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## CONSUMPTION PATTERNS OF FOREIGN TOURISTS IN POLAND TRAVELLING WITH LCCs AND THEIR ECONOMIC EFFECTS IN THE LIGHT OF THE RESULTS OF A PILOT SURVEY

### Summary

The article aims to present and interpret the results of a pilot survey carried out among passengers at the Warsaw Modlin Airport in 2016. It is discussed in the context of the development of the Polish airline market in recent years, selected elements of its structure and changes thereof. Flights to and from the Modlin airport are solely operated by low-cost airlines, which significantly facilitates access to and the separation of the group of passengers who do not permanently reside in Poland (defined as foreign visitors) as well as determining their characteristics.

The survey whose main results are presented below was a pilot study, designed as the first stage of a larger research project mostly aimed at estimating the impact of inbound tourist traffic served by LCCs on the economy and, indirectly, also on public finance (the budget, taxes). The objective of the first stage of the survey referred to in the article was to test the hypothesis that LCC passengers permanently residing abroad had attributes which called for further research. Taking into consideration a number of important criteria, their image does not significantly differ from the characteristics of all tourists visiting Poland. Neither do they account for a marginal share of air transport in the low-cost segment. In the opinion of the Author, the hypothesis was confirmed by the pilot survey results.

**Key words:** air transport, low cost carriers, international tourism, tourism economy, tourist services, tourism expenditure.

**JEL codes:** D10, D12, F22, F61, H80, R41, Z31, Z33

### Introduction

No regulations enacted by world law organisations (ICAO), by the European Union institutions or contained in the Polish Air Law define the concept of 'low-cost airlines' (*LCCs – Low Cost Carriers*) or of 'cheap carriers'. The latter

category is used in the media and in colloquial language. In the literature, the expression ‘low-cost airlines’ has been adopted for a certain type of carriers with special characteristics. However, this is not a uniform term; for example, R. Doganis interchangeably uses the notions of ‘*low cost*’ and ‘*low cost no-frills*’, which is supposed to emphasise an airline’s focus on the transport service itself, on a point-to-point basis, with no unnecessary extras (Doganis, 2002, pp. 3, 19, 130, 137, 139). In turn, a European association of carriers from the segment concerned<sup>1</sup> adopted an official name of the European Low Fares Airline Association – ELFAA<sup>2</sup>, specifically communicating to consumers the aspect of low prices, irrespective of their sources.

It is assumed in air transport economics that the characteristics of this group of carriers are as follows:

- ‘Lower<sup>3</sup> labour costs and higher productivity,
- Lower ticket distribution costs,
- No-frills service,
- Common fleet type,
- Point-to-point service,
- Use of secondary airports,
- Higher aircraft utilization’ (Fleming, Tacker, Vasigh 2013, pp. 373-374).

R. Doganis assesses that ‘Low-cost airlines start with two initial cost advantages arising from the very nature of their operations, namely, *higher seating density* and *higher daily* [twenty-four-hour – TD’s note] *aircraft utilisation*’<sup>4</sup> (Doganis 2001, p. 144), which – combined with airport operation costs and labour costs – significantly translates into unit costs incurred by this type of enterprise.

Bearing in mind the above criteria characteristic of and distinguishing the segment in question, we must remember, however, that both such airlines and their competitors are not frozen within the rigid framework defined by systematists. Some airlines, ranked among LCCs in the previous years, have dissociated from such an identification (*vide*: Aerlingus and Air Berlin), whereas others – e.g. the IAG – formally joined this group by acceding to the ELFAA. On the other hand, a significant part of network carriers take effective measures for cutting unit costs (in certain areas even imitating solutions typical of LCCs before), whereas the vast majority have achieved aircraft utilisation rates previously only available to the leading low-cost carriers and change the scope of

<sup>1</sup> The notion of a ‘segment’ is referred to by the Authors primarily as a logical category, i.e. part of a larger whole; if used in the marketing sense, it is distinctly indicated.

<sup>2</sup> In 2015, the European Low Fares Airline Association, – ELFAA – had 10 members, e.g. Ryanair, Easy Jet, Norwegian AS., Wizz Air. On 1 April 2015, the ELFAA was also joined by the IAG (encompassing airlines such as British Airways, Iberia and Iberia Express), which came as a certain surprise, breaking the classification patterns. Information based on the website [elfaa.com](http://elfaa.com) (retrieved on 10.10.2016).

<sup>3</sup> The words ‘lower’ and ‘higher’ should be understood as below and above the average for the industry.

<sup>4</sup> R. Doganis addresses those issues in a whole chapter with the meaningful title *The low-cost revolution*.

services included in their fares<sup>5</sup>. Due to the above-mentioned developments, an increasing number of airlines are hybrid in nature. Despite the transformations observed, we can still use the LCC concept in the economic and marketing sense, although no longer as a legal term, with the reservation that the market position of each airline is not a dummy variable (black or white, a *low-cost* or network airline); instead, it is a certain continuum: from carriers satisfying the above-mentioned assessment criteria to the highest degree to those which are the most distant from them.

When considering the above-mentioned conditions in the context of the broader travel market and its economic impact, the following questions arise:

- a/ What passenger segments are served by LCCs in flights to and from Poland?
- b/ Do those permanently residing abroad account for a perceptible share among passengers carried by LCCs on routes from and to Poland?
- c/ Are there any distinguishing features of the group visitors in relation to all tourists visiting Poland – and if so, what are they?
- d/ Is there a type of characteristic behaviour in the segment of visitors concerned?
- e/ What is the level of tourism expenditure in Poland of LCC passengers visiting Poland?
- f/ Can we estimate the economic effects of visits by this group of tourists (i.e. low-cost carrier passengers) on the regional or national economy?
- g/ Assuming that it is possible to develop an appropriate methodology, what is the financial aspect of the impact?

Simultaneously, at the preliminary stage of the investigation, it seems justified to formulate the following hypothesis: LCC passengers in the Polish market who permanently reside abroad do not account for a marginal share of air transport, whereas their tourist behaviour and expenditure are not different (to the disadvantage of the tourism economy) from the overall behaviour pattern of tourists visiting Poland. If the hypothesis is corroborated by the pilot survey results, it should be the basis for developing assumptions of and carrying out surveys allowing to generalise the findings for the group under analysis (LCC passengers) and the whole economy.

## **General characteristic of activities of LCCs as a segment of passenger transport**

The entry into force of rules concerning the liberalisation and deregulation of the air transport market made low-cost airlines, colloquially referred to

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<sup>5</sup> Most frequently, it consists in the elimination of a luggage or catering service which was included in the fare before but within profitability improvement measures is considered to be a 'frill' and recognised as an 'extra' in the economy class. Sometimes, additional services are also offered in higher-class fares.

as cheap carriers, a permanent element of that market and of international passenger transport. In the European Union such developments took place in the 1990s. In Poland the process started in December 2003, several months before EU accession<sup>6</sup>. At present (2015–2016), LCCs are estimated to account for more than 30% of total passenger traffic at European airports and airlines representing this very business (economic) model of transport organisation rank as the largest carrier in Europe in terms of the number of passengers.

In Poland, the above developments were even more pronounced. In 2015, the leading LCC accounted for over 30% of scheduled (domestic and foreign) traffic, whereas all the low-cost airlines represented 60% (*Civil Aviation Authority*, April 2016). For years, the share of low-cost airlines in total transport operations in Poland has been on the increase and, basically, their activities largely determine changes in and the overall level of transport operations as well as receipts for Polish airports. The above relationships are pointed to, in a broader context, by D. Kaliński and A. Ruciński in their assessments of air transport as a driver of the competitiveness and development of Polish regions (Ruciński, 2008, pp. 86–109). The authors stress the region-forming role of air transport and recognise 2004 as the breakthrough year in which low-cost carriers entered the domestic market with an attractive offer of airline services (Ruciński, 2008, p. 90). In turn, D. Tłoczyński emphasises that ‘Functioning in conditions of open competition, Polish airports derived benefits from the introduction of the ‘open skies’ policy, e.g.: new entrants, also low-cost carriers ...’ (Tłoczyński 2008, p. 212).

On the other hand, such carriers are accused of infringing the rules of fair competition within the industry, benefiting from public subsidies, taking advantage of weaker bargaining positions of smaller airports (the lack of alternative carriage offers). With regard to the Polish market, it is also argued that air transport (in terms of demand) is dominated by the *job travellers* segment and by relatives and/or friends of such persons, which supposedly involves minimum effects on inbound tourism in Poland and on the part of the economy benefiting from tourism destinations.

According to information gathered by the Authors, flights operated by LCCs accounted for 46.1% of all scheduled services on foreign routes at 14 Polish commercial airports in the summer season 2016<sup>7</sup>. Some Polish airports (in international connections) rely on LCC operations in full, e.g. Warsaw Modlin

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<sup>6</sup> The start date is assumed to be December 2003, i.e. the commencement of business activity by Poland’s first carrier to operate on the basis of most of the assumptions typical of LCCs. It was Air Polonia. The beginning of operations as an LCC was possible as a result of the signing by the Polish authorities of bilateral agreements with the governments of the United Kingdom, Germany and Italy, anticipating ‘open sky’ solutions. The full opening of the market took place on 1 May 2004.

<sup>7</sup> When assessing this proportion, one must remember that the average LCC aircraft size (usually B-737 and A-320) is larger than the figure for other carriers in the Polish market and that aircraft utilisation by such airlines is likely to be slightly higher. Hence the 2016 share in services (in terms of the number of flights) is lower than the proportion in transport operations.

Airport (WMI), Szczecin-Goleniów (SZZ), or to a very significant degree. It concerns both regional airports with limited traffic (Lublin LUZ 89%, Rzeszów RZE 74%, Bydgoszcz BZG 71%) and the largest ones (Katowice KTW 87%, Gdańsk GDN 80%, Kraków KRK 67%). Only the Warsaw Chopin Airport (WAW) differs in this regard from regional airports, with shares in LCC services and in the number of passengers ranging between 20% and 25% (Dziezic 2014, pp. 61, 78 and the previous editions of the monograph).

Based on the same analysis, it was found that out of the 137 connections (the number of foreign airports served by carriers from Poland) from all the Polish airports 73 were routes solely operated by LCCs, 45 – exclusively by traditional carriers, whereas in 19 cases both segments shared the market. It means that LCCs were exclusively or partly present on 67% of routes from Poland to foreign destinations. The highest shares characterised flights to Ireland (100%), the United Kingdom (91%), Norway (96.5%), Spain (87.5%), Sweden (76.5%) and Malta (100%)<sup>8</sup>. The LCC market position must be considered strong with regard to flights to certain European cities. For instance, flights to the London airports operated by LCCs represented 85% of transport services offered, to Oslo – 95%, to Berlin 90%, to Barcelona – 87%, to Milan, Rome, Stockholm and Madrid – between 60% and 70%. Where mixed services were offered (by low-cost airlines as well as by network/traditional carriers) only in the case of Paris (and its two airports: CDG and BVA) LCCs accounted for less than 50%. The vast majority of airports outside the capital cities of the United Kingdom, Norway, Sweden, Italy and Spain were only served in the Polish market by LCCs (Milan and Barcelona constituted special exceptions)<sup>9</sup>. All the data reflect a very high transport potential of LCCs, particularly in the still relatively limited Polish air transport market. It must be added that an analysis of destinations offered, with a distinct majority of flights to the United Kingdom, Scandinavia, Spain and Italy, shows a focus on the segments of *job travellers* and of Polish residents taking shorter or longer holiday trips.

In order to even partly verify the conclusions following from the above data, for some time the Management of the Warsaw Modlin Airport has been conducting, on a regular basis, surveys of traffic in terms of countries of permanent residence of its passengers. The data obtained indicate that, for a number of directions (the Benelux countries, Scandinavia, France, Spain, Italy), persons permanently residing abroad (foreign residents) accounted for one-third to more than half of the passengers surveyed. In addition, in the case of Cologne (Germany), Lisbon (Portugal) and Athens (Greece) the share of foreign nationals was rather substantial (exceeding one-fourth). Only for

<sup>8</sup> In the last case, the share of LCCs was 100% (as to Ireland) but the frequency offered was limited (10 flights a week).

<sup>9</sup> Data on the supply of international connections from Polish airports in the summer 2016 season on the basis of an analysis of data collected by the Authors in May 2016 from the websites of the airports concerned.

British airports (with the exception of Manchester MAN), Irish and smaller Italian cities the respective proportion fell below 20%. As the surveys were carried out in November in 2015 and July 2016 in certain cases we can also observe symptomatic differences in the share of foreign nationals in traffic and no or very insignificant differences in others. It may reflect dissimilar levels of demand not only in individual countries but also depending on the purpose of trips taken by tourists travelling (with LCCs) to Poland. For example, with regard to flights on the routes Modlin–Paris BVA (Beauvais), Modlin–Brussels CRL (Charleroi) and Modlin–Barcelona BCN, during the 2016 summer holiday the shares of foreign nationals were more than 10 pps higher than in November 2015. On a number of routes the opposite was case, i.e. the interest from foreign nationals in travelling to Poland during the 2016 summer holidays appeared to be relatively lower than in November 2015. It mostly concerns Italian airports and most of the British ones, which shows that those markets (both national and local) generate greater demand from passengers with motivations for travelling other than tourism or leisure. It may be a useful observation for marketing activities and the assessment of their effectiveness. Detailed data broken down into 2 groups of connections – with higher or lower shares of foreign nationals – are presented in Table 1.

The values presented in table 1 do not correspond to the structure of traffic at other Polish airports as each of them has certain special characteristics in terms of segments of supply and demand (carriers, directions, markets of origin) and their proportions. It must be assumed that the shares of foreign nationals among LCC passengers served in Kraków and in Lublin are distinctly different. At the same time, when assessing traffic at the Warsaw Modlin Airport on that basis, we may quite safely assume that the share of persons permanently residing abroad is not lower than 20% of the total number of passengers. Since in 2015 international traffic at WMI included 2,243,000 passengers<sup>10</sup> (*Civil Aviation Authority*, April 2016). The 20% share in transport operations represents 448,000 foreign visitors to Poland. In a simplified and the most typical pattern of a return flight, it translates into a number not lower than 220,000 foreign tourists who visited Poland using low-cost airlines operating at the Warsaw Modlin Airport. It means that, even according to very cautious estimations, that traffic has an important economic aspect in the form of receipts from tourists (expenditure) during their stay in Poland.

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<sup>10</sup> 2,590,000 pass. in overall traffic, including 347,000 pass. in traffic domestic.

**Table 1. Shares of foreign nationals in selected foreign connections on routes from and to the Warsaw Modlin Airport in 2015 and 2016**

No.	Country	Airport	Share of foreign nationals in transport operations		Difference in pps
			July 2016	November 2015	
<b>Routes with relatively high shares of foreign nationals in July 2016</b>					
1	Netherlands	Eindhoven EIN	59.1	54.5	4.6
2	France	Paris Beauvais BVA	50.0	37.1	12.9
3	Sweden	Stockholm Skavska NYO	48.7	52.9	-4.2
4	Belgium	Brussels Charleroi CRL	48.1	26.5	21.6
5	Spain	Malaga AGP	42.9	no data	-
6	United Kingdom	Manchester MAN	42.9	30.0	12.9
7	Spain	Madrid MAD	41.9	41.7	0.2
8	Spain	Barcelona BCN	38.9	28.0	10.9
9	Italy	Rome Ciampino CIA	37.2	50.0	-12.8
10	Germany	Cologne CGN	37.0	40.0	-3.0
11	Spain	Alicante ALC	34.8	36.4	-1.6
12	Norway	Oslo Ryge RYG	29.8	18.2	11.6
13	Portugal	Lisbon LIS	28.6	22.2	6.4
14	Greece	Athens ATH	27.5	33.3	-5.8
15	Italy	Bologna BLQ	27.3	41.7	-14.4
16	Italy	Milan Bergamo BGY	25.8	31.6	-5.8
17	Italy	Pisa PSA	20.0	40.0	-20.0
<b>Routes with lower and relatively low shares of foreign nationals in July 2016</b>					
18	Ireland	Dublin DUB	19.6	23.3	-3.7
19	Italy	Trapani	14.3	no data	-
20	United Kingdom	London Stansted STN	13.2	33.0	-19.8
21	Greece	Thessaloniki SKG	10.0	no data	-
22	United Kingdom	Bristol BRS	6.2	21.1	-14.9
23	United Kingdom	Glasgow GLA	5.9	no data	-
24	United Kingdom	Liverpool LPL	5.9	14.3	-8.4
25	Ireland	Shannon SNN	5.0	no data	-
26	United Kingdom	East Midlands EMA	2.0	0.0	2.0

Notes:

1. The compilation excludes domestic directions (2), 3 to the Canary Islands and 1 to Majorca. With regard to foreign airports, LPA, PMI and TFS also showed significant shares of foreign nationals (above 20%) but it was assumed that such passengers had no connection with places of permanent residence in the destination countries for those flights. Furthermore, it is also difficult to draw any conclusions on the nature of stay of such passengers in Poland.

2. The values which in the 2015 survey were based on on small numbers are in italics.

3. 'No data' denotes cases where the number of foreign passengers in 2015 was 10 or lower.

For the survey conducted in November 2015 N=1,000.

Source: own study based on unpublished results of the surveys carried out by the Management of the Warsaw Modlin Airport.

## Assumptions and the purpose of the survey

The values presented above and traffic composition suggest that the part of transport activities pursued by low-cost airlines and the fragment of inbound tourism served by them may have a considerable effect on the performance of the Polish tourism economy and on related industries (thus on the economy as a whole) rather than only be perceived as means to increasing current airport (aeronautical and non-aeronautical) revenue in respect of services for transport operations and passengers, as is often the case. It requires a gradual and meticulous, possibly in-depth, investigation of specific sections of the transport reality. On account of traffic homogeneity, it was assumed that at the first research stage the best and the most efficient field of study would be the Warsaw Modlin Airport, with a focus only on LCC operations and passengers from its opening to scheduled traffic<sup>11</sup>. At the vast majority of airports in Poland (and, in general, in Europe) traffic is of a mixed nature, i.e. with intermingled segments of domestic, foreign, low-cost, network, scheduled, charter, GA operations, etc. Airports with greater traffic also experience waves of arrivals and departures. Those factors impede efficient access to passengers representing the desired segment of travellers. From this point of view, the situation at the Warsaw Modlin Airport can be regarded as laboratory conditions, therefore it attracted attention as a place to reach the passenger segment concerned. It was considered to be particularly useful at the preliminary stage of the project.

The survey was designed as the first, pilot stage of the research subject aimed to analyse the impact of operations of low-cost airlines on the activation of inbound tourism in Poland (directly) and, indirectly and at further stages of the survey, to assess this activity and to estimate its economic effects – in the form of arrivals at the Warsaw Modlin Airport (served by the airlines operating there) – on Warsaw, the whole Mazowieckie voivodship and Poland<sup>12</sup>. This, in turn, should be the starting point for designing and conducting surveys at other airports and estimating the impact on other regional economies and on the national economy. The survey was carried out in close cooperation with the Management Board and the relevant organisational units (and employees) of the Warsaw Modlin Airport.

The survey and analysis of the whole multi-stage process aim to estimate the economic impact (including: on the tourism economies of Warsaw, Mazovia and

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<sup>11</sup> After the opening, the first flight took place on 15 July 2012; between 22 December 2012 and 24 June 2013 the airport was closed (for repairs of the runway); it was re-opened on 24 June 2013 and operations were re-launched on 30 September 2013. Since then, flights have been operated without interruptions.

<sup>12</sup> The first stage of research, conducted in 2016, was financed from a grant of the Ministry of Science and Higher Education to the Warsaw School of Tourism and Hospitality Management for the implementation of the project entitled 'Preliminary development of methodological assumptions for surveys of inbound traffic at airports: the building and testing of research tools' [Wstępne opracowanie założeń metodologicznych do badań ruchu przyjazdowego na lotniskach: skonstruowanie i przetestowanie narzędzi badawczych].

Poland) of the inbound traffic at the Warsaw Modlin Airport. The task objective at the first stage (executed in 2016) was to design a methodological framework for further research phases, including to develop a pilot version of the survey questionnaire, to test the research tool concerned, to plan pilot sampling based on the current and changing flight schedule and to prepare and analyse the results of the field survey so that they can be used to formulate assumptions and to carry out surveys at subsequent stages.

## **Sample structure and sampling, the questionnaire description, the time and place of the survey**

In accordance with the research objective defined above, the assumption was that the survey sample would include persons permanently residing abroad (UNWTO, 2014, pp. 8, 12), irrespective of their nationality, citizenship, country of residence or the language spoken, aged 17 or over, and leaving Poland after a stay of any duration, regardless of the purpose of the trip. Due to the pilot nature of the survey, it was assumed that the group of potential respondents comprised passengers departing from the Warsaw Modlin Airport on routes used by foreign tourists arriving in Poland. A useful source of information was the current departure schedule and the findings from the studies described in the first part of this article.

Therefore, it was assumed that the respondents would be passengers going to the following foreign airports with direct connections with WMI:

1. Athens ATH (Greece),
2. Barcelona BCN (Spain),
3. Bergamo/Milan BGY (Italy),
4. Ciampino/Rome CIA (Italy),
5. Charleroi/Brussels CRL (Belgium),
6. Dublin DUB (Ireland),
7. Eindhoven EIN (Netherlands),
8. Cologne CGN (Germany),
9. Lisbon LIS (Portugal),
10. Madrid MAD (Spain),
11. Manchester MAN (United Kingdom),
12. Beauvais/Paris BVA (France),
13. Ryge/Oslo RYG (Norway),
14. Skavska/Stockholm NYO (Sweden),
15. Stansted/London STN (United Kingdom).

Passengers flying from Modlin to other domestic and foreign airports (e.g. to southern Spain, to the Canary Islands, to other airports in the United Kingdom) were not excluded from the sample but it was assumed that persons permanently

residing abroad were much less likely to be found in the group in question than on the above-mentioned routes. Therefore, surveying activities concentrated on times preceding departures to the aforementioned airports.

The dual representation of routes to Spain, Italy and the United Kingdom was aimed at capturing possible differences in the nature of traffic and at testing the appropriateness of the research tool for the differentiated structure. The choice of the survey times connected with the departure times for specific routes must be considered purposeful. The final selection of an individual for the survey was random, subject to the necessary conditions (pre-selection) of permanent residence abroad and finalising their stay in Poland.

The questionnaire contained (with certain exceptions) closed or semi-closed questions which concerned the arrival in Poland, the organisation of stay, the regions and localities visited, the organisation of accommodation and the type of accommodation establishments used, the scope and structure of services (including transport) purchased, the level and assessment of expenditure, a general evaluation of the stay. It was supplemented by questions about the country of permanent residence and selected socio-demographic data. The survey questionnaire was prepared in 4 language versions: in Polish, English, German and French.

Due to possible differences in the characteristics and behaviour of passengers (tourists) during and outside the summer holiday period, the survey was divided into two one-week rounds (both from Monday morning to Sunday evening); the 1<sup>st</sup> round took place on 25–31 July, the 2<sup>nd</sup> round was arranged on 19–25 September 2016. The respondents were requested to give answers to questions in the part of the passenger terminal open to the public at the Warsaw Modlin Airport and they were approached by trained survey interviewers.

## General sample description<sup>13</sup>

The survey covered a total of 104 respondents (with an assumed sample size of 100), of which 39 and 65 persons were interviewed in July and September respectively. The vast majority of those surveyed (as should have been expected) resided in countries to which direct connections were offered from Modlin. In several cases, those surveyed appeared to reside in other countries (also outside Europe)<sup>14</sup>. To a certain degree, the purposefulness of sampling (flights on specific routes) determined the distribution of results in terms of country of permanent residence. The pilot nature of that survey stage and the fragmentary period in

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<sup>13</sup> All the source data presented in this report are derived from the survey discussed unless indicated otherwise.

<sup>14</sup> The share of those surveyed from non-European countries (7%) did not differ from the respective proportion of that segment in total tourist arrivals in Poland (ca. 5%).

which the survey was carried out excluded an assumption on representative sampling with regard to this characteristic. However, the results allow to establish an indicative distribution of the variable, which may facilitate further studies. The countries of permanent residence are presented in Table 2.

**Table 2. Countries of permanent residence of those surveyed; N=104**

No.	Country	No. of respondents	Share in %
1	United Kingdom	15	14.4
2	Italy	12	11.5
3	Netherlands	10	9.6
4	France	9	8.6
5	Spain	9	8.6
6	Belgium	8	7.7
7	Norway	8	7.7
8	Germany	7	6.7
9	Sweden	7	6.7
10	Ireland	6	5.8
11	Portugal	4	3.8
12	Greece	2	1.9
13	CIS countries	1	1.0
14	Other European countries (LUX, CZE)	2	1.9
15	Countries in the Asia–Pacific region*	2	1.9
16	North American countries**	1	1.0
17	South American and Central American countries***	1	1.0
18	Other countries	0	0
No data		0	0
<b>Total</b>		<b>104</b>	<b>100.0</b>

In the case of the Asia–Pacific region\*, those were as follows: Nepal and New Zealand, for North America\*\* – the USA, for South America\*\*\* – Peru.

Source: study based on the results of own survey.

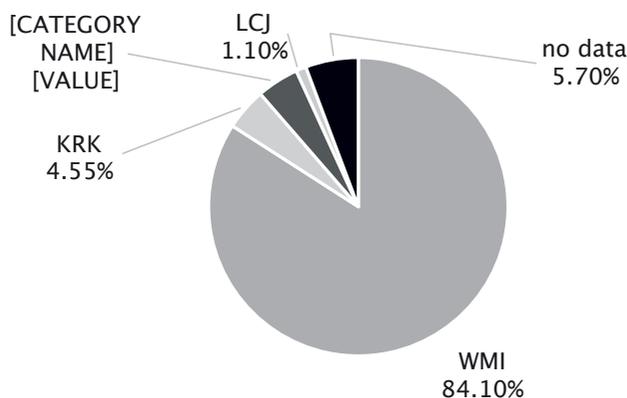
The above data indicate that LCCs participated, to a certain degree, in supplying transport services to visitors to Poland from countries outside the network of their direct connections.

In order to describe the sample surveyed as well as from a more general, marketing point of view, it seems important that for half of those surveyed (50%) it was the first visit to Poland. The variable is a proxy for the role of low-cost carriers in handling inbound traffic in Poland and for increased accessibility of Poland in the tourism market. It refers to the issue of LCC positioning in the Polish air transport market, as pointed out in the first section of the article. The results obtained also indicate – provided that further research produces similar findings – a possible change of the perception of LCCs solely as airlines serving Polish inbound traffic with a dominant share of the *job travellers* segment.

With regard to the organisation of the trip – apart from the obvious exclusivity on departure – aircraft also dominated as the respondents' mode of transport on arrival in Poland; it was used by nearly 83% of those surveyed and in the group of those who flew to Poland 91% travelled with Ryanair.

On arrival in Poland, those surveyed mostly used the Warsaw Modlin Airport; in addition, the respondent landed at the Kraków (KRK) and Łódź (LCJ) airports as well as at the Warsaw Chopin Airport (WAW). None of those surveyed used airports outside Poland; out of the total number of 9 respondents who had flown to airports other than WMI 7 were included in the July (summer holiday) round. Fig. 1 presents the shares of the Polish airports in the operation of arrival services.

**Figure 1. Shares of Polish airports in the operation of arrival services to those surveyed (in %); N=88**



Source: the Authors' study based on the results of own survey.

In the light of the above data, it can be stated that for the dominating majority of those surveyed (71%) the journey to and from Poland followed the typical pattern of arriving and departing with the same carrier at and from the same airport.

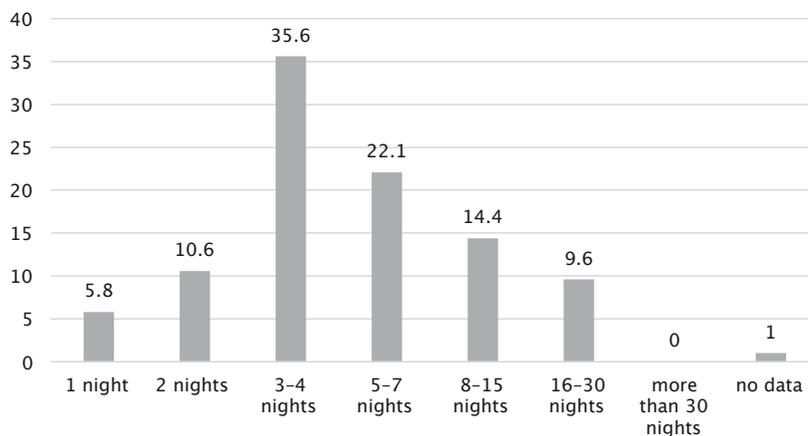
### **Selected survey results (including consumer behaviour indicators and the level of expenditure)**

The respondents were asked a number of questions concerning the organisation of their stay in Poland, the types of tourism activities, services purchased and expenditure incurred during their stay. As they were also asked about the length of stay and the number of persons participating in their

expenditure, it was possible to estimate expenditure in unit terms – per night and per person.

In the case of both domestic and inbound tourism trips, the length of stay is considered to be one of the determinants of types of activities undertaken by the tourist, a wider or narrower scope of tourism consumption and the related level of expenditure. In this regard, the surveyed LCC passengers were not significantly different from the whole group of tourists who visited Poland in 2015. The average number of overnight stays of those surveyed was 6.4, whereas for all the foreign tourists in Poland in 2015 it was 5.5 overnight stays (*Charakterystyka przyjazdów cudzoziemców do Polski w 2015 roku*, April 2016). Since answers of the respondents included declarations of rather long stays (more than 2 weeks), which influenced the average value (considering the small sample), for this variable the median value was computed as well; it was 4 nights. It is worth adding that in the summer holiday period the average length of stay of those surveyed was a little longer (slightly more than 7 overnight stays), whereas the median value was the same. The structure of the declared length of stay is presented in Fig. 2.

**Figure 2. Length of stay in Poland as declared by those surveyed; number of overnight stays; share in %; N=104**



Source: as in Figure 1.

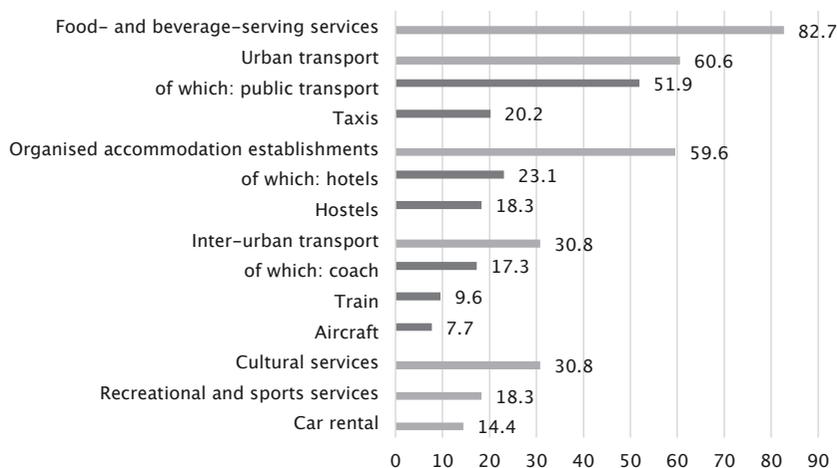
The distribution of values in fig. 2 is similar to the normal distribution and does not significantly differ from the results of the year-long surveys of all tourists in 2015 carried out by MSiT/GUS/NBP<sup>15</sup>, although the institutions in question adopted somewhat different gradation and other aggregates

<sup>15</sup> NBP – the central bank of the Republic of Poland [Narodowy Bank Polski]; GUS – Central Statistical Office [Główny Urząd Statystyczny].

determining time periods (*Charakterystyka przyjazdów cudzoziemców do Polski w 2015 roku*, April 2016, tab. 3).

In a number of questions, the respondents were asked about the scope and types of services used during their stay in Poland. Due to the economic importance of accommodation services to the tourism industry, in this case the question not only concerned the use of organised accommodation establishments but the respondent were also asked to indicate the types of establishments used, including cases where only some overnight stays were purchased at such facilities. Similarly, more detailed answers were asked with regard to the types of urban and inter-urban transport. The percentages of answers indicating the use of particular types of services are shown in Fig. 3.

**Figure 3. Respondents' indications of the types of services used during their stay in Poland (shares in %); N=104**



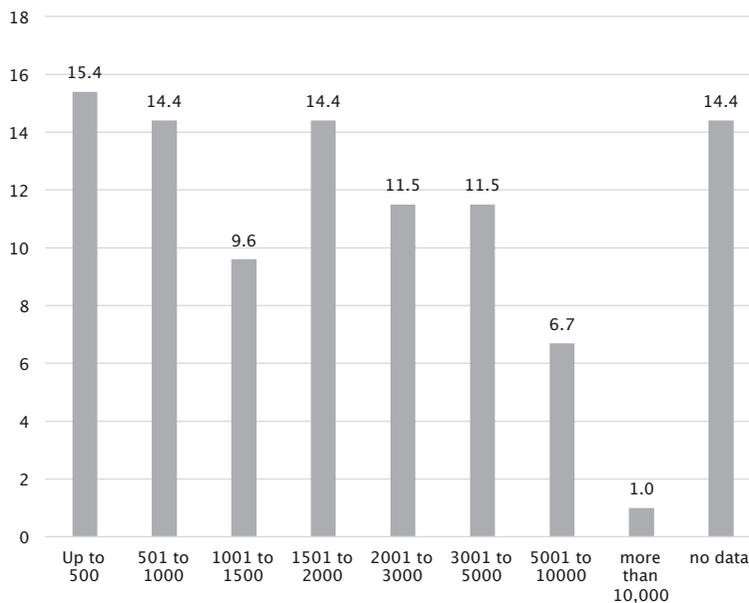
Note: in cases of (urban and inter-urban) transport services, those surveyed could choose more than 1 answer. As regards accommodation facilities, they indicated the dominating type of establishment.

Source: as in Figure 1.

The results obtained distinctly indicate that the use of food- and beverage-serving services were the most commonly used (more than 80%), whereas significant interest (approx. 60% of the answers) was also attracted by urban transport services and organised accommodation establishments. It is worth emphasising that nearly one-fourth of the surveyed stayed at hotels, i.e. establishments which usually provide the greatest comfort of accommodation services and, on the other hand, involve relatively high tourism expenditure, thus direct receipts for the tourism economy. The least frequently used services (indicated by every 6<sup>th</sup> or 7<sup>th</sup> tourist surveyed) were rent-a-car as well as leisure and sports offers.

The analysis of the expenditure incurred by the respondents during their stay was based on declarations made in currencies convenient for the tourists. The amounts given were then converted into PLN at NBP exchange rates from the survey period (before or as at the date of the commencement of the survey round concerned)<sup>16</sup>. The subsequent steps in the procedure were threefold: analysing the distribution of expenditure per case surveyed, per person participating in the expenditure declared as well as per person and per overnight stay<sup>17</sup>. In addition to attributing each of the cases surveyed to a specified range of expenditure (aggregation), the arithmetic mean (the average level of expenditure) was calculated; on account of a limited number of very high amounts of expenditure distorting average values, the median value was computed as well. The results and distributions obtained are presented in Figures 4 and 5.

**Figure 4. Distribution of answers to the question about expenditure incurred in Poland during the current stay (in PLN per case surveyed), shares in %; N=104**

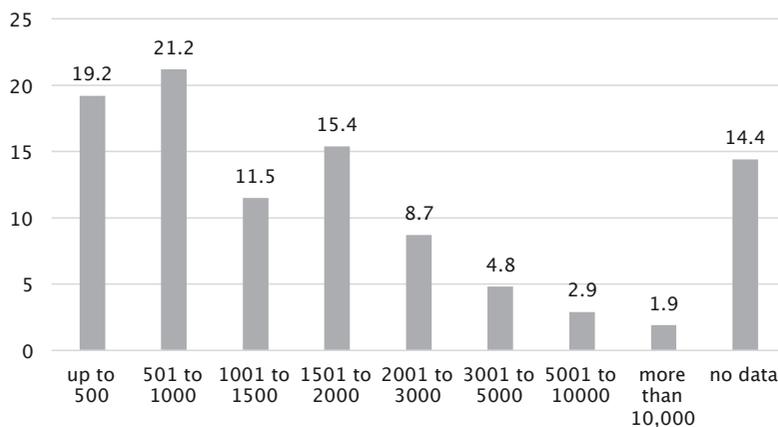


Source: as in Figure 1.

<sup>16</sup> For the 1<sup>st</sup> round, the following average exchange rates of the NBP as at 15 July 2016 were adopted: EUR 1 = PLN 4.4121; USD 1 = PLN 3.9598. For the 2<sup>nd</sup> round, the NBP exchange rate as at 19 September 2016 was adopted: EUR 1 = PLN 4.3071; USD 1 = PLN 3.8586. The respondents did not indicate amounts in other currencies.

<sup>17</sup> In this case, the objective is to standardise the level of expenditure irrespective of the length of stay which was strongly differentiated, as shown in fig. 2.

**Figure 5. Distribution of answers concerning expenditure per participating person (in PLN), shares in %; N=104**



Source: as in Figure 1.

In the case of both variables, i.e. expenditure per case surveyed and expenditure per person, the distributions are not close to normal. There is distinct 'overrepresentation' of those in the lowest expenditure ranges; expenditure of up to PLN 1,000 per case surveyed was indicated by 30%, whereas expenditure per person up to this amount was declared by 40% of the total number of those surveyed. In order to complement the picture of consumption by the interviewed passengers, the above values were made relative by calculating consumption per overnight stay as well as the average and median values were computed. As the results of the July and September rounds showed significant differences Tables 3 and 4 present the findings for both groups and for the sample as a whole.

**Table 3. Average and median expenditure (in PLN) per case surveyed and per person**

Round	No. of questionnaires answered	Average expenditure per questionnaire	Median expenditure per questionnaire	Average expenditure per person	Median expenditure per person
I N=39	37	2,326	1,300	1,666	882
II N=65	52	2,654	1,723	2,051	1,552
<b>Total N=104</b>	<b>89</b>	<b>2,517.5</b>	<b>1,700</b>	<b>1,891</b>	<b>1,103</b>

Source: the Authors' study based on the results of own survey.

Based on the data from table 3, we can state that the computed value of average expenditure per person of PLN 1,891 is close to the average expenditure

of foreign tourists in Poland in 2015 determined in the MSiT/GUS/NBP survey. According to above source, the average expenditure was USD 446 per person (*Charakterystyka przyjazdów cudzoziemców do Polski w 2015 roku*, April 2016, p. 4). Assuming the average value of the July and September USD/PLN exchange rates at USD 1 = PLN 3.90, the value of expenditure of the respondents at the Warsaw Modlin Airport was USD 485. It means that the surveyed passengers travelling with LCCs did not deviate in their tourism consumption from the average expenditure by foreign nationals in Poland. It should serve as an indication of the need to carry out further in-depth analyses of the tourism behaviour of this group of visitors (LCC passengers) to Poland and to recognise it as an integral and important component of inbound tourist traffic in assessments of its economic impact.

Considering the average number of overnight stays of 6.4 and the average expenditure of PLN 1,891 per person, the level of expenditure per person per night spent in Poland is established to be PLN 295.5. Simultaneously, if we take into account the median length of stay of 4 nights and the median expenditure of PLN 1,103 per person, the expenditure per person per night is estimated at PLN 276. Owing to differences in the results, the calculations are again presented separately for each round and for all those surveyed.

**Table 4. Expenditure (in PLN) per person per night according to the median and the arithmetic mean of expenditure broken down by survey round**

Round	Average no. of overnight stays	Median no. of overnight stays	Average expenditure per stay per person	Median expenditure per stay per person	Average expenditure per night per person	Median expenditure per night per person
I	7.15	4.0	1,666	882	233.0	220.5
II	5.95	4.0	2,051	1,522	344.7	380.5
<b>Total</b>	<b>6.4</b>	<b>4.0</b>	<b>1,891</b>	<b>1,103</b>	<b>295.5</b>	<b>276.0</b>

Source: as in Table 3.

It means that also in the case of this indicator for the group of LCC passengers interviewed at WMI the level of expenditure per person per night was higher than for all the surveyed foreign tourists in Poland in 2015. According to the source cited above, in this approach average expenditure in Poland was USD 69 (*Charakterystyka przyjazdów cudzoziemców do Polski w 2015 roku*, April 2016, fig. 5, p. 5). At the USD/PLN exchange rate as applied before (USD 1 = PLN 3.90), the sample surveyed at WMI produces USD 71 in terms of median expenditure and the length of stay, and USD 76 if the arithmetic mean is taken into account. Therefore, also with regard to this indicator tourists travelling with LCCs have (in the sample surveyed) above-average 'consumption value'.

Naturally, these conclusions cannot be generalised but they should stimulate further and in-depth research.

To complement this part of the description of those surveyed, it can be mentioned that the vast majority (61.5%) believed that the expenditure incurred in Poland corresponded to the value of purchases (in terms of quantity and quality), whereas the share of those who believed to have been overcharged was 2 pps lower than that of persons having indicated expenses lower than the value acquired. It should be regarded as a positive perception of the Polish market by the surveyed group of passengers.

### **Tourism behaviour patterns of LCC passengers and the expenditure declared**

Particular types of services used by the surveyed tourists as described above can be collectively treated as a certain indication of their attitude and propensity to consume tourism products. Such an approach should facilitate the verification whether or not the objective of the survey was achieved. In the execution of the task, it was assumed that specific types of behaviour favour consumption at a higher level (in terms of value, frequently also of quality). Those were considered to be the following:

1. the use of organised accommodation establishments, particularly of hotels;
2. the use of public urban and inter-urban transport, also of car rental services; due to higher costs (receipts from tourists<sup>18</sup>), an additional value is the use of taxis (within cities) and aircraft (across the country).
3. the use of food- and beverage-serving services, cultural as well as sports and recreational services.

Based on a comparison of the above assumptions with the questions contained in the survey questionnaire, the following were considered signs of behaviour conducive to consumption activities:

- a) the exclusive use of organised accommodation establishments;
- b) the use of food- and beverage-serving services, i.e. having meals at restaurants, bars, pizza parlours, etc.;
- c) the use of cultural services, i.e. buying entrance tickets to museums, theatres, cinemas, concerts and other cultural events;
- d) participation in sports events and the use of aqua parks, swimming pools, tennis courts, etc.
- e) the use of public urban transport (with an option to indicate the type of transport);

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<sup>18</sup> Since we assess the behaviour of foreign tourists the amount of receipts translates into the balance of foreign tourism, thus into the balance of payments.

- f) the use of inter-urban transport in Poland (with an option to indicate the type of transport);
- g) the use of vehicles rented from *rent-a-car* firms.

It was also assumed that the use of hotels, taxis and aircraft was a sign of above-average consumption activity and should be treated as a separate category. As a result, with regard to the theoretical framework, each of the respondents could give a maximum of 10 indications to all the above-mentioned types of services to zero if they had bought no items from the scope specified<sup>19</sup>. Considering such a treatment, it is obvious to simultaneously obtain, without exception, declarations of using organised establishments in situations of indicating hotels, the use of inter-urban transport and of aircraft, or of using urban transport by those who indicated travelling by taxi.

At that survey stage, the attribution of differentiated and adequate weights to all positions would be a difficult and methodologically risky exercise. It requires a meticulous consideration and answering, among others, the question of: adequate to what? Therefore, at the pilot stage of the survey each of the mentioned types of services (activities) was given 1 point if indicated by a respondent. The empirical material gathered allowed to determine that there was no case of the maximum number of 10 indications, whereas few persons (4) declared to have used 7 or more of the services specified. The largest group were those who declared to have bought 4 types of services. The intensity of the use of the above-mentioned services is presented in Table 5.

**Table 5. Number of types of services used by the respondents, with bonus points for the use of hotels, aircraft and taxis; N=104**

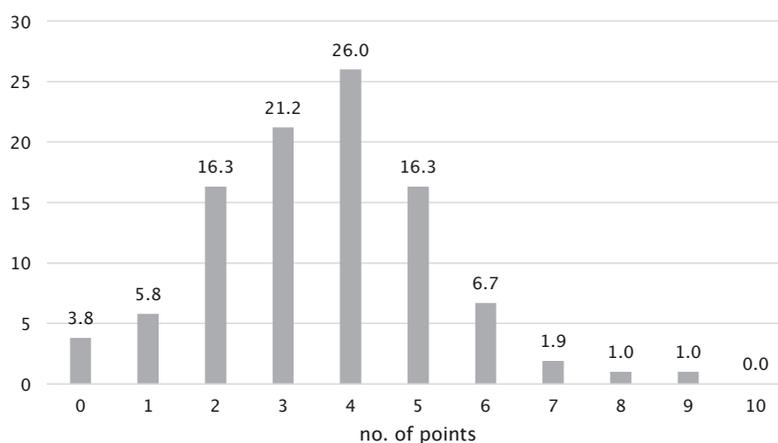
No.	Total number of points (no. of service types + 'bonus points')	Number of respondents	Share in %
1	10	0	0.0
2	9	1	1.0
3	8	1	1.0
4	7	2	1.9
5	6	7	6.7
6	5	17	16.3
7	4	27	26.0
8	3	22	21.2
9	2	17	16.3
10	1	6	5.8
11	0	4	3.8
Total		104	100.0

Source: as in Table 3.

<sup>19</sup> In another open question the respondents could also list other services purchased during their stay in Poland. Only 4 persons used this option and the indications were heterogeneous, therefore those answers were not taken into account in the in-depth analysis; they were also excluded from the set of consumption activity indicators.

The data shown in table 5, presented in graphical terms, indicate that the scope of the use of service has a nearly-normal distribution, with a shift towards lower values. The shift means that there were more persons who used less than half of the services included in the questions asked. It is presented in Fig. 6.

**Figure 6. Percentage of the number of indications of services used by the respondents, including additional bonus points for hotels, aircraft and taxis; N=104**



Source: as in Figure 1.

Is it possible to treat the above construction as a scale? It seems that there are no grounds for such a qualification if it means a Guttman scale. It does not satisfy the criterion of a single dimension as it concerns various types of services which only have one common denominator, i.e. that they are supplied to tourists. Secondly, it is not cumulative (Frankfort-Nachmias, Nachmias 2001, p. 482). Apart from the sections which concern bonus points for the use of hotels, aircraft or taxis where consuming a specific service determines being a consumer of a wider category of services, the surveyed passenger behaviours had no causal or logical link. Therefore, if we define a scale as a specific comparison of certain categories, types and classes with measured values of variables – in terms of quality or quantity – of surveyed subjects, phenomena and processes (Olechnicki, Załęcki, 2002, p.188) the presented construction does not satisfy those conditions.

The approach summarised in Table 5 and in Fig. 6 aimed to demonstrate that among LCC passengers there was a significant share of persons whose

tourism consumption was beyond the narrow package of hotel accommodation and food- and beverage-serving services, sometimes accompanied by public urban transport. Over 25% of those surveyed bought a wider range of services. Although the introduction of weights based on average expenses to the set of services surveyed has the disadvantage of generating values with a significant margin of possible deviations with regard to specific expenditure of a tourist, it allows to approximate the principle of homogeneity (one-dimensionality) of measurement, thus the treatment of the constructed service index as a quasi-scale. It can be assumed that a survey of LCC passengers on a much larger sample and carried out in different periods due to varying types and volume of tourist traffic will allow to analyse several interesting issues. In the opinion of the Author, those include attempts to answer the following questions:

- Are there any typical sets of purchased services where passengers/tourists use more than the three basic types (i.e. accommodation, food- and beverage-serving services and public urban transport? If so, what are they?
- Is the number of types of services purchased statistically related, and in what way, to the length of stay in Poland, the criterion of the first visit to Poland, the country of permanent residence, the period of stay, the degree of satisfaction with the visit, age or sex?
- Can we speak, and to what degree, of a relationship between the consumption of particular types of services or their typical sets and the level of expenditure declared?

With regard to the last question, it will be useful to compare answers concerning the consumption of specific services or service packages, assuming the introduction of weights (based on average prices) as indicated above. The empirical material gathered in the pilot survey showed no statistical convergence between the number of services used (according to the method presented above) and the level of expenditure. The Pearson correlation coefficients of the variable 'level/intensity of the use of services' (for N=87, rejecting the lack of data) and expenditure per case surveyed / expenditure per person were computed to be 0.21 and 0.23 respectively. Thus, in both dimensions the regression coefficient is 0.05, which indicates no relationship. It must be assumed that overweighting of particular types of services by their costs made somewhat more real will render that convergence more distinct (stronger). In a survey on a much larger sample, the analysis of convergence between the 'model' of consumption and the level of expenditure must also take account of a control variable in the form of the length of stay. That common-sense convergence is then very likely to be confirmed statistically<sup>20</sup>. It will also allow to outline several types of private consumption of visitors to Poland travelling with low-cost carriers. With the

<sup>20</sup> In the consideration of the above issues and future measures, one must not forget the relatively significant price ranges for many types of services, the varying intensity of using similar services by individuals, cash which 'just disappeared, there is no telling how', amounts spent on souvenirs and presents, gambling, gifts, etc.

above conditions satisfied, we will be able to break down the group surveyed into segments in marketing terms where it will be possible not only to determine the characteristics of buyers, their attitudes and market behaviour but also to learn the conditions of differences and similarities arising from geographic, demographic, socio-economic and psychographic variables, as summarised by E. Dziejic (2015, p. 142).

## Conclusions

The information gathered and the results of the surveys carried out by the Management of the Warsaw Modlin Airport indicate that tourists arriving in Poland (visitors to Poland) travel with low-cost airlines operating at the airport in question. On certain routes, they account for a significant share.

The observed structure of traffic and transport volumes call for measures aimed to analyse its characteristics and composition in a more in-depth manner than before and one step towards achieving this objective was the pilot survey carried out and the research tool tested in 2016.

The study mostly covered passengers residing permanently in countries having direct connections with Modlin, although there were cases (7% of those surveyed) of residing in other countries (also outside the EU).

The average length of stay among the respondents did not differ from the tourist behaviour of all the visitors to Poland in 2015, whereas the share of those staying at hotels was slightly higher. It allows to draw the conclusion that the benefits for the tourism industry from this group of passengers not are below the average for foreign tourists. It is also confirmed by the level of declared expenditure. The amounts of expenditure per person and per overnight stay per person were even a little higher than those computed per tourist in 2015.

With regard to services used by those surveyed, the most frequent indication was having meals at various types of food- and beverage-serving establishments, followed by urban transport and services provided by organised accommodation facilities. Each of the above-mentioned types of services was indicated by more than half of the respondents.

Individuals having only used 1 or 2 types of services were relatively few. Every fifth respondent answered in this way. Otherwise, the scope and diversity of the use of services was greater or much greater. Survey on a significantly larger sample will allow to identify typical sets, service 'bundles', their convergence or divergence in relation to other variables and as well as examining the relationship between them and the level of expenditure and overall consumer satisfaction. This article merely points to the investigation directions as fields of study, whereas a very limited statistical base precluded the carrying out of such analyses and the possibility of reliable inference.

It seems that the hypothesis formulated at the beginning, i.e. that LCC passengers in the Polish market who permanently reside abroad do not account for a marginal share of air transport and that their tourist behaviour and expenditure are not different (to the disadvantage of the tourism economy) from the overall behaviour pattern of tourists visiting Poland, has been corroborated by the survey findings. Therefore, it should serve as a basis for developing assumptions and further studies allowing to comprehensively describe the group surveyed (LCC passengers) and its economic impact.

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## Struktura konsumpcji turystów zagranicznych w Polsce podróżujących tanimi liniami lotniczymi i jej efekty ekonomiczne w świetle wyników badania pilotażowego

### Streszczenie

Artykuł ma na celu zaprezentowanie i zinterpretowanie wyników badania pilotażowego przeprowadzonego wśród pasażerów w porcie lotniczym w Modlinie w roku 2016. Jest ono omawiane w kontekście rozwoju polskiego rynku lotniczego w ostatnich latach, wybranych elementów jego struktury i jej zmian. Loty do i z portu lotniczego w Modlinie są obsługiwane wyłącznie przez tanie linie lotnicze, co znacznie ułatwia dostęp i wyodrębnienie grupy pasażerów, którzy nie mieszkają na stałe w Polsce (określani jako goście zagraniczni), jak również ustalenie ich charakterystyk.

Badanie, którego główne wyniki są prezentowane poniżej, było badaniem pilotażowym pomyślanym jako pierwszy etap większego projektu badawczego, przede wszystkim mającego na celu oszacowanie wpływu turystyki przyjazdowej obsługiwanej przez tanie linie lotnicze na gospodarkę i, pośrednio, na finanse publiczne (budżet, podatki). Celem pierwszego etapu badania, o którym jest mowa w artykule, było sprawdzenie hipotezy, że pasażerowie tanich linii lotniczych stale mieszkających za granicą posiadają cechy wymagające dalszych badań. Biorąc pod uwagę liczbę istotnych kryteriów, ich wizerunek nie różni się znacznie cech wszystkich turystów odwiedzających Polskę, ani też nie stanowią one marginalnego udziału transportu lotniczego w segmencie niskokosztowym. Zdaniem autorów wyniki badania pilotażowego potwierdziły postawioną hipotezę.

**Słowa kluczowe:** transport lotniczy, tanie linie lotnicze, turystyka międzynarodowa, gospodarka turystyczna, usługi turystyczne, wydatki turystyczne.

**Kody JEL:** D10, D12, F22, F61, H80, R41, Z31, Z33

Artykuł nadesłany do redakcji w grudniu 2016 roku.

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