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## ASSESSMENT OF THE ECONOMIC IMPACT OF THE MEETINGS INDUSTRY ON THE CITY OF KRAKOW

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The academic world has long endeavoured to make a meaningful contribution to the challenge of measuring the economic impacts of meetings. Existing reviews of the business tourism literature demonstrate that the economic impact of events and meetings is among the crucial themes that have emerged as key research topics in academia. The main aim of the research was an assessment of the impact of the meetings industry on the economy of Krakow. The results are expressed as overall values – comprising direct, indirect and induced effects. The study has used a thorough literature review to identify the best methodology for calculating the impact on the city level. The project consisted in the pilot study and afterwards the main survey method (five different questionnaires were used) which enabled the gathering of the empirical data necessary for the analysis of the economic impact of Krakow's meetings industry. The calculated input of the meetings industry to the city's economy is significant, considering how complex Krakow's economy is. This was the first assessment of the significance of the meetings industry for a city in Central Europe.

**Keywords:** economic impact, meetings industry, business tourism, multiplier.

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### 1. INTRODUCTION

The meetings industry, also known as the business events or MICE (meetings, incentives, conferences and exhibitions) industry has grown into a major sector in most parts of the world, often making a crucial contribution to the local, regional and national economies of the cities and countries in which the meetings are held.

Mindful of the possible benefits of a thriving meetings industry, governments are an important potential source of financial support for that sector, and many governments – national, regional and local – choose to provide such support in the attempt to boost the volume and value of the meetings held within their

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territory. Authors such as Dwyer et al (2000) emphasise the sound economic and non-economic reasons that explain why governments may provide such support: conferences, conventions and other forms of meetings have the capacity to create income and jobs in the short term and generate increased visitation and related investment in the longer term. But governments as well as investors and other stakeholders must be convinced of the economic benefits that the meetings industry yields for the destinations in which they take place (Sánchez-Rivero and Cárdenas-García, 2014; Kayat et al., 2013; Xu 1999; Ji et al., 2015), and convincing them of this means developing systems that can accurately measure those economic benefits.

The Polish city of Krakow in Central Europe is rapidly developing as a conference destination, bringing a range of economic benefits of the types mentioned above. In recognition of the city's success in this sector, Krakow was awarded the title of 'MICE Trend Destination 2014' in December 2014 by journalists of the publication "MICE & Business Travel".

The main aim of this paper is to assess the impact of the meetings industry on the economy of Krakow. It should be stressed that this represents one of the first attempts to evaluate the meetings industry's economic impact at local/city level, as until now the majority of such measurements have been conducted at national or regional levels.

The research questions in this paper were formulated as follows:

1. What is the amount of GDP created by the meetings industry in Krakow?
2. How much employment is generated by the organising of meetings and events in Krakow?
3. How much is generated in terms of personal income?
4. How much in terms of taxes and other levies is paid into the city's budget by the meetings industry?

The impact analysis refers to the year of 2013 and the data resulted from empirical research conducted in Krakow in 2012–2014.

Two research hypothesis were formulated:

H1: The expenses of participants in the meetings industry are differentiated by the type of the meeting.

H2: The share of the meetings industry in the economy of Krakow is the highest – among the four analyzed categories – in the case of wages.

This paper begins with a general review of the literature pertaining to the assessment of the economic impact of meetings and then continues with a review of a study designed to estimate the economic impact of the meetings industry on Krakow.

It is clear that, in addition to the positive economic impacts they may generate, business events can also result in a range of associated social and cultural benefits to a destination. For example, they may enhance the exchange of ideas, foster business contacts, provide forums for continuing education and training, and facilitate technology transfer etc. However important these impacts may be, they are beyond the scope of this paper and will not be taken into consideration here.

## **2. LITERATURE REVIEW**

### **2.1. Estimating the economic contribution of meetings**

The academic world has long endeavoured to make a meaningful contribution to the challenge of measuring the economic impacts of meetings. Existing reviews of the business tourism literature, such as that conducted by Mair (2012), Connell and Page (2005), demonstrate that the economic impact of events is among the main themes that have emerged as key research topics in academia. Many researchers have focused on analysing the economic impacts of the meetings industry on the host destinations (Dwyer and Forsyth 1996, 1997; Grado et al. 1998; Kim et al. 2003; Lee 2007), using various methods in order to assess the direct and indirect economic impacts of meetings. Lee (2007) notes that among those methods, the input-output (I-O) model has been widely used in the economic impact assessments.

Yang and Gu (2012) illustrate the diversity of approaches taken by contrasting two frameworks proposed for the measurement of the economic impacts of the meetings industry. They highlighted the proposal of Kock et al. (2008) for a Regional Impact Based Feasibility Study (RIBFS) framework for the Orange County Convention Centre (OCCC) in Florida, noting that this framework includes aspects of a traditional feasibility study, I-O analysis, and all monetary market transactions for consumptions over a particular period of time. Taking a different approach altogether, Dwyer and Forsyth (1996, 1997) developed an alternative framework for assessing the extent to which a national economy may reap economic benefits from the meetings industry. Three different impacts of convention and exhibition activities were identified: the direct effects, the indirect effects, and the induced effects. Within this framework, estimates of direct spending, economic output, value added, direct employment, and total employment were identified.

It transpires that the lack of a universally-accepted methodology for estimating the economic impacts of the meetings industry on destinations and comparing the scale of those impacts between destinations and over a period of time has been one of the key long-term challenges facing the meetings industry. This challenge has been compounded by a number of the characteristics of the meetings industry itself, including its fragmented and complex structure, comprising a great variety of stakeholders, as well as a general lack of clarity in terms of definitions (ICCA, 2015).

A significant step forward in gauging the state of affairs regarding the measurement of the economic impacts of meetings was made in 2012 when, on behalf of the Joint Meetings Industry Council (JMIC), Jago (2012) collected a range of studies designed to assess the economic impacts of meetings held in a range of destinations worldwide. The various studies that were accessed by the author, although relatively limited in terms of quantity, were subsequently analysed in depth in order to identify their aims, the methods employed, and the underlying assumptions made.

The studies were compared and contrasted in order to highlight the similarities and differences between them, and their methods and assumptions that were assessed.

## **2.2. National studies**

In terms of national studies of the economic impacts of the meetings industry, Jago identified five countries that had endeavoured to measure the economic contribution of that sector. Table 1 lists the studies. Following the Jago's review, economic impact studies were undertaken for the United Kingdom (2013), while in 2014, update studies were published for Australia and Canada.

These national studies were all found to have adopted the guidelines established in 2006 as the outcome of a collaboration between the UN World Tourism Organisation (UNWTO), the International Congress and Convention Association (ICCA), Meeting Professionals International (MPI) and Reed Travel Exhibitions to produce the first global standards for the undertaking of national economic impact studies, based upon a 'Meetings Satellite Account', an extension of the widely-used Tourism Satellite Accounts. These guidelines were published by the United Nations World Tourism Organisation as a report entitled 'Measuring the Economic Importance of the Meetings Industry – Developing a Tourism Satellite Account Extension' (UNWTO, 2006).

Table 1  
National Economic Contribution Studies

Study title	Country	Year published	Research Agency
National Business Events Study	Australia	2005	Cooperative Research Centre for Sustainable Tourism STCRC
The Economic Contribution of Meetings Activity in Canada	Canada	2008	Maritz Research
The Economic Significance of Meetings to the US Economy	USA	2011	PricewaterhouseCoopers
The Economic Significance of Meetings to Mexico	Mexico	2011	PricewaterhouseCoopers
The Economic Contribution of Meetings Activity in Denmark	Denmark	2012	Visit Denmark

Source: Jago (2012).

Jago's evaluation of these national studies was that although they consistently employed an internationally-recognised methodology to measure the economic impacts of meetings upon the national economy, there were two fundamental limitations to the UNWTO approach: firstly, the expense incurred in collecting data from such a broad range of stakeholders active in the meetings industry; and secondly, the fact that the outputs of these stakeholders have little relevance at regional or city destination levels where key decisions pertaining to the meetings industry are made. However, a number of authors, such as Jones and Li (2015) argue that the core Meetings Satellite Account could be extended to estimate the indirect economic impacts and economic impacts at sub-national levels.

Jago (2012) also highlighted key differences in the data collection processes of the national studies, such as how the amount of expenditure by delegates, the number of events and attendance were estimated. In addition, he indicated a few of the challenges arising from the attempt to establish an extended Tourism Satellite Account to better reflect the economic impact of the meetings industry on national economies.

### 2.3. Local studies

Given that investment and managerial decisions affecting the meetings industry are generally made at local level, much of the interest in measuring the economic impacts of that industry has focussed on calculating the impacts of meetings on the economy of individual cities.

The report compiled by Jago on behalf of the Joint Meetings Industry Council (JMIC) includes a review of a number of studies designed to measure the economic contribution of meetings at sub-national level. According to the author, three different approaches have been adopted, with studies attempting to estimate one of the following:

5. the contribution that a single meeting makes to a region;
6. the contribution that meetings held at a particular venue make to a region over a period of twelve months;
7. the contribution that meetings held at a number of venues in a region make to that region over a period of twelve months.

The essential focus of these studies was found to be the economic impact in the form of new expenditure brought to the city by delegates who are inbound visitors to the destination. But Jago's principal critique of this focus is that in ignoring a key element of economic impact, namely the spending of local delegates, it underestimates the overall value of meetings taking place in the destination (Jago, 2012).

### 3. DATA AND METHODOLOGY

The aim of the research was to estimate the economic significance of the meetings industry for the economy of Krakow. The study focuses on the key parameters: GDP, employment (in terms of annual FTEs), salaries and taxes. The meetings and events under consideration were divided into four groups:

1. conferences and congresses,
2. corporate meetings,
3. incentive events,
4. trade fairs and exhibitions.

With reference to the main goal, the following detailed research questions were formulated:

- How much time do business tourists spend in Krakow (before, during and after an event)?
- To what extent are business tourists coming to Krakow alone or with accompanying persons?
- How much – and on what – do they spend in Krakow?
- What kind of accommodation do they choose?
- How long (how many days) on average do business events last in Krakow?
- To what extent do the costs of the organisers, intermediaries and host venues relate to the expenditure of the participants?

- How many jobs are generated by the business events hosted in the venues in Krakow (as FTEs)?
- What is the GDP yielded by the meetings industry in Krakow?
- What is the volume of taxes that are paid to the city of Krakow's budget as a consequence of the meetings activity taking place there?
- What is the volume of the salaries of employees involved in the meetings industry in Krakow?

Seeking answers to these questions was the principal focus of the study.

The starting point of the research process was a review of the literature concerning the impact of tourism in general and the meetings industry in particular on the economy of the nation, region or city. The next step was a review of the accessible secondary statistical data concerning tourism and selected sectors in Krakow. Next, preliminary research tools in the form of questionnaires were prepared and tested as a pilot survey of 16 meetings held in Krakow. The results of this pilot survey were used for the purposes of refining the methodology and improving the questionnaires for the main survey. Both of these surveys (the pilot and the main one) were conducted by external professional companies, but the sampling, questionnaires and methodology were prepared by the authors. The research process was based on good practices established in Switzerland and involved the participation of representatives of the meetings industry in Krakow. The research was conducted within the wider project: 'Steering the meetings industry in Krakow: assessment and monitoring of the economic effect of the meetings industry on the economy of Krakow with the use of good practices from Switzerland', financed by the Swiss Government, in cooperation with the University of Applied Sciences of Western Switzerland<sup>1</sup>.

With the aim of ensuring the reliability of the data to the greatest extent possible, the authors collected responses from a number of sources in order to permit triangulation. Five different questionnaires were used in the survey for five different groups of respondents: meetings organisers; managers of meetings venues (hotels, universities, museums, conference centres and restaurants); participants in conferences and other meetings; participants in trade shows and fairs; and exhibitors in trade shows and fairs. Based on the obtained results, the H1 hypothesis has been confirmed: the level of

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<sup>1</sup> The detailed description of the project is in the report: K. Borodako, J. Berbeka, A. Niemczyk, R. Seweryn, Influence of the meetings industry on the economy of Kraków, Foundation of the Cracow University of Economics, Kraków 2014 [e-publication: [www.krakowimpact.pl](http://www.krakowimpact.pl), accessed on 22.09.2017].

expenditure of participants in the meetings industry varies according to the type of the meeting.

The sources consulted for the literature review above revealed that similar research projects had already been carried out in other countries and other cities. But the limitations of such studies, as previously highlighted by Jago (2012) and others, motivated the authors to employ their own methodology for use in the particular context of business tourism in Krakow.

For the purposes of this survey, the Polish Classification of Economic Activities (PKD-2007) classification of the economy was used. The framework of the Statistical Office in Krakow was used for the assessment of the tourism economy, and activities included in the meeting industry were taken into consideration. In this way, seven tourism-related groups of economic activities were identified (groups 01–07) as being beneficiaries of meetings held in the city. However, taking into consideration the fact that the meetings industry involves some activities which are not included within the tourism sector, one more group (08: Creative industries and other sectors) was also included.

The analysis was carried out by classifying expenditures (in total or partially) of three different groups of participants of the meetings to each of the specified above groups (01 to 08). Next, based on the numbers of business tourism participants in 2013 (according to the research conducted by Polish Convention Bureau, Polish Tourism Organization and institutions organizing trades and fairs) and the data on earnings of those employed in groups 01–08 (from the Statistical Office), the direct impact (Niemczyk and Seweryn, 2008) of the meetings industry on these selected sectors of the Krakow economy was calculated. Due to the lack of statistics at city level, the evaluation of indirect and induced impact was conducted using multipliers obtained from the DMAI Event Impact Calculator developed by Tourism Economics and specifically calibrated for local data pertaining to Krakow. The indirect and induced impact of the meetings industry (a concept borrowed from tourism industry) show how many times money spent by the participants of meetings circulates through a city's economy. Due to the lack of input-output matrix for Krakow's economy and the lack of essential statistical data for the city level, the authors used the Tourism Economics model (developed as the DMAI Event Impact Calculator) that delivers the values of multipliers. The results of the analysis obtained at a later stage of the study enabled the testing of both hypotheses.

While GDP is used to compare the amount of value generated at national level, it is generally agreed that its use for evaluating the amount of value

generated by smaller territorial units is limited due to the lack of comprehensive and reliable data that would be required for the relevant calculation. However, due to the demand for this type of indicator, GDP is occasionally also used for the purposes of analysing the value generated in regional or sub-regional units. In the research presented in this paper, GDP was calculated on the basis of linear regression modelling, but due to the limited length of the article a detailed description has been omitted. Two different approaches have been applied in this use of GDP at sub-national level. For the first method – known as ‘top-down’ – disaggregation from the whole GDP into smaller units is applied, and for the second one – known as ‘bottom-up’ – data for regional level territorial units are aggregated and summed up. Both approaches are used in many countries, including the US (Landefeld, 2006) and the EU member states, including Poland.

However, an approach using the aggregation of GDP at city level and for specific groups of business sectors is, in practice, somewhat rare due to the considerable number of difficulties that may be encountered in implementing such a calculation.

## 4. RESULTS

### 4.1. The meetings industry in Krakow, 2012–2013

The Krakow meetings industry has been the subject of research since 2009. However, in 2012 a new way of gathering data was used: data were reported on line, voluntarily, by the enterprises themselves. This change made it impossible to compare data from 2012 onwards (gathered by the authors) with data from previous years. That is why the analysis in this paper refers only to the years 2012–2013.

In 2012, 1,855 meetings were reported in Krakow; and in 2013, 3,413, representing an increase of 84%. In terms of the numbers of reported participants, the difference was also apparent: 286,898 in 2012, compared with 427,980 in 2013. In 2013, the largest share of business visitors to Krakow participated in conferences/congresses and fairs/exhibitions (Figure 1). The volume of congresses and conferences participants increased by 20%, and participants in incentive trips by 5%. However, there was a 17% decrease in the numbers of participants in fairs and exhibitions and a 9% decrease in the number of participants in corporate events.

The volume of participants was not in proportion to the volume of meetings. As for meetings, in 2013, the majority were conferences and

congresses, which constituted 75% of all meetings in Krakow (Figure 1). That proportion was 29 percentage points higher than in 2012, when the dominating type of meetings were corporate events (47%). In 2013 their share of the total decreased by 14%.

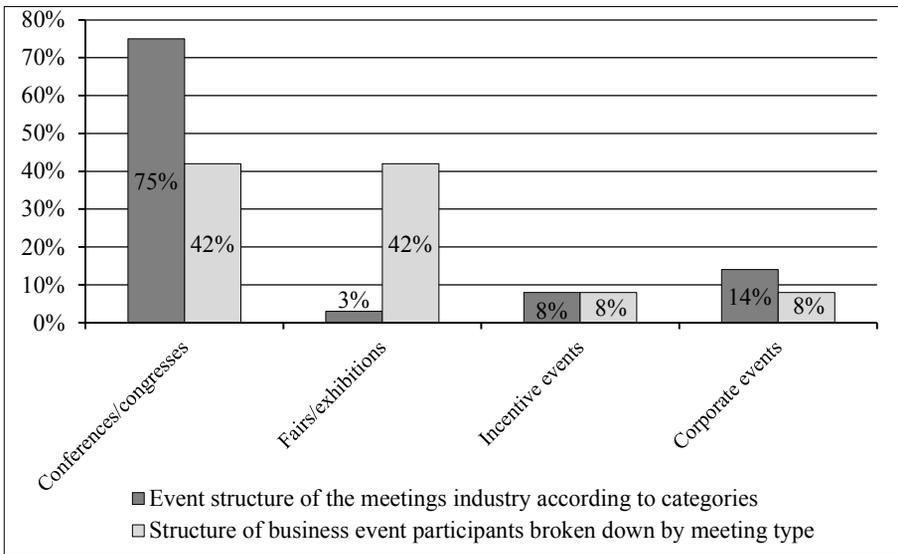


Fig. 1. Share of events and share of business event participants hosted in Krakow in 2013 broken down by meeting type

Source: authors' own study based on the PCB POT database.

It should be stressed that the share of international meetings in Krakow in 2013 increased by 9 points, to 28.2%. Among those the most frequent were congresses and conferences which in 2013 constituted 84% of all meetings.

The meetings industry market is seasonal, as indeed is the whole tourism market. The data reveal two peaks in Krakow: in the autumn (September, October and November) and in the spring (March, May and June) when there are fewer meetings than in the autumn, despite the fact that the spring period extends over four months. Therefore both peaks have similar importance for the city – there are about 9%–11% of the annual total meetings and events during each month of these two periods. The summer and winter months are less popular with the meetings industry as 5%–7% of all meetings are held each month of these two periods which, however, are more popular for leisure, which is widely demonstrated in the literature.

One of the most significant feature of meetings is their duration. The analysis of data leads to the conclusion that international meetings (all their types) were considerably longer than national meetings.

#### **4.2. Infrastructure necessary for the meetings industry in Krakow**

In 2013 in Krakow there were 138 facilities suitable as venues for the meetings industry. The number of seats (in a theatre configuration) in Krakow's venues was 82,499, and the number of meeting rooms was 566 (many of the venue room layouts are changeable, however, and this has a small impact on the data (Kraków Convention Bureau). The exhibition space in the city covered a total of 28,663m<sup>2</sup>.

It should be stressed that the majority of facilities in Krakow lack large meeting rooms. The average capacity overall is 606m<sup>2</sup>, but the median is 214 seats. The distribution of rooms in facilities is also differentiated. The average for a venue is 4 meeting rooms, but again the median is lower, at 3.

It is worth mentioning that in 2014 the situation was significantly improved when three new venues opened in Krakow, with important ramifications for the sector: Congress Centre ICE Krakow, Expo Krakow and Tauron Krakow Arena.

An analysis of the location of conference/congress facilities leads to the conclusion that larger facilities are located more peripherally, and the smaller ones closer to the centre of Krakow. Krakow's supply of meetings facilities is extremely diverse, including attractive unique venues such as museums, university and historical buildings where meetings can be held. As far as trade shows and fairs are concerned, the largest and most modern venue is Expo Krakow.

#### **4.3. Participants' expenditures**

One of the most significant categories of data for the assessment of the economic impact of the meetings industry is the volume of participants' spending. The surveys needed to obtain the data were conducted with:

1. participants of congresses, conferences, seminars, workshops and other corporate meetings, including incentive travel (meetings' participants);
2. visitors at trade shows and fairs (trade visitors);
3. exhibitors at trade shows and fairs (fairs and exhibitors).

For the first of these groups, the results showed that the highest sums were spent on meetings registration fees (an average of around USD 230 per

person). Almost 50% lower was the spending on the item in second place – accommodation during the meeting, at approximately USD 120 per person. The smallest sums were devoted to transport in the city (about USD 15 per person)

It is worth noting that the most common item of spending was fees, which were incurred by 83% of all participants, accommodation during meetings (almost 65% of participants) and food and drinks (more than two-thirds of participants). However the levels of spending on food and drinks were not particularly high, at around USD 48 per person. The lowest percentage of visitors' spending was on recreation (spa, gym, swimming pools), at 3%.

The second group surveyed were visitors to trade shows and exhibitions. In terms of their spending, the top item was accommodation during the fairs (approximately USD 74 per person) and shopping (almost USD 71 per person). Their lowest category of spending was on fair attendance fees (only USD 10 per person). The results revealed that the biggest share of visitors to fairs spent their money not on accommodation (40%) or shopping (32%) but on food and drinks (83%). Only 2% of trade participants paid for accommodation during their attendance at fairs.

The third group of respondents were trade exhibitors. They spent the highest amount on accommodation during fairs (more than USD 250 per person) and before and after the event (around USD 178 per person). Their lowest category of expenditure was culture (less than USD 9 per person). Also in this group the highest percentage of exhibitors paid for food and drinks. The smallest percentage spent on participation in a team-building integrative event, and on culture and recreation (4%).

Exhibitors expenditures consisted in individual spending – analyzed above – and company spending. So, taking into consideration the latter, the highest amounts were dedicated to paying for the services of Trade Services Enterprises (approximately USD 1700 per enterprise) and for an event for partners (more than USD 1300 per enterprise). On the opposite side was expenditure on entrance fees for partners (roughly USD 60 per company). Nearly 98% of exhibiting firms spent money on exhibition space, as would be expected. Other costs were rarely mentioned, e.g. the entrance fee for partners (less than 2% of firms) – see Figure 2.

To sum up, the spending of the three different types of meetings' participants is differentiated by the items of expenditure and by the amounts spent, thus confirming H1. This was taken into consideration in the evaluation of the economic impact of Krakow's meetings industry.

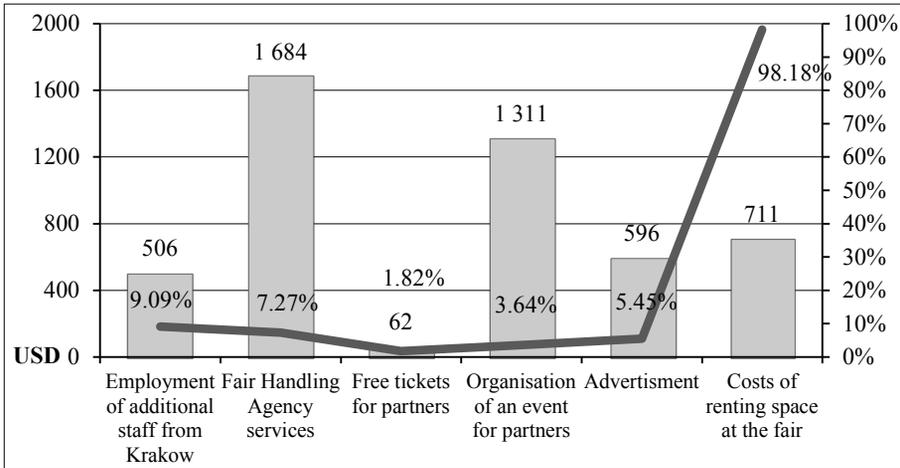


Fig. 2. Share of exhibitors at Krakow fairs, by type of personal expenditure in the city and the average spending per exhibitor (in USD) in 2013

Source: own study based on survey results.

It should be also stressed that some participants were accompanied by family or friends, and this was also examined in the survey, with the impact of family and friends' additional expenditure in the city being taken into account in the assessment.

The fees charged by meetings organizers and facility owners were also surveyed in order to check the information given by participants (comparison of participants' spending and specific costs of meetings). Additionally, organizers' costs were used for the evaluation of external sources of financing (such as sponsors). It was assumed that the meetings were not generating losses, meaning that participants' spending and other sources were in balance with the organisers' expenditure.

#### 4.4. Impact

The total sum of participants' spending (including the spending of accompanying persons) and external financial sources was related to the sum of revenues of all market players in the selected groups 01–08 in Krakow. The share of the meetings industry in these groups of activities was 20.68%, leading to the conclusion that about one-fifth of the revenue of these eight groups was generated by the meetings industry. In relation to the total economy of the city, the meetings industry share was evaluated at 1.98%.

**GDP.** According to the methodology presented previously, the estimated value of GDP produced by the meetings industry in Krakow in 2013 was USD 329.6 million<sup>2</sup>, at an exchange rate of 3,243 PLN/USD, accounting for approximately 2.37% of the GDP produced by Krakow's economy. The estimated GDP of the whole city was USD 13,907 million.

**Jobs.** One of the aims of the research was an attempt to evaluate the labour market involved in the meetings industry (FTE, *full-time equivalent*) in the city. Full time equivalent is defined as the sum of worked hours divided by the annual average worked hours for a full-time job. The assessment was made on the basis of secondary data obtained from the Statistical Office in Krakow referring to the number of employees in certain sectors. From these figures it was possible to estimate the number of employees in the meetings industry. The figures are provided in Table 2.

Table 2

Number of employees in selected groups/branches of the Krakow economy working in the meetings industry in 2013

Subclass	Number of employees
Group 01 Handicraft, retail sales	980
Group 02 Hotels	3163
Group 03 Restaurants	1617
Group 04 Transport	768
Group 05 Travel agents, guides	61
Group 06 Culture	886
Group 07 Recreation, physical well-being	182
Group 08 Creative sectors and miscellaneous	1233
<b>Total</b>	<b>8890</b>

Source: the authors' own study based on the data of the Statistical Office in Kraków.

The results indicate that in 2013 the meetings industry generated 8,890 jobs (full time equivalent). The highest number of jobs created was in the hotel sector, at 35.6% of all employees in the meetings industry. In second place were restaurants, in which 18.2% of all employees in the meetings industry were found to be employed. The third was Group 08: Creative industries and miscellaneous, where 13.9% of jobs were supported by the

<sup>2</sup> In this research GDP for the city of Krakow had been estimated a year before there was the official figure published by the Statistical Office. The impact analysis was based on estimations of all economic categories.

meetings industry. The smallest number of jobs was in group 05: Tourism offices and tourist guides.

The analysis of the labour market in Krakow revealed that taking into consideration the indirect and induced effects, the total number of jobs (full time equivalent) created by the meetings industry in the city in 2013 was 12,214 which constituted 3.25% of jobs in Krakow. This calculation does not take into account micro enterprises (entrepreneurs) – because they are not included in the Central Statistical Office data for either the published financial data or the number of employees. Moreover, in the case of entrepreneurs, the scale of their activities is small, and they usually operate over a number of industries, not just one.

**Salaries.** The analysis of salaries in the meetings industry in Krakow was made on data from different sources, the most important of them was data from the Statistical Office in Krakow. Data showed that the highest average salaries were in group 08, comprising many activities connected with organization of meetings and supporting activities. Empirical data and survey results allowed the authors to assess salaries in the meetings industry in Krakow in 2013. These were estimated using appropriate multipliers of total salaries (with direct and induced effect included) – see Table 3.

Table 3

Value of gross salaries in the meetings industry in Krakow in 2013

Subclass	Value of gross salaries in the meetings industry in Krakow in 2013 (in USD)
Group 01 Handicraft, retail sales	5,041,010
Group 02 Hotels	17,545,120
Group 03 Restaurants	37,240,020
Group 04 Transport	7,170,750
Group 05 Travel agents, guides	49,530
Group 06 Culture	9,480,960
Group 07 Recreation, physical well-being	147,920
Group 08 Creative sectors and miscellaneous	15,043,370
<b>Total</b>	<b>58,202,690</b>
Overall effect on salaries	97,378,920

Source: the authors' own study based on the data of the Statistical Office in Krakow.

The highest proportion of annual total salaries generated by the meetings industry was found to be in the Hotels group (30.1%), followed by Creative industries and miscellaneous connected with the organisation of meetings (25.8%). The third group where the largest proportion of total salaries

appeared to be due to the meetings industry was Culture (16.3%), and the fourth Transport (12.3%).

The conducted research made possible the calculation that in 2013 the total value of gross salaries in the meetings industry in Krakow was USD 58,202,690. Taking into account also the indirect and induced effects, it can be stated that in 2013 the overall value of net salaries in the entire meetings industry in Krakow was USD 97,378,920. The overall share of the gross salaries generated by the meetings industry in the entire economy of the city in 2013 reached 4.0%.

**Taxes.** The aim of the article is to assess the full impact of the meetings industry on the city of Krakow. So as far as taxes were concerned, the calculations took into consideration only those streams of tax revenue (or the appropriate parts of them) and levies that are paid to the Treasury of the Municipality of Krakow. They consisted of:

1. the income tax paid to the state treasury in the following proportions: A) corporate income tax on legal persons active in the meetings industry, of which 6.71% is paid to the municipal treasury; B) 37.26% of revenue from personal income tax from Krakow inhabitants working in the meetings industry (excluding persons paying their taxes in the form of a tax card);
2. tax on the businesses run by natural persons operating in the meetings industry paid in the form of a tax card;
3. revenue from real estate tax;
4. revenue from local tax;
5. vehicle tax;
6. revenue from environmental tax.

Secondary sources of information from the Statistical Office were used. However, statistics concerning taxes and levies are not prepared by the Statistical Office in the degree of disaggregation necessary for this study, so the volume of taxes and levies was estimated in accordance with the methodology presented above, which means that the current proportion of the share of the meetings industry in the groups of business activity analyzed was applied. The results of the calculations (see Table 4) lead to the conclusion that the largest volume of taxes paid to the Treasury of the Municipality of Krakow by the meetings industry is personal income tax (PIT), which in 2013 accounted for 79% of all the taxes and levies. Real estate tax was in second place and constituted 17.05% of all the revenues in 2013. Other taxes and levies provided significantly smaller shares of the total.

In 2013 the total value of taxes and levies paid by entities operating in the meetings industry to the Treasury of the Municipality of Krakow was USD 18,501,942. This constituted 1.61% of the municipality's revenue (according to data provided in the Budget Report 2013). Taking into account the tourist multiplier for the meetings industry, the overall sum of the taxes and levies reached USD 27,630,686, which constituted 2.4% of the total budget of Krakow.

Table 4

Total revenue (taxes and levies) of the municipality of Krakow generated by the meetings industry in 2013 (in USD)

<b>Types of revenue stream entering the treasury of the municipality of Krakow generated by the meetings industry in 2013</b>	<b>Amount (in USD)</b>
<b>Corporate Income Tax (CIT) generated by the meetings industry in 2013</b>	155,441
<b>Personal Income Tax (PIT) generated by the meetings industry in 2013</b>	14,555,792
<b>Natural Persons Business Tax paid in the form of a tax card</b>	80,937
<b>Real Estate Tax</b>	3,228,331
<b>Vehicle Tax</b>	454,479
<b>Local Tax</b>	26,962
<b>Total</b>	<b>18,501,942</b>

Source: the authors' own study based on the data of the Statistical Office in Krakow.

Taking into consideration the number of participants of meetings and events in Krakow estimated by the Polish Convention Bureau POT studies (Celuch, 2014), it can be evaluated that in 2013 the total volume of taxes and levies (direct, indirect, and induced effects) flowing into the Treasury of the Municipality of Krakow generated by each participant in the meetings industry was USD 65. Considering the above results, it should be stated that H2 has been confirmed: the share of the meetings industry in the Krakow economy is the highest in the case of wages – 4%.

## 5. DISCUSSION

The first question underlying this study is how the impact of the meetings industry can be assessed from the city perspective. In the authors' opinion such an input of the meetings industry to the city's economy is significant,

taking into consideration how complex this economy is. The city is a centre of business services (SHELL, IBM, CISCO, Ernst & Young, Capgemini, Comarch, Heineken and many others – around 50 global firms in total) so their revenues are high.

It is very difficult to compare the obtained results with any others from cities around the world, as they are usually based on a different format or aggregation. As mentioned in the literature review, there have been other attempts made in the field of impact assessment but often concerning one meeting (Asia-Pacific Economic Cooperation (APEC) Summit in Busan, Korea, in 2005; Noh et al., 2005) or one venue (The London Convention Centre in Ontario, Canada; *London City Hall*, 2013). The most comparable are data from Vienna (VCB 2013). These reveal that in 2013, a total of 1,221 national and international congresses with 364,101 participants added a total of EUR 692.27 million to the city's GDP and generated tax revenues of EUR 196.29 million. This in turn secured 12,794 jobs. National and international corporate events generated an increase in GDP to the sum of EUR 139.90 million in 2013, equivalent to 3,113 permanent jobs (at current prices). The City of Vienna (as both a province and a municipality) earned tax revenues to the amount of EUR 4.65 million from corporate events in 2013.

These results are much higher than in Krakow but it must be stressed that Vienna is a leader in the world's meetings market (according to ICCA statistics, for example). This demonstrates that there is much scope for developing the meetings industry in Krakow. As this was the first attempt at a city-level impact assessment in Poland, the results cannot be compared with those of other Polish cities. Neither can they be compared with results for Krakow for previous years.

## 6. CONCLUSIONS

The meetings industry plays a significant role in Krakow's economy as an emerging sector. The research proved that in 2013 it accounted for 2.7% of the city's economy (in terms of GDP), but a considerable increase in the near future is expected. This growth potential brings with it the necessity of studying the sector to obtain the information needed for its guidance and stimulation. It seems that the meetings industry has the opportunity to increase the attractiveness of Krakow as a tourism destination, not only in the domestic but also in the European market.

Several advantages of Krakow should be mentioned: the modernization and enlargement of the airport and the opening of new, modern and multifunctional facilities that complement the existing infrastructure, high standard hotels, tourist attractions (including heritage), technical support at events (AVL), highly qualified (and cheaper than in the Western countries) labour, and good road accessibility from the west (Berlin) and the south (Vienna, Prague). The university education of the city ensures a highly qualified work force, which is one of the factors attracting foreign capital. Krakow is an important outsourcing centre of business and IT services (Borodako, Berbeka and Rudnicki, 2014). An additional advantage are the favourable exchange rates PLN/EUR and PLN/USD. All of the above factors, combined with Krakow's tradition and atmosphere, create the city's growth potential in the meetings industry market.

Evidence of the strengthening position of Krakow in the global meetings market was seen in the rise of the city in the 2014 ICCA rankings to 60th position in the world from 79th position in 2013. The authors expect the share of the meetings industry in Krakow's economy to increase by 5% within the next few years. The testing of this expectation requires further systematic research and the authors are fully committed to conducting it.

## 7. LIMITATIONS

There were a few significant limitations. Firstly, the assessment was made for the impacts on an individual city, and some statistical data are not available for this level of disaggregation. Due to the need to make a number of assumptions and simplifications in the inputting of data in calculations and the need to estimate a number of values, the final results are subject to interference and could be lacking in precision.

Secondly, the fact that the input-output table is not meaningful for use at city level, obliged the authors to use a different methodology. In the literature there are no published multipliers calculated for a city, so the authors were obliged to use multipliers assessed by the model Tourism Economics (DMAI), calibrated for Krakow (also used by other European cities). The next limitation was the problem with the accurate reporting of the volume of meetings planned by meetings organizers or the facilities holding them. The last limitation worth mentioning was the challenge created by certain organizers' refusal to participate in the researchers' survey during the meetings.

## REFERENCES

- Borodako, K., Berbeka, J., Rudnicki, M., *The potential of local KIBS companies as a determinant of the development of tourism in Krakow*, *Tourism Economics: The Business and Finance of Tourism and Recreation*, Vol. 20, No. 6, 2014, pp. 1337–1348, 2014.
- Borodako, K., Berbeka, J., Niemczyk, A., Seweryn, R., *Influence of the meetings industry on the economy of Kraków*, Foundation of the Cracow University of Economics, Kraków 2014 [e-publication: [www.krakowimpact.pl](http://www.krakowimpact.pl), accessed on 22.09.2017].
- Celuch, K., *Poland Meetings and Events Industry Report 2014*, PCB POT, Warsaw 2014.
- Connell, J., Page, J. S., *Evaluating the Economic and Spatial Effects of an Event: The Case of the World Medical and Health Games*, “*Tourism Geographies*”, 7(1), pp. 63–85, 2005.
- Dwyer, L., Forsyth, P., *MICE tourism to Australia: a framework to assess impacts*. Australian Tourism and Hospitality Research Conference, Coffs Harbor, NSW, pp. 313–23, 1996.
- Dwyer, L., Forsyth, P., *Impact and benefits of MICE tourism: A framework for analysis*, “*Tourism Economics*”, 3(1), pp. 21–38, 1997.
- Dwyer, L., Mellor, R., Mistilis, N., Mules, T., *A framework for assessing ‘tangible’ and ‘intangible’ impacts of events and conventions*, “*Event Management*”, 6(3), pp. 175–189, 2000.
- Grado, S.C., Strauss, H. C., Load, E. B., *Economic impacts of conferences and conventions*, “*Journal of Convention and Exhibition Management*”, 1(1), pp. 19–33, 1998.
- ICCA, 2015. *Measuring the economic impact of the meetings industry* <http://www.iccaworld.com/cdps/cditem.cfm?nid=5173>, accessed: 14 July 2015.
- Jago, L., *The Value of Business Events*, *Tourism & Business Events International*, 2012.
- Ji, M., Li, M., King, B., *The Impacts of China’s new free-trade zones on Hong Kong tourism*, “*Journal of Destination Marketing and Management*”, 4 (4), pp. 203–205, 2015.
- Jones, C., Li, S., *The economic importance of meetings and conferences: A satellite account approach*, “*Annals of Tourism Research*”, 52, pp. 117–133, 2015.
- Kayat K., Sharif, M. N., Karnchanan, P., *Individual and Collective Impacts and Residents’ Perceptions of Tourism*, “*Tourism Geographies*”, 15(4), pp. 640–653, 2013.
- Kim, S. S., Chon, K., Chung, K., *The convention industry in South Korea: an economic impact analysis*, “*Tourism Management*”, 24(5), pp. 533–541, 2003.
- Kock, G., Breiter, D., Hara, T., DiPietro, B. R., *Proposing a regional impact based feasibility studies framework for convention centres: a quantitative analysis of the Orange County Convention Centre (OCCC)*, “*Journal of Convention & Event Tourism*”, 9(4), pp. 309–340, 2008.
- Landefeld J. S., 2006, *Gross Domestic Product by State Estimation Methodology*, U.S. Department of Commerce, Bureau of Economic Analysis, [www.bea.gov](http://www.bea.gov), accessed: 12 November 2015.
- Lee, M. J., *Analytical reflections on the economic impact assessment of conventions and special events*, “*Journal of Convention & Event Tourism*”, 8(3), pp. 71–85, 2007.
- Mair, J., *A review of business events literature*, “*Event Management*”, 16(2), pp. 133–141, 2012.
- Niemczyk, A., Seweryn, R., *Tourism multiplier in Poland as a region in united Europe (attempt of measurement)* [in:] Gołębowski, G. (ed.), *Tourism as a factor for regional competitiveness growth in a globalizing world*. Akademia Ekonomiczna w Poznaniu, Poznan 2008.

- Gross Domestic Product – Regional Accounts in 2011*. GUS/US Katowice, Katowice 2013.
- Smith, G. V., *The growth of conferences and incentives* [in:] Quest, M. (ed.), *Horwath Book of Tourism*. Macmillan, London 1990.
- UNWTO, *Measuring the Economic Importance of the Meetings Industry – Developing a Tourism Satellite Account Extension*, United Nations World Tourism Organisation, 2006.
- Yang, L., Gu, Z., *Capacity optimization analysis for the MICE industry in Las Vegas*, “International Journal of Contemporary Hospitality Management”, 24(2), pp. 335–349, 2012.
- Noh J., Park, J., Sung, H., Lee, I., Oh, Y., 2005. *The economy of convention tourism*, SNU Tourism Team, <http://www.cuc.ac.jp/eng/gpac/papers/snu/SNUtourism.pdf>, accessed: 12 November 2015.
- London City Hall*, 2013. <http://www.london.ca/city-hall/budget-business/business-planning/Documents/2013/Conventions-Meetings-Events-2013.pdf>, accessed: 6 November 2015.
- Landefeld J. S., *Gross Domestic Product by State Estimation Methodology*, U.S. Department of Commerce, Bureau of Economic Analysis, [www.bea.gov](http://www.bea.gov), 2006.
- Sánchez-Rivero, M., Cárdenas-García, P. J., *Population characteristics and the impact of tourism on economic development*, “Tourism Geographies” 16(4), pp. 615–635, 2014.
- VCB, 2013. *Vienna Meetings Industry Report 2013*, Vienna Convention Bureau, [www.vienna.convention.at](http://www.vienna.convention.at), accessed: 10 September 2015.
- Xu G., *Socio-economic impacts of domestic tourism in China: Case studies in Guilin, Suzhou and Beidaihe*, “Tourism Geographies” 1(2), pp. 204–218, 1999.

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