Alica TOBISOVÁ, Dorota LIPTÁKOVÁ, Marek PILÁT, Stanislav SZABO,
Róbert ROZENBERG, Peter KÁĽAVSKÝ
Technical University of Košice, Slovakia

EFFICIENCY ANALYSE OF AIRPORT COMMERCIAL AREA

Analiza wydajności powierzchni handlowej lotniska

Abstract: *The article is focused on analysis of financial cost effectiveness and the utilization of business premises in the terminal building of Bratislava Airport. Our analysis is based on a comparison of sales, profitability, and number of customers of individual newsagents of the GGT a. s. company, which operates three such newsagent stands at the examined airport. Each of the newsagents are located in a different part of the airport terminal, namely Schengen, non-Schengen and check-in area. The examined shops will serve as a practical example of the usability of these areas, and our goal is to find out which of these parts of the Bratislava Airport terminal building is most used by passengers and airport visitors. The data was collected for the period from 1st January 2018 to 31st December 2018, covering one full calendar year, which is a sufficient period for our analysis.*

Keywords: airport, usability, efficiency, finance, cost

Streszczenie: *Artykuł koncentruje się na analizie opłacalności finansowej wykorzystania lokali użytkowych w budynku terminalu lotniska w Bratysławie. Nasza analiza opiera się na porównaniu sprzedaży, rentowności i liczby klientów poszczególnych kiosków firmy GGT a. s., która prowadzi trzy takie kioski na badanym lotnisku. Każdy z kiosków znajduje się w innej części terminala lotniska, a mianowicie w strefie Schengen, non-Schengen i strefie odpraw. Zbadane sklepy posłużą jako praktyczny przykład użyteczności tych terenów, a naszym celem jest dowiedzieć się, z której z tych części budynku terminalu lotniska w Bratysławie najczęściej korzystają pasażerowie i goście lotniska. Dane zostały zebrane za okres od 1 stycznia 2018 roku do 31 grudnia 2018 roku, obejmujący jeden pełny rok kalendarzowy, który jest wystarczającym okresem do naszej analizy.*

Słowa kluczowe: lotnisko, użyteczność, wydajność, finanse, koszt

1. Introduction

The available space at the airport areas are used by many companies. One of the companies that have their operations established at Bratislava Airport is GGT, a.s. This company owns and operates three newsagent stands located at Bratislava Airport in its various parts - the public area (landside), the non-public area (airside) and the Schengen area (Schengen zone). These business units which our research are focuses on. GGT a.s. is one of the leading companies in the Slovak market dealing with the distribution of cigarettes, tobacco products and complimentary assortment for sale via newsagents and newsstands. The history of the company dates back to 1988 when the first specialized tobacco shop in Slovak republic was launched. The company has undergone several changes from its starts to present time, whether we are talking about the company name, organizational structure or about assortment offers. The company has been providing its services and assortment on the market for more than 20 years. During the year 2011, the company expanded its assortment about office supplies and books. The company is the exclusive distributor and importer of many world brands and operates 14 retail distribution partners through a retail chain of newsstands and cigarette shops all over Slovakia called the "TABAK PRESS". This company presents products also on the Czech market due to cooperation with the Czech company PressMedia and operates specialized tobacconist shops [1].

2. M.R. Stefanik in Bratislava and the current status of airport space use

The landside of the airport is located at the entrance to the departure terminal. It's an area that can be used without security control. Passengers can choose from several restaurants offering local and international cuisine, coffee companies, bars, snack kiosks and self-service restaurants. There is also a restaurant overlooking the whole airport area. The airport area provides the opportunity to sit comfortably and spend some time with TV watching [6]. The airside is an area with restricted access. The passengers entering the airside must go through security control first. In Bratislava airport this area consists of security checks, passport control, check-in counters, baggage allowance, area for passengers flying through the Schengen zone and also duty-free zone where passengers can buy products that do not have to pass through security control [7, 10]. The Non-Schengen zone is intended for passengers travelling outside from the Schengen zone. The zone can be reached via Schengen zone. The passengers need to pass another passport control in order to enter [9]. GGT, a.s. has business units in all these areas with tobacco shops. CHECK-IN newsagent is located in the public area to the right of the main entrance. It's operated by Mediapress Bratislava, which is a subsidiary of GGT a.s. The newsagent offers daily newspapers, magazines, public transport tickets, sweets, soft drinks and various

complementary goods. Its area is 23.10 m². SHENGEN newsagent can be found in the airside area of the airport right next to the departure gates which are used for Schengen flights. This is the second business unit that the passenger can see immediately after the security control. The newsagent is operated the same way as the CHECK-IN newsagent by Mediapress Bratislava. This unit sells and disposes the same range of products as the one in the landside area. The size of the retail space is 60 m² and is one of the largest area available for the operating company. The availability of the NON-SCHENGEN newsagent can be evaluated as the worst available of all three selected newsagents examined at the airport because it's located in the Non-Schengen airport area. In order to get into this area the passenger needs to go through a security control which then admits us to the gate section for flights flying from within the Schengen area. Upon passing this control the passenger proceeds to the next passport control because the flight outside Schengen zone is possible only with a valid passport. The composition of the sold assortment is similar to the other newsagents at the airport. Area is 31 m². According to the Bratislava Airport statistics 2 292 712 passengers were carried in 2018 [8]. From the obtained data the airport located in the capital city of Slovakia have increasing numbers since 2013 due to number of carried passengers.

3. Methodology

The article aim is to analyze the efficiency of commercial space at selected airport in terms of financial analysis and usability. Basic scientific methods such as analysis and comparison were used for this article. Obtained data on the selected retail space were summarized, analyzed and then interpreted into graphical form. It's important to appropriate the interpret data and objectives to the basic theses:

1. The selected commercial areas at the analyzed airport are used efficiently?
2. If not, it's possible to use them more efficient by financial, operational or other measures?

The basic data needed for this analysis and comparison were obtained directly from the company's internal materials. Company GGT a.s. uses the modern software from the world-known SAP company to evaluate the state of the company, namely the BusinessObject program, which is a subsystem of the Business Intelligence system. Business intelligence is SAP's enterprise-class platform for creating custom reports and analysis without any need to understanding the programming language and technical knowledge of databases for any user.

Currently, the primary product is the SAP BusinessObjects platform which includes the following products [1]:

- SAP BusinessObject Web Intelligence tool for flexible and intuitive ad hoc reporting and interactive analysis,
- SAP Crystal Reports enable creation of classic reports, development of formatted values called pixel-perfect reports,

- SAP BusinessObjects Mobile App for mobile access to corporate data reports and visualizations.

The number of customers who visited the airport companies that we mentioned was determined by using the BusinessObject program explained above. We created a report and then the exact number of customers was analyzed and calculated. For analysis we used the cash register receipts.

4. Analysis of commercial area usability at Bratislava Airport

In order to analyze the usability of terminal building space it was necessary to investigate the number of customers to individual newsagents. It's clear from the collected data and reported that newsagents were considerably more visited during the summer season in holiday months of June, July, August and September. The most demanding month was July when newsagents served up to 62 970 customers. This represents a daily average of 2 031 cash register receipts. Of the total number of receipts the most visited SHENGEN newsagent issued 1 118 receipts daily, the NONSHENGEN newsagent 503 receipts and the least visited CHECK-IN newsagent issued 410 cash register receipts. The monthly customer traffic in the analyzed newsagents is shown in fig. 1.

With the use of the Bratislava airport statistics obtained from the official website of the airport and data obtained from the internal system of GGT a.s. we analyze and compare the number of customers and the number of total passengers who visited the airport.

The analysis found that the SHENGEN newsagent as busiest and the most visited newsagent, achieved a customer-to-passenger ratio of 9.45%, which means that every 11th passenger used their services. At the NONSHENGEN newsagent the customer-to-passenger ratio is 5.44%, which means that one of 18 passengers have visited the store and conducted a purchase. The least visited CHECK-IN newsagent reached the ratio of 4.21% and was visited by every 24th passenger. The overall ratio at all newsagents is 19.09%, which corresponds to every 5th passenger conducting a purchase at the newsagent.

The utility of newsagents is supported by the size of the leased space and the number of staff. With the growing size of the space comes the opportunity to offer a broader range of products or the possibility to place a higher number of the same goods into the shelves, which means less replenishment and less storage area required. On the other hand a larger space represents increased demands on staff because it is necessary to satisfy the requirements of each customer and at the same time to ensure operation from a safety point of view. For these reasons it is need to compare the number of staff, operating space and rent per square meter. The information about rental amount shows how much the airport operator receives from the lessees. The information about the newsagents leased area and the number of staff was provided by the GGT, a.s. who runs all three newsagents. The data is shown in tab. 1.

Fig. 1. The monthly customer traffic in newsagents with categories of sold products

Table 1

Comparison of leases and the number of staff in the newsagents

Newsagent	Space /m ² /	Fixed monthly rent /€/	Fixed monthly rent for m ² /€/	Parking /€/	Total number of staff	Daily operation
Shengen	60	2 042,40	34,04	40,52	12	24H
Nonshengen	31	1 055,24	34,04	40,52	3	16H
Checkin	23,10	786,32	34,04	40,52	5	16H

The table 1 shows that the rent per square meter is the same for all parts of the airport and therefore its amount is not differentiated for individual parts of the airport where the leased space is located. The rent per square meter is the same regardless of whether we are talking about the space in Check-in, Shengen or Non-Schengen area of the terminal building. The airport provides rental prices to the lessees in a consistent manner regardless of the placement of their stores. During daily operation there are two workers on the shift at SCHENGEN and CHECK-IN newsagents and only one worker at the NONSCHENGEN newsagent. This implies that with SHENGEN and NONSHENGEN business unit one employee is in charge of an area of approximately 30 m², and at CHECK-IN newsagent one employee is responsible for an area of only 11.55 m². The parking fee is uniform and does not affect the size of the leased area of the retail space.

5. Discussion

From the information gathered so far we know that the rent at the airport under review is the same in all parts of the terminal building regardless of the designation of individual parts. However the observed sales and customer numbers showed us a number of differences directly related to the division of the airport area. SHENGEN newsagent who served half of all customers of these business units while the airport operator sets the same rent per square meter as for the other two newsagents. In order to optimize the amount of collected rent, we propose to determine the amount of rent according to the development of the tenant's turnover the so-called turnover rent.

From the analysis of available data from GGT a.s. we have obtained the following conclusions on predefined theses:

1. The analyzed commercial areas are used efficiently at the M. R. Štefánik Airport in Bratislava in terms of operational management and logistical location of the commercial space at the airport. However, from economic point of view the management of retail space is inefficient.
2. Analyzed commercial space has shortcomings in economic management we propose an adjustment of the cost base for the purposes of calculating the rent for commercial areas at the airport.

When analyzing the invoices year-on-year we found that rent in 2017 was cheaper by 0.44 € per square meter and parking by 0.52 €. In 2018 the rented space did not change, and its size has been retained. In overall the parking and increased rents in 2018 earned to airport operator 621.12 € more than in 2017.

The total increase in turnover compared to 2017 is 313 187 €. The only newsagent who did not succeed in increasing the turnover was the CHECK-IN unit. We also found that in 2017 the first three months was strong and these months are out of season. When we check the year 2018 there is a big difference in turnover arose which had to be covered in the following months. The CHECK-IN newsagent did not meet this goal. This business unit recorded a decline in profits in comparison with the previous year in five months. Significant decline occurred with tobacco products, groceries and print. The expected cause of turnover loss is the newly opened DELIA food store. The grocery store has a better location in comparison to the newsstand which is "hidden" at the far right corner of the departure terminal. In the public area of the airport the customer base is broader. Besides the travelling passengers, the customers of different business units consist of airport employees and also of persons accompanying passengers. This part of the customer base is crucial, especially when selling cigarettes since most passengers purchase tobacco and alcohol after the security check in order to take them onboard. As the above-mentioned grocery store has a better location in comparison to the newsagent, the customers will favor the store closer to the entrance and conduct their purchase there. In the case of our proposal this wouldn't matter because the airport would receive the same amount of rent but from another tenant.

Table 2

Comparison of proposed turnover rent and actual fixed rent in individual months

	1	2	3	4	5	6	7	8	9	10	11	12	Summary
Shengen – proposal	1 781	1 469	1 636	1 736	1 890	2 414	2 985	3 006	2 519	2 099	1 787	1 619	24 945
Nonshengen – proposal	1 367	1 035	1 132	1 286	1 318	1 351	1 420	1 703	1 521	1 461	1 402	1 148	16 148
Checkin - proposal	631	566	518	621	673	798	937	949	827	682	745	635	8 589
Shengen – actual rent	2 042	2 042	2 042	2 042	2 042	2 042	2 042	2 042	2 042	2 042	2 042	2 042	24 504
Nonshengen – actual rent	1 055	1 055	1 055	1 055	1 055	1 055	1 055	1 055	1 055	1 055	1 055	1 055	12 660
Checkin – actual rent	786	786	786	786	786	786	786	786	786	786	786	786	9 432
Shengen – difference	-261	-572	-406	-305	-151	371	942	964	476	57	-255	-423	436
Nonshengen – difference	312	-20	77	231	263	295	365	648	465	405	347	93	3 485
Checkin – difference	-154	-219	-267	-164	-112	12	151	163	41	-103	-40	-151	-846
Total difference	-103	-813	-597	-239	-1	679	1 459	1 776	984	360	51	-481	3 074

To support our proposal we created a table with basic fixed rent proposal at the amount of 5.25 € per square meter and 1% of business unit turnover. In the table we used our proposed turnover rent for each month of year 2018. We also calculated the currently applied fixed rent and the difference for each month and for year in total. Thus we can compare the total annual profit derived from our proposal with the actual state.

From our proposal we can see that the combination of fixed rent and the turnover proportion has been chosen appropriately. The proposed rent in tab. 2 is the final sum representing the fixed amount and the portion added from 1% of turnover. We also entered the actual rent into the table which is the same for each month. It can be seen in the middle part of tab. 2. The result of the table is the difference between the proposed and the actual rent for the individual months and newsagents. An important finding was the total monthly difference for all newsagents together and the total annual revenue of the airport operator in the calendar year.

Based on our findings and data proposed in tab. 2 rent in 2018 would have been lower during six months but the rent collected in the remaining six months, especially in summer months, would make up for the loss significantly. The highest difference in rental income would be in August by up to 1,776 €. The highest loss in collected rent would be 813 € in

February. As for the whole year the airport operator would collect 3,074.70 € more from these business units than in the currently used rental model.

6. Conclusion

Through our research we have found that just as we anticipated there are differences between the usability of retail space in direct relation to the individual parts of the airport terminal building. We have found that the placement of the business unit in the airport terminal building plays a vital role in a number of aspects examined. The most visited newsagent of all three newsagents was the one located in the SHENGEN part of the airport terminal building, which suggests that most passengers used the services provided in this part of the airport. According to our findings, the second most visited newsagent was located in the NONSHENGEN section and the least visited newsagent was located in the CHECK-IN section of the building. This makes it clear that airport visitors will use the least services in the CHECK-IN area. In addition we found that the most demanding months for the airport are the holiday months of June, July, August and September. The busiest month was July. The difference in use of services in different areas of the terminal building can be clearly seen in July, as the SHENGEN newsagent in the given month for the year 2018 served 1 118 customers a day, while the least visited newsagent in the CHECK-IN airport part served only 410 customers a day.

We assumed that the highest sales would be achieved by SHENGEN newsagent which was confirmed. An interesting result of our findings was that the month of August in which we observe the highest monthly sales did not have the highest number of customers at the same time, which was the highest in July and by 3 799 more than in August. In our research we also assumed that the rent per square meter would vary depending on where the leased space is located which would imply its attractiveness, traffic rate and usability. We have found that the rent per square meter is the same for business units in all parts of the airport terminal building. Therefore its amount is not differentiated depending on the location of the leased space. The amount of rent per square meter is therefore always the same regardless of whether we are talking about space in Check-in, Shengen or Nonschengen area. The airport operator provides constant rental prices to the tenants in all airport areas.

Based on our findings we came up with a proposal the application of which would improve the usability of the airport space and bring better conditions for both the airport operator and the tenants. Our proposal for improvement concerns the rent where we suggest the introduction of so-called turnover rent.

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