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QUALITY OF UNIVERSAL POSTAL SERVICE IN BULGARIA

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Abstract: *Postal services around the world play a critical, daily role in keeping countries, economies, and people connected. The world has changed dramatically over the last decade: digitization has fundamentally altered how people communicate and do business. This has caused a major structural shift in the postal industry: letter items volume has declined, e-commerce has boosted the parcels volume, and competition has intensified as the postal markets are liberalized. The impact of information and communication technologies (ICT), competition, liberalization and the demand of user for better and more reliable postal services have had a major impact on the postal sector and particularly on the segment of Universal Postal Service (UPS). In an increasingly competitive environment quality of service (QoS) is the only weapon which UPS operators can successfully use to face with the challenges of growing competitive, sensitive and very demanding market.*

The European Postal Directives aim at improving quality of postal service and to foster the establishment of the internal market for postal services by providing QoS rules and regulations. These are generally defined as minimum requirements for the provision of UPS. However, except for intra-Community cross-border transit time objectives within the Postal Directives there is no precise specification of these rules. Hence, present paper discusses the process of liberalization of the Bulgarian UPS market, the scope of the UPS obligations and the level of competition and concentration. The second part of the paper focuses on QoS objectives set in Bulgaria. An analysis of quality of UPS with regard to timely delivery of postal items as well as on the number and category of customer complaints is made. The result of the study shows that quality of UPS in Bulgaria is low and under the average level of European Union Member States. UPS providers should make a strong commitment to collect and deliver every single shipment, on time, and with accordance with the prior agreement. The recent changes in demand of UPS in Bulgaria due to competition and changes in customers' preferences have to be taken into account when the scope and depth of QoS regulation is reconsidered.

Keywords: *Universal Postal Service, Postal Services Market, Quality of UPS, Liberalization, Competition and Concentration*

INTRODUCTION

Postal services have a significant role in the economic development of all countries. Postal services around the world play a critical, daily role in keeping countries, economies, and people connected. In Europe, postal industry employs more than 2 million people and connects more than 800 million people daily. At the same time postal sector generates turnover of more than 150 billion euros and about 1% of the European Union Gross Domestic Product (EU Commission, 2018). According to the European Commission, postal services play a key role in an effective and dynamic European Union (EU) Single Market and they are of crucial importance to businesses and EU citizens alike.

The role of postal services has fundamentally changed over the past decades. Global trends such as the development of e-commerce, the increasing role of small and medium enterprises (SMEs), higher activity of exporters, the rise of electronic communications, increasing competition and higher users' demands have reshaped the postal industry (Pilinkienė et al., 2017).

The world has changed dramatically over the last decade: digitization has fundamentally altered how people communicate and do business. This has caused a major structural shift in the postal industry: letter items volume has declined, e-commerce has boosted the parcels volume, and competition has intensified as the postal markets are liberalized. These tendencies require a different postal infrastructure, different skills and patterns of employment for employees, as well as different strategies of postal operators.

During the time of significant structural changes the postal industry continues to sustain growth. Total postal industry revenue reached €425,3 billion in 2016, up €1,2 billion on 2015 results (International Post Corporation, 2017).

All over Europe, national postal operators (the providers of UPS) are facing two major challenges: declining letter items volumes and electronic substitution on the one hand, and increasing competition from private operators on the other hand (Dieke, Junk & Thiele, 2011).

In an increasingly competitive environment quality of service is the only weapon which postal operators can successfully use to face with the challenges of growing competitive, sensitive and very demanding market.

Hence, the aim of this work is to analyze to quality of UPS in Bulgaria in the conditions of fully liberalized postal market.

The paper has four sections. The section one discusses the process of liberalization of the European Postal Market. The section two presents the Postal Reform in Bulgaria. In addition, an analysis of the level of competition and concentration in Bulgarian UPS market is made. Section three is devoted on the scope of UPS in Bulgarian. The objective of the section is to provide an overview of the scope of UPS, current changes to the UPS and liberalization experiences of postal markets in other countries as postal service competition increases.

In the section four an analysis of quality of UPS with regard to timely delivery of postal items as well as on the number and category of customer complaints is made.

LIBERALIZATION OF THE EUROPEAN POSTAL MARKET

Today the total postal market is considered to embrace the 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 (Dieke, James & Campbel, 2003). The total postal services market comprises two main categories of services: Universal Postal Service and non-UPS.

UPS is defined as a service of General Economic Interest and represents a set of postal services which is provided constantly within certain working time with quality complying with the norms, at affordable prices and possibility for its use by every consumer on the territory of the country, irrespective from his/her geographic location. The operators of UPS are obliged to provide it on all working days, at least 5 days a week with the exception of the rural areas. As services of General Economic Interest, postal services are economic activities that public authorities identify as being of particular importance to citizens and that would not be supplied (or would be supplied under different conditions) if there were no public intervention.

On the international level, UPS is regulated by the Universal Postal Union Acts and European Postal Directives (Postal Directives 1997/67/EC, 2002/39/EC and 2008/6/EC). According to the Postal Directives UPS includes:

- clearance, sorting, transport and distribution of domestic and international letter items up to 2kg;
- clearance, sorting, transport and distribution of domestic parcels up to 10 kg;
- clearance, sorting, transport and distribution of international parcels up to 20 kg;
- services for registered items and insured items.

Non-UPS include large parcel services, express delivery services, delivery of unaddressed advertisements and document exchanges, postal money orders.

In many countries access to postal service is regulated and the Universal Service Obligation (USO) ensures that any consumer throughout the country has access to a minimum service level. Often the universal service is provided by the incumbent and dominant firm, which is the current or former state monopolist (Beschorner, 2012).

The process of liberalization of the European Postal Market was in form of stepwise reduction of the monopoly in the postal sector (Otsetova & Dudin, 2017).

The launched process of transformation resulted in the adoption of so called Postal Directives. The Postal Directives:

- define the minimum characteristics of the UPS to be guaranteed by each EU country on its territory;
- fully open the sector to competition;
- lay down the principles to govern the authorisation/licensing of postal services;
- define the tariff principles applicable to the UPS as well as the transparency of the accounts of the universal service providers;
- govern the setting of quality of service standards for national and intra-EU cross-border services and requires that EU countries do the same at national level;
- confirm the mechanisms to encourage technical harmonisation in the postal sector;
- establishe complaints procedures for all users of postal services;
- require the creation of national regulatory authorities that are independent of postal operators;
- establishe rules for the financing of any net cost of the UPS in the event that a net cost arises and represents an unfair financial burden;
- foresee regular Application Reports to the European Parliament and the Council on the implementation of the Postal Services Directives (European Commission, 2017).

Taking into account that the establishment of the internal market in the postal sector is of proven importance for the economic and social cohesion of the Community, and that postal services are an essential instrument of communication and trade, the Postal Directive 1997/67/EC aimed to ensure the gradual and controlled liberalization of the market. So called First Postal Directive sets a minimum UPS scope, guaranteed by Member States, at the same time it determined which postal services can be reserved for the universal service provider, in order to maintain the sustainability of UPS. The so-called reserved sector included the letter items under 350 gr. This Directive also defines minimum requirements regarding the UPS scope, accessibility, frequency of collection and delivery, quality and price (Directive 1997/67/EC). Additionally, Directive 1997/67/EC determines a timetable for further liberalization, principles that govern the authorization/licensing of non-reserved services, requirements for the creation of national regulatory authorities independent of the postal operators. Within the framework of this Directive, Member States had considerable freedom in adopting country specific postal policies.

The dimensions of USO are summarized in *Fig. 1*.

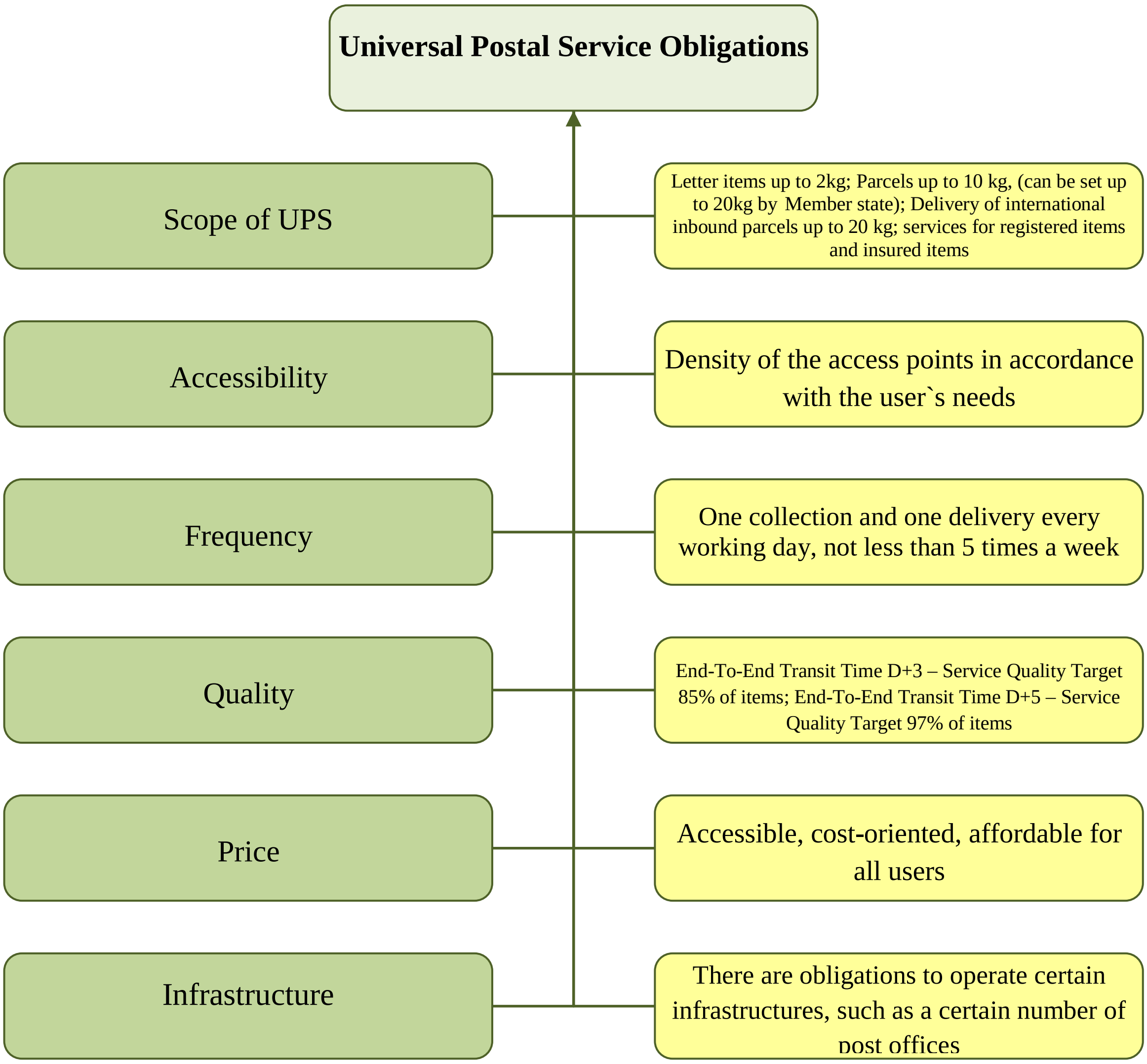

Fig. 1. Universal Postal Obligations (Directive 97/67/EC)

The aim of the Second Postal Directive (2002/39/EC) was to ensure the further opening to competition of postal market. According to the Directive the Member States may continue to reserve services to universal service provider(s), but they have to reduce the price and weight limits for the reserved sector. According to the Directive, Member States must open to competition items of correspondence weighing less than 100 gr from January 1, 2003, and items weighing less than 50 gr from January 1, 2006.

The aim of the Second Postal Directive was the reducing of the scope of the monopoly of national postal operators (*Fig. 2*).

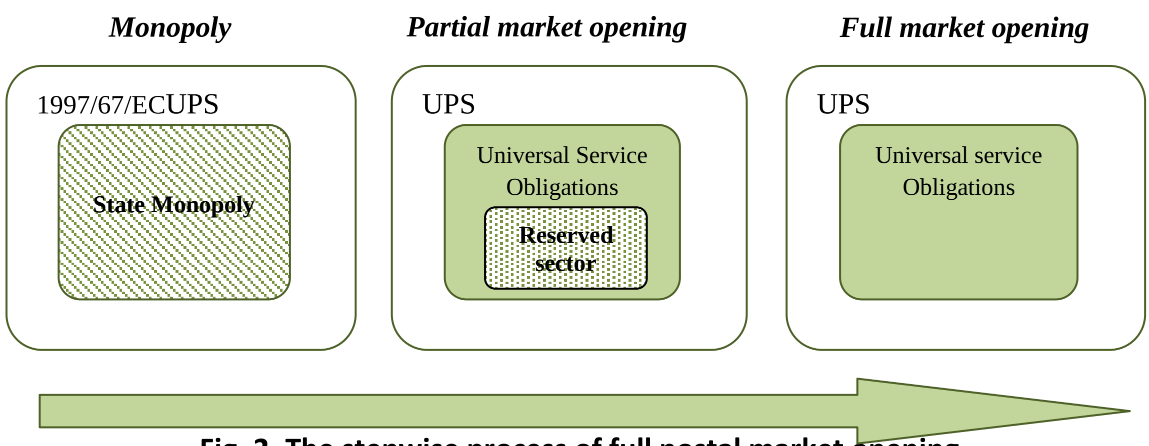

Fig. 2. The stepwise process of full postal market opening

The Third Postal Services Directive (2008/6/EC) introduced the legal basis for the accomplishment of the internal market for postal services by providing the last legislative step in the process of gradual market opening. It sets a deadline for full market opening of 31 December 2010 for 16 Member States (Austria, Belgium, Bulgaria, Denmark, Estonia, Finland, France, Germany, Ireland, Italy, Netherlands, Portugal, Slovenia, Spain, Sweden, UK) and 31 December 2012 for the remaining 11 Member States (Cyprus, Czech Republic, Greece, Hungary, Latvia, Lithuania, Luxembourg, Malta, Poland, Romania and Slovakia) (Directive 2008/6/EC) (*Fig. 3*).

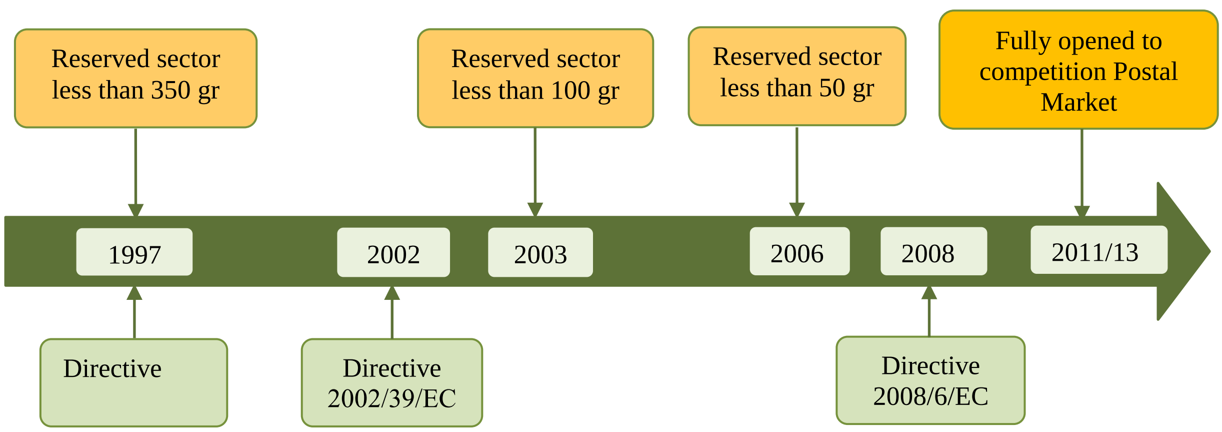

Fig. 3. EU postal reform

The development in the legal framework of the postal sector can be understood in terms of regulation, liberalization, and privatization:

- Regulation is the entirety of legal constraints on economic activity in the sector. The postal sector is characterized by a dense regulatory framework. Regulations may be concerned with fair competition, and be targeted to all operators in the sector (market regulation). Alternatively, regulations may focus on correcting market failures by providing a socially desired level of service quality or redistribution. This second kind of intervention is often integrated as part of USO, which have long been the main motivation for establishing state monopolies (reserved sector).
- Liberalization is the abolishment of reserved sector and the opening of markets for new operators.
- Privatization is the process of transferring ownership of a postal operator from the public sector (government-owned) to the private sector (Jaag, 2014).

The maim goals of privatization of UPS postal operators can be summarized as: enhance profitability and end or limit subsidies; promote efficiency of operations; enable the postal operators to respond faster to market changes.

Figure 3 presents the Universal Postal Service Provision Model, based on two criteria: the ownership of the Universal Service Provider and the degree of liberalization of the postal market.

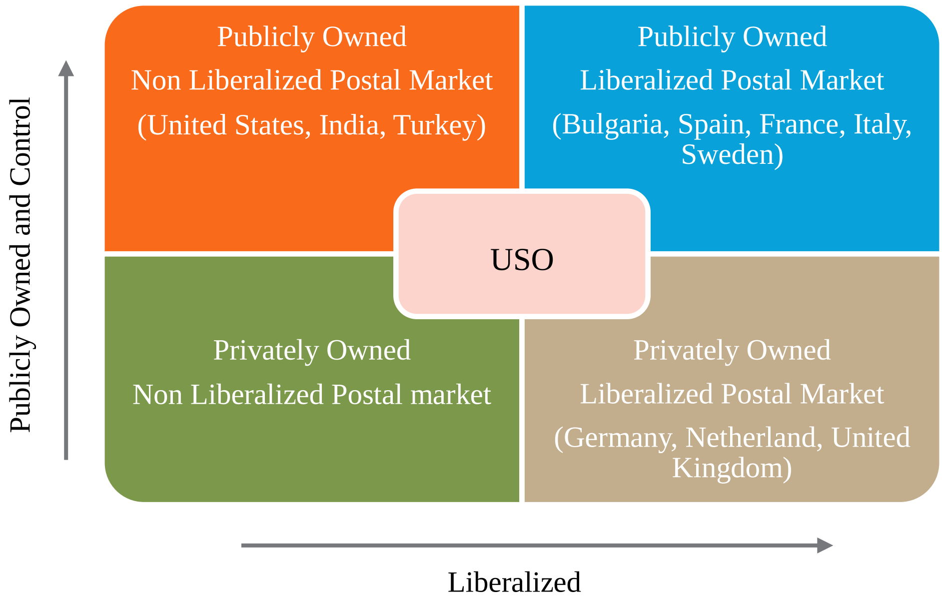

Fig. 3. Universal postal service provision models (adapted by Khazabi, 2016)

According to the previous research the liberalized private markets offer the most competitive postal environment. In this situation the UPS operators provide their universal service on very successful commercial terms. The operators have used their commercial flexibility to modernize their sorting and transportation networks as well as their post office networks. As a result, their cost structure has become more flexible, allowing them to respond to changing market conditions. Non-liberalized private markets are rarely seen in practice (Khazabi, 2016).

POSTAL REFORM IN BULGARIA

The main steps in the process of liberalization of Bulgarian Postal Market are presented in *Fig. 4.*

During the period from 1997 to 2006 the UPS in the country was provided by the incumbent operator Bulgarian Posts. UPS has been provided as a state monopoly. The reservable area is defined as "*the clearing, sorting, transport and delivery of items of domestic and cross-border correspondence, the price of which is less than 5 times the public tariff for an item of correspondence in the first weight step of the fastest standard category where such category exists, provided that they weigh less than 350 gr"* (Directive 1997/67/EC).

In connection with the joining of Bulgaria to the European Union on 01.01.2007, amendments of the Postal Service Act have been adopted in the beginning of 2006, aimed at completing the transposition of the Second Postal Directive. On January 1, 2006, the reserved sector in Bulgaria has been reduced (from 350 gm to 150 gm). Two private operators (Tip Top Courier and Econt Express) have entered the UPS market. Thus the domestic users of UPS for the first time had the possibility to choose between the services of the incumbent postal operator Bulgarian Posts and two more alternative operators. By the end of 2006 Bulgarian Posts performs around 96% of the services from the scope of UPS. From January 1, 2007, with the adopted amendments of the Postal Services Act, the limits for weight for the services in the reserved sector are reduced to 50 gr.

In 2008 there are four UPS operators – Bulgarian Posts, Tip Top Courier, Econt Express, M§BM Express. The market share of Bulgarian Posts in total revenue of UPS has fallen from 96% to 94%.

The development of Bulgarian Postal Sector during 2009 was affected by the preparation for elimination of state monopoly over a reserved sector of UPS.

The reserved sector was removed from the begging of 2011. The last remaining barriers to competition in Bulgaria were eliminated. Full liberalization is the last step in a more than decade long process in which postal market in Bulgaria have gradually been opened to competition.

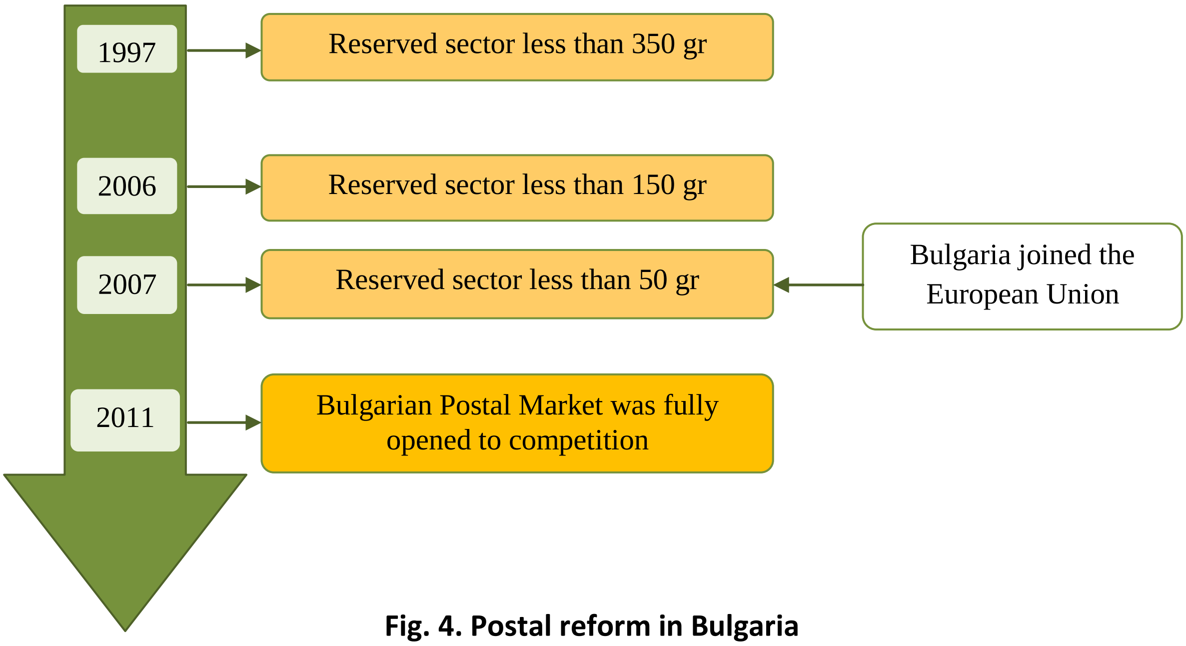

Fig. 4. Postal reform in Bulgaria

Bulgarian Postal Market was fully opened in 2011. As a state-owned enterprise structured as a corporate entity, Bulgarian Posts has the obligation to provide the UPS in Bulgaria, in fully liberalized postal market. The company provides UPS on the territory of the whole country, including rural areas, with a certain quality level and at accessible prices.

Universal services are partially funded by the Bulgarian government when the USO results in net costs and represents an unfair financial burden for it. By the end of 2016, Bulgarian Posts operates a postal network of 2981 offices and a workforce of 10508 employees 72,3% of which are full-time.

From the beginning of 2011 the competition in services within the scope of UPS has been gradually grow. After the reserved area advantage was removed, the market share of Bulgarian Posts (incumbent operator) continues to decline (*Fig. 5*).

In 2012 Bulgarian Posts retained its leading position, but it lost a significant share – about 7%.

During 2013, as a result of the removal of reserved sector in UPS market and competition development, the market share of the Bulgarian incumbent operator decreased by 16% while the Econt Express gained a market share of 19%.

In 2014 Bulgarian Posts continued to lose its market position and its share decreased by 7% compare to the previous year. For a second year, the next largest player in UPS segment was Econt Express. With a growth of 11%, the postal operator gained a market share of 30%.

In 2014 the seven postal operators (including Bulgarian Posts) provide services within the scope in UPS.

In 2015 the new entrant Speedy reported activity and revenue from services provided within the scope of UPS, but together with Star Post and Tip-Top Courier they constitute a market share of 1 %.

In 2016 Bulgarian Posts lost another 11%. The market power of leading competitor Econt Express was increased by 10%. The so called "*Others*" operators gained market share of 2%.

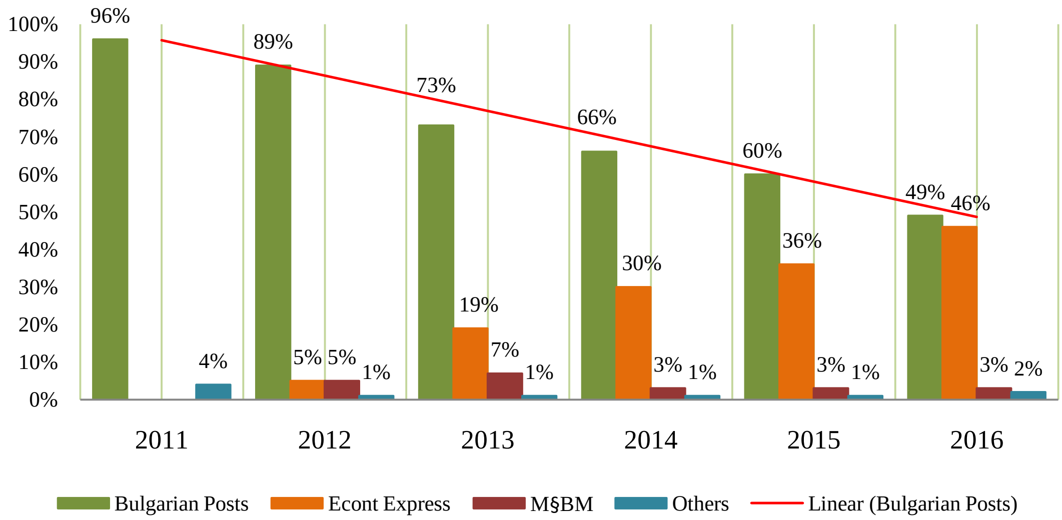

Fig. 5. Market shares of UPS postal operators in Bulgaria

The national postal operator Bulgarian Posts has an obligation to provide all services within the scope of UPS on the entire territory of the country. The other companies (Econt Express, Tip-Top Courier, M&BM Express, Star Post, Terra Post Services and Speedy) have licenses for provision of services within the scope of UPS on the part of the territory of the country.

In the context of increasing competition in the UPS market in Bulgaria, one of the important issues is a question of market power and market concentration as a specific indicator of market power (Otsetova & Nedelchev, 2017).

The degree of competition and concentration in the Postal Services Market are usually assessed by two indexes – the Herfindahl-Hirschman Index (HHI) and the Concentration Ratio (CR).

The HHI is a statistical measure of concentration in the postal market and it indicates the competition between the postal operators. The HHI is calculated by squaring the market shares in present of all operators in a market, and then summing the squares, as follows:

$$HHI = \sum_{j=1}^{n} MSj \quad (1)$$

where MS_j represents the market share of operator *j* and there are *n* operators in the market.

Based on the HHI value, the market is determined as: normal competitive market with low level of concentration, relatively competitive market with average level of concentration and less competitive market with high level of concentration.

The HHI takes into account the relative size distribution of the postal operators. It approaches zero when a market is occupied by a large number of operators of relatively equal size and reaches its maximum of 10000 points when a market is controlled by a single operator. The HHI increases both as the number of postal operators in the market decreases and as the disparity in size between those operators increases (*Table 1*).

Table 2. Interpretation of HHI value

Market definition according to HHI value	*General Interpretation*
Highly competitive	HHI<100
Is not concentrated	100<HHI<1000
It is moderately concentrated	1000<HHI<2000
Highly concentrated	HHI>2000

The CR is the ratio of the combined market shares of a given number of operators to the whole market size, as follows:

$$CRk = \sum_{i=1}^{k} MSi \quad (2)$$

where MS_i represents the market share of operator *i* and there are *k* operators with the largest market share, usually *k=3 or k=4.*

The most common concentration ratios are the CR_3 and the CR_4, which means the market share of the tree and the four largest postal operators. Concentration ratios are usually used to show the extent of market control of the largest operators in the postal industry (*Table 2*).

A value of CR close to 0% means perfect competition, excellent conditions for competing, i.e. the largest operators do not have any significant market power. A value below 40% means effective competition and low concentration in the market. A value below 70%

means medium concentration. A value above 70% means high concentration (Pilinkienė et al., 2017).

Table 2. Interpretation of CR value

Market definition according to CR value	*General Interpretation*
Highly competitive	CR3=0
Is not concentrated	CR3<40; CR4<50
It is moderately concentrated	40<CR3<70; 50<CR4<85
Highly concentrated	CR3>70; CR4>85

Figure 6 presents the dynamics of HHI of Bulgarian UPS market. The results show that HHI was constantly decreasing but despite of increased competition in Bulgarian UPS market, the state of competition in this market segment is still relatively low and market is highly concentrated.

The CR value for 2016 is 98%, which means that four largest postal operators form 98% of total revenue of UPS. The value indicates that the UPS market in Bulgarian is highly concentrated.

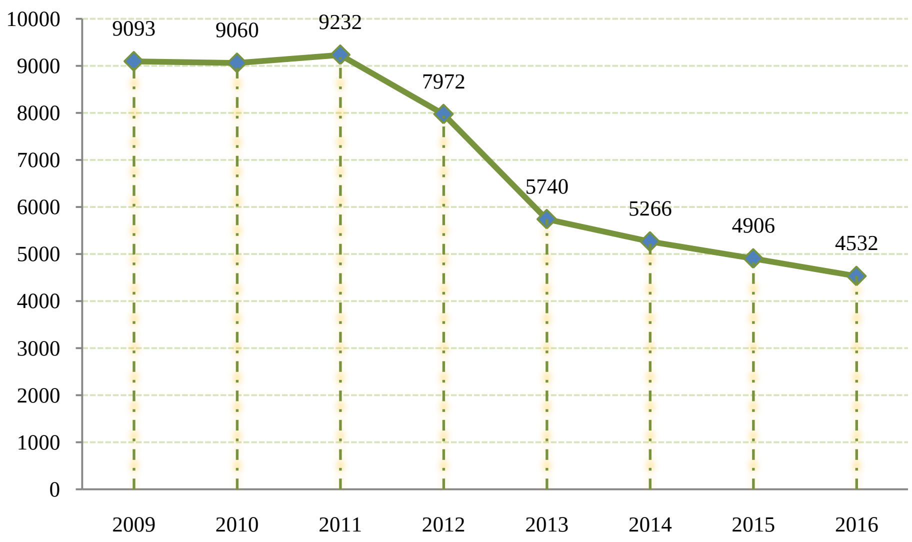

Fig 6. Values of HHI of Bulgarian UPS market

According to the Annual report of the Communications Regulation Commission for 2016, the incumbent operator had generated:

- 86% of the revenues from the service “clearance, sorting, transport and distribution of domestic letter items up to 2kg”;
- 92% of the revenues from the service “clearance, sorting, transport and distribution of books, newspapers and periodicals up to 5 kg”;
- 98% of the revenues from international services within the scope of UPS.

Econt Express is a leader in providing the domestic parcel services up to 20 kg – with a share of about 95% of the total revenues.

USO IN BULGARIA

Universal postal service is becoming more and more in the focus of interest of the postal stakeholders, especially in the European countries. Since the time of its definition, this principle of provision of services of general public interest, characteristic for postal and telecommunications services, has been the object of numerous discussions (Бонева, 2017; Димитрова, 2016; Pilinkienė et al., 2017; Khazabi, 2016; Crew & Kleindorfer, 2000; Valletti, 2000; Tockvov, 2015; Beschorner, 2012; Štefunko & Madleňák, 2016; Madleňák et at., 2016; Svadlenka & Salava, 2014; Madleňáková et al, 2018; Matúšková & Madleňáková, 2017; Pateiro-Rodríguez, 2016; Diallo & Tomek, 2015; Kolev & Stanev, 2017). Especially so, if this phenomenon is observed in the light of the development of ICT, normally causing the decrease of the volume of classic postal services (especially letter post items), and inevitably increasing the costs of service provision.

The universal postal service consists of the provision of basic postal services (essentially letters and light-weight parcels) subject to certain quality requirements: collection and delivery in the entire territory, at a stipulated frequency and at prices that are affordable and normally uniform throughout the territory. Providing this service normally also requires the existence of certain infrastructure, such as offices open to the public.

Table 3. Dynamics in the Scope of UPS in Bulgaria

Year	*Scope of UPS*
2006	1. Clearance, sorting, transport and distribution of domestic and international postal items as follows: • letter items up to 2 kg; • small packets up to 2 kg; • direct mail up to 2 kg; • printed matter (books, newspapers and periodicals) up to 5 kg; • secogrammes (postal service for blind and partially sighted people) up to 7 kg; 2. Clearance, sorting, transport and distribution of domestic and international parcels up to 10 kg; 3. Postal money orders; 4. Services for registered items and insured items. The services of the **reserved sector** include clearance, sorting, transport and distribution of domestic letter mail and of international outgoing and incoming letter items. As from 01.01.2006 the limits for weight and price of the services from the reserved sector are lowered to 150 grams and price, which does not exceed more than three times (but is not equal to three times) the price for a standard domestic or international priority item of correspondence up to 20 grams, applied by the incumbent postal operator.

2007, 2008	1. Clearance, sorting, transport and distribution of domestic and international postal items as follows: • letter items up to 2 kg; • small packets up to 2 kg; • direct mail up to 2 kg; • printed matter (books, newspapers and periodicals) up to 5 kg; • secogrammes (postal service for blind and partially sighted people) up to 7 kg; 2. Clearance, sorting, transport and distribution of domestic and international parcels up to 20 kg; 3. Postal money orders; 4. Services for registered items and insured items. The services of the **reserved sector** include clearance, sorting, transport and distribution of domestic letter mail and of international outgoing and incoming letter items. As from 01.01.2007 the limits for weight and price of the services from the reserved sector are lowered to 50 grams and price, which does not exceed more than three times (but is not equal to three times) the price for a standard domestic or international priority item of correspondence up to 20 grams, applied by the incumbent postal operator.
2009	1. Clearance, sorting, transport and distribution of domestic and international postal items as follows: • letter items up to 2 kg; • small packets up to 2 kg; • direct mail up to 2 kg; • printed matter (books, newspapers and periodicals) up to 5 kg; • secogrammes (postal service for blind and partially sighted people) up to 7 kg; 2. Clearance, sorting, transport and distribution of domestic and international parcels up to 20 kg; 3. Services for registered items and insured items. **Reserved sector** – less than 50gr.
2010	1. Clearance, sorting, transport and distribution of domestic and international postal items as follows: • items of correspondence (incl. postcards) up to 2 kg; • small packets up to 2 kg; • printed matter (books, newspapers and periodicals) up to 5 kg; • secogrammes (postal service for blind and partially sighted people) up to 7 kg; 2. Clearance, sorting, transport and distribution of domestic and international parcels up to 20 kg; 3. Services for registered items and insured items. **Reserved sector** – less than 50gr.
2011	1. Clearance, sorting, transport and distribution of domestic and international postal items as follows: • items of correspondence (incl. postcards) up to 2 kg; • small packets up to 2 kg; • printed matter (books, newspapers and periodicals) up to 5 kg; • secogrammes (postal service for blind and partially sighted people) up to 7 kg; 2. Clearance, sorting, transport and distribution of domestic and international parcels up to 20 kg; 3. Services for registered items and insured items. **Full removal of the state monopoly.**
2012, 2013, 2014, 2015, 2016	1. Clearance, sorting, transport and distribution of domestic and international postal items as follows: • items of correspondence (incl. postcards) up to 2 kg; • small packets up to 2 kg; • printed matter (books, newspapers and periodicals) up to 5 kg; • secogrammes (postal service for blind and partially sighted people) up to 7 kg; 2. Clearance, sorting, transport and distribution of domestic and international parcels up to 20 kg; 3. Services for registered items and insured items.

Based on the prescribed minimum requirements, Member States are allowed to adapt UPS in accordance with their national specifics (Otsetova & Nedelchev, 2017).

The changes in the scope of the UPS in Bulgaria are summarized in *Table 3*.

The service "postal money order" has been part of UPS till the end of 2008. In the beginning of 2010 the "direct mail" services has been removed from the scope of UPS.

The postal market in Bulgaria was fully opened for competition, by removing of reserved sector from January 1, 2011.

A comparative analysis between the scope of UPS in Bulgarian and other EU country shows that the scope of UPS in Bulgaria is one of the widest (*Table 4*).

Table 4. Scope of UPS in EU Member States

Country	Letter items	Books, newspapers and periodicals	Secogrammes	Small packets	Additional services	Parcels	Other services
Austria	up to 2 kg	up to 2 kg	up to 2 kg	up to 2 kg	registered, insured	up to 10 kg	No
Belgium	up to 2 kg	up to 2 kg	up to 2 kg	No	registered, insured	up to 10 kg	No
Bulgaria	up to 2 kg	up to 5 kg	more than 2 kg	up to 2 kg	registered, insured	up to 20 kg	No
Czech Republic	up to 2 kg	No	more than 2 kg	up to 2 kg	registered, insured	up to 10 kg	No
Cyprus	up to 2 kg	up to 2 kg	more than 2 kg	No	registered, insured	up to 20 kg	no
Croatia	up to 2 kg	No	up to 2 kg	up to 2 kg	registered, insured	up to 10 kg	No
Denmark	up to 2 kg	up to 2 kg	more than 2 kg	No	registered, insured	up to 20 kg	No
Finland	up to 2 kg	up to 2 kg	more than 2 kg	No	registered, insured	up to 10 kg	No
France	up to 2 kg	up to 2 kg	more than 2 kg	No	registered, insured	up to 20 kg	No
Germany	up to 2 kg	up to 2 kg	more than 2 kg	No	registered, insured	up to 20 kg	No
Greece	up to 2 kg	up to 2 kg	up to 2 kg	up to 2 kg	registered, insured	up to 20 kg	No
Hungary	up to 2 kg	up to 2 kg	more than 2 kg	No	registered, insured	up to 20 kg	Yes
Estonia	up to 2 kg	No	up to 2 kg	No	registered, insured	up to 20 kg	No
Ireland	up to 2 kg	up to 5 kg	more than 2 kg	up to 2 kg	registered, insured	up to 20 kg	Yes
Italy	up to 2 kg	up to 2 kg	up to 2 kg	up to 2 kg	registered, insured	up to 20 kg	Yes
Latvia	up to 2 kg	No	up to 2 kg	up to 2 kg	registered, insured	up to 10 kg	No
Lithuania	up to 2 kg	No	up to 2 kg	up to 2 kg	registered, insured	up to 10 kg	No
Luxembourg	up to 2 kg	No	more than 2 kg	No	registered, insured	up to 10 kg	No
Malta	up to 2 kg	up to 2 kg	up to 2 kg	up to 2 kg	registered, insured	up to 20 kg	No
Netherlands	up to 2 kg	No	up to 2 kg	No	registered, insured	up to 10 kg	No
Poland	up to 2 kg	No	more than 2 kg	No	registered, insured	up to 20 kg	No
Portugal	up to 2 kg	up to 2 kg	more than 2 kg	No	registered, insured	up to 20 kg	No
Romania	up to 2 kg	up to 2 kg	up to 2 kg	No	registered, insured	up to 10 kg	No
Spain	up to 2 kg	No	more than 2 kg	No	registered, insured	up to 10 kg	No
Slovenia	up to 2 kg	No	up to 2 kg	No	registered, insured	up to 10 kg	No
Slovakia	up to 2 kg	No	up to 2 kg	No	registered, insured	up to 10 kg	No
Sweden	up to 2 kg	up to 2 kg	more than 2 kg	up to 2 kg	registered, insured	up to 20 kg	No
United Kingdom	up to 2 kg	No	more than 2 kg	up to 2 kg	registered, insured	up to 20 kg	No

According to *Discussion paper on the implementation of Universal Service in the postal sector and the effects of recent changes in some countries on the scope of the USO* the following postal services within the scope of UPS in Bulgaria are provided at a loss:

- Single piece domestic letters (including registered mails);
- Single piece parcels;
- Items for blind (European Regulators Group for postal services, 2014).

The incumbent operator Bulgarian Posts lost 37% market share of the revenues of total postal market, and 47% market share of the revenue of UPS. The main reasons for the loss of the market share are the reduced volume from the UPS market segment (especially letter items) and the significant growth of the non-UPS generated by the competitive operators (*Table 5*).

Table 5. Revenues from UPS and non-UPS

Year	Total Postal Market	non-UPS		UPS	
		(*1000 BGN)	%	(*1000 BGN)	%
2005	125000	75000	60%	50000	40%
2006	166000	111220	67%	54780	33%
2007	206000	140080	68%	65920	32%
2008	248000	178560	72%	69440	28%
2009	226000	167240	74%	58760	26%
2010	237000	189600	80%	47400	20%
2011	231000	189420	82%	41580	18%
2012	245000	203350	83%	41650	17%
2013	258000	208980	81%	49020	19%
2014	301000	243810	81%	57190	19%
2015	315000	248850	79%	66150	21%
2016	399000	315210	79%	83790	21%

Source: Annual Reports of Communications Regulation Commission

For 2016 the volume of the postal market was about BGN 399 million and was formed by the revenues provided in UPS and non-UPS market segments. The volume of the postal services market represented an increase of 27% as compared to 2015. A driving force for the development of the postal market in recent years has been the services of the non-UPS segment, nevertheless, in 2016 the revenues from UPS services also marked a significant increase with growth of 27%, as compared to 2015. From 2010 there is a trend of a significant predominance of the share of non-UPS in the total market volume.

From the beginning of 2013 the revenues of UPS became to increase. The UPS sector registered a growth for the first time since the UPS market liberalization (01.01.2011). The main reason for this trend was the growth in postal parcels up to 20 kg. Despite of the registered growth in parcels, the leading role in formation the total volume of UPS continued to play the domestic and international postal items (items of correspondence up to 2 kg, small packets, and printed matters up to 5 kg) (*Fig. 7*).

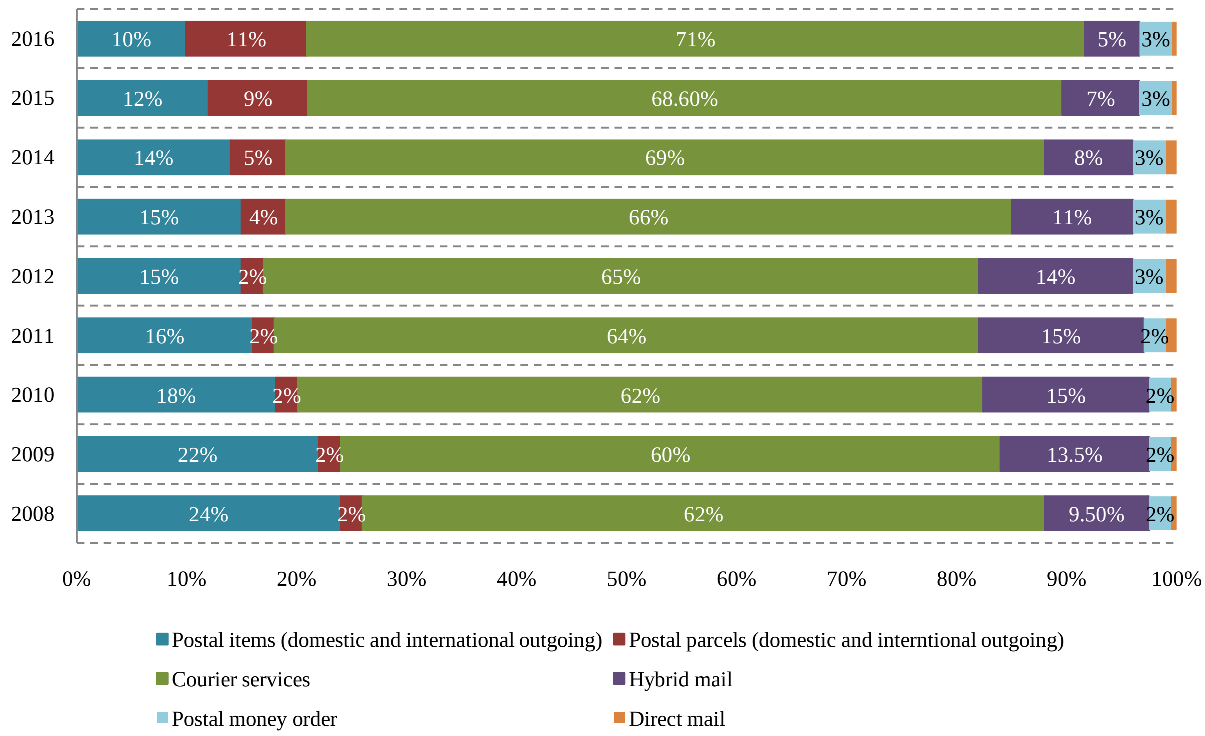

Fig. 7. Structure of the postal market in Bulgaria

Source: Annual Reports of Communications Regulation Commission

During 2014 the revenue from the parcels reported a steady growth, reaching 5% of the total market revenues, which represent 39% of UPS market revenues.

In 2015, as well as in 2016 the growth in revenues from services included in the UPS scope, was mainly due to the increase in revenues from accepted and delivered postal parcels up to 20 kg. According to Annual Report of Communication Regulation Commission for 2016, 40% of all revenues from parcels are formed from parcel items generated by e-commerce.

With letter items decline, postal operators in Bulgaria are turning their attention to e-commerce as an alternative source of revenues. Parcels services (courier services also) are increasingly becoming a promising business as more people shop online and need carriers to deliver their goods services.

Postal operators are an essential element of the e-commerce value chain. The digital era of communications provides unprecedented opportunities for postal operators to develop innovative solutions to deliver efficient and high-quality services.

Postal operators should leverage on the advancement of e-commerce with increasing benefits for consumers, SMEs, large businesses, and the economy as a whole. To succeed, postal operators must identify and address priority needs of the e-commerce market.

The dynamic growth of the express and parcels service segments in the context of the development of electronic commerce and the drop in traffic of the traditional postal items, made evident the need for an analysis of the users' needs. On the other hand it should be evaluated in depth whether all services within the scope of UPS in Bulgaria are still relevant.

QUALITY OF UPS IN BULGARIA

The First Postal Directive aims at improving quality of postal service, to foster the establishment of the internal market for postal services, to set the appropriate regulatory framework for this major reform and to allow postal operators to adapt to their changing commercial environment. To this end the Directive provides for Quality of Service (QoS) rules and regulations. These are generally defined as minimum requirements for the provision of UPS. However, except for intra-community cross-border transit time objectives within the Postal Directive there is no precise specification of these rules. This is left to the Mamber States. They have the opportunity to reflect their national characteristics and needs in setting national QoS objectives (Niederprüm, Hense & Kulenkampff, 2003).

The purpose of this study is to provide a review and analysis of the current QoS regulation and actual QoS performance on national level.

The QoS of UPS in Bulgaria comprises the following aspects:

- domestic and cross-border transit time;
- complaints and redress procedures;
- postal network density;
- frequency of collection and delivery (Postal Services Act, 2017).

QoS indicator for transit time is calculated as percentage of first class (or equivalent) postal items that UPS provider delivers on-time. The indicator is related to transit times in *(D + n)%* when *D* represents the date of deposit, and *n* represents the number of working days which elapse between the date of deposit *(D)* and date of delivery to the addressee. The indicator gives the percentage of postal items delivered on-time according to the National Performance Indicator.

The results of measurements of domestic and cross-border transit time of UPS in Bulgaria are presented in the text below.

The measurement results of the transit time of domestic unregistered priority postal items show a considerable decrease in the Service Quality, in particular for *D+1*, which significantly deviate from the target (*Table 6*).

Table 6. Transit time of domestic unregistered priority postal items

End-to-end Transit Time	Service Quality Target	2011	2012	2013	2014	2015	2016
D+1	**Not less than 80% of the postal items**	**68,2%**	**47,9%**	**50,7%**	**67,2%**	**71,4%**	**59,7%**
D+2	**Not less than 95% of the postal items**	**95%**	**72,8%**	**75,6%**	**90,3%**	**92,2%**	**86,1%**

In comparison with the other EU Member States, Bulgaria has one of the worst results in terms of domestic unregistered priority postal items delivered on-time (*Table 7*).

The quality standard for domestic postal items is achieved by all Member States except Bulgaria, Poland and Romania. The highest level is registered in Luxemburg, Slovenia and Netherlands. The result of Bulgaria (59,7%) is one of the lowest results compared to the other Member States.

Table 7. Percentage of domestic postal items delivered on-time in EU Member States (2016)

Member State	Result	Member State	Result
Austria	95,2	*Italy*	83,9
Belgium	90,9	*Latvia*	94,5
Bulgaria	59,7	*Lithuania*	83,1
Czech Republic	93,9	*Luxembourg*	99,6
Cyprus	90,0	*Malta*	93,6
Croatia	85,2	*Netherlands*	96,4
Denmark	93,0	*Poland*	59,2
Finland	82,0	*Portugal*	93,8
France	84,9	*Romania*	33,1
Germany	89,8	*Spain*	93,2
Greece	86,1	*Slovenia*	96,6
Hungary	90,0	*Slovakia*	95,5
Estonia	88,6	*Sweden*	91,2
Ireland	91,0	*United Kingdom*	93,1

Source: European Commission, Postal services, Postal statistics, https://ec.europa.eu/growth/sectors/postal-services/statistics_en

The results for the transit time of domestic unregistered non-priority postal items show that the set targets have been achieved and even exceeded (*Table 8*). It can be concluded that quality of domestic unregistered non-priority postal items is high and that the requirements are met.

Table 8. Transit time of domestic unregistered non-priority postal items

End-to-end Transit Time	Service Quality Target	2011	2012	2013	2014	2015	2016
D+2	Not less than 80% of the postal items	91,7%	93,3%	81%	87,3%	90,4%	95,8%
D+3	Not less than 95% of the postal items	99%	99,9%	90,4%	94,8%	97,1%	99,6%

The end-to-end time for international priority postal items is measured using the UNEX system, introduced by Bulgarian Posts since the beginning of 2008. In 2016 the system is applied by all postal operators obliged to provide UPS from the 28 EU Member States, as well as Iceland, Norway, Switzerland and Serbia.

UNEX system measures international priority letter mail service performance. The UNEX measurement was put in place by International Post Corporation Members in 1994 to work together towards cross-border letter mail service excellence. The measurement is end-to-end: from posting in the origin country to delivery to the final addressee in the destination country, including the time for collection, sorting and transportation.

Comparison of the results for a sex-year period shows that the trend towards incompliance with both target indicators continues, but the trend to slightly improvement of results, in particular for *D+3* also continues (*Table 9*).

Table 9. Transit time of international priority postal items (within Europe)

End-to-end Transit Time	Service Quality Target	2011	2012	2013	2014	2015	2016
D+3	Not less than 85% of the postal items	59,1%	56,3%	44%	32,7%	39,8%	44%
D+5	Not less than 97% of the postal items	89,7%	89,3%	81,9%	76%	81,9%	81%

At European Union level, the result from UNEX System measurements show that in 2016, an average 83,2% of letters were delivered within three days of posting and that 95,2% were delivered within five days. For the first time since 1998, these results have not reached the objectives set by Postal Directive 97/67/EC, which states that 85% of letter ittems have to be delivered within three days (*D+3*) and 97% within five days (*D+5*).

The 2016 results show that European postal operators continue to experience challenges in keeping the highest levels of letter ittems performance (International Post Corporation, 2016).

Concerning the transit time of non-priority postal items from geographical zones within Europe the analysis show better results, but the targets haven`t been achieved yet (*Table 10*).

Table 10. Transit time of international non-priority postal items (within Europe)

End-to-end Transit Time	Service Quality Target	2011	2012	2013	2014	2015	2016
D+5	Not less than 80% of the postal items	72,7%	75,8%	80,4%	71,8%	82%	79,4%
D+7	Not less than 95% of the postal items	91,3%	94%	97%	93,3%	96,4%	93,2%

The results show that parcels delivery met their respective objectives till 2015. During 2016 there is a significant decrease in QoS indicators (*Table 11*).

Table 11. Transit time of domestic postal parcels

End-to-end Transit Time	Service Quality Target	2011	2012	2013	2014	2015	2016
D+1	Not less than 80% of the postal items	90,3%	90,7%	89,7 %	92,6%	92,9%	53,2%
D+2	Not less than 95% of the postal items	99,3%	99,6%	99,5 %	99,8%	99,9%	92%

The National Postal Operator Bulgarian Posts has to improve postal service quality by turning results into action and viewing services, processes, and operations from a completely new perspective. The operator can use transit time data to successfully make data-driven decisions and improvements of postal services. One possible decision is to simplify collaboration in teams with ticketing and to-do systems in order to reduce response times and improve internal communication across the board. Further improvement of postal processes is possible by implementing new quality improvement projects and identifying room for additional measurements.

One of the important QoS aspects are user complaints and redress procedures. In the rapidly changing postal market effective complaint handling benefits both consumers and postal operators. It helps build better levels of customer trust and loyalty and limits negative publicity.

Acording to First Postal Directive "*Member States shall ensure that transparent, simple and inexpensive procedures are made available by all postal service providers for dealing with* *postal users' complaints, particularly in cases involving loss, theft, damage or non-compliance with service quality standards (including procedures for determining where responsibility lies in cases where more than one operator is involved), without prejudice to relevant international and national provisions on compensation schemes*" (Directive 97/67/EC).

The number of users complains (regarding UPS) in Bulgaria for six-years period is presented at *Fig.8*.

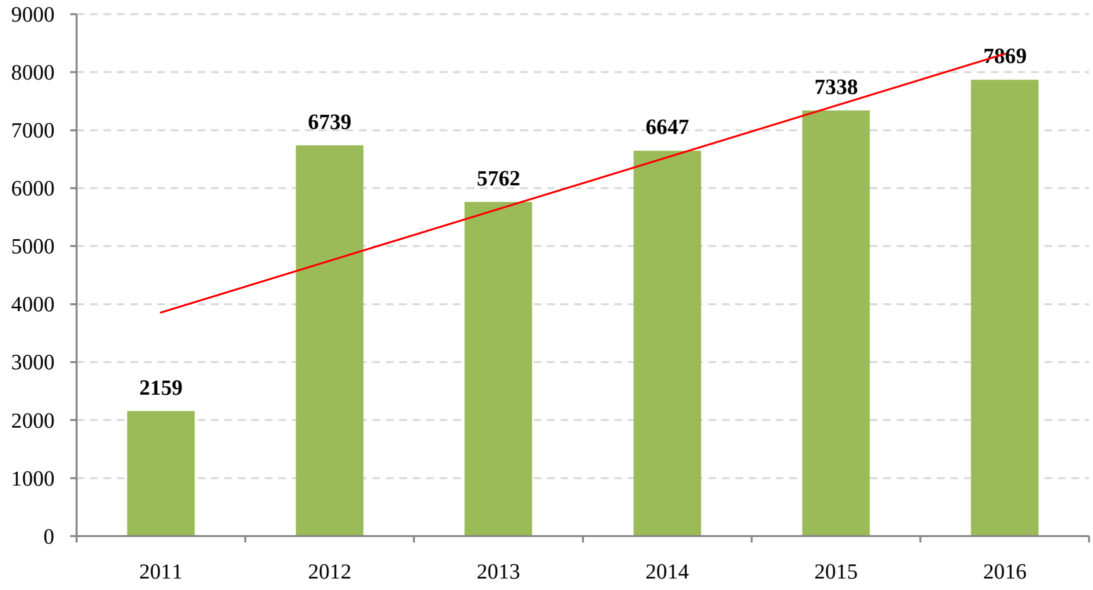

Fig. 8. Number of user complains from UPS in Bulgaria

The results show that the number of complaints increased dramatically. In 2016 the number of users complains are 3 times more as compared to 2011.

In the postal services sector, the relevance of customer analysis continues to grow, as provision of the service often requires interaction between the customer and the company's employees. Postal service failures are quite frequent in the Bulgarian postal industry, with the subsequent reduction in customer satisfaction and, on occasions, customer complaints. Thus, in a service failure context, to implement an adequate complaint management is crucial for UPS provider to reach higher levels of customer satisfaction.

Figure 9 presents complaints by reasons during 2016. The complaints for lost items formed 83% of all complaints. Complaints for delayed items take second place with 7%, follow by general complains (complaints based on a general dissatisfaction with the postal services).

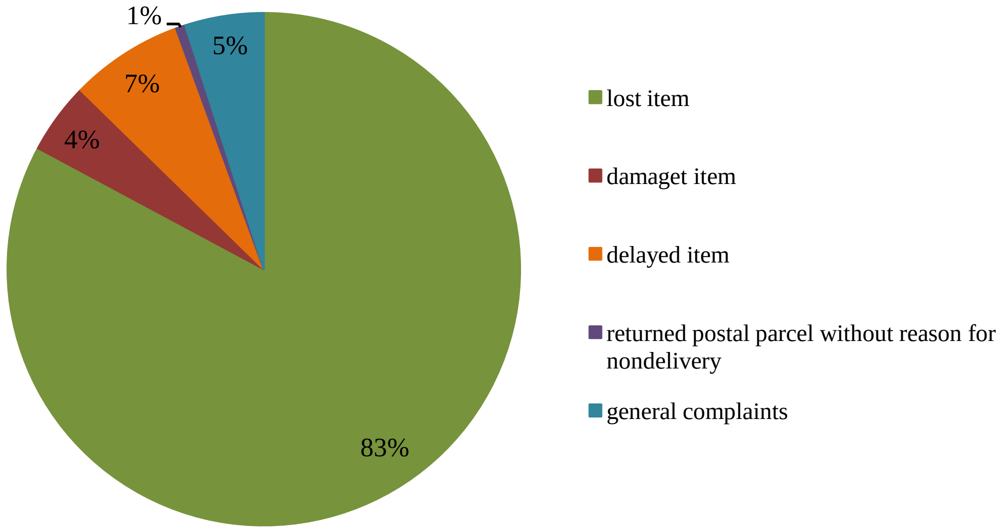

Fig. 9. Users complaints by reasons (2016)

The result of the study shows that quality of UPS in Bulgaria is low and under the average level of EU Member States. UPS provider should make a strong commitment to collect and deliver every single shipment, on time, and with accordance with the prior agreement. The most common problem in Bulgarian UPS market was with the lost items.

National UPS provider has to strive to differentiate themselves by highlighting its firm's relative strengths and by improving QoS. In the conditions of Forth Industrial Revolution, survival and success at the UPS market will depend on flexibility and effectiveness in all aspects of activities, including superiority over global competition at technology application to reduce expenses and dramatic improvement of service quality.

CONCLUSION

Based on this study following conclusions can be formulated:

- The results from the study show that the competition in UPS market in Bulgaria is still relatively low and market is highly concentrated. The four largest postal operators form 98% of total revenue of UPS.
- A conducted comparative analysis between the scope of UPS in Bulgarian and other EU country shows that the scope of UPS in Bulgaria is one of the widest. At the same time the incumbent operator Bulgarian Posts lost 37% market share of the revenues of total postal market, and 47% market share of the revenues of UPS. The main reasons for the loss of the market share are the reduced volume from the UPS

market segment (especially letter items) and the significant growth of the non-UPS generated by the competitive operators.

- National Postal Operator in Bulgaria has to turn its attention to e-commerce as an alternative source of revenues. The incumbent operator should leverage on the advancement of e-commerce with increasing benefits for consumers, SMEs, large businesses, and the economy as a whole. To succeed, postal operator must identify and address priority needs of the e-commerce market.
- For several reasons re-thinking, re-evaluating, and re-designing the USO in Bulgaria is appropriate. First, incumbent postal operator in Bulgaria competes not only with other postal operators, but also against other players operating different modes of conveyance. Second, with the rapid progress ICT the pressure on postal operator increases. At the same time ICT play an overall positive role for postal services and acts as an enabler and a driver for better services for consumers.
- The result of the study shows that quality of UPS in Bulgaria is low and under the average level of EU Member States. The National Postal Operator (Bulgarian Posts) has to improve postal service quality by turning results into action and viewing services, processes, and operations from a completely new perspective. The operator can use transit time data to successfully make data-driven decisions and improvements of postal services. One possible decision is to simplify collaboration in teams with ticketing and to-do systems in order to reduce response times and improve internal communication across the board. Further improvement of postal processes is possible by implementing new quality improvement projects and identifying room for additional measurements.

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