

TECHNICAL AND ECONOMIC CHARACTERISTICS OF POSTAL COMMUNICATION TODAY

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ABSTRACT

Postal services play a fundamental role in each nation, because of the double impact they generate from a social and economic point of view. Postal services are changing daily in the conditions of Fourth Industrial Revolution. The Fourth Industrial Revolution is a new era in the economic development because of the explosiveness of the technologies development. In this era technology is no longer an enabler, but a business driver. The growth of the internet, mobiles and communication technology has added a different dimension to postal market. The main focus of this article is to discuss the impact of the Fourth Industrial Revolution on postal services. New digital technologies is having a strong influence on the way postal operators are functioning and providing services and will continue to have greater impact in the future. The extend to witch different postal operators are using digital means vary widely and their potential is still far from fully exploited.

Keywords: Postal Services, Postal Sector, Fourth Industrial Revolution, Information and Communication Technology

INTRODUCTION

The Fourth Industrial Revolution is the developing environment in which technologies such as the Internet of Things (IoT), robotics, virtual reality and artificial intelligence are changing fundamentally the way people live, do business and related one to other. The Fourth Industrial Revolution is a new era in the economic development because of the explosiveness of the technologies development. The distinctive features of the Fourth Industrial Revolution are the speed of technological breakthroughs, the pervasiveness of scope and the tremendous impact of new systems (Sung Hyun Park, Wan Seon Shin, Young Hyun Park & Youngjo Lee, 2017). The First Industrial Revolution used water and steam power to mechanize production. The Second Industrial Revolution used electric power to create mass production. The Third Industrial Revolution used electronics and information technologies to automate production. Now, a Fourth Industrial Revolution is characterized by a fusion of

technologies that is blurring the lines between the physical, digital, and biological spheres (Schwab, 2015). Postal services are widely recognized as playing an important role within society. The postal services are a vital component of countries economic and communications infrastructure and they are an essential instrument for communication and trade. Over the last few years increasing attention has been given by both researchers and practitioners as to how technologies can have an impact on postal services development. Technology is no longer an enabler, but a business driver. The growth of the internet, mobiles and communication technology has added a different dimension to postal market (Ankrah, 2015). Hence, this article is focused on the impact of the Fourth Industrial Revolution on postal services.

ROLE AND CHARACTERISTICS OF POSTAL SERVICES

Postal services play a fundamental role in each nation, because of the double impact they generate from a social and economic point of view. Postal services are changing daily. During the last decades a number of important postal market developments have taken place. Now, postal industry lies at the crossroads of four markets important for economic development: communications, advertising, transportation (including logistics) and financial services markets (Fig. 1). The vitality and economic role of the postal sector in the future must develop in harmony with these closely related markets. In a rapidly changing world, the role that postal services play in ensuring the right to communication through the exchange of messages, the transport of parcels or the sending of money is now more relevant than ever. Postal services are vital to e-commerce development, ensuring the delivery of millions of parcels daily. Postal services play an essential role in the development of trade, especially for small and medium enterprises. In addition, over 1.5 billion people around the world have access to financial services via the post office (Universal Postal Union, 2017). Postal sector is an essential infrastructure that facilitates the functioning of the global economy. The sector has the largest integrated distribution network in the world and can physically connect everyone around the world. On the other hand postal electronic network enables postal operators to play a key role in e-commerce. Finally, the postal sector is the second largest contributor to financial inclusion. In many countries the postal network is the largest network in the rural areas and it ensures the provision of financial, communication, logistics and other retail and government services.

At the same time postal industry is one of the largest employers in many countries. The main characteristics of postal services can be summarized as follows: Postal services are services that involve collection, transportation, and delivery of all Types of letters, documents, printed matter (books, newspapers and periodicals), and parcels by all types of public and private operators.

Postal services are services of general economic interest (more specifically Universal postal service (UPS)).

Postal services are an essential instrument for communication and information exchange.

Postal services promote social, economic and territorial cohesion.

UPS is a set of postal services, which is provided regularly (during all working days, at least 5 days a week) within fixed working time, with definite quantity and at affordable prices, and is accessible for every user at the territory of the country regardless of his place of residence.

Time element has great significance in postal services marketing.

Postal services are built around four core activities – collection, transport, sorting and delivery. These activities are traditionally labour intensive.

Contemporary understanding of postal services (especially courier services) defines them as a type of logistics services.

Postal services demand has high degree of fluctuations.

The postal services are composed of a number of "partial" services that are temporally and spatially arranged to fulfill their ultimate purpose. In relation to their quality, the above means that it is formed as a kind of synthesis (sum) of the quality characteristics of the composite services and their optimal spatial and temporal ordering.

The provision and consumption of the postal service takes place as a unified time and space process, which in relation to its quality means that it cannot be assessed at the time of sale (purchase). The customer "buys a promise of a subsequent service" and takes a certain dose of risk.

Postal services are personalized services. They result from the interaction between two or more subjects. In terms of quality, this means that it depends to a great extent on the human factor (contact staff, back office employees, dispatchers, and customers).

A postal service is a complex and varied service both from the point of view of operators and consumers. It is a variable, integrated service and, last but not least, is an information rich service. This is what makes the postal services sector particularly suited to the application of modern Information and Communication Technology (ICT) achievements.

The use of ICT is a source of efficiency in delivering postal services. For example, customers in a self-service situation do a certain job, which increases the efficiency of the process, saving labor costs for the organization providing postal services.

Postal services are characterized by high flexibility and orientation to the specific needs of consumers. Compliance with customer requirements refers to the necessity and the possibility of changing the service in order to meet the requirements and meet the needs of each individual customer.

Postal services are services with a low level of customer contact, which determines the expected high efficiency of the service delivery process. However, customers play a significant role in the service delivery, thanks to the capabilities of modern technology, enabling traceability, changing the direction of movement, etc. □ Postal services are a combination of physical sites and services. Therefore, service satisfaction can be said to be the sum of the satisfaction of the individual elements or attributes of all the services that form the service.

FOURTH INDUSTRIAL REVOLUTION AND ITS IMPACT ON POSTAL SERVICES

The Fourth Industrial Revolution is defined as a range of new technologies combining the physical, digital and virtual worlds. It is characterized by its higher levels of automation and data exchange.

The main characteristics of the Fourth Industrial Revolution can be summarized as follows:

Humans, devices and systems are connected along the entire value chain;

Other technological advances that speed up the whole postal process in Radio-Frequency Identification (RFID). The RFID enables faster remote processing. RFID is a generic term that is used to describe a system that transmits the identity of an object or person wirelessly, using radio waves. Some areas of RFID applications in the postal sector are: item tracking; autosorting and tracking for delivery; control of delivery and collection of postal items from post boxes; management and supervision; personnel and people monitoring. The usage of RFID systems in the postal sector can bring significant savings and competitive advantages while enhancing the quality of operations. One of the most important applications of RFID in the postal sector is for traffic and quality management. The possibilities of using RFID technology are practically limitless. The application of RFID improves and optimizes the engagement of the workforce, increases the efficiency of the supply system and reduces human errors and frauds and finally what is most important, it could bring significant savings (Švadlenka, Dobrodolac & Blagojević, 2016). Self-service postal lockers offer 24/7 access, making deliveries more efficient by avoiding failing delivery attempts and realizing delivery cost savings. Postal lockers, autonomous containers that can be used to either receive or send a postal item, are among the several popular alternative solutions customers can select to manage their online shopping deliveries or dispatches.

For postal operators, investment in postal lockers can reduce costs in the logistics chain, increased delivery efficiency and generate new market opportunities.

CONCLUSION

The postal sector has embraced innovation in order to respond to the rapid evolution of consumer needs and to remain competitive in the conditions of Fourth Industrial Revolution. Postal operators have to make significant efforts to adapt their organizational process to digital business. Technologies will become more and more important for postal services. The new digital means are not able to substitute the physical delivery but they can enhance the process efficiency and flexibility, and reduce the transaction cost. New digital technologies is having a strong influence on the way postal operators are functioning and providing services and will continue to have greater impact in the future. The extend to witch different postal operators are using digital means vary widely and their potential is still far from fully exploited.

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