

Innovations in the courier services

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Abstract: Logistics is the most important element on market and courier services is a significant part of it. Every company is looking for a way to save money and innovations is the best way to do this. Expanding knowledge in this area allows for a broad look beyond the basic framework of the market. The basis for innovative solutions are IT systems, but there are several organizational solutions that improve the market and make savings. The article presents the impact of innovation on the courier services market, resulting in savings and improved efficiency.

Keywords: Logistics, innovations, economic development, courier services

Introduction

Innovative activity is a most important think in the development of the economy, society, ecology or development of technics and technology. This type of activity is understood as an activity focused on increasing the tendency to create, implement and apply innovations to the daily activities of each enterprise. It is a complicated process, requiring significant financial outlays, which is still evolving and each of the potential innovators is looking for effective ways to implement it.

A developed and modern economy, development of enterprises, decent working conditions, good living conditions, a knowledge-based society are invariably the most important thinks of functioning every country. Polish economy, after many years of experience and couple years functioning in differential legal systems does not fully achieve these objectives. Still, the most important challenge for the Polish economy is an attempt to building

awareness and develop knowledge among the society as well as to research and implement research results of innovative processes, without which the modern economy cannot function efficiently. An indispensable condition for the implementation of shaped trends is the consolidation of entrepreneurial and innovative attitudes and the pursuit of these attitudes should be based on integrated knowledge development using available technical, economic, organizational and administrative standards. An important task is observation of changes in the adaptation mechanism of various entities towards innovative activity understood as the tendency to introduce various forms of innovation in individual spheres of management. The analysis of this mechanism should answer the question, which and to what extent economic and social conditions are able to stimulate on the one hand, and restrict the innovation activity of enterprises on the other.

There are many economic and social determinants of innovative processes in enterprises. We have many economic and social determinants of innovative processes in enterprises. Among many solutions, cluster activity is often presented, understood as a spatially concentrated group of organizations of related sectors that are connected with each other by a network of horizontal and vertical interdependencies, cooperating with each other (sometimes also competing) creating and disseminating innovative solutions. Innovations are the result of cooperation of R&D units that take into account the market needs of consumers, which most often manifests itself in a specific structure of demand. New products (breakthrough innovations) are manifested in a specific supply structure. Innovative activity is therefore the sphere of human activity, without which civilization development is impossible. The choice of forms of functioning of enterprises on the market is a complex process, which requires the definition of selection criteria for many factors that will determine the implementation of specific strategies.

Logistics and new solutions

Innovative activity is an area that is still developing and becoming present in many economic entities. Attention should be paid to the distribution channels needed to sell the ware (commodity) and meet consumer needs. Thanks to analyzes using BigData , Internet of Things concept (IoT) and Industry 4.0 concept, entrepreneurs gain an overview of what areas of operation should pay special attention to, how to increase the number of consumers and how to encourage customers to make shopping. In the case of new logistics, it is important to shorten distribution channels (increase efficiency) by the skipping the warehouse process and selling in

retail stores. Distribution working in real time and the commercial offer is much wider than in traditional stores. Internet shops can sell products in any territory.

Logistics is a most important element of this type of trade, as it is used to deliver goods ordered on the Internet (mainly in online stores). The supply chain, which is created for the purpose of distributing goods to consumers (at the time, place and conditions determined by them) is largely based on courier services. The development of courier services has been observed for several years and thus the high activity of courier entities. Initially, couriers cooperated with several large online stores and the dominant position was the provision of standard services for current customers. The dynamic growth of online customers forced the interest of large logistics operators dealing with full service of online stores and cooperating with couriers. This approach is common and effective for small businesses (no need to spend money on logistics outsourcing). This allows them to effectively control their own business and become independent from external service providers. In this case, it is extremely important to be well prepared for the sudden development of the company. When the level of sales (orders) increases, employment or warehouse space increases. When the number of customers grows the shipment of the product are directly from the external warehouse belonging to the manufacturer, specialized entity or distributor - to the customer (dropshipping). This type of service is mainly interested in medium-sized entities that avoid the risk of freezing cash in inventories, especially when they plan to increase the number of assortment items. The process consists in storing goods, accepting and completing orders, generating sales documents and sending them to online customers (Internet users, e-customers). This model enables greater involvement in acquiring new customers. If the number of customers is huge (online stores) comprehensive service is being realized by specialized organizations refers to the one stop e-commerce model. On behalf of the client, we accept deliveries to the warehouse, manages the stock, accepts orders from e-customers, packs parcels, prepares documents (receipts, invoices, waybills), handles returns and cooperates with carriers. One stop e-commerce model (5PL) assumes extensive support, both in the field of logistics, but also customer service, IT solutions, marketing activities, financial organization and accounting by one organization. This solution is very flexible, as a specialized operator is able to adapt to the volatility of demand depending on the needs. The operator of the one stop e-commerce model generates reports on its activities for the customer, such as sales volume, complaints, returns, etc. There are entities on the market (in addition to the aforementioned services) that undertake the repair, recycling or disposal of returned and advertised goods. This form of cooperation with one partner enables high

coordination of activities and communication between the parties thanks to the integration of processes in one place [Cywiński, 2021 p. 116].

Courier services and innovations

In its specificity, courier services include the transport of various groups of goods (loads) along with the service selected for them. Many imperfections in the operation of national postal entities contributed to the creation of a market niche that is currently occupied by specialized courier companies. In this case, the key factors are the time, quality of the service provided, convenience as well as the effectiveness and timely delivery of shipments, and everything has common denominator - innovations. Courier entities offer their clients national or global services, although they usually operate on a national basis. Couriers rely on a wide range of distribution networks and cargo transport broken down into bulky goods and smaller weight and limited size shipments. The system of operation is focused on reducing the time of delivery of parcels to a minimum. The main element of the courier service is delivering the parcel from the point of sending to the point of collection with a guarantee of service performance within a specified time. In addition, important elements are placing orders by phone or via the Internet, completing orders, processing returns, controlling the location of the shipment and collecting payments for the ordered goods. Since the establishment of the first entities offering courier services, express mail and parcels (SEP) the market is developing powerfully. Currently, operators place emphasis on development using new technologies and a high level of customer service. When carrying goods, couriers in addition to performing their tasks, also provide additional services, such as picking up the parcel directly from the sender. This is a very useful solution, because the distance from the sending point can be even several kilometers. The possibility of placing an order via the Internet has become a great help. This allows customers to be more convenient and time-saving and allows to monitor, locate and track the route of the cargo. Financial settlements were corrected (non-cash settlements). The interest in express and courier services in Poland appeared much later than in other countries, but it is developing very quickly. In 2015, the market of courier and express services in Poland reached the value of PLN² 4.5 billion. The following year brought an increase to PLN 5.1 billion, which accounted for 2% of the European market and had a huge impact on economic development. In 2019, the SEP market was reaching value in Poland over 7,9 billion PLN and 8,2 billion PLN in

² PLN is a polish value (1 USD – 4,37 PLN)

2021 [2;3]. Such a huge growth of the Polish market was caused by the constantly growing volume in the e-commerce market. Polish society is more and more willing to buy goods via the Internet, guided by the convenience of buying, a large selection of goods, better prices and flexibility of deliveries. This poses many challenges for the courier services industry. On the one hand, they have to meet the ever-growing volume of shipments, and on the other hand, the growing expectations of consumers. Such a situation leads to the need to implement various types of innovations (optimization of deliveries, use of drones, RFID technology, etc.). In addition to the currently known pick-up and drop-off points, alternative solutions are being tested, such as the possibility of leaving the parcel in a vehicle, garage or delivering it to individual points.

According to the data of the Office of Electronic Communications, almost 260 courier entities operate in Poland. On the top DPD with almost (26% market share) and InPost (Polish private operator – 18%) with Polish National Post Office (17% market share), UPS (12%), DHL (10%), GLS (9%) or FedEx (8%)[2; Eurostat] with a volume of 776 million shipments in 2021. The structure of the express and courier parcels industry in Poland is similar to the structure of Western European countries. It includes, among others SEP industry integrators with many years of experience and global reach (UPS, DHL, FedEx), carriers operating in the area of Europe (DPD, GLS), Polish Post Office as the national operator of postal items and also Poland private companies that provide services (Siódemka, InPost). The activities of the latter are aimed at accumulating the offers of several courier operators in order to facilitate access to them and enable price comparison. Almost half of all parcels in Poland are delivered in the B2C (Business to Customer) segment as part of e-commerce, and the percentage of Internet users buying online is growing year by year [6]. The courier services market is developing well and there is no indication that growth will collapse. It is one of the few industries on the market that has not experienced a downturn or a downturn in recent years. The dynamic development is affected by increasing the high popularity of mobile devices and apps. Consumers order goods at a convenient time for them and expect a quick execution of their orders. For logistics professionals, the high volatility of demand is very problematic. Nobody is referring to a trend or a classic seasonality for certain products, but on a large accumulation of orders on certain days. In addition, there is an accumulation of seasonal peaks (cultural, religious or occasional events), which are most often triggered by promotions. The requirements and expectations of customers regarding SEP services are characterized by a slightly different specificity compared to other sectors of the economy. Namely, SEP services must be tailored to the needs of both the seller and his client. For the sender, quality, reliability, system integration are important, and

for the recipient, convenience, flexibility and price are important. In addition, senders expect extended delivery times - ideally at the end of the business day, and customers expect flexibility with regard to delivery times [6]. This is due to the fact of looking for and finding innovative customer service solutions. Option of sending and collecting parcels outside the place of residence or work (PUDO system) it is convenient not only for customers but also for couriers. They can deliver more than one package to the address indicated, where someone is always available. Thus, the number of undelivered shipments is reduced. The number of consumer questions is also reduced, as each of them receives feedback on the status of the shipment. With the development of the off-site delivery network (out of home delivery – OHD) operators of the courier services market introduce further innovations. InPost implements the collection of shipments at a regulated temperature. Access to devices and points by more than one SEP operator is also developed, which allows for the expansion of the network and increased availability for customers like gas stations, shops, bakeries, even hairdressers. In the case of operators, it is associated with the need for system integration and generating an additional shipping label, which causes costs. The society quickly adapted to new solutions from the market. DHL has reorganized the parcel delivery system (On Demand Delivery – ODD). These are solutions that allow the recipient to change the place, term and date of receipt of the shipment or even transfer it to another person, change the method of delivery, even without a signature. Another way to deal with the last mile problem (final delivery to the recipient) is the use of customers' cars as mobile points. When ordering products, the customer indicates his vehicle as the place of delivery. The courier opens the trunk with a single-use digital key and places the parcel in it. Thanks to creativity and the implementation of innovations a large part of consumers used couriers (72%) [2]. New players with new business models are also entering the market based on the principles of operation in the sharing economy and services changing the idea of deliveries, using the potential of modern technologies and meeting the social trends of sharing and cooperation [Rouges and Montreuil, 2014]. The best example of crowdsourced delivery services is Uber, which in addition to transporting people, is developing goods delivery services. Undoubtedly, however, this business model will be conducive to the development of the service same day delivery. Currently, delivery systems with drone devices (DHL), autonomous vehicles (Amazon) or ground rail as mobile mailboxes are being tested.

There are many indications that the courier services market will continue to develop [Cywinski, 2021, p. 117]. Therefore, constant improvement of B2C services is required. The role of courier operators is no longer limited to ensuring a reliable and efficient supply chain. The quality of delivery is of great importance, where the courier entity directly affect the

position and image of the seller (customer experience). If the choice is not limited by anything, the convenience of purchasing becomes a necessity that determines the choice of the delivery option. In the case of the courier services market, where the operator acts as an intermediary between the seller and the buyer, innovations and their adaptation determine their further development.

Conclusions

In this article defines the basic logistics mechanisms on the courier services market. An analysis was made of the supply chain management in the arrangement of the fourth and fifth participant of the logistics provider (4PL, 5PL) which evolve in the supply market. The aspect of the internet consumer in the market analyzed in this work is characterized by a wide range of access to information. The disadvantage is the lack of anonymity, due to the fact that when making purchases on many sales platforms, you have to register and provide your personal data. The information presented about the specificity of the market functioning and its development tendency shows how the supplies industry quickly adapted to the changing conditions. This is evidenced by the number of users, the diversity of companies and the huge amount of articles available. Courier services market can be considered a young market in Poland, which grows in strength and developing dynamically along with the development of ICT technology. This means that he can use everything related to the Internet, thanks to which IT systems are able to adapt advertisements to an individual customer and reach the products he or she browsed. Over several decades, convincing a large number of people in Poland and the world to buy on the Internet is stunning. Likely that new instruments will emerge to support this trading model which is not only a place for shopping, but also creating new jobs, acquiring new contacts, perceiving new brands and creating a future

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