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Interdependence between Agglomeration Processes and the Hotel Sector in the City of Lviv

Abstract. The purpose of the article is to establish the relationship between the market of hotel services and the development of the Lviv agglomeration. The study is based on questionnaire data, statistical analysis and logical reasoning. The author analysed 92 hotels operating in Lviv. Reports and studies of tourist flows and hospitality were conducted by the Tourism Department of Lviv City Council, and the Main Statistical Office in Lviv region. The main objectives of the study included evaluating the Lviv agglomeration in terms of attractiveness for living and doing business in comparison to other regions of Ukraine; identifying changes in the development of urban infrastructure of the Lviv agglomeration and their impact on the development of tourism and hospitality; characterising the hotel services market; identifying current trends in how the Lviv agglomeration is exploiting its current potential in the hospitality. As a result of the analysis, the author presents 1) modern features of the development of the hotel industry in Lviv; 2) an underlying inconsistency of the processes taking place in the Lviv metropolitan area, which is a complex system of relations in the urban space and, at the same time, a factor that determines the important role of hospitality establishments; 3) positive and negative aspects of the impact of the agglomeration on the hotel industry.

Keywords: agglomeration, hotel industry, hotel establishments, hospitality, accommodation facilities, hostels, factors

1. Introduction

The emergence of agglomerations is one of the main socio-economic factors involved in the transformation of the hospitality industry into a powerful service component of the economy. Today, the mutual influence of agglomerations and

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the hospitality sector is no less relevant than it was in the period of its active development in the mid-twentieth century, since these phenomena, in addition to their positive impact, can negatively affect the social and spatial structure of urban areas. The study of the impact of an agglomeration on the development of the hotel industry is also necessary because the existing research on the subject is fragmentary and there are no appropriate techniques for identifying aspects of these interactions.

The process of urbanization and the formation of agglomerations is characterized by rapid growth (1.84% per year), as urban settlements provide citizens with better opportunities for employment and social development. In 2017, 54.9% of people in the world lived in urban areas [Global Health Observatory… 2017] and this share is expected to increase to 75% by 2050 [United Nations Department… 2018].

Historically, urbanization has led to an increase in GDP per capita, as a result of higher productivity of the urban population. Accordingly, the current urbanisation trends contribute to an increase in the proportion of people with average and above-average incomes. According to forecasts, by 2025, the share of the population with an average wealth status will increase by more than 1.2 billion people, or from 27% today to 60% in 2030 [UTC investor and analyst meeting 2018]. Average-income consumers, especially those more affluent, represent a group that can drive a similar growth in the hotel sector.

The rise of urbanization and the resulting formation of agglomerations not only brings considerable advantages for the urban population but is associated with certain drawbacks. 54.9% of the world population living in urban areas consume as much as 75% of the world's natural resources and are responsible for 80% of greenhouse emissions [A New Urban Agenda…]. Energy consumption is increasing, which contributes to the global climate change. For example, in the USA, about 16% of energy is consumed by air conditioners, while the global demand for energy for air conditioners is expected to increase by more than three times by 2050 [International Energy Agency 2018].

A direct link between the increase in the number of hotels and the growth of metropolitan areas was established by M. McCroskey [1990], who analysed the development of these processes in the United States in the early 20th century. According to McCroskey, the growing popularity of automobile transport resulted in a high mobility of the population and was a factor which contributed to the wide-scale construction of hotels in the USA.

Another study of the relationship between urbanization, the development of metropolitan areas and the increasing number of hotels in China was conducted by J. Shen [2000].The author notes that as a result of urbanization about 10% of temporary urban population uses hotel accommodation.

These studies reflect the relationship between the growth of agglomerations and the hotel industry caused by the growing demand from the tourism market. The authors observe that high-demand-orientated large metropolitan areas are associated with lower costs and increased income for investors [Marco-Lajara et al. 2016].

The relationship between the concentration of tourism enterprises in agglomerations, including hotel establishments, and the development of the hotel industry is explored by Philipp Ehrl [2013]. This study confirms the development of individual hotels with the support of other hotel enterprises, which leads to industry consolidation.

The relationship between agglomerations and hotel development was also investigated by J.M. Luo and C.F. Lam. According to the authors, research interest in this topic reflects the priority given to large cities and the service sector in the strategic development for China's economic growth. As agglomerations develop, travel expenses for their inhabitants are reduced, working conditions improve, and migrants from villages find employment in service industries [Luo, Lam 2016].

Agglomerations have become one of the reasons for the commercialization of the hospitality industry. The weakening of community ties in large cities, with their inherent exchange of natural resources, disappearance of conservatism in the conditions of a predictable future for the individual are all factors that lead to the formation of a multicultural environment. According to the German sociologist, G. Simmel, such an environment is the core of individual and social freedom, the possibility to show one's worth, but, at same time, the clear structuring of urban society in the division of labour often narrows the individual's need for personal freedom, causes moral and spiritual degradation, and kills the personality. The sociologist also focuses on the formation in cities of a particular demonstrative model of behaviour, the essence of which is the individual's desire to stand out, become a prominent, public person, and, therefore, a free person [Simmel 2003]. In this context, hospitality facilities, particularly hotels, with their multifunctional appeal for city guests and local residents, have become a means of manifesting urban social space.

The American urbanists, L. Mumford and L. Wirth, analysed the evolution of cities and identified an interesting aspect of their development. At first glance, cities appear to be chaotic, messy social phenomena, but, in reality, they are dynamic, mobile, secular, economically rational organic systems. All components, in particular hospitality enterprises, which are part of this socio-spatial system, are characterized by internal logic and dynamics [Mumford 2001].

Other studies of social, communication, architectural and other components of the urban space indicate deep social changes, the suitability of urban areas, their organization, important attributes of urban infrastructure for the interaction in socio-cultural space, for aggregating and expressing the needs and interests of individuals.

Multifunctionality of agglomerations increases the demand for accommodation facilities, promotes competition, partnership, implementation of innovations, diversification of types and forms of business organization, generally improves market characteristics and market research, encourages the development of hotel supplies [Alcácer, Chung 2014].

The Ukrainian historian and culture expert, V. Rusavska, analysed the influence of the hospitality factor on the formation of the socio-cultural space of the city in the 19th-century Ukraine. Her analysis focuses on the functional interaction between social unity, social structures, symbols and values, communication and information. In the context of this socio-cultural space, the city is not only the result of transforming the natural landscape into an urban one but is also a form of people's coexistence. This coexistence, with its unique cultural, material and spiritual values is what produces a spatial urban culture. It is the urban culture that determines the perception of the urban population, includes norms of hospitable behaviour [Rusavska 2014].

2. Research methods

The study described in the article was conducted using empirical and theoretical methods. Empirical methods included interviews with guests, top managers, hotel staff and residents of Lviv. The results of the survey of the hotel services market were supplemented by reports and studies concerning tourist flows and hotel management conducted by the Tourism Department of the Lviv City Council and statistical reports of the Main Statistical Office of the Lviv region. Empirical data provided expert information on the development of the hotel industry and tourism in Lviv and Ukraine. In order to compare the social and economic status of Ukraine's largest agglomerations, monitoring results of the country's recognised rating agencies were used.

Interview data were collected from 92 hotel enterprises operating in Lviv. The survey was conducted between December 2018 and February 2019 among managers responsible for certain functional areas associated with the reception of guests in hotels.

The data collected directly from employees of Lviv hotels revealed inconsistencies with official data provided by the State Statistics Office and the Tourism Department of the Lviv City Council. The discrepancy is due to fact that market operators are reluctant to reveal true information. Some establishments, especially small hotels and hostels, do not reveal their activities or provide false information. Hoteliers intentionally reduce the room occupancy rate to report smaller amounts of profit. There are also discrepancies regarding the number of hotel enterprises in the city from various sources, including official ones, which make it difficult to assess the economic performance of the hotel services market in Lviv. For example, the Lviv City Council website lists 44 hotels and 21 hostels, doroga.ua – only 16 hotels and 13 hostels, and booking.com – as many as 53 hotels and 37 apartments.

The collected data were analysed to measure the degree of correlation between related variables (Pearson's correlation coefficient).

The analysis of the results revealed modern features of the development of the hotel industry in Lviv and an underlying inconsistency of the processes taking place in the Lviv metropolitan area, which is a complex system of relations in the urban space and, at the same time, a factor that determines the important role of hospitality establishments.

3. The results of the study

In 2018, the Lviv agglomeration, with a population of 721.3 thousand people, received 2.2 million tourists. Tourism and hospitality today form the socio-economic basis of the city's development. Due to the development of tourism and other non-productive areas of economy, Lviv, over the past years, has ranked among the top three Ukrainian cities with the highest standard of living.

The positive assessment of the Lviv agglomeration is associated with high employment rates - 65.9% (5.8 points in the regional ranking, see Table 1) [Zajnyatist naselennya za stattyu … 2017] a favourable employment situation in terms of the ratio of the number of applications to the number of vacancies (1.8 applications per vacancy), as well as the highest quality of higher and secondary education in Ukraine (1.4 and 1.6 points out of 5, see Table 1). The agglomeration of Lviv is also characterized by the lowest crime rate situation in the country. The reconstruction and modernization of the Lviv airport and the runway infrastructure, the availability of well-known international and Ukrainian low-cost airlines, has generated a significant level of passenger traffic. Each year, the airport receives about 2 million passengers, which makes it second only to the main airport in Ukraine - Boryspil Airport.

At the same time, Lviv is one of the most expensive cities in Ukraine. Considerable demand for housing ranked the city as the most expensive in terms of purchase price and second, after Kyiv, for housing rental in 2019.The high investment attractiveness of Lviv's construction sector (6.9 out of 10 points), according to the results of the Euro-Rating agency research, is due to the great demand of tourists for commercial housing (Table 1) [U rejtyngu "Najkomfortnishyx mist Ukrayiny 2019"...].

Table 1. The ranking of the largest agglomerations of Ukraine in terms of the standard of living and the conditions for doing business

Score, points	Average salary, 10 points	Investment attractiveness, 10 points	The cost of a consumer, 5 points	The cost of a one bedroom apartment, 5 points	The cost of renting one room apartments, 5 points	Employment of working age population, 10 points	Number of CVs for the vacancies 5 points	Number of schools in the rating «100 best in Ukraine», points	Number of .higher education institutions in the rating «200 best Ukraine», 5 points	Amount of waste per 1 thousand км^2, 5 points	Crime rate, 5 points	Airport passenger traffic, 5 points	Demographic situation, 5 points	The sum of points
Lviv	1.4	6.9	4.2	0	1.1	5.8	1.8	1.4	1.6	4.9	4.0	0.5	3.4	36.6
Kiev	10	10	0.2	2.3	0.0	8.2	3.2	5.0	5.0	2.8	0.0	5.0	5.0	56.7
Kharkiv	1.2	4.1	2.9	3.1	2.1	10	1.8	0.7	3.1	1.3	1.6	0.3	2.1	34.3
Dnieper	3.6	6.8	3.8	3.4	3.2	8.0	2.7	0.7	1.9	4.5	1.4	0.1	1.8	41.9
Odesa	1.2	5.1	2.5	0.9	1.2	6.6	2.7	0.5	1.9	5.0	2.8	0.5	3.0	33.9

Source: results based on statistical data and scores awarded by rating agencies.

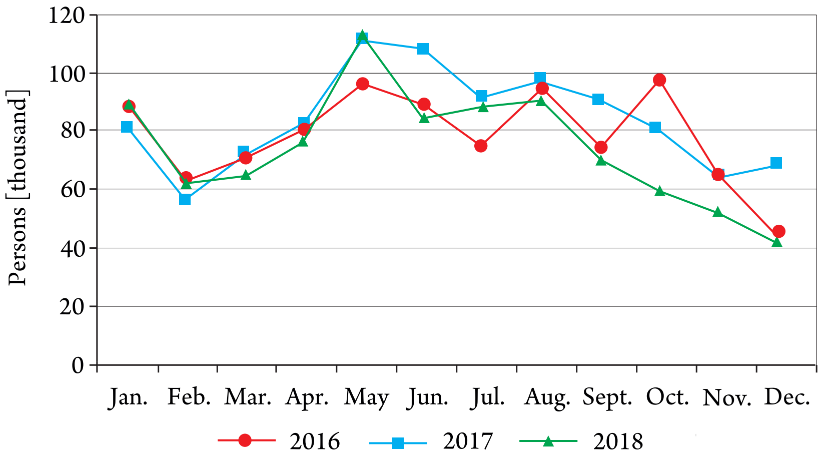
According to *Business Insider'* ranking of the most affordable tourist cities in the world, Lviv was ranked first, mostly thanks to the price of accommodation which, in 2018, in the equivalent USD amount, started from $25 per person per night. According to a ranking of the best cities to visit in Ukraine in 2017 published by *CNN,* Lviv also ranked first [Best Places to Visit in Ukraine… 2017].

During the period 2016-2018, the hotel services market saw an increase in Lviv's attractiveness. Improvements in the country's geopolitical and economic situation resulted in an increase in domestic and foreign tourist flows since 2015. The number of hotels and similar accommodation facilities increased by 18.1% in 2017, compared to 2016 (from 75.7 thousand to 92.5 thousand people) (Fig. 1.).

In early 2018, there were 124 hotels in Lviv, with 3118 rooms offering a total 6,209 beds; there were also over 100 hostels [Lviv Oblast 2019]. This corresponds to 4.1 hotel rooms per thousand inhabitants, compared to the average of 9 rooms per thousand inhabitants in Eastern and Central Europe. With the constantly growing number of hotels in the city, Lviv is slowly catching up with the neighbouring countries.

At the end of 2018 and in the first half of 2019, Ukraine experienced a significant drop in the demand for hotel services (20-30% depending on hotel type). Among the main causes are the imposition of martial law, which led to a consid-

Fig. 1. The number of persons using accommodation facilities in Lviv in 2016-2018



Source: based on data of the statistical department of Lviv region.

erable decline in the number of foreign tourist arrivals; the possibility of visa-free travel to the EU countries, which increased the popularity of these destinations among Ukrainian tourists, as well as two stages of elections in Ukraine, which significantly reduced business activity in the country. During the hotel survey it was found that the average occupancy in Lviv hotels of various categories in the first half of 2019 was as follows: 40-50% in 4-5 star hotels, 50-60% in 3-star hotels. The hotel occupancy rate increased slightly by 5-10% in April-July.

In the second half of 2019, operators and experts noticed a steady increase in the attractiveness of Ukraine among foreign tourists [Okhrimenko et al. 2019]. In 2019, Ukraine recorded the biggest progress in the group of Eastern European countries in terms of the Travel and Tourism Competitiveness Index (TTCI), having moved up by 10 points to 78th place. The country's standing improved with respect to the business climate (from 124th to 103th place), safety (from 127th to 197th place), openness to foreigners (from 78th to 55th place) and general infrastructure (from 79th to 73th place [The Travel and Tourism Competitiveness…].

After a marked drop in demand for Lviv accommodation facilities, in early 2019, and in general in the whole year, the commercial real estate market is showing signs of recovery and growth. Despite the decrease in the number of tourists, tourism revenues have increased from 128 million UAH up to 151 million UAH. This paradoxical situation was due to a rise in prices for services, primarily for accommodation facilities. There was also an increase in the number of foreign tourists who stay for a slightly longer period than Ukrainians and leave more money.

In the second half of 2019, an increase in occupancy rates prompted hotel and hostel owners to raise prices. The cost of rooms increased by 10-40%, hostel and apartments prices increased by 10-20%, while in more expensive hotels, mainly used by foreigner guests, who are less sensitive to the growth of hryvnia prices, the price increased by 30-40%.

With regard to categories of rooms available in Lviv hotels, more than 80% are middle-standard rooms classified as *budget*, *economy* and *midscale*. A similar trend is observed in newly opened hotels. Over the past 5-7 years, the largest increase in the hotel room stock has been in the categories of the middle class, *economy, midscale* and *upper midscale* [Lviv City Council Tourism Office... 2017]. But, there is only one hotel offering rooms classified as high international *luxury* standard (Grand Hotel Lviv Luxury & Spa). In other words, the current demand determines the structure of the market supply.

When one analyses the demand for rooms of various categories, in the first half of 2018, the prices of upscale *luxury*, *upper upscale,* and *upscale* rooms rose from 5 to 22%, then fell to 5% in the autumn of 2018, and in late 2018 and early 2019, the period of growth was followed by a significant decrease of 20% relative to the price in the same period in 2018.

The price of middle class rooms – *budget, economy,* and *midscale* kept increasing between early 2018 and the second quarter of 2019. The growth was due to the demand and significant supply potential in this segment.

The average annual occupancy rate of Lviv hotels in 2018 was 65-75%. Hotels with less efficient management and less attractive location were occupied at an average level of 35-55%. These figures for Lviv are higher than the average for Ukraine (Table 2).

Table 2. Average occupancy rate of Lviv hotels in 2016–2018 (%)

Year	2016	2017	2018
Average occupancy	61	80	72

Source: based on data of the statistical department of Lviv region.

An important factor which determines how agglomerations affect the hospitality market is their attractiveness for investors. The return on investment in hotel enterprises in Lviv today is 9% or more. The average payback period is 7-9 years, the long-term payback is 10-15 years. Investors are primarily interested in the most popular middle-class hotels – budget 3 star- and 3+ star hotels. Such hotels are popular with foreigners and are the preferred option for Ukrainian tourists and businessmen. There is a growing interest in 4-star hotels as a result of price reduction of up to 6% in high-class establishments. [Malska, Pandyak 2012: 46].

An important criterion in assessing investment attractiveness of hotel establishments is profit margin. This indicator depends on the hotel category: the smallest profit margin in high category 4-5-star hotels is 35-72% of total gross income, in 3-star hotels – from 50%, in lower category hotels and in hostels, 65-70%. At the same time, hotels of the high price segment with a much longer return on investment, but with steady occupancy rates, provide a more reliable, stable revenue stream. The most attractive option in terms of return on investment today are 3-star hotels in Lviv with a 9-12% annual profit margin [Since the beginning of 2019 …].

The uncertainty of investors is due to the payback period of projects (5-13 years), which depends on the effectiveness of implementing an investment in a well-chosen location, a rationally designed technical project, and professionalism of project and business managers. Today, the payback period of investments has not changed considerably, as the market conditions are consistently positive, given the general economic growth, and inflationary processes are balanced in terms of expenditure and revenue. However, consultants, marketers and other specialists are only occasionally involved or not present in the initial stage of the project at all.

The current hotel market in Lviv is one of the most developed and attractive for investors. What distinguished it from other cities of Ukraine is the significantly higher number of hotels (124), a relatively high occupancy rate (65-75%), closer to the level observed in European countries, a noticeable segmentation, (with thematic and boutique hotels representing the majority). Compared to Kiev and other Ukrainian cities, where no significant increase in visitors has been recorded, the popularity of Lviv is associated with the organisation of international festivals, sports events, the implementation of the *Program for the Development of the Tourism Industry of Lviv for 2016-2022*, an increase in the number of air routes and improvement in the general infrastructure, the most important factor being the cultural aspect – historical monuments, mentality, culinary art.

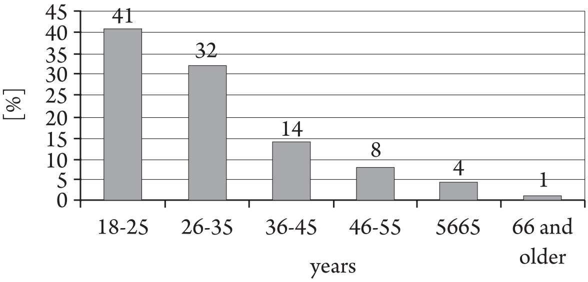
One of the main trends of the hotel services market in Lviv in 2019 was the increase in the share of Ukrainian tourists (30% of all tourists).

In terms of basic demographic traits, the majority of tourists (87.5%) are under the age of 50, with a slight predominance of men, the major share (77.1%) of business people (entrepreneurs, managers, employees, specialists). As regards the frequency of arrivals, 35.4% of respondents visited Lviv for the first time, for the others it was another visit (Fig. 2).

During the survey, guests interviewed in Lviv hotels reported the following purposes of visiting: 58.3% – tourism, entertainment and recreation; 25.0% – business; 9.4% – for medical treatment, medical consultation, disease prevention, rehabilitation; 7.3% – other reasons (Fig. 3).

Among the respondents, 67.3% plan to stay in the hotel from one to three days, 19.6% – from 4 to 7 days, 10.2% – more than 7 days, the rest (2.9%) did not decide on the length of stay.

Fig. 2. Age structure of guests staying in Lviv hotels in 2018 (%)



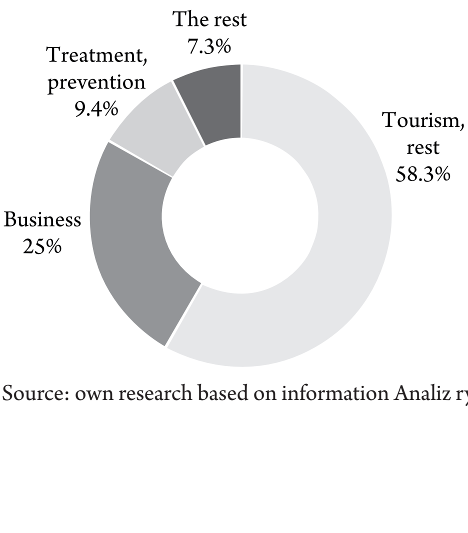
Source: own research based on information Analiz rynku vyiznyx turystiv… 2018.

More than a half of interviewed guests (53.1%) chose a hotel to stay in taking into account the quality of service, staff hospitality and room comfort. Other important criteria include the location (16.7%) and the room price (15.6%). Other criteria, such as the hotel image, room category, availability of additional services are less significant, and were mentioned by only 14.6% of the respondents.

The main source of information for a considerable group of potential hotel guests (42.7%) were recommendations of relatives and acquaintances. Information on hotel website also plays an important role (34.4%), advertising in the media is considered to be less important (15.6%) and information from other sources is mentioned by a small percentage of respondents (7.3%). 53.1% of interviewed guests choose to stay in the same hotel again; in most hotels with effective marketing, regular guests are the main category of visitors.

The main reasons for changing a hotel after the first visit include inconvenient location (30.2%), the quality of service (22.9%), room facilities (22.9%), the price of services (18.8%).

Fig. 3. Purpose of visiting given by guests staying in Lviv hotels in 2018 (%)



Source: own research based on information Analiz rynku vyiznyx turystiv… 2018.

To identify the relationship between individual factors that affect the demand for hotel services, Pearson's correlation coefficients were calculated. This coefficient describes a linear relationship and is widely used to measure the degree of dependence between two variables.

The correlation coefficient can range from –1 to +1. A value of +1 indicates a positive relationship between two variables X and Y, which means that an increase in Y is correlated with an increase in X. A value of –1 indicates a negative relationship, which means that a decrease in Y is correlated with an increase in X. If the Pearson correlation coefficient is close to 0, there is no linear correlation between a pair of variables. The strength of the relationship is considered to be high if the value of the indicator is above 0.5.

Based on the values of the Pearson's coefficient, it can be concluded that the occupation of hotel guests (entrepreneur, specialist, student, etc.) is positively correlated with their expectations concerning accommodation and hotel services (in all cases the correlation coefficient exceeds 0.9). At the same time, there are differences between the groups studied when it comes to certain factors. For example, 65.3% of interviewed entrepreneurs said that the main goal of visiting Lviv was to solve a business issues (the average for all respondents was 33%). 26.7% of pensioners and housewives indicated medical treatment and rehabilitation as the goal of their visit (the average for all respondents was 10.6%). Almost 90% of students and workers said they were staying for no more than three days, compared to the average of 62.4% for all respondents. Business guests primarily paid attention to the quality of service and location of the hotel (31.7% and 19.9%, respectively).

The development of the hospitality industry in Lviv has been negatively affected by the influence of the war, which significantly reduced the number of foreign visitors, causing a fall in foreign currency earnings, and the introduction of visa-free travel to EU countries, which has resulted in the declining number of Ukrainian tourists. Thanks to a developed network of low-cost airlines, Ukrainian tourists can now buy cheap flights to destinations in European countries, which, in some cases, are even cheaper than train tickets.

The development of tourism and hospitality in Lviv is hampered by an insufficiently developed network of high-speed railway connections with major regional centers in Ukraine. Considering the needs of holiday and weekend tourists, the only *Intercity* service is available between Lviv and Kyiv. Services to other major regional centers - Kharkiv, Dnipro, Odesa, are provided by regular trains with a travel time of 1.5-2 days.

The decline in hotel occupancy in the first half of 2019 was associated with a decrease in the tourist attractiveness of Ukraine and Lviv, in particular. Only 26.8% of tourists arriving in Lviv for holidays stay in hotels [Analiz rynku vyiznyx turystiv… 2018], the rest stay with relatives or friends (26%) and in hostels

(21.5%), rented apartments (19.3%). For this reason, Lviv needs to develop industrial production in order to attract more business tourism.

The greatest decline in occupancy rates was observed in 4-5 star hotels. These hotels are mainly focused on foreign tourists from the business segment. The development of Lviv's strategy for tourism, trade and IT sector in the last decades has led to a decrease in industrial business activity; political events have reduced the city's popularity as a destination for foreign guests. Another factor, the strengthening of the hryvnia against the dollar in 2019 reduced the attractiveness of high-category hotels for foreign tourists but has a positive effect on domestic tourists.

Another important factor for foreign guests is getting new travel experiences. The Lviv tourist offering has been available on the market in a more or less unchanged form for about 10 years and most tourists have already seen major attractions so the city has ceased to be interesting for foreign and Ukrainian tourists. Minor changes are associated with new festivals, usually intended for a narrow audience. In addition, it is necessary to take into account the change in value-based orientations, the development of new kinds of entertainment, services. Changes in hospitality services and tourism facilities will generally be an impetus for the development and renewal of the industry.

The development of tourism tends to be associated with higher costs of living, a greater strain on the local infrastructure and the transport system. Tourists increase the consumption of water and energy, the amount of waste and waste water, emissions and noise. According to a recent survey of Lviv residents, 4.2% of respondents are dissatisfied with the presence of tourists.

For hotel guests, the price-to-quality ratio is an important aspect. Fees for services in Ukraine are often similar to, or even higher than their equivalents abroad. For example, compared to the price of 2,835 UAH for a single room in Lviv (*Atlas Deluxe* Hotel), the cost of accommodation in a hotel of a similar category in Budapest (*Memories Budapest* Hotel, 4 stars, a standard room) is only 1,741 UAH., and in Cracow (*PURO Kraków Kazimiezz* Hotel) – 2,027 UAH. In neighbouring countries with a stable political and socio-economic situation, accommodation is often cheaper than in Ukraine by a factor of 1.5 or even 2. Therefore, some potential guests of Lviv hotels have decided to travel abroad, where, in addition to the price, the quality of services is higher.

Today, Lviv's development strategy focuses on social and knowledge-related areas – IT services, medical tourism, and the conference industry. These areas are financially most profitable and, according to Lviv's Tourism Management Department, offer the best prospects [Prykhid 2019]. 4-5 star hotels are actively developing in response to the growing demand in the events industry[1]. The prox-

[1] MICE tourism (meetings, incentives, conferences and exhibitions), also known as the meetings industry. The incentive component is associated with trips offered to employees as a form of for targets met or exceeded, or a job well done.

imity and transport accessibility of Lviv to well-known medical centres in Europe and the demand for private quality medicine contributes to the development of this healthcare industry in the city, which is manifested by the increasing number of conferences held in hotels. Conference delegates spend more money than holiday tourists staying for a longer period of time and order, in addition to conference services, catering and other additional services.

The main areas of development in medicine – dentistry, reproductive medicine – attract foreign tourists, who are the most desirable category of hotel guests. In 2019, a number of promotional tours for Scandinavian companies were organized in Lviv. With prospects created by this new source of revenue, and given the drop in demand for recreational tourism, Lviv is planning to open four new hotels, with a view of attracting foreign tourists.

Another opportunity with a great potential for the hotel industry is the development of the IT sector. In recent years, Lviv has often been called the Silicon Valley of Eastern Europe, the most attractive place for information analysts from all over Ukraine. At the beginning of 2019, 320 IT companies based in Lviv employed more than 21 thousand people; by the end of the year this figure increased to 24 thousand people [Ukrayina – ce odne z najkrashhyx miscz… 2018]. Lviv is attractive for IT specialists because of low taxes and low cost of living, comfortable conditions, a well-developed system of vocational education, and salaries comparable to those of European specialists. The annual growth of the industry is 25%. By virtue of the multiplier effect, the industry generates 3-4 jobs in related sectors of the economy, attracting a quarter of those involved in the production and social sphere of Lviv. The IT sector has the greatest influence on the commercial and individual real estate market and the construction industry in Lviv.

In the coming years, the development of the hotel sector depends on the socio-economic and political situation in the country. The tourism development strategy in Ukraine's main tourist centres and regions will play a significant role.

What might provide further impetus for the development of the hotel sector is the expected adoption of the Law on Gambling, which will regulate the operation of casinos in five-star hotels with a certain number of rooms depending on the region. In Kyiv, the threshold has been set at 200 rooms per hotel, in Odesa, Kharkiv, Dnipro, and Lviv – at 120 rooms, in other cities – the required minimum is 100 rooms. The adoption of this law will encourage many hotels to improve the quality of their service in order to earn a 5-star rating. The increase in the number of five-star hotels in Lviv due to the legalization of gambling will lead to the expansion of the tourism offering and to economic growth.

4. Conclusions

The study of the interdependence of agglomeration processes and the hotel industry in Lviv has revealed a mixture of positive and negative factors. The city's hotel industry is affected not only by agglomeration processes but also by the difficult political and economic situation of the whole country.

Attractive features of the Lviv agglomeration that contribute to the development of tourism, strengthened by the city's development strategy, which prioritises the tourism sector, have put Lviv at the top of the ranking of Ukrainian cities when it comes to the standard of living. The quality of life, which contributes to the growth of the agglomeration, the growing share of the urban population and the workforce, have created the economic basis for market operators and the growth in the number of hotel guests. About 10% of the urban population uses tourist accommodation facilities for temporary residence, mostly in private apartments.

There is now a strong demand for tourist accommodation provided by new hotels and the growing number of private apartments. The average occupancy rate in Lviv hotels, which is 65-75%, is similar to the European level, with a clear market orientation on thematic and boutique hotels. The proximity of Lviv to European countries, enhanced by its rich historical and cultural heritage and natural conditions, makes it popular with foreign tourists. The Lviv agglomeration is characterized by a developed social infrastructure, air route services, though land transport needs to be improved, especially the railway, which is a popular mode of transport for domestic tourists.

The recreational attractiveness of the city generates a high demand for middle-class hotel rooms, which encourages investments in 3-4-star hotels. The average period of return on investment is 7-9 years and is more favourable than in other cities in Ukraine and Europe. Also, profit margin are relatively high and, depending in the category, vary from 35% to 72% of gross revenue. The development of the IT sector and the strategy for the development of specialized medical tourism are also an opportunity for the segment of 4-5-star hotels.

The relatively high standard of living in Lviv is associated with higher costs of living and is reflected by high housing prices (rent and purchase), high fees for medical, transportation services, and food prices. The strong demand for tourism services has increased prices of hotel rooms, which are higher than their foreign counterparts. Despite the development of the hotel, Lviv's tourism offering has not changed much.

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Współzależność procesów rozwoju aglomeracji i branży hotelarskiej we Lwowie

Streszczenie. Celem artykułu jest porównanie relacji między rynkiem usług hotelowych a rozwojem aglomeracji lwowskiej. W badaniach wykorzystano następujące metody: statystyka, kwestionariusz, analiza i konstrukcja logiczna. Badania przeprowadzono w 92 hotelach we Lwowie. Analizę raportów i badań przepływów turystycznych oraz branży hotelarsko-hotelowej przeprowadził Lwowski Urząd Turystyczny Lwowskiej Rady Miasta i Główny Urząd Statystyczny w obwodzie lwowskim. Główne zadania badawcze polegały na: identyfikacji miejsca aglomeracji lwowskiej, m.in. na Ukrainie, pod względem atrakcyjności dla życia i prowadzenia działalności gospodarczej; na identyfikacji zmian w rozwoju infrastruktury miejskiej aglomeracji lwowskiej i ich wpływu na rozwój turystyki i hotelarstwa; na scharakteryzowaniu rynku usług hotelowych; oraz znalezieniu aktualnych kierunków wykorzystania potencjału przez aglomerację lwowską w dziedzinie hotelarstwa. Główne wyniki badań: odkryto nowoczesne cechy rozwoju lwowskiego przemysłu hotelarskiego; niespójności procesów w aglomeracji lwowskiej jako skomplikowanego systemu relacji w przestrzeni miejskiej, a jednocześwnie jako czynnika strukturyzującego ważną rolę placówek hotelarskich; pozytywne i negatywne aspekty wpływu aglomeracji na branżę hotelarską.

Słowa kluczowe: aglomeracja, przemysł hotelarski, przedsiębiorstwa hotelowe, hotelarstwo, obiekty noclegowe, hostele, czynniki