstrates how relationship marketing can sustain competitiveness in digital economy (Table 2).

II. Digital economy and actualization of network economy.

The current processes of implementing digital and artificial intelligence technologies are in their prime today in comparison with the previous stages. The creation of the cyber physical space, the widespread adoption of digital technologies and the possibility of real-time communications have strengthened the tendency to form network relationships. The formation of a “network society” refers to the development of a dynamic open system, where, according to M. Castells the basis is “networks of production, power and experience” (Baggio and Sheresheva, 2012). The network structure of relations in a joint access to resources and an intensive horizontal linkages increase the value of cooperation. Information database aggregates data of the connected elements and their users. The number of elements involved in a specific information network leads to an increase of the stored information volume, and, consequently, to increasing the network capacity for future use. The benefits of platform business models lead to a consolidation in certain market segments. The network effect means that the increase of device-connected and information gathered allow to create new services and expand opportunities of collaboration.

The fourth industrial revolution accompanied by the widespread introduction of digital technologies and robotics, introduces new elements into the established system of relations. Today there is a significant reduction in the number of employees in

французских портов. Формирование продолжительных отношений с клиентами, то есть ориентация не столько на одномоментное оказание услуг, сколько ориентация на продолжительное сотрудничество, стимулирует разработку сервисов, наиболее актуальных для клиентов компании.

Цель данной работы состоит в ответе на вопрос о том, как маркетинг может укрепить конкурентоспособность компании в цифровой экономике. На основе эволюции концепций в маркетинге утверждается, что маркетинг отношений является наиболее актуальным подходом в условиях цифровой экономики. На примере компаний логистической индустрии показывается, как маркетинг отношений позволяет поддерживать конкурентоспособность в цифровой экономике.

II. Цифровая экономика и актуализация сетевых взаимодействий

Наблюдаемые сегодня процессы внедрения технологий искусственного интеллекта находятся в расцвете по сравнению с предыдущими стадиями. Создание кибер-физического пространства, повсеместное внедрение цифровых технологий и возможности коммуникаций в реальном времени усилили тенденции к формированию сетевых форм взаимосвязей. Формирование «сетевого общества» относится к развитию динамичной открытой системы, где согласно М. Кастельсу базой выступают «сети производства, власти и опыта» (Баджо, Шерешева). При сетевой структуре отношений при совместном доступе к ресурсам и интенсивным горизонтальным взаимосвязям усиливается значение кооперации. Информационные базы агрегируют данные подключенных элементов и их пользователей. При большем количестве включенных в определенную информационную сеть объектов возрастает объем накапливаемой информации, а, следовательно, растет мощность сети для дальнейшего использования. Распространение платформенных бизнес-моделей компаний приводит к консолидации в определенных сегментах рынков. Сетевой эффект приводит к тому, что с ростом включаемых в сеть объектов или подключаемых устройств наращивается база данных и степень распространения. Четвертая промышленная революция, сопровождающаяся повсеместным внедрением цифровых технологий и роботи-
ventory control, retail and banking sector, who are performing standardized operations. The introduction of automated technologies allows achieving savings in labour costs; the robots are capable of performing the same operation with a longer and higher accuracy.

The digitalization of information allows us to analyze large amounts of data and to offer the most popular and highly differentiated services. Intensive networking, automation and digitalization are the main features of the fourth industrial revolution. These processes influence a wide range of industries and set new standards of competitiveness.

The network presents a mechanism of coordination of actions of companies through the conclusion and implementation of inter-organizational relational contracts with indefinite duration. The main advantage of networking is sharing of resources: human capital, knowledge and data. The main characteristics of network organizations by the G. Lipnik and G. Stamps are a common goal (shared attitudes and values), the independence of the members (the possibility of participants in networks to continue their independent existence, while receiving benefits from their position within a network structure), and voluntary affection, having multiple leaders and interrelatedness of different levels. Thus, a network organization is characterized by a long-term goal setting, aimed at the optimal use of complementary resources.

Information technologies contribute to strengthening network forms of relationships due to their ability to exchange information regardless of distances. The fourth industrial revolution involves the formation of a new technological order, based on Internet technologies. The Internet of things, involving the aggregation and exchange of data about the properties of objects by means of the Internet, allows increasing the optimization possibilities of decision making (Mayburry, 2017). In turn, recommendations for decisions relate to the growing possibilities of artificial intelligence.

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III. Literature Review

A set of marketing tools, such as the traditional marketing mix present characteristics, which influence the interaction with consumers. “Concept marketing mix”, elaborated by Borden (Borden, 1964) was one of the first attempts of systematization of instruments to elaborate marketing strategy. Further, J. McCarthy created the famous 4-Ps model (product, price, place, promotion), which was developed in the extended version 7Ps (additionally including processes, people and physical environment). The data model allows you to focus on key factors that influence customer relationships. However, these models limit the possibility of an integrated approach to the management of relationships with customers.

Increasing competition and differentiation gradually reduced sales growth. There was a request for new mechanisms focusing not just on existing markets, but also on the creation of new ones. This is due to the shift from monitoring and calculating market shares using the raw sales data to a more creative approach of developmental education, internal improvements recommendations at the various stages of decision-making.

However, it is important to uphold the integrity of the decision-making process. Technologies can improve productivity and reduce the time for performing any operations. However, they cannot replace the management of decisions by themselves. Rather, new technologies increase the gap between traditional and modern technological provision of production processes. For example, nearly the same trend was observed in an era of rapid railway construction. Some areas with access to railway infrastructure were becoming industrialized, while others did not get an opportunity to get the same pace of economic development despite their industrial specialization.

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III. Обзор литературы

Совокупность маркетинговых инструментов, таких, как традиционный маркетинг-микс, позволяет смоделировать характеристики, оказывающие влияние на взаимодействие с потребителями. «Концепция маркетинг-микса», опубликованная в 1964 г. Н. Борденом стала одной из первых попыток систематизации факторов, позволяющих сформулировать маркетинговую стратегию. В дальнейшем Дж. Мак-Карти создал знаменитую модель 4-R (продукт, цена, место, продажа), которая получила развитие в расширенной версии 7Р (дополнительно включены процессы, люди и физическое окружение). Однако такие модели представляются чрезмерно упрощенными и ограничивают разработку комплексного подхода к управлению взаимоотношениями с клиентами.

На фоне усиления конкуренции и повышения дифференциации предлагаемой на рынке продукции, используемые ком-
and long-term processes (McKenna, 1991 pp. 2-3). This shift can be described as a movement towards cooperative behavior, oriented to the common good. The relationship marketing differs from traditional marketing in that there is a focus on achieving profitability through joint production and cooperation, rather than through manipulation using the available marketing levers.

Relationship marketing involves benefits for both parties: for buyers it is reduced transaction costs, and for sellers it is better understanding of consumer requirements (Tynan, 1997 p. 992). Relationship marketing is not based on the analysis of individual transactions with customers; it considers customer relationships as a set of transactions. Relationships with clients involve all transactions carried out with direct and indirect participants. Customer relationships represent the process of generating knowledge about the customer preferences for further increase of customer appreciation (Peppers and Rogers, 2000, p. 244). Increasing customer satisfaction ensures their loyalty. Superior customer services helps to retain key customer segments. However, loyalty is not the same as consumer satisfaction; a number of other reasons can also cause it: habits, convenient consumption, and high switching costs.

To attract the attention of potential customers, the company shows how its product or service can help solve the problems of their potential clients. A key premise of traditional marketing is that self-interest and competition are the incentives for creating value. In turn, relationship marketing comes from the fact that cooperation ensures value creation (Sheth and Parvatiyar, 1995, p. 399). Relationship marketing includes the purpose of cooperation, allowing the creation of higher customer value, thereby increasing the profitability of the company. Gummesson (Gummerson, 1999 p. 183) introduced the concept of “return on investment” (“return on relationship”). This term describes the resulting long-term cash flow in connection with the creation and maintenance of a network relationship. The
loyalty demands long-term relationships as it has cumulative nature.

The shift from transactional marketing to relationship marketing is an important stage of transformation in the understanding of the customer relations development. The first approach means the possession of specific marketing tools to promote companies’ own products. In the framework of a transactional approach, the focus is on particular operation with the client with the aim to increase sales and, consequently, revenue. This approach prevailed in the industrial era, which was characterized by mass production and standardization of products. However, it does not sufficiently take into account the issues of customer retention and complete satisfaction of customers’ interests. A paradigm shift occurred with a change from orientation to obtaining maximum revenue from production activities to serving the clients’ interests and gaining subsequent revenue. This concept is focused on creating customer loyalty and building long-term relationships.

With the development and wide spreading of information technologies, resulting in sharing information in real-time, regardless of distance, marketing communications have become of particular importance in the competitive struggle of the companies. The need to deliver information about their products to target customers and create interest and long-term customer care has an impact on the competitiveness of the company. The use of information technologies allows the company not only to convey information to the client, but also to collect information about the customer demands in order to be able to offer the demanded products. The introduction of digital technologies with a focus on improving the efficiency of the productive business processes enhances the company’s position in the market. The information platform provides access to a network of connected devices that collect data about users. If access to a data network refers to cooperative behaviors, the interpretation of the results opens the possibility of creating competitive advantage. The spread
IV. The business of transport logistics in the digital economy and tools of relationship marketing

Companies engaged in logistics, can specialize in the field of transport logistics, as well as in the field of supply chain management of industrial companies. In this paper, we propose to consider companies in the field of transport logistics, which are interested in the issues of creating the most optimal routes, based on current geographical, political and infrastructure conditions.

Shipping to remote regions is carried out mainly by sea transport. The largest shipping companies, according to the available capacity of container ships are Maersk (2.8 million TEU), CMA-CGM (1.55 million TEUs), Hapag-Lloyd (1 million TEUs) COSCO (0.8 million TEU) and Hanjin Shipping Company (0.6 million TEU). The trend of orders for vessels with bigger capacity is due to the desire of reducing costs for transportation of large shipments. The fastest, but also the most expensive is the aviation mode of transportation. The business of express air shipping is most developed in the USA with leading companies such as FedEx (688 aircraft) and UPS (519 aircraft). Overland transportation, presented by automobile and railway types of transport, relates to medium distances. Railway transportation companies have different business models, which does not allow direct comparison. Some companies are vertically integrated with their own infrastructure, while others specialize only on freight transportation. In the field of road transport, some companies have a large fleet and broad geographic network of services, while others are smaller and provide services only at local level.

Foreign policy issues directly affect the development of the transport linkages among the countries. In case of conflict, the transport connection between the countries can be blocked. However, international political cooperation can promote

creation of transport corridor with construction of infrastructure and elimination of customs procedures.

International transport is regulated by international transportation legislation (SMGS and COTIF conventions for rail transportation), international legal conventions (TIR Convention, road transport) and international norms and rules, regulating foreign economic activity (Incoterms). Foreign policy initiatives could give impetus to the development of international transport. The initiative of China “One Belt - One Road”, focused on the creation of a regular land communication with European countries, contributed to the growth of container transport by rail. Rail container trains from about twelve Chinese cities run to nine European cities on a regular basis. International transport companies consider the current legal regulation, but also take into account the strategic interests of countries in the transportation development.

Infrastructure in the management of transport logistics include terminal and warehouse complexes, road and rail infrastructure, port terminals and airports. The infrastructure may be owned, leased or used on contract basis. For some companies, the ownership of infrastructure projects is a key link in the value chain. Assets can be core for business of logistics companies. For example, the company can provide services of storage and handling, owning A-class warehouses in the industrial park. On the other hand, a company, which is specializing in the elaboration of transport solutions, can do business without assets. In this case, it contracts with providers of relevant services.

Industry 4.0 is characterized by four key components, described in Hermann et al. It includes cyber-physical systems, Internet of things, Internet of services and smart manufacturing. Cyber-physical systems represent the two synchronized networks. The first is a physical network of interconnected infrastructure components; the second is a cyber-system, composed of sensors and lines with connections among them. The Internet of things represents a set of connected products, which are
becoming “smart things” with expanding functionality. The concept of web services comes from the possibilities of meeting supply and demand through the Internet to provide or acquire service. Intelligent production is a decentralized production system where human beings, machines and resources communicate with each other naturally as in a social network.

In this context, the competition between companies is not only in the introduction of modern technology, but in effective operations and interpretation of received data. The benefits of information technologies implementation are presented in Table 1.

Due to its ability to exchange information regardless of distances, information technology contributes to strengthening network forms of relationships. The fourth industrial revolution involves the formation of a new technological order, based on Internet technologies. The Internet of things, involving the aggregation and exchange of data about the properties of objects by means of the Internet, allows to increase the optimization possibilities of decision making (Mayburry, 2017). In turn, recommendations for decisions belong to the growing possibilities of artificial intelligence.

However, to simplify the reality by granting technologies full production responsibility is a reckless decision. While technologies can improve productivity and reduce the

Table 1. Information technologies in transport logistics

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<th>Scope of Task Серфераздача</th>
<th>Examples of information technology use by transport-logistics companies Примеры использования информационных технологий компаниями в сфере транспортной логистики</th>
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| Spatial / Geographic Пространственная/Географическая | • Information about congestion of transportation network in real time and with the accumulation of the previous periods for analysis and decision-making on the formation of a routing network; Информация о загруженности транспортной сети в реальном времени и с накоплением предыдущих периодов для анализа и принятия решений о формировании маршрутной сети;  
• Supply of data about the dynamics of supplies in key areas; Данные о ритмичности поставок по ключевым направлениям;  
• Information on material flows at production facilities for timely delivery allowing to reduce costs of storage; Информация о товарно-материальных потоках на производственных объектах с целью своевременной доставки, позволяющей сократить издержки хранения; |
<table>
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<th>Customers’ category</th>
<th>Aspect</th>
<th>Steps to develop relationships with customers</th>
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<tr>
<td><strong>Spatial</strong>/Пространствен-</td>
<td>Get or create access to information networks, including data on the transport needs of potential customers.</td>
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<td><strong>Socio-economic</strong>/Социально-</td>
<td>Participation in industrial exhibitions and industry associations in order to promote its own brand and distribution of analytical information about trends in the industry and the company’s position in the market.</td>
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<tr>
<td><strong>Infrastructural</strong>/Инфраструктур-</td>
<td>Offer services based on access to infrastructure objects of customers’ interest with particular characteristics (storage capacity, processing capabilities of the specialized goods, a wide geography of location).</td>
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time for performing any operations, they themselves cannot supersede the managerial decisions. Rather, new technologies increase the gap between traditional and modern technological provision of production processes. For example, nearly the same trend was observed in an era of rapid railway construction. Some areas with access to railway infrastructure were becoming industrialized, while others did not get an opportunity to get the same pace of economic development despite their industrial specialization. The results of implementation of technologies depend on their application: if it is oriented to efficient process, it will increase effectiveness; but if it is an inefficient process, it will increase the ineffectiveness.

Применимительно к логистическим компаниям маркетинг отношений позволяет структурировать связи компании с существующими и потенциальными клиентами. В логистическом бизнесе самым высокодоходным видом услуг является логистический аутсорсинг. За счет комплексного подхода к обслуживанию клиента логистический оператор способен создать существенную экономию на издержках и, соответственно, повысить собственную выручку. Оказание разовых перевозок требует комплексного подхода в отношении анализа ситуации на рынке с целью предложения более выгодных условий оказания сервиса. При взаимоотношении с клиентами требуются различные линии поведения в зависимости от стадии развития отношений с клиентами.
Digital technologies and artificial intelligence provide great opportunities for processing information and executing standardized tasks. However, the question of how to incorporate modern technologies to strengthen companies’ competitive advantage and enhance their competitiveness in the market is open for discussion.

V. Conclusions
The issues of economy digitalization affect many areas. Network relationships reinforce the importance of relationship marketing in achieving leading positions in the target market segments. For companies in the logistics industry the introduction of modern information technologies is capable of improving the company’s competitiveness. In any case, the introduction of new technologies provides significant cost optimization and/or creates opportunities for offering fundamentally new services, which could undermine the position of companies, continuing to exploit outdated approaches.

Companies in the field of transport logistics, using the capabilities of digital technologies for the automation of standardized business processes in the collection and dissemination of information, have the opportunity to reduce costs on services, and to increase the level of customer satisfaction. Logistics services with the highest added value bring the highest marginal revenue. Digital technologies open up such opportunities through the collection of data. Further interpretation and development of higher-yielding configuration of freight flows is a competitive advantage of the logistics companies. With the wide usage of digital technology, the connectivity to the network provides access to data and allows strengthening the competitive advantage of the company. Orientation to customer satisfaction and maintaining their loyalty strengthens a company’s competitiveness in the long term.

V. Заключение
Вопросы цифровизации экономики затрагивают многие области. Наблюдаемые тенденции усиления сетевых взаимоотношений усиливают значение маркетинга отношений в достижении лидирующих позиций на целевых сегментах рынка. Применительно к компаниям в сфере логистики внедрение современных информационных технологий способно как усилить конкурентоспособность компании в текущих рыночных условиях, так и трансформировать их в свою пользу. В любом случае, внедрение технологий, обеспечивающих существенную оптимизацию издержек и/или создание возможностей для оказания принципиально нового сервиса, способно подорвать позиции компаний, которые руководствуются прежними правилами взаимодействия.

Компании в сфере транспортной логистики, используя возможности цифровых технологий при автоматизации стандартизованных бизнес процессов, в сборе и распространении информации, способны сократить издержки на предоставляемые услуги, а также повысить уровень клиентоориентированности оказываемых услуг. Наибольший маржинальный доход приносят логистические сервисы с наиболее высокой добавленной стоимостью. Технологии, оцифровывающие информационный поток, открывают такие возможности путем сбора данных. Дальнейшая интерпретация и разработка более высокодоходной конфигурации управления грузовыми потоками составляет конкурентное преимущество логистической компании. С распространением цифровых технологий подключённость к сети, обеспечивающей доступ к данным, позволяет усилить конкурентное преимущество компании. Ориентация на удовлетворение интересов потребителей и поддержание их лояльности укрепляет конкурентоспособность компании в долгосрочной перспективе.
Reference/Литература


