INFRASTRUCTURE CHARGES LEVIED IN AIR TRANSPORTION – CURRENT ISSUES AND PERSPECTIVES

Prof. Christina NIKOLOVA, PhD
Department of Economics of Transport and Energy, UNWE
E-mail: hrnikolova@unwe.bg

Abstract: *The paper reviews the progress achieved so far in terms of applying the major principles of levying infrastructure charges in air transportation by analysing the charge rates in the country for access to airports and for air navigation services. It also comments on some problems arising in result of applying the current charge rates and suggests possible solutions. The author of the paper conducts a SWOT analysis that summarises the opportunities for improving charge rates and the immediate benefits which could be obtained as a result of using those opportunities in applying infrastructure charges in air transportation.*

Key words: *infrastructure charges; airport charges; air navigation charges; air transportation.*

JEL: *R48, R53, L93*

Introduction

Implemented policy in terms of airport infrastructure development aims at establishing fair conditions for competition between airports in the EU by maximizing the exploitation efficiency of those entities and the sector in general. On the one hand, infrastructure charges in air transportation are an essential element of the costs incurred by airport users since they amount to 14.4% of their exploitation costs (Clarkson, Cazan, & Crome, 2017). Furthermore, the involvement of the private sector in the exploitation and management of airport has been growing, although they are still public property in most of the EU members-states, yet in both cases it is in the best interest of airport owners and managing bodies to maximize the profits generated from providing airport services. In addition, public authorities often tend to support

measures for increasing the charges levied by airports which are undergoing privatization or concession procedures and thus gain higher revenue.

Within this context, the paper analyses the development of the system of infrastructure charges applied in air transportation and conducts a SWOT analysis to identify opportunities for its further improvement.

Airport Charges

Airport charges are an element of the system of infrastructure charges employed in air transportation. They are charged to ensure the necessary funds for the maintenance and operation of airport facilities by airport operators, thus guaranteeing the service of aircraft from the time they land to the time they take off, as well as that of passengers and cargo, so that air carriers could provide air transportation services. The common framework for determining airport charges is set by Directive 2009/12/EC (Official Journal, 2009).

The main objectives of the Directive which shall apply to any EU airport whose annual traffic is over five million passenger movements aim at:

- Ensuring greater transparency of the costs that must be covered. Airport managingbodies are required to present to airport users detailed reports about their costs to justify the charges levied by them;
- Ensuring non-discrimination. This principle refers to levying the same charges for thesame services provided to airport users at airports. This does not prevent the modulation of airport charges for certain services, provided that the criteria and terms applied for such modulation are transparent and clearly stated in advance. In addition, airport managing bodies may levy different environmental charges based on the different volumes of emissions from different aircraft engines;
- Establishing a procedure for consultation between airport managing bodies and airport users with respect to the levied airport charges and tariffs which shall gradually become mandatory for all EU airports. Furthermore, each member state shall set up an independent supervisory authority that will provide remedy in case of a disagreement between airport operators and airport users about levied airport charges.

The collection of airport charges in the Republic of Bulgaria is regulated by the Civil Aviation Act (Darzhaven vestnik, 2019) and the Ordinance on the Charges for Using the Airports for Public Use and for Air Navigation Services in the Republic of Bulgaria (Darzhaven vestnik, 2017) which has been updated several times.

In compliance with the Ordinance, airport charges are paid by carriers or by the owners of aircraft. Airports for public purposes collect charges for:

Landing of aircraft

The amount of landing charges is calculated on the basis of the maximum take-off weight of the aircraft. Since 12.08.2014, different landing charges have been introduced for the airport with an annual traffic of more than 5 million passengers or the airport with the highest number of passenger transport on the territory of the Republic of Bulgaria, i.e. Sofia airport, to which the provisions of Directive 2009/12/EC apply.

The applicable landing charges for the airports in Varna, Burgas and Gorna Oryahovitsa have been determined separately and are different from the charges applicable to Sofia airport. The ordinance also determines different landing charges applicable to the airport in Plovdiv. In order to encourage traffic volume at Plovdiv airport, the amount of landing charges is reduced for a certain number of monthly landings made by carriers whose aircraft has a maximum take-off weight exceeding 5.7 t.

The amount of landing charges for all Bulgarian airports increases by 25% for landing on Saturday, Sunday and public holidays; by 25 % - for landing from 10 pm to 6 am; and by 10% - for landing on a 'peak' day or an hour determined for the respective airport in the Book for air navigation information and publications of the Republic of Bulgaria.

Parking

Parking charges include expenses for the provision of facilities for the stay of the aircraft at the station, the use of a platform stand, of contact platform or at the long-term stay platform of the aircraft and their security. Different parking charges apply for different airports, for different flights and for stays of different length. Parking charges for basing aircraft (permanently and temporary) at the airports in Varna, Burgas and Gorna Oryahovitsa, which are basic for certain carriers, are determined as percentage of the landing charge.

Using a boarding bridge

The charges for using a boarding bridge have been applied since 22.12.2006, when Terminal 2 of Sofia Airport started operating. These charges include expenses for using facilities, for the provision and use of aircraft navigation and positioning system, for using fixed land electrical power supply and for the supply of pre-conditioned air. The charges for using a boarding bridge are due for the time the facility is used upon the arrival and before the departure of aircraft.

Passenger service

Passenger service charges are collected for passengers travelling from a Bulgarian airport and include expenses for passengers using airport departure lounges and other premises for servicing passengers which are equipped with the necessary facilities; for the provision of special safety equipment and qualified security staff; for providing various services, such as post, telegraph, shops, eating and drinking establishments, banks, etc. which passengers can use in exchange for certain payment; as well as administrative costs and facilities and personnel that give general information about flights status.

Security

Carriers pay security charges that include expenses for the provision and control of the access regime in public areas and restricted areas and ensuring the safety and security of passengers and aircraft at airport areas. Security charges are not collected for transit passengers and passengers arriving at or departing from the airport in Gorna Oryahovitsa.

Noise (environmental) charges

Airports noise (environmental) charges are collected to cover the costs of measures for limiting harmful effects upon the environment – noise; gas emissions; soil, water and air protection in the area of the airport. These charges are determined according to the maximum take-off weight and the individual noise characteristics of the aircraft which are grouped in 5 noise categories, according to the level of noise produced by the aircraft. In order to encourage air transportation traffic, charges are substantially reduced for airport users starting new, year-round passenger routes, as well as for airport users performing year-round flight programs for international flights to and from Sofia Airport.

The airport charges due for the major types of aircraft operated by Bulgarian air carriers have been calculated for landing in the interval from 7 am to 10 pm, at full aircraft occupancy and for international flights (see Table1). Based on those calculations, the total amount of due airport charges can be calculated by the formula:

$$APC = l + k + p + s + cc + ns, \quad (1)$$

in which:

l is the landing charge, calculated with the formula l=a+bx(w-u), where *a* is the absolute value of the charge for a specific maximum take-off weight; *b* is the sum due for exceeding the maximum take-off weight by 1 ton; *w* is the maximum take-off weight of the aircraft, and *u* is the lower limit of the maximum take-off weight for a specific category of aircraft;

κ is the parking charge, calculated with the formula κ =cxl, in which *c* is the coefficient, denoting the share of the landing charge in the applicable airport charge;

p is the charge collected for using a boarding bridge, calculated with the formula p=e+nxm, where *e* is the constant amount due for using a boarding bridge for 1 hour; *n* is the number of 15-minute intervals during which the boarding bridge is used after the first hour has expired; m is the amount due for any additional fifteen-minute interval in which the boarding bridge is used after the first hour;

s is the charge for passenger service calculated with the formula s=fxN in which *f* is the charge for servicing a single passenger at the airport; N is the number of passengers on board the airplane;

cc is the security charge calculated with the formula ccxN in which cc is the security charge unit for a specific type of aircraft at different airports;

ns is the noise charge calculated with the formula nsxw in which ns is the noise charge unit determined according to the maximum take-off weight and the type of the aircraft.

Afer substituting each of the formulas used to calculate the different charges, we have the equation:

$$APC = [a+bx(w-u)]x(1+ c) + (e+nxm) + \left(f.N + \frac{f}{2}.N_1 \right) + ccxN + nsxw \qquad (2)$$

As Table 1 indicates, the highest airport charges per passenger are collected at airport Varna and airport Burgas, and the lowest are those collected at airport Gorna Oryahovitsa. Airport charges collected per passenger at airport Plovdiv are similar to those collected at Sofia Airport, despite the special provisions applicable to that airport and the reduction in the amount of the different types of charges.

An analysis of the ratios between the different types of charges indicates that the share of the passenger service charge accounts for 50% of the total amount of the airport charges due at Sofia airport (see Figure 1). This is due to the fact that passenger service takes the longest time and requires complex organisation as well as the establishment of a special passenger service system. The second largest share is that of security charges that are collected to cover the costs for ensuring airports safety – an issue whose significance has been growing over the last years.

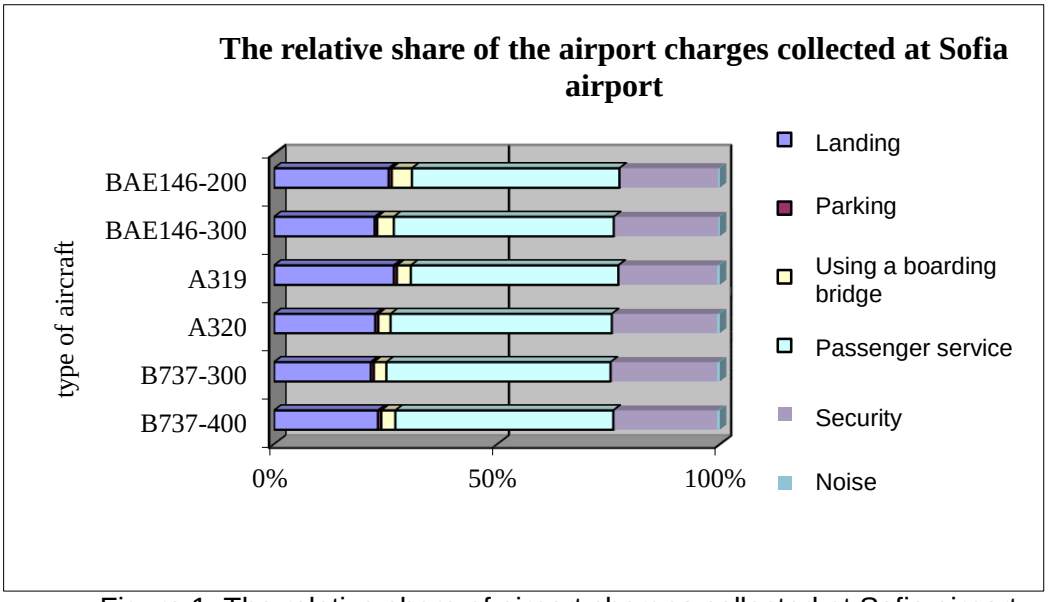

Figure 1. The relative share of airport charges collected at Sofia airport.
Source: Computations made by the author

Table 1

Airport charges by type of aircraft and airport

Type of aircraft	Maximum take-off weight, t	Number of seats	Charges, Euro						Total	Airport charge per passenger
			Landing	Parking	Using a boarding bridge	Passenger service	Security	Noise		
Sofia Airport										
B737-400	65	128	702.00	22.23	95.00	1472.00	704.00	19.50	3014.73	**23.55**
B737-300	68	148	734.40	23.26	95.00	1702.00	814.00	20.40	3389.06	**22.90**
A320	73	150	788.40	24.97	95.00	1725.00	825.00	21.90	3480.27	**23.20**
A319	64	124	822.40	21.89	95.00	1426.00	682.00	19.20	3066.49	**24.73**
BAE146-300	45	110	578.25	15.39	95.00	1265.00	605.00	8.55	2567.19	**23.34**
BAE146-200	42	85	539.70	14.36	95.00	977.50	467.50	7.98	2102.04	**24.73**

Airports Varna, Burgas and Gorna Oryahovitsa										
Type of aircraft	**Maximum take-off weight, t**	**Number of seats**	**Charges, Euro**					**Total**	**Airport charge per passenger, Varna and Burgas**	**Airport charge per passenger, GO**
			Landing	**Parking**	**Passenger service**	**Security**	**Noise ***			
B737-400	65	128	565.00	113.00	1024.00	552.96	7.48	2262.44	**3481**	**13.30**
B737-300	68	148	580.00	116.00	1184.00	639.36	7.48	2526.84	**37.16**	**12.70**
A320	73	150	605.00	121.00	1200.00	648.00	7.48	2581.48	**35.36**	**12.84**
A319	64	124	560.00	112.00	992.00	535.68	7.48	2207.16	**34.49**	**13.42**
BAE146-300	45	110	435.00	87.00	880.00	475.20	7.48	1884.68	**41.88**	**12.75**
BAE146-200	42	85	414.00	82.80	680.00	367.20	7.48	1551.48	**36.94**	**13.84**

Plovdiv Airport									
Type of aircraft	**Maximum take-off weight, t**	**Number of seats**	**Charges, Euro**					**Total**	**Airport charge per passenger**
			Landing	**Parking**	**Passenger service**	**Security**	**Noise**		
B737-400	65	128	325.00	16.25	768.00	192.00	9.75	1311.00	**20.17**
B737-300	68	148	340.00	17.00	888.00	222.00	10.20	1477.20	**21.72**
A320	73	150	365.00	18.25	900.00	225.00	10.95	1519.20	**20.81**
A319	64	124	320.00	16.00	744.00	186.00	9.60	1275.60	**19.93**
BAE146-300	45	110	225.00	11.25	660.00	165.00	6.75	1068.00	**23.73**
BAE146-200	42	85	210.00	10.50	510.00	127.50	6.30	864.30	**20.58**

Source: Computations made by the author

The relative share of the charges collected for landing and passenger service is even higher for the rest of the international airports in the country. They amount to nearly 60% for airport Burgas, depending on the type, capacity and maximum take-off weight of the aircraft.

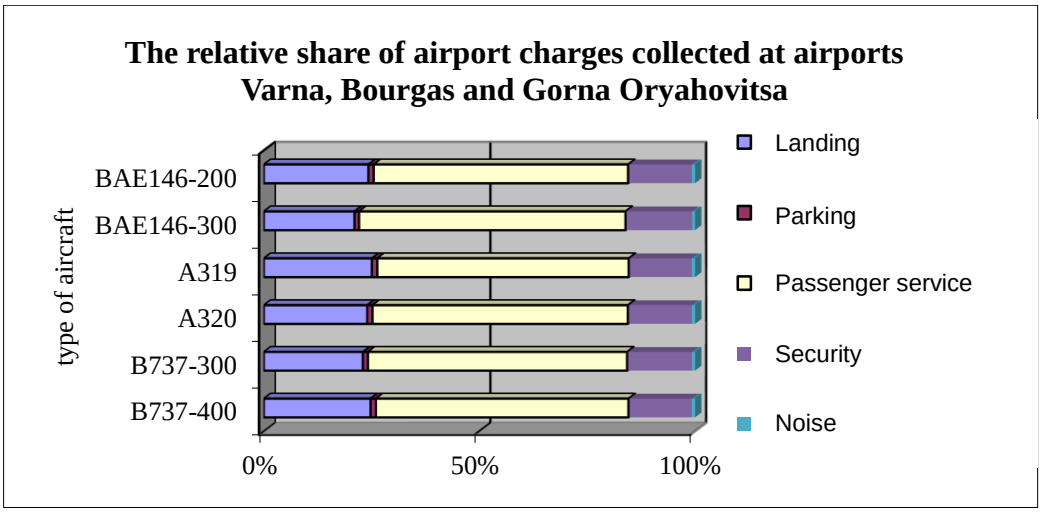

Figure 2. The relative share of airport charges collected at airports Varna, Burgas and Gorna Oryahovitsa.
Note: No charges for security or noise are collected at Gorna Oryahovitsa airport.
Source: Computations made by the author

At Plovdiv airport, the highest relative share is that of the passenger service charge, followed by the relative shares of the landing and security charges collected.

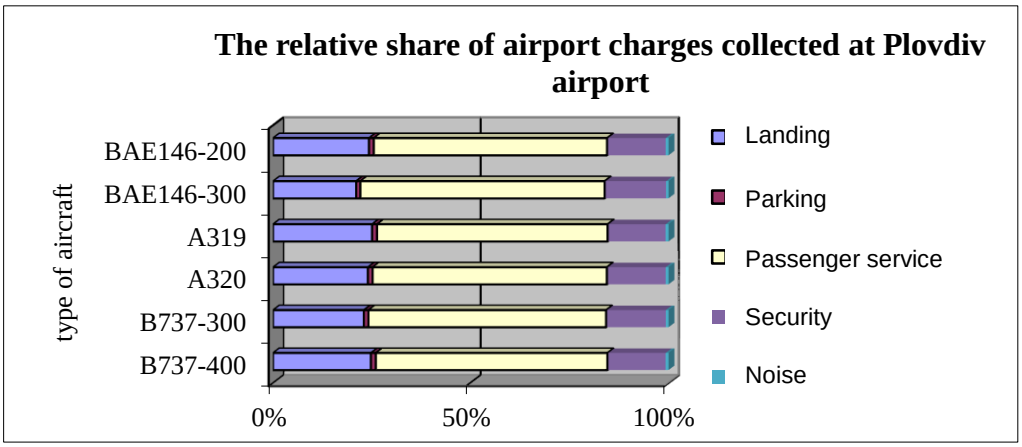

Figure 3. The relative share of airport charges collected at Plovdiv airport
Source: Computations made by the author

Airport charges are stated and collected with air transportation fees. The sums collected as airport charges are used to fund activities related to ensuring the safety of flights and maintaining and developing the infrastructure of civil airports for public use.

Charges for Air Navigation Services

The second group of infrastructure charges applied to air transportation is that of the **charges for air navigation services**. They are collected for flights of aircraft above the territory or above a sector of the territory of the Republic of Bulgaria by virtue of international agreements and/or for air navigation service within the zones of the airports in the country.

The Bulgarian Air Traffic Services Authority collects the following charges:

Traffic charges for using air navigation equipment and for flights service in airport zones

These charges are determined so as to cover the costs incurred for the provision and use of air navigation equipment and aircraft landing and taking-off lighting equipment; the provision of aeronautical and meteorological information; the direction and control of flights upon aircraft landing and taking off, and administrative costs.

Traffic charges for flying over the served civil airspace of the Republic of Bulgaria

Those charges are determined based on the costs for the provision and use of air navigation equipment; the direction and control of the flights of aircraft flying over, and administrative costs.

The charges collected for servicing international flights to and from the airports in the country can be calculated based on the example of airport charges and in compliance with the provisions of the Ordinance of the Charges for Using the Airports for Public Use and Air Navigation Services in the Republic of Bulgaria (Table 2).

The amount of these charges is mainly determined according to the maximum take-off weight of the aircraft and by the great-circle distance covered by the aircraft that is flying over the country. As Table 2 indicates, for flights from Central European countries to Bulgaria, air navigation charges are higher aircraft landing at Varna and Burgas airports, since a longer distance in the air space of the country is covered and fly-over charges are higher.

Table 2
Charges for air navigation services collected in the country

Type of aircraft	Maximum take-off weight, t	Number of seats	Charges, Euro			
			In airport zones (IF)	At flying over	Total	Air navigation charge per passenger
When landing at Sofia Airport						
B737-400	65	128	51.06	7.07	**58.13**	**0.45**
B737-300	68	148	52.70	7.23	**59.93**	**0.40**
A320	73	150	55.39	7.49	**62.87**	**0.42**
A319	64	124	50.51	7.01	**57.52**	**0.46**
BAE146-300	45	110	39.47	5.88	**45.35**	**0.41**
BAE146-200	42	85	37.61	5.68	**43.29**	**0.51**
When landing at airports Varna and Burgas						
Type of aircraft	**Maximum take-off weight, t**	**Number of seats**	**Charges, Euro**			
			In airport zones (IF)	**At flying over**	**Total**	**Air navigation charge per passenger**
B737-400	65	128	51.06	70.67	**121.73**	**0.95**
B737-300	68	148	52.70	72.28	**124.98**	**0.84**
A320	73	150	55.39	74.89	**130.28**	**0.87**
A319	64	124	50.51	70.12	**120.63**	**0.97**
BAE146-300	45	110	39.47	58.80	**98.27**	**0.89**
BAE146-200	42	85	37.61	56.81	**94.42**	**1.11**

Source: Computations made by the author

The highest relative share in the total amount of the charges due for flights to Sofia airport is that of the charge for services in the zone of the airports due to the short great-circle distance between the point of entry into the air space of the country and the landing airport (see Figure 4).

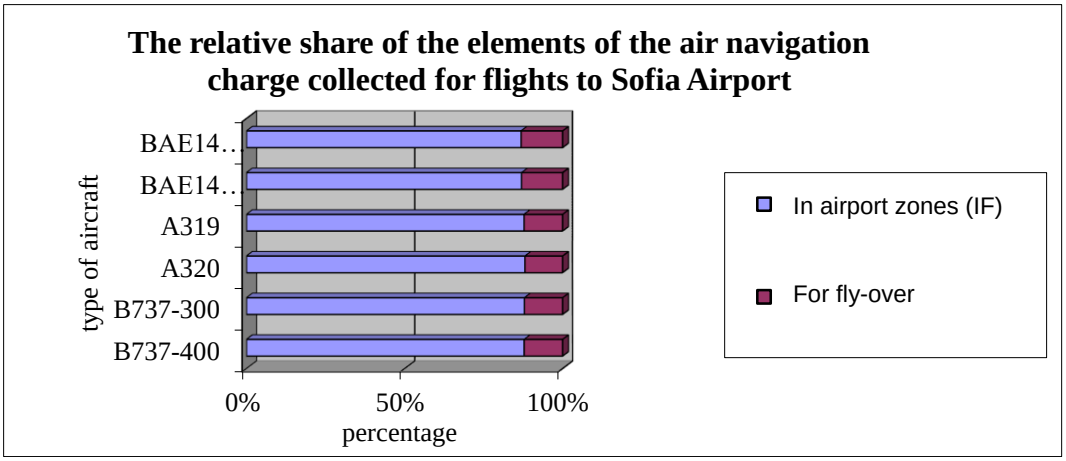

Figure 4. The relative share of the elements of the air navigation charge collected for flights to Sofia Airport
Source: Computations made by the author

The ratio between the relative shares of the individual elements of charges collected for flights to Varna and Burgas airports is different. The relative share of fly-over charges is higher since the provision of air navigation services implies higher costs for ensuring the safety and security of aircraft flying over in the air space of the country.

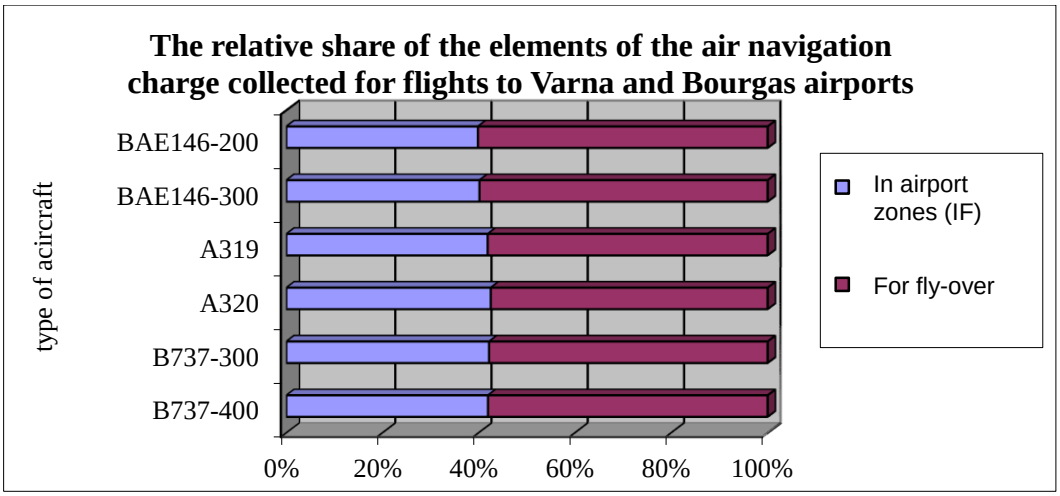

Figure 5. The relative share of the elements of the air navigation charge collected for flights to Varna and Burgas airports
Source: Computations made by the author

The charges collected for air navigation services are used to fund the activity of the Bulgarian Air Traffic Services Authority, including the remuneration of employees which is calculated as a percentage of the charges

collected for air navigation services; the acquisition of fixed assets; capital expenditure and technical maintenance for integrating and aligning the national system for air traffic services with that of the EU and other international conventions in which the Republic of Bulgaria is a party; search and rescue activities; loan repayments; the implementation of training programs for maintaining and improving the qualifications of staff; rehabilitation and preventive health-care provided to the employees of the Bulgarian Air Traffic Services Authority; the implementation of programs and commitments to international air traffic agreements signed by the Republic of Bulgaria; managing the property of the enterprise; payment of charges for administrative services provided by the Civil Aviation Administration Directorate General; premiums paid on third-party liability insurance.

Airport authorities also collect *administrative charges*. Those refer to the administrative services provided at airports and fulfilling different procedures for having the required certificates, permits and licenses issued for servicing airport complexes and carriers. The funds raised through the collection of administrative charges are also used to fund activities ensuring the security of flights and the maintenance and development of the infrastructure of civil airports for public use.

SWOT Analysis of the System of Infrastructure Charges in Air Transportation

The analysis of infrastructure charges in air transportation, which was presented above, and the brief SWOT analysis which follows (Table 3) indicate that the principle of cost-oriented pricing is employed to make the use of airport infrastructure and facilities more efficient and to reduce the risk of setting too high airport charges.

Airport charges are applied according to the costs incurred for airport facilities and the level of service provided, so as to ensure an acceptable return on capital ratio, determine a correct method for depreciation of assets and efficient management of infrastructure capacity in compliance with the principles defined in Directive 2009/12/EC for levying infrastructure charges in air transportation. The level of transparency in determining the size of charges levied for airport services may be described as relatively high, i.e. the methodology for evaluating costs and determining the size of infrastructure charges in air transportation is adequate and clear. The system of levied infrastructure charges in air transportation was further improved by introducing airport charges for environmental protection (noise charges) and security charges in 2012.

Table 3
A brief SWOT analysis of the system of infrastructure charges collected in air transportation in Bulgaria

Strengths	**Weaknesses**
- High transparence in terms of determining airport charges and charges for air navigation.	- The specifics and differences in determining the charges collected at different airports reduce the efficiency of the performance and maintenance of the system of infrastructure charges in air transportation; - When determining the amount of charges for air navigation services, distance is the main factor which is taken into consideration, while total costs for environmental protection and for reducing air traffic congestion are not.
Opportunities	**Threats**
- Employing appropriate systems for collecting infrastructure charges and providing incentives to minimize disturbances and improving the efficiency of airport use by introducing noise and security charges for airport zones, as well as environmental charges; - Establishing the conditions for fair competition in the provision of air transportation services through the charges collected for using airport infrastructure and air navigation services.	- An excessively complicated and differentiated system of airport charges and lack of incentives for rational 24-hour flight distribution might result in limiting the traffic to and from the airports in the country, and hence, to declining airport revenue.

The specifics and differences, as well as the individual approach to determining the charges collected at different airports partially reduce the efficiency of the performance and maintenance of the system of infrastructure charges levied in air transportation. In addition, applied charge rates do not promote the even distribution of flights or reduce peak air traffic to or from the airports in the country since the charges levied for airport access and groundhandling services at night are higher than those in daytime.

Charges for air navigation service are determined in compliance with the methodology recommended by EUROCONTROL (EUROCONTROL, 2009)

and ensure adequate revenue and earnings to the Bulgarian Air Traffic Services Authority. The airport charges applied at present are determined according to the weight of aircraft and the distance of flights. The distance factor is not included when determining terminal charges. The sums collected as terminal charges are used to cover total, not just variable, costs. They do not take into consideration total costs for environmental protection or preventing air traffic congestion. The underlying principles of determining the amount of air traffic control charges are set by intermodal associations such as the International Civil Aviation Organisation (ICAO) and EUROCONTROL (Commission of the European Communities, 2009).

Over the last 10 years, a multilateral agreement signed by 27 EU member states (excluding Finland) has been effective. The aim of the agreement is to adopt a common policy in terms of determining the size of charges, their cost bases and collection. According to that agreement, charges for air navigation service are billed and collected by EUROCONTROL by applying the so-called unit rate of charge which is determined by dividing the total cost of air traffic control into the volume of traffic (Official Journal, 2009).

We may therefore conclude that, on the one hand, there is a relatively high level of alignment and differentiation of the infrastructure charges levied in air transportation in our country and the mechanism for determining those charges takes into consideration actual infrastructure costs and, to some extent, the costs on ensuring air transportation security and reducing noise emissions.

On the other hand, the conducted SWOT analysis of the infrastructure charges which are levied in air transportation in the country indicated that it is necessary to change the methods of determining those charges so as to adequately cover public costs on the maintenance and exploitation of airports and airport infrastructure. What is more, determining acceptable infrastructure charges will contribute to ensuring revenue stream for the development of public-private partnerships and thus reduce the need of government subsidies.

Financial and Economic Aspects of Infrastructure Charges in Air Transportation

Over the last years, the issue of determining infrastructure charges adequately so as to ensure the necessary funds for the maintenance and operation of airports has become extremely relevant with the rapid and dynamic development of air transportation and the increasing number of passengers and airport users flying to and from Bulgarian airports.

Infrastructure charges in air transportation are collected to promote the more efficient use of airports and air navigation infrastructure and to cover a higher volume of the costs incurred for their operation and maintenance. The main objective of levying those charges is to provide the necessary funds for

the current maintenance and exploitation of airports, as well as for building new airport terminals and modern air traffic control systems. These considerations have a significant impact on the decision-making process in terms of investments in air transportation infrastructure. Such decisions need to be based on an analysis of the total public costs and benefits from the exploitation of airport terminals. Furthermore, the occurrence of the so-called cross-cutting effects is observed more frequently within the integrated EU market as a result of new infrastructure projects. Examples include growth in the tourism sector or in commerce due to the expanded capacity of airport terminals. Such effects need to be taken into consideration when conducting a cost-benefit analysis. Those cross-cutting effects are felt in the different sectors of the economy and therefore require co-funding by different economic entities (Nash, 2003).

An adequate mechanism for monitoring the cross-cutting effects of investments in airport infrastructure has not been designed in our country yet, and this is an important issue for the airports in Varna, Burgas and Gorna Oryahovista whose management bodies now include private companies (concessionaires). In the next place, in order to develop a transparent and clear infrastructure accounting system, it is necessary to exchange information about the costs of and benefits from public investment in airport and air navigation infrastructure and to predict the total effects of investment decisions. This will contribute to determining adequately the amortization of assets, on the one hand, and to raising the efficiency of infrastructure management, on the other hand.

Furthermore, if levied charges take into account the differences in the costs for aircraft service, so that airport users actually have to pay for the services they are provided and the costs they incur, carriers could become more flexible when selecting their routes, their landing and take-off time, the type of carrier, fuel, engines, etc. they use, and adjust them to the level of charges that are currently levied. This could ensure greater comparability between charges and costs, especially in terms of taking into consideration the costs of dealing with the damages from aircraft emissions, congestion and noise in airport zones when determining the size of airport charges. Provided that those charges cover both infrastructure costs and the costs for reducing the harmful effects on air traffic, the services which airport operators and airport users provide will ensure a higher balance in the exploitation of airports and will raise the efficiency of air transportation.

Conclusion

A major aspect of the policy of levying infrastructure charges in air transportation is applying the principles of free competition between infrastructure entities, as well as establishing the conditions for free access of carriers to the air space and the airport infrastructure of EU member-states.

Improving the system of air transportation infrastructure charges in the country will contribute to making the exploitation of airport and air navigation infrastructure more efficient and to correlating their funding to the charges that are collected from users and adjusted to their financial management model.

From a general economic perspective, the long-term effect of introducing changes into air transportation infrastructure charges will have an indirect impact on increasing the volume of air traffic, but it will also provide secondary benefits by having higher revenue generated. Adjustments to the charges levied for airport access and use and for air navigation services will affect the manner in which airport infrastructure is used and will result in having a higher volume of costs directly covered by users themselves. Air transportation in the country will thus be able to respond to the challenges it is currently facing and ensure that high-quality air transportation services are provided to passengers by the airport operators in the country (The European Commission, 2014).

Upgrading the system of infrastructure charges will also provide a more adequate base for comparing the return on investment in airports and improve the conditions for private investment in and exploitation of the infrastructure of airports. On the other hand, the adoption of further measures to internalize the costs on environmental protection will establish the right conditions for raising the environmental efficiency of air transportation, since when charges take into consideration the costs for reducing harmful emissions, the volume of those emissions will be reduced to a level at which the costs on their reduction will equal the benefits from having that measure adopted. In terms of economic and social efficiency, this will maximize public welfare, rather than the number of flights.

We can therefore conclude that initiating measures for improving currently applied methods of determining the size of airport charges and air navigation charges by taking into account the financial and economic considerations reviewed in this paper will promote the economic, social and environmental efficiency of using the available infrastructure and hence, the air flights to and from the country.

References

Clarkson, R., Cazan, I., & Crome, S. (2017). *Support study to the Ex-post evaluation of Directive 2009/12/EC on Airport Charges.* Brussels: European Commission.

Commission of European Communities. (1998). *Fair Payment for Infrastructure Use: A Phased Approach to a Common Transport Infrastructure Charging Framework in the EU.* Brussels: CEC.

Commission of European Communities. (1995). *Towards Fair and Efficient Pricing in Transport.* Brussels: CEC.

Commission of the European Communities. (2009). A common framework for airport charges. Brussels.

Darzhaven vestnik. (2019). Zakon za grazhdanskoto vazduhoplavane. DV, br. 94 ot *1.12.1972,* (94), [in English: State Gazette. (2019). Civil Aviation Act. *SG, 94/1.12.1972,* (94)].

Darzhaven vestnik. (2017). Naredba za taksite za izpolzvane na letishtata za obshtestveno polzvane i za aeronavigatsionno obsluzhvane v Republika Balgariya. *Darzhaven vestnik, br. 2/08.01.1999*. [in English: State Gazette. (2017). Ordinance on airport Charges and Air Navigation Services in the Republic of Bulgaria. *State Gazette, 2/08.01.1999*].

EUROCONTROL. (2009). *Customer Guide to Charges.* Retrieved from: EUROCONTROL: https://www.eurocontrol.int/sites/default/files/publication/files/customer-guide-to-charges-2018-june.pdf

Evropeyska komisiya. (2014). *Doklad na Komisiyata do Evropeyskiya parlament i saveta otnosno prilaganeto na Direktivata za letishtnite taksi*. Bryuksel: Evropeyska komisiya, [in English: European Commission. (2014). *Report from the Commission to the European Parliament and the Council on the Application of the Airport Charges Directive.* Brussels: European Commission].

High-level Group on Transport Infrastructure Charging. (1999). *Calculating Transport Infrastructure Costs. Final Report of the Expert Advisors to the High Level Group on Infrastructure Charging (Working Group 1).* Brussels: High Level Group on Infrastructure Charging.

Nash, C. (2003). Marginal Cost and Other Pricing Principles for User Charging in Transport: a Comment. *Transport Policy , 10* (4), 121-130.

Nikolova, H. (2007). *Usavarshenstvane na sistemata ot infrastrukturni taksi v transporta*. Sofiya: UI 'Stopanstvo'.

Official Journal. (2009). Directive 2009/12/EC of the European Parliament and of the Council of 11 March 2009 on airport charges. Brussels.

Ofitsialen vestnik na Evropeyskiya sayuz. (2009). Direktiva 2009/12/EO na Evropeyskiya parlamen i na Saveta ot 11 mart 2009 g. otnosno letishtnite taksi. *Ofitsialen vestnik na Evropeyskiya sayuz* , 11-16, [in English: Official Journal of the European Union. (2009). Directive 2009/12/EC of the European Parliament and of the Council of 11 March 2009 on Airport Charges. *Official Journal of the European Union*, 11-16].

Quinet, E. (2005). *European Pricing Doctrines and the EU.* Paris: IMPRINT EUROPE.

D. A. Tsenov Academy of Economics, Svishtov
University of National and World Economy, Sofia
University of Economics, Varna
Sofia University St. Kliment Ohridski
New Bulgarian University, Sofia

ECONOMICS 21

An inter-university scientific journal
Volume IX, Issue 1, 2019

TABLE OF CONTENTS

ECONOMICS 21

AN INTER-UNIVERSITY SCIENTIFIC JOURNAL

Submitted to publisher 19.04.2019, Printed in 11.06.2019, Print format 70x100/16, Printed copies 70.

ISSN 1314-3123 (Print)
ISSN 2534-9457 (Online)

ISSN 2534-9457 (Online)
ISSN 1314-3123 (Print)

ECONOMICS 21

Year IX, Book 1, 2019

- The 10 Don'ts to Manager's Efficiency
- Infrastructure Charges Levied in Air Transportation – Current Issues and Perspectives
- Protection against Fraud in Electronic Trade Payments

INTERUNIVERSITY JOURNAL

Икономика 21
Година IX, книга 1 2019
Year IX, Book 1, 2019
Economics 21

TO THE READERS AND AUTHORS OF ECONOMICS 21

Economics 21 publishes **research studies, articles and methodological papers**.

1. Volume

Studies: min. - 26 pages; max. - 40 pages;
Articles: min. - 12 pages; max. - 25 pages;
Methodological papers - up to 40 pages.

2. Submission of materials

- On paper and electronically (on CD and/or by e-mail).

3. Technical characteristics

- Written in Word 2003 (at least);
- Page size - A4, 29-31 lines / 60-65 characters per line;
- Line spacing - Single;
- Font - Times New Roman 12 pt;
- Margins - Top - 2.54 cm; Bottom - 2.54 cm; Left - 3.17 cm; Right - 3.17 cm;
- Page numbers - bottom right;
- Footnotes - size 10 pt;
- Charts and graphs - Word 2003 or Power Point.

4. Layout

- Name of article, name of author, scientific degree, scientific title - font Times New Roman, 12 pt, capital letters Bold - justified;
- Employer and address of the place of employment; contact telephones and E-mail;
- Abstract in Bulgarian - up to 15 lines; keywords - from 3 to 5;
- **JEL** classification code for research papers in economics (http://ideas.repec.org/j/index.html);
- The main body of the paper;
- Tables, charts and graphs must be embedded in the text (allowing for language correction and translation);
- Formulae must be created with Equation Editor;
- References in alphabetical order – in Cyrillic and Latin script;
- Technical characteristics and layout:

Template: https://www.uni-svishtov.bg/samagazine/upload/Economics-21-Template_bg.doc

5. Citation guidelines

When citing sources authors should observe the requirements of **APA Style** at: http://www.apastyle.org/ or at http://owl.english.purdue.edu/owl/resource/560/01/ or at http://www.calstatela.edu/library/guides/3apa.pdf.

Each author bears responsibility for the ideas presented, the content and layout of his/her text.

6. Contacts

Editor-in-chief: tel.: (++359)631-66-338
Stylistic editor: tel.: (++359)631-66-335
E-mail: i.varbanov@uni-svishtov.bg, economics21@uni-svishtov.bg
Address: D. A. Tsenov Academy of Economics, 2 Em. Chakarov str., Svishtov, Bulgaria