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DEFINITION AND CLASSIFICATION CRITERIA OF LOGISTICS SERVICES FOR ELDERLY

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ABSTRACT

An ageing population is a natural and inevitable phenomenon that constitutes an opportunity for the development of the logistics services industry. This is related to the fact that a new demographic profile of the world is determined by a growing number of customers — seniors — with special needs that generate the demand for services such as carriage and home delivery of food and medicines. Therefore, considering the growing demand for logistics services intended for older adults, there is a justified need to develop theoretical knowledge in this area. The paper aims to define a logistics service dedicated to an elderly person as the ultimate recipient as well as to identify the classification criteria of such services. The first part of the article is based on a literature review and presents definitions of a service and a logistics service according to various researchers. It also identifies different classifications of logistics services. These theoretical aspects provided a basis for authors to propose the notion of a logistics service and a catalogue of criteria for systemising logistics services dedicated to older adults. Logistics services for the elderly may be grouped according to classification criteria applicable to what is widely understood as logistics services in source literature. The classification criteria are the type of service, the immateriality of service, the frequency of contacting the customer, the type of purchaser market, the degree of service customisation, the type of a relationship between the service enterprise and the customer, and the place of service provision. Nonetheless, due to the customer-oriented approach in logistics, the authors proposed the classification criteria of these services with regard to age, financial situation, needs, health, expectations, hobby, skills and problems of older adults. Such an approach to classification is determined by considerable inherent diversification of the discussed group of customers as well as a specialised catalogue of logistics services. The classification of logistics services may contribute to the improved design of such services.

KEY WORDS

logistics service, elderly, definition, classification, ageing population

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INTRODUCTION

In the period of the last 25 years, a systematic growth in the percentage of older adults has been observed. The research conducted by the Department of Economic and Social Affairs of the United Nations

indicated that the ageing process of societies is also noticeable on the global scale. It is forecasted that globally, the number of people over 60 years of age will grow from 841 million in 2013 to 2 021 million in 2050, and to 2 985 million in 2100. Hence, in 2100, this group will constitute 355% of seniors living in 2013 (World Population Prospects, 2013). In Poland,

the percentage of older adults is growing as well. According to the Central Statistical Office of Poland, the country had 6 520 247 people aged 65 years and over in 2017. It is forecasted that in 2050, this number will almost double and reach 11 097 488. While analysing the demographic structure in Poland in terms of age, it can be observed that in 2017, older adults constituted 17% of the entire population, and in 2050 — as the Central Statistical Office of Poland reports — this percentage will reach 32.7% (<https://bdl.stat.gov.pl>) This disturbing demographic trend is primarily caused by the lengthened average life expectancy and a decline in the number of births.

The ageing society thus constitutes a challenge to be faced by many developed countries across the world. This issue entails both economic and socio-political consequences. On the one hand, the process of society's ageing is perceived as a negative phenomenon that determines many threats (Szukalski, 2012, pp. 6-7). The growth in the population of older adults means growing budget expenses for retirement and disability allowances, medical care and care services. Besides, ageing labour resources mean a decrease in employee productivity. On the other hand, it offers an enormous opportunity for economic growth and development (Golinowska, 2011; New waves of growth. Unlocking opportunity in the multi-polar world, 2011), which is increasingly recognised. The challenge posed by the greying world has been observed by the Commission and the Council of the European Union. The current policy aimed at older adults prioritises organisations that engage in initiatives for the support of older adults. As stressed by the European Commission, Europe's ageing process may constitute a chance for improving the competitiveness of the European economy by means of, e.g. creating new markets of goods and services adjusted to the needs of older customers (European Commission, 2006).

The world's new demographic profile has also been noticed by the business sector that is beginning to perceive older inhabitants as a new group of customers. The population of older adults is becoming a megatrend in logistics (Tinnilä, 2012), which can fundamentally change the functioning of logistics companies, their mode of operation, and competition. It is a significant direction, tendency or power that emerges globally or locally and is capable of operation in the future and that exerts a significant impact on almost every aspect of the functioning of societies and logistics itself (Bujak, 2016, p. 1257). A logistics service provider DHL has also noted the

issue of an ageing society as a growth opportunity for logistics enterprises, highlighting a significant role of the grey power logistics (the logistics for older adults) in the functioning of the logistics industry. DHL claims that the growing percentage of the elderly will result in a need for new logistics services (Logistics trend radar, DHL, 2016, p. 16). Therefore, enterprises that provide logistics services should systematically study trends that are likely to shape the sector in the future (Nazarko et al., 2015a) and adjust or design logistics services that correspond to needs of ageing customers. However, firstly it is important to recognise the needs and expectations of customers who constitute an internally diverse group. Furthermore, an ageing population poses a challenge not only for the business and infrastructural environment (Nazarko et al. 2015b) but also science. The implementation of innovative logistics solutions gives rise to the need to develop the related theoretical aspects.

This article undertakes to devise a definition of a logistics service for an older adult as the ultimate recipient and indicate the classification criteria of such services. The first part of the article is based on a literature review and presents definitions of a service and a logistics service according to various researchers. Also, it identifies different classifications of logistics services. These theoretical aspects provided a basis for the authors to offer the notion of a logistics service and a catalogue of criteria for systemising logistics services dedicated to seniors. Logistics services for the elderly can be classified according to various criteria existing in the literature. Nonetheless, considering the recently noticeable stress on customer orientation in logistics, the authors propose a different approach to the classification of such services.

1. DEFINITION AND CLASSIFICATION OF LOGISTICS SERVICES - A LITERATURE REVIEW

The source literature provides a number of various definitions of a service. One of the first definitions was devised in 1960 by the American Marketing Association, which defined services as activities, benefits, or satisfactions which are offered for sale, or provided in connection with the sale of goods (de Vries et al., 2012, p. 2). However, this definition limits the scope of services since it suggests that services are

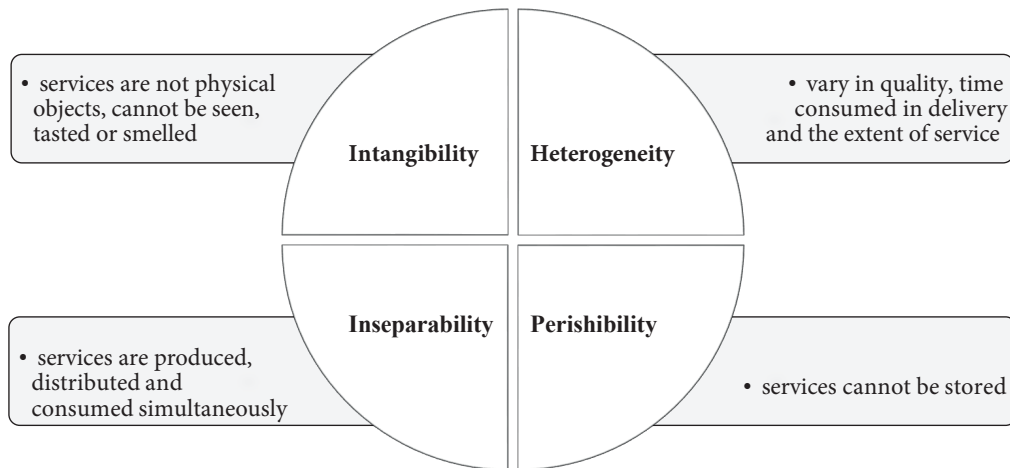


Fig. 1. Service characteristics

Source: based on (Bhattacharjee, 2012, p. 4).

offered solely together with products sold. In 1963, Regan presented another concept of a service, defining it as “represent[ing] either intangibles yielding satisfactions directly (insurance), tangibles yielding satisfactions directly (transportation, housing), or intangibles yielding satisfactions jointly when purchased either with commodities or other services (credit, delivery)” (Regan, 1963, p. 57). In this manner, the author treated services as immaterial values that can be sold in the same way as products. His definition may be complemented with Judd’s statement, adding that a service is all that is neither solid nor liquid (Judd, 1964, p. 58). Moreover, Gummesson suggested that “services are something that can be bought and sold but which you cannot drop on your foot” (Gummesson, 1987, p. 19). According to another definition, “services are intangible activities that perish relatively quickly and which, during interactive consumption, satisfy direct needs rather than the desire for material possession” (de Vries et al., 2012, p. 13). A frequently cited definition of a logistics service was offered by Kotler, who interpreted a service as “any act or performance that one party can offer to another that is essentially intangible and does not result in ownership of anything. Its production may or may not be tied to a physical product” (Kotler, 1997, p. 467).

A common element of the above definitions is attributing a service with immaterial character. Services can be exchanged even though they are not tangible (Bhattacharjee, 2012, p. 2). Moreover, services are activities that should bring customer satisfaction. They are assigned with certain basic characteristics such as intangibility, heterogeneity,

inseparability and perishability (Grönroos, 1998, p. 322; McDonald & Payne, 2006, p. 17; Parry et al., 2011, p. 20; Bhattacharjee, 2012, p. 4) (Fig. 1).

Services are not physical objects; hence, customers cannot see, touch or smell them (intangibility). They are experiences rather than things. Services are characterised by heterogeneity since they vary from one another according to the context, nature, requirements of each customer, different quality standards associated with different costs, as well as with regard to regions or cultural background. Still, the inseparability of services means that services are produced, distributed and consumed simultaneously. Services are perishable because there is no possibility to keep them in stock.

Among many services provided to individual and institutional customers, a logistics service has gained significance in recent years. Source literature provides many definitions of logistics service; however, no universal explanation of this notion exists. The definition and the scope of logistics services have undergone changes together with the development of the logistics services industry. Until the late eighties, a traditional transport sector functioned divided into transport as well as forwarding and mail branches. In the nineties, logistics service operators began to create the so-called logistics service packages involving storage services, stock management and additional services, e.g. packaging or labelling. The end of the nineties saw the development of, a concept of managing and optimising supply chains and supply networks based on close-knit cooperation of logistics operators with manufacturing and trading enterprises. Logistics services of that time began to assume a form of

Tab. 1. Logistics service definitions

AUTHOR, YEAR	DEFINITION
Gołemska, 1999	A logistics service is transportation and storage of logistics products organised by a company together with full formal and legal handling, including customs. A logistics service is a response to customer demand and expectation associated with the provision of a proper product in due time, at an agreeable price, while preserving an adequate quality level of this service
Tseng et al., 2005	Logistics services support the movement of materials and products from inputs through production to consumers, as well as associated waste disposal and reverse flows. They include activities undertaken in-house by the users of the services (e.g. storage or inventory control at a manufacturer's plant) and the operations of external service providers. Logistics services comprise physical activities (e.g. transport, storage) as well as non-physical activities (e.g. supply chain design, selection of contractors, freightage negotiations)
Gołemska, 2007	A logistics service is a logistics product constituting a set of wishes and expectations of a customer; a logistics service is provided by means of logistics management, which is a process of service planning and performance that considers an analysis of needs, possibilities and means of providing such a service in the entire supply chain from the manufacturer to the consumer
Kopeć, 2007	A logistics service means organising transportation and storage of logistics products by a company together with full formal and legal handling, including customs
Rydzkowski, 2011	A logistics service means performing activities involving the execution of one or many logistics functions towards the ordering party by the service provider, based on contractual provisions. The components of a logistics service are transport, forwarding and logistics as well as additional services
Srivastav & Chandra, 2013	Logistics services can be described as services involved in the processes related to planning, implementation and controlling of the flow of materials/goods, services, information, and funds between the point of origin and the point of destination to meet customer requirements in an efficient and effective manner
Jeszka, 2013	Logistics services entail gainfully provided services of forwarding, transport, storage as well as related services and those supporting the process of the commodity flow between various foci of the supply chain
Rosa et al., 2017	A logistics service means an activity aimed at satisfying logistics the needs of business entities and people

Source: elaborated by the author on the basis of the literature.

customised logistics services and their development was growingly determined, e.g. through the use of integrated ICT systems (Jeszka, 2013, p. 56; Ciesielski, 2005, p. 10).

The notion of a logistics service is very broad; thus, it is differently defined in source literature. Tab. 1 presents selected definitions.

An analysis of the above-presented definitions for a service and a logistics service can lead to the identification of common features that can be ascribed to a logistics service. These are:

- a logistics service is an activity, operation or process;
- logistics services aim to satisfy the needs of customers;
- logistics services involve transport, forwarding, storage and other services supporting the process of the flow of commodities/persons, information and financial means among the foci of supply chains;
- logistics services may have a physical (e.g. transport and storage) or non-physical character (e.g. designing a supply chain and transport planning);
- logistics services are provided for gainful purposes by specialist companies;
- a logistics service should be provided to the customer in accordance with the principle of 7R's proposed by Shapiro and Heskett in 1985, namely, right product, right quantity, right condition, right place, right time, right customer, and right price (Coyle et al., 2007, p. 52).

There is no official logistics service classification. Logistics does not have its own General Agreement on Trade in Services (GATS) classification in the World Trade Organization (WTO) Services Sectoral Classification List: MTN.GNS/W/120. Logistics services are classified there only as Transport Services (MTN.GNS/W/120 11). Still, many researchers attempted to classify logistics services, applying various classification criteria. For instance, Gołemska proposes the following classification criteria of services: the type of service, the degree of service immateriality, the frequency of customer contact, the motive for service purchase, conditions for service provision, the type of service purchaser (Gołemska, 2010, pp. 258-259). Services can also be classified according to the type of satisfied needs (manufacturing, consumption and collective consumption services), the type of

Tab. 2. Logistics service classification

AUTHOR, YEAR	CLASSIFICATION
Ciesielski, 2006	<p>basic services associated with movement and storage: carriage, storage, packaging, package return services, waste management, supply consolidation and conditioning, JIT system execution, procurement, distribution;</p> <p>additional services: executing customer orders, stocktaking, commodity inspection, labelling, post-sales service, publicity, research on demand and forecasting;</p> <p>financial services: insurance, transaction financing, payment, commission sales, financial record-keeping;</p> <p>information services: providing information on supply and sales markets as well as the course of logistics processes in a manner that suits the needs of the company's strategic and operational management</p>
Vasiliauskas & Barysienė, 2008	<p>physical services: basic (storage, good reception, picking and packing, re-packing and labelling, return of goods, delivery from storage), intermediate (consolidation, deconsolidation, preparation for freezing, thawing, sawing, prepare for delivery and pack, set building, sequencing, product, resorting and labelling, cross-docking) and advanced (assembly of components, operate vendor, management inventories in stores, or stock-keeping facilities, recycling with waste, handling and reconditioning, unpacking and quality control);</p> <p>administrative services: basic (tendering and contracting other LSP, tendering and contracting carriers, insurance services stocktaking), intermediate (payment services, order administration and customer service, claims handling, export clearance and import, clearance, forwarding services, financial services, provide one-stop logistics service purchase) and advanced (forecasting and inventory management, administration of minimum and protective inventories, purchase and call-offs, delivery planning and management and follow up, exception management, design of individual logistics set-ups, implementation of logistics set-ups, operation of customer logistics set-up, responsible for the customer logistics operations)</p>
Kisperska-Moroń & Krzyżaniak, 2009	<p>a carriage service — a basic service that is limited merely to the execution of the carriage process;</p> <p>a forwarding service — organisation of the carriage process in the following stages: operations preceding the carriage process, inspection of the carriage process, and operations performed upon its completion;</p> <p>a logistics service which may involve: transport, storage management, stocks handling, packaging, customer and order servicing</p>
Rydzkowski, 2011	<p>logistics operations: transport, stocks management, packaging, cross-docking;</p> <p>logistics processes: forwarding, JIT supplies, distribution;</p> <p>TSL-specific services: courier services, transhipment (terminal) services, transport packaging trade, intermodal transport;</p> <p>extended services: supplies with subassembly, distribution with product finishing;</p> <p>services oriented at the level of services: Vendor Managed Inventory (VMI)/Custom Managed Inventory, continuous complementation, comprehensive logistics services</p>
Jeszka, 2013	<p>forwarding services;</p> <p>transport services;</p> <p>storage and terminal services;</p> <p>additional services</p>
Gleissner & Femerling, 2013	<p>order processing;</p> <p>warehousing, incl. transhipment;</p> <p>transport services incl. transhipment</p>
Rosa et al., 2017	<p>physical operations associated with transport and storage (e.g. carriage, goods distribution, return policy, conditioning, operating the Just-in-time system, packaging, special-purpose carriages, waste management);</p> <p>servicing operations (e.g. order preparation, logistics counselling, stocktaking, quality inspection, customer contact, remedy activities, sales promotion);</p> <p>informative operations (e.g. stocks management, data processing, statistics)</p>

Source: elaborated by the author on the basis of the literature.

purchaser market (services for individual and institutional purchasers), the degree of service customisation (standardised or adjusted to the demands of individual purchasers), the nature of service demand (services with high or low demand dynamics), type of relations between a service provider and a customer (services provided in direct or indirect contact with the customer), physical site of service provision (services rendered on the premises of the service provider, at the customer's seat, remotely or on a neutral ground), purpose of the service provider/nature of remuneration (services provided for commercial and non-commercial purposes) (Czubala et al., 2012, pp. 21-28). Logistics services can also be grouped with regard to two categories: resource-driven logistics services — physical services whose execution requires technical equipment; and skill-based services — services that entail planning, organisation, supervision etc. (Rosa et al., 2017, p. 16). Bhattacharjee distinguishes three groups of services depending on the type of a recipient/customer: services for individual consumers, business to business end users and industrial end users. Furthermore, services can also be classified as high contact services that involve a higher degree of contact from the customers and low contact services (Bhattacharjee, 2012, p. 18).

With regard to the diversity of service classification criteria that exhibit the heterogeneity of services, source literature may provide various classifications of logistics services.

Based on the compilation presented in Tab. 2, there is no single universal set of logistics services in the literature. Moreover, these classifications demonstrate the diversity of services. This is primarily connected with the development of the logistics services market where the level and scope of the offered logistics services is changeable. The authors of the classification of logistics services undoubtedly identify and distinguish three major groups of logistics services: transport, forwarding, and storage services. Other logistics services that improve the functioning of supply chains constitute a group of services termed auxiliary or additional.

2. LOGISTICS SERVICES FOR ELDERLY

With regard to the demographic perspective which entails a growing share of the elderly in the total population as well as increasing life expectancy, some economic sectors are expected to grow. Bran et

al. identified the main beneficiaries of the current demographic situation which include (Bran et al., 2016, p. 132):

- the health sector (especially medical devices, pharmaceuticals and eHealth);
- the construction sector, especially focusing on smart homes which support independent living;
- personal and autonomous transport services (actions, programmes and services designed to facilitate the access of older adults and people with disabilities to public transport services);
- personal banking and e-banking services;
- the tourism sector.

All these economic and social activities can be supported by logistics. In the era of ageing societies, enterprises operating in the logistics industry face an enormous challenge with regard to the newly emerging group of customers. At present, the logistics services market is occupied by companies categorised by Płaczek as carriers, forwarding and transport enterprises; 3PL logistics operators, national mail operators and courier companies; logistics, storage and distribution centres; 4PL logistics integrators, logistics electronic platforms, 5PL virtual logistics operators, and electronic application providers (Płaczek, 2012, p. 166). These businesses have different profiles of activity, diversified with regard to the used logistics infrastructure and providing a range of various logistics services. According to the authors of this article, any of these enterprises will be able to provide services to older adults. Required services will be delivered directly to this group of customers as well as indirectly, by means of logistics support provided to institutions that render services or offer products dedicated to older adults.

In order to develop and gain competitiveness, businesses that operate on the market of logistics services should design strategies for integrating logistics operations with medical and preventive care provision. A growing percentage of the elderly will stimulate growth in the demand for medical and care services (Ejdys & Gedvilaite, 2017), the delivery of which is often made possible with the support of logistics. The authors claim that the development of new distribution channels for medicines and food will be required in towns and remote rural areas. Such added last-mile solutions as meals-on-wheels or home delivery of medicines and food will become more popular. Medicinal or food products are frequently sensitive to temperature or humidity variations. Hence, cold-chain networks will stand a good chance of development.

A growing number of older adults constitutes a challenge to packaging manufacturers who should account for the physical and health aspects of this particular group of customers. Product packaging mainly dedicated to older adults should be light and easy to use. Product descriptions, the manner of their use or prices should be printed using large enough font for those with impaired vision to read

A new demographic tendency will also give rise to the development of various forms of logistics support dedicated to entities operating in the field of service provision for older adults, namely, hospitals (Kauf, 2014), social care facilities, blood donation centres, pharmacies, associations and foundations. As entities operating in the business area, these institutions may become beneficiaries of the same logistics services that were already classified in Tab. 2. Moreover, these entities may use tools or management concepts known in business logistics. The concept of logistics management was defined by Sołtysik as "a process of complex planning, organisation and controlling of logistics operations [processes and logistics activities] executed to ensure the effective and efficient flow of materials, semi-products and finished goods in organisations, logistics chains or supply chains" (Sołtysik, 2003, p. 58.). It may help these organisations find answers to a number of important questions, e.g. how many services should be provided and how to shape relations between customers and service providers (Detyna & Twaróg, 2013, p. 41). Moreover, according to the glossary of the Council of Supply Chain Management Professionals, logistics management activities typically include inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfilment, logistics network design, inventory management, supply/demand planning, and management of third-party logistics services providers (CSCMP, 2013, p. 117).

Logistics support is also required in the activity of manufacturers offering products and services dedicated to the elderly, e.g. in generotechnology. Generotechnology is a technology domain that refers to technology tools and services that assist older adults to offer a more independent, healthy, comfortable, safe, and socially engaged life (Mostaghel & Oghaz, 2017, p. 1970). To improve the quality of life of seniors, producers design innovative products and solutions, including, among other things, robots (Ejdys & Halicka, 2018), telecare (van den Berg et al., 2012; Mitseva et al., 2012) or smart homes (Majumder et al., 2017; Frisardi & Imbimbo, 2011). Their

launch requires the commitment of many entities, also including logistics service providers.

Due to the growing need of the elderly for logistics services, there is a consequent need for the development of theoretical aspects associated with this issue. To the best of the author's knowledge, source literature offers no definition of a logistics service dedicated to older adults. It also lacks a classification set of such services. Therefore, the article aims to fill this gap. The authors, at this stage of their research — prior to the empirical study to be conducted among the population of the elderly and logistics services providers — are not able to classify logistics services for older adults. They merely identify possible criteria, according to which these classifications could be made.

Considering definitions of a service and a logistics service as well as a set of identified crucial components of the notion of a logistics service presented in the first part of the article, the authors attempted to devise a definition of a logistics service dedicated to an older person.

A logistics service for an older person is an activity or a set of activities connected with performing transport, forwarding, storage and other additional services that support the functioning of specific entities within a supply chain, aimed at satisfying the needs of an older person in accordance with the principle of 7Rs. It should be emphasised that a logistics service can be provided to the senior directly (e.g. home delivery of medicines) or indirectly, via such entities as hospitals, social care facilities, blood donation centres, pharmacies, associations and foundations providing assistance to the elderly (e.g. storing medicines).

Fig. 2 illustrates the proposed notion. Logistics services were classified into two groups: (1) services provided directly to an older adult and (2) services rendered indirectly, via entities offering support to the elderly. The figure also presents examples of logistics services.

Logistics services for older adults can be classified according to various criteria. According to the authors, it is justified to group them with regard to the following criteria proposed by Gołemska (Gołemska, 2010, p. 258-259) as well as Czubała et al. (Czubała et al., 2012, pp. 21-28):

- the type of service (e.g. transport to the health facility, home delivery of medicines);
- the degree of service immateriality (e.g. transport of a patient to the hospital, planning the delivery of cleaning agents to the social care facility);

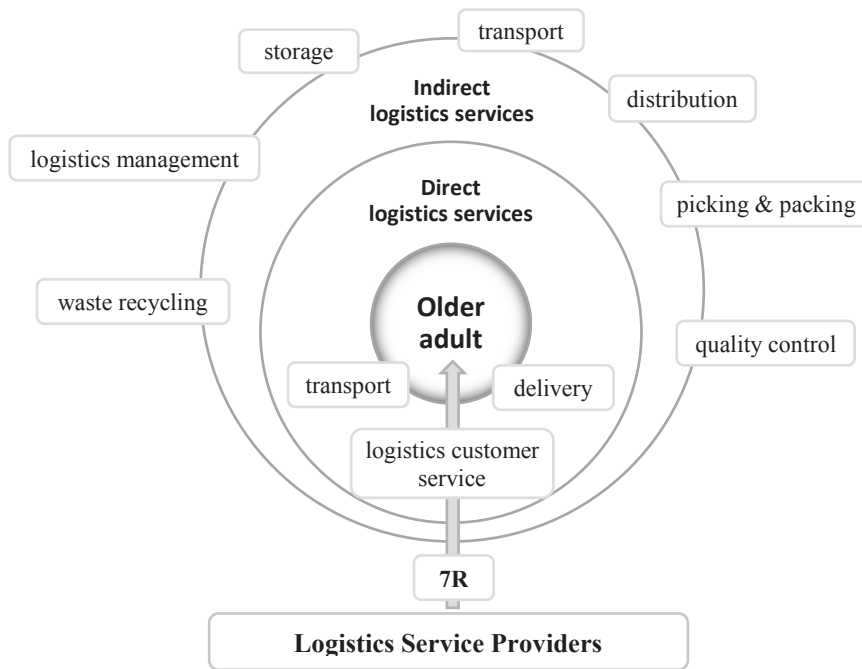


Fig. 2. Definition of logistics services for older adults

- the frequency of customer contact (e.g. daily home delivery of meals, transporting a senior for tourist purposes);
 - the type of purchaser market (services for individual purchasers, e.g. seniors; institutional customers, e.g. hospitals, social care homes, manufacturers of products dedicated to older adults);
 - the degree of service customisation (standardised, e.g. home delivery of medicines; adjusted to the requests of individual purchasers, e.g. transporting a wheelchair-bound, older person to the sanatorium);
 - the type of relationship between the service provider and the customer (services rendered in direct contact with the recipient, e.g. home delivery of medicines; indirect contact with the recipient, e.g. logistics management in hospitals);
 - the physical site of service provision (services provided on the premises of a logistics company, e.g. storage of medicines; at the customer's seat, e.g. home delivery of medicines; remotely, e.g. online shopping);
 - the purpose of the service provider/nature of payment (commercial services, e.g. transportation of a customer; non-commercial services, e.g. free transport of organs for transplantation).
- Logistics services for seniors may also be grouped with regard to two categories proposed by Rosa (Rosa et al., 2017, p. 16):
 - resource-driven logistics services (e.g. transportation of patients, storage of medicines);
 - skill-based services (e.g. planning, organisation and supervision of transport of the elderly).

Considering the recently noticeable stress on customer orientation in logistics, the authors (Detyna & Twaróg, 2013, p. 43) proposed different classification criteria. From the perspective of the development of logistics services, logistics services for older adults should be grouped according to age, financial situation, needs, place of residence, health, expectations, hobby, skills and problems (Fig. 3).

The criteria proposed above stem from key factors of customer orientation in logistics, namely, marketing perspective, market segmentation, quality of service and logistics strategies subject to the interests of customers (Harrison & van Hoek, 2010, pp. 67-68; Michalczyk & Widelska, 2011). At present, older population — customers/recipients of logistics services — is an internally diversified market group. Elderlies have various needs that frequently result from their age, health and material condition as well as interests, likings and aspirations. Moreover, they are characterised by a different level of knowledge on the multichannel environment or skill to apply information and communication technologies (ICT).

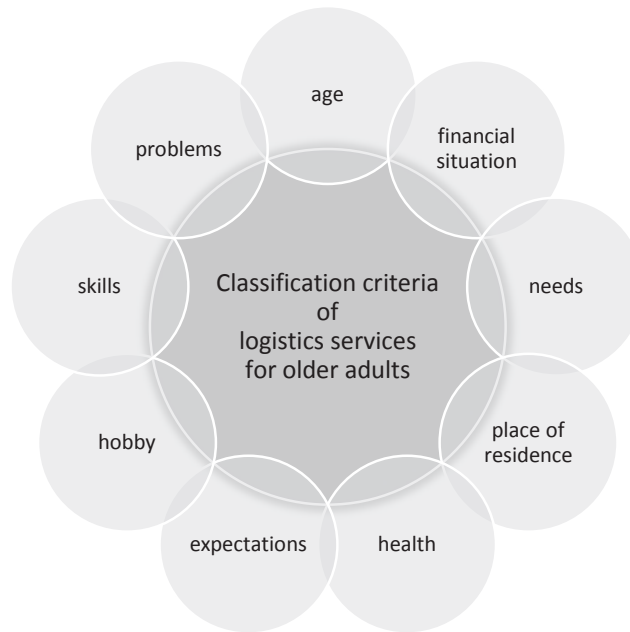


Fig. 3. Classification criteria of logistics services for older adults

Thus, strategic decisions concerning logistics services offered by logistics service providers should be based on firstly identified problems and needs as well as features of older adults. Recognising their expectations, habits, interests, age or material differentiation will allow to conduct a typology of this group of customers and subsequently adjust or design new, desired logistics services.

CONCLUSIONS

Nowadays, in most developed countries, the service sector has gained importance and services have captured markets on the global scale (State of the Services Economy Report, 2017; Kozłowska, 2017). The logistics services market grew in line with the development of information and computer technologies as well as globalisation of the electronic trade. The authors claim that this industry constitutes a continuously open space for innovative solutions, including services dedicated to older adults. In the era of ageing societies, enterprises operating in the logistics sector face many challenges. It is highly likely that this trend shall give rise to new business models and strategies for logistics management. One of the challenges is undoubtedly designing and offering logistics services that satisfy the needs and expecta-

tions of an internally diversified group of customers, i.e. older adults. Their development also requires strong theoretical foundations that can be brought by science and related empirical research. This article is the first step to fill the theoretical gap in the literature with regard to the definition and classification criteria of logistics services for older adults.

The authors of this article are conscious of the fact that the proposed classification criteria of logistics services are general and should be narrowed down. With this regard, it is planned to conduct empirical research which will lead to creating a catalogue of needs, expectations and problems of the elderly. It will allow to expand the classification criteria of logistics services and identify examples of such services for specific groups of customers. Moreover, the classification criteria can be combined, hence their various sets should be devised and analysed. The development of classification criteria of services and service categorisation may improve the process of market segmentation and facilitate the creation of profiles of the described group of customers. The knowledge of market segments may be subsequently used in the development of a logistics strategy of customer care, modes of communication with customers as well as means of reaching them. Depending on various features of customers or their expectations, the classification of logistics services classification may foster the design of personalised logistics

solutions. In applying the classification criteria, enterprises will be able to adjust their offer to specific market segments. Offer differentiation, dedicated products and services are aimed at establishing purchaser loyalty and increasing the level of their satisfaction. Moreover, the elaboration of the logistic services classification based on the results of the research on the needs and expectations of older people may contribute to the prioritisation of logistics services dedicated to older adults, as well as indicate future directions of the development of such services.

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