The characteristics of Great Cultural Projects and their impact on architectural and urban heritage (1850–2012)

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Abstract. This study examines Great Cultural Projects (GCPs) as an element of the developmental process of cities. For this study, GCPs are regarded as a global phenomenon rather than cases that must be analyzed independently. The study focused on four types of GCPs: world and international exhibitions, horticultural exhibitions, Olympic Games, and the European Capitals of Culture. The research sample comprised 183 GCPs globally, organized between the middle of the 19th century to the beginning of the 21st century. The study analyzed the influence of different GCPs on city structure and urban heritage and focused on the distinctive development of each GCP type. The study's novelty lies in recognition of the four main types of GCPs' potential for multidimensional urban development and their diversified impact on the transformation of modern cities, along with the identification of potential threats, benefits, and development opportunities related to different GCP types.
Keywords: Great cultural project; cultural urban branding; mega-events; urban heritage.

[es] Las características de los Grandes Proyectos Culturales y su impacto en el patrimonio arquitectónico y urbano (1850-2012)

Resumen. Este artículo examina los Grandes Proyectos Culturales (GPC) como un elemento del proceso de desarrollo de las ciudades, considerándolos como un fenómeno global en lugar de analizar cada caso de forma independiente. El estudio esta centrado en Exposiciones Mundiales e Internacionales, Exposiciones de Horticultura, Juegos Olímpicos y Capitales Europeas de la Cultura. La investigación abarcó 183 GCP organizados desde el siglo XIX hasta principios del siglo XXI en todo el mundo. El estudio definió la influencia que los diferentes Grandes Proyectos Culturales han tenido en la estructura de la ciudad y el patrimonio urbano, así como el desarrollo distintivo de cada tipo de GPC. La aportación de este artículo consta en la definicón del potencial de los cuatro tipos principales de GPC para el desarrollo urbano multidimensional y su impacto diversificado en las transformaciones de las ciudades modernas, junto con la identificación de posibles amenazas, beneficios y oportunidades de desarrollo relacionados con diferentes tipos de GPC.
Palabras clave: Grandes proyectos culturales; branding cultural; megaeventos; patrimonio urbano.

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6.4. The urban heritage of the GCPs. 6.5. The architectural heritage of the GCPs. 7. The opportunities and risks of the GCPs. 8. Discussion. 9. Conclusions. References. Abbreviation list. Acknowledgements.

1. Introduction

The global pandemic caused by COVID-19 has persisted for over a year and changed the perception of mega-events (Ludvigsen & Hayton, 2020) and urban issues (Martínez & Short, 2021). As predicted by Carlo Caduff (2015), the pandemic shut down economies globally and sparked a reaction that transformed the world. Nonetheless, we must consider the importance of great mass cultural events with respect to the spatial development and economic regeneration of cities (Smith, 2012; Getz & Page, 2016) and perceive these events not only in terms of threats but also as important urban planning triggers that have been enhanced by the lessons learned during the pandemic (Megahed & Ghoneim, 2020). This study focuses on Great Cultural Projects (GCPs) and their impact on urban planning and development of cities in the pre-pandemic period.

National exhibitions were the precursors to great international events that have been organized since the mid-19th century. These events were later transformed, in terms of their scale, subject matter, and scope, into world fairs. Toward the end of the 19th century, several initiatives to promote sporting events were undertaken, but the most important was the Olympic Movement. In the 1960s, the Horticultural Trades, which had already been organized before, gained international recognition. In the 1980s, the European City of Culture project was initiated and became the forerunner of the current European Capital of Culture program. For this study, GCPs have been generally defined as mega-events that cause profound changes at various levels of city life and are aimed at a wide audience, ranging from events related to building cultural identity and city branding to important economic and spatial transformations. The four basic types of GCPs focused on in this study are as follows: World and International Exhibitions (WIE), Summer and Winter Olympic Games (SOG, WOG), Horticultural Exhibitions (HE), and European Capitals of Culture (ECoC).

The history of each of these GCP types is well established in the literature (see for example: Ebert, 1981; Findling & Pelle, 1990, 2004, 2008; MacAloon, 1981; Monclus, 2006; Palmer, 2004; Ponzini & Sampo, 2011; Rydell, 1993, 2013, Findling et al., 2000; Theokas, 2004).

In the literature, GCPs are presented as tools for urban renewal (Evans, 2002; Gómez, 1998; Voase, 1997) and cultural urban branding (Evans, 2004; Gil de Arriba, 2010; Richards & Wilson, 2004; Yuen, 2008), as well as place-making tools (Gospodini, 2004) and waterfront regeneration catalysts (Januchta-Szostak & Biedermann, 2014; Januchta-Szostak, 2020). Additionally, they have been analyzed in the context of the creative city theory (Hall, 1998; Landry, 2012; Howkins, 2002; Florida, 2002; Florida & Florida, 2005, Sasaki, 2010) and as a part of intercity

competitions (Brotchie et al., 1995; Duffy, 1995; Jensen-Butler, 1997). GCPs' positive and negative impacts have been detailed in extant literature. Zachary M. Jones (2020) explored a broad range of physical effects and institutional changes by first examining the dynamics of cities' attempts to reduce overall costs and increase the sustainability of mega-events by further embedding them within the existing fabric of the city and then by studying the impact of GCPs on the heritage of host cities. However, this research was limited to three World Heritage cities: Genoa, Liverpool, and Istanbul.

Furthermore, in the vast majority of cases, such studies are exclusively devoted to one category of events, and their specific impacts on the transformation and development of cities are rarely compared to that of the different categories (Roche, 2005; Monclus, 2006).

2. Materials and Methods

2.1. Research scope

Unlike previous studies, this study cross-sectionally examines and presents an overview of the 150 year-plus history of GCPs to reveal the differences and common characteristics of the four main GCP types analyzed.

The research sample comprised 183 GCPs globally, organized between the mid-19th century to the beginning of the 21st century. The time frame for each GCP type is different (see Figure 1), but it is limited to 2012 in all cases. The latest events have not been included because an evaluation of the durability of their impacts on the urban structure is impossible to perform as not enough time has passed since the most recent events took place. The statistical data used in this study accounted for the whole study period, including the 30 years during which a new era of GCPs began with the end of the Cold War, and new objectives, such as city branding and touristic promotion in the era of globalization, were added as the organizational aims of GCPs.

In the 20th century, in addition to the establishment of the institutions that supervise and define GCPs (IOC — International Olympic Committee, BIE — Bureau International des Expositions — International Exhibition Office, AIPH — Association Internationale des Producteurs de l'Horticulture — The International Association of Horticultural Producers) and the use of GCPs for branding of cities, new GCP types appeared. The process became increasingly intensive toward the end of the 20th century (e.g., American Capital of Culture and World Design Capital). These projects were not included in the research).
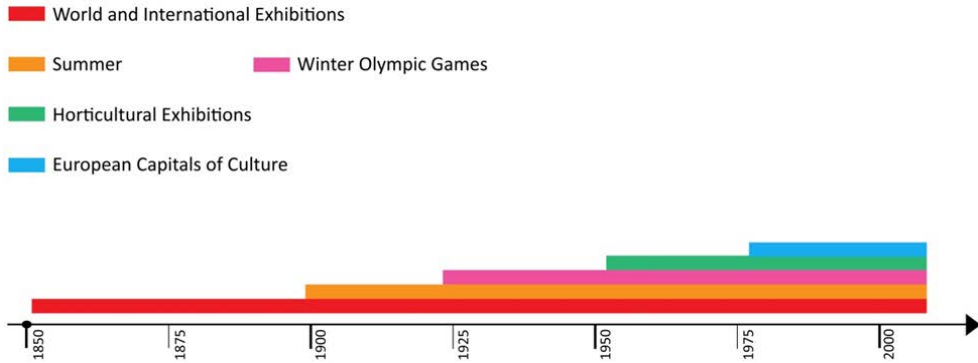
Figure 1. Research time scope. (Author).

2.2. Research methodology

The study covered the spatial scale, time, and duration of the organization of the GCPs, attractiveness with respect to the public and the media, thematic scope, and impact on the urban transformations of the corresponding cities. The collected data was obtained not only from the literature but also from the official websites of the organizers, that is, the BIE, the AIPH, or the European Commission. Comparative analysis methods were used to analyze the individual cases of the World and International Expositions, Olympic Games, Horticultural Trades, and ECoCs.
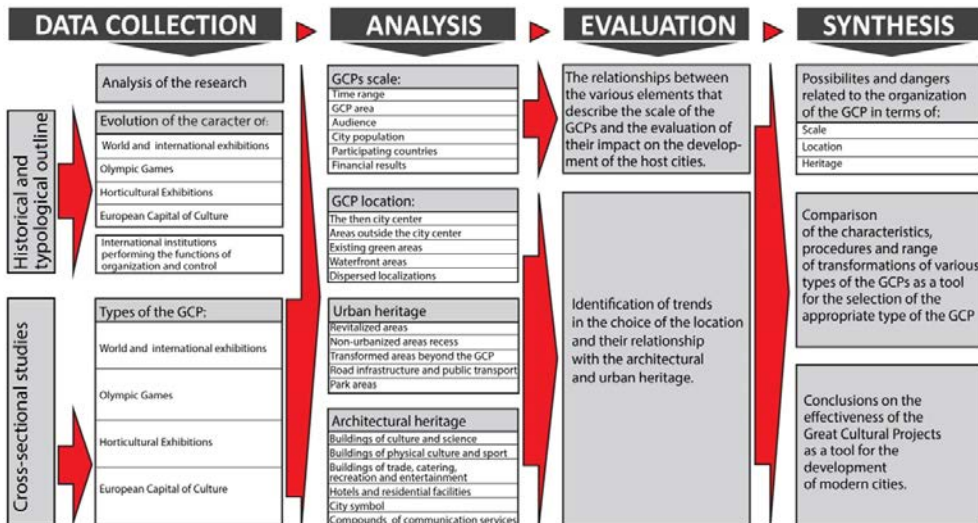

Figure 2. Diagram of the research methodology. (Author).

Figure 2 presents the adopted research methodology, based on: data collection, analysis, evaluation and synthesis. Comparative analysis methods based on a compilation of statistical data were used in the cross-sectional studies. A total of 209

Great Cultural Projects were analyzed, and the full data was obtained from 183 cases, including 72 WIEs, 27 SOGs, 21 WOGs, 19 HEs, and 44 ECoCs, which comprised the representative sample. The historical and typological outline was based on the analysis of the bibliographic, cartographic, and iconographic sources, which traced the evolution of the four main GCP types and the institutions that performed the organizational and supervising functions. The GCP scale, location, and urban and architectural heritage were analyzed through cross-sectional studies. Quantitative, statistical methods and qualitative analysis were applied to evaluate the impact of GCPs on the development of the host cities. The research results helped identify the opportunities and threats of the GCPs' organization and compare the profiles of various GCP types.

Finally, our conclusions on the effectiveness of the GCPs as a tool for developing modern cities were established.

3. The definition of the GCPs

For this study, an original definition of GCPs was formulated, and the criteria used for selecting the sample events are listed below:

– periodical character,
– an international organization selecting the host city and supervising the compliance with the established procedures,
– an established protocol for a host city candidate and for running the event itself,
– several years of infrastructural preparation for the event and necessary transformations,
– aimed at popularization of global developments related to the progress of civilization: cultural, sporting, or technological,
– limited duration of the event,
– the defined project realization area (usually strictly limited),
– the overtone of a diplomatic event: the participation of celebrities, heads of the state, etc,
– the opening ceremony and the closing period of the event having a wide media coverage,
– interest of a wide, international audience and the media,
– strictly defined symbolism of the event: the logo, the flag, the mascot, etc,
– official products.

The definition of GCPs coincides with the concept of so-called 'mega-events' to some extent (Carreras & Verdaguer, 1995; Chalkley & Essex, 1999; Hiller, 2000; Burbank et al., 2001; Roche, 2002). The difference lies in the fact that the phrase "mega-events" particularly emphasizes the huge scale of the event, its brevity, and the spectacular climate. In contrast, the term "the Great Cultural Projects," apart from the scale, emphasizes the planning process, the cultural factor, and the heritage left after the realization of the project, which distinguishes these projects from other purely commercial ones.

Culture is a constant element of the declared organization objectives of GCPs, combining several institutions, groups, and organizations in one project. Cultural projects are connected with creating cultural institutions, which were especially popular in the 19th century as a response to progressing democratization and the requirement to convince citizens to accept a particular vision of the world. The ruling groups and the well-off bourgeoisie began to elaborate cultural policies that facilitated the origins of the cultural industry. These processes coincided with the introduction of obligatory primary education, which primarily promoted the attitudes and behaviors accepted by the citizens of a given country (Bowles & Gintis, 1976). Thus, the sense of belonging to a given nation and social group was created and often reinforced by new "traditions" (Hobsbawm & Ranger, 1983). In this context, regardless of the specific typology, the GCPs were used to shape the collective identity of the group participating in an event. Culture is also an important sector of the European economy. As demonstrated by studies commissioned by the European Commission in 2006, culture accounted for 2.6% of the European GDP, which was more than the contributions of the car industry and ICT (Summary of the European Commission conference "Celebrating 25 years of European Capitals of Culture" Brussels, 23–24 March 2010). In 2017, there were 1.1 million cultural enterprises in the EU-27, generating 145 billion € of value added (Eurostat, 2017).

4. The organizational institutions of GCPs

Initially, the exhibitions were not controlled by any external body, which resulted in a series of organizational problems for the hosts of the exhibitions and the participants. Thus, at the beginning of the movement, the founder of the Olympic Movement — Pierre de Coubertin — initiated the creation of the entity responsible for regulating and controlling the organization of the modern Olympic Games — the International Olympic Committee (IOC) (McAloon, 1981). Although the IOC is older than the BIE as an institution, the modern Olympics were subsequent to the World Expositions. All succeeding GCPs analyzed in this study (The Horticultural Trades and the ECoCs) were created by the existing controlling institutions.

5. Research objectives

The most important aims of this study included exploring the different GCPs' potential for a multi-dimensional urban development and defining the differences in their impact on the transformation of modern cities. Moreover, another objective was to define potential risks, benefits, and development opportunities related to different GCP types.

6. Results

6.1. The GCPs as a global phenomenon

The influential range of the organizational institutions is defined by the number of members of a particular institution. Figure 3 shows that participation in GCPs is a global phenomenon, especially when it concerns WIEs and OGs (excluding ECoCs, which include just the EU and collaborating countries).

Figure 3. Members of the controlling institutions BIE, MKOI, AIPH, and EU. (Author).

Although GCP hosting is theoretically an opportunity available to all cities globally, it entails the necessity to meet strict requirements, which is possible only for developed or dynamically developing countries. Host cities are mainly situated in Europe, North America, and East Asia (see Figure 4).
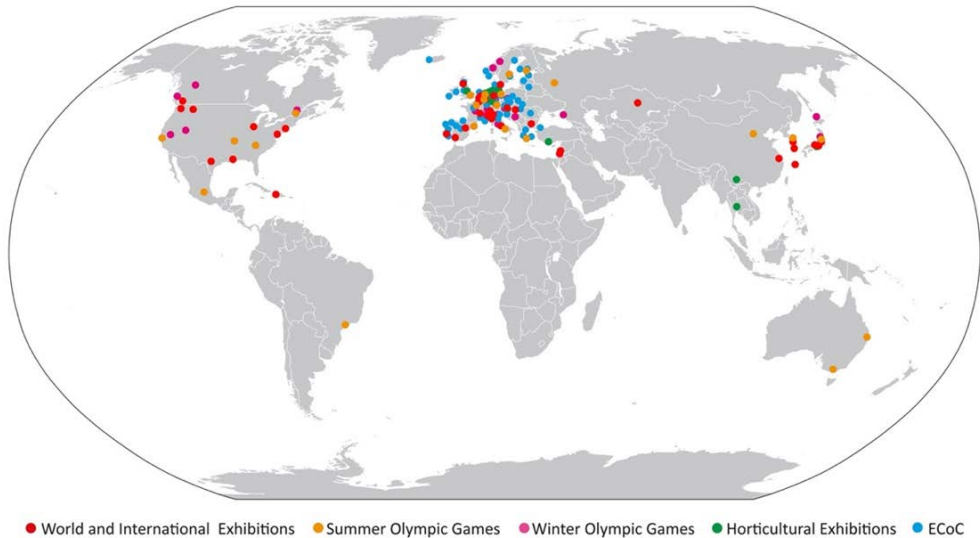

Figure 4. The graphic summary of cross-sectional research in terms of the geographical location of the host- cities. (Author; based on organizers' websites and controlling institutions BIE, MKOI, AIPH, and EU).

6.2. The scale of GCPs

The differences in scale among the different types of GCPs were analyzed and compared by considering city population, audience size, duration of the event, event area, and several participating countries. The analysis was based on the average values obtained in the research, accounting for the entire period when the particular GCP type was organized, including the last 20 years, to show the latest trends (See Figure 5).

The results revealed, for example, that in the last years of the study period, the average size of the WIE and SOG host cities has become similar, averaging at approximately 4 million residents per host city. Furthermore, we observed a great standard deviation, which shows that the host city size varies from great metropolises, like Shanghai with a population of 23 million, to relatively small towns, like Squaw Valley with 2,000 residents. The audience size is a key criterion of the GCP's success, so it is essential to understand its drivers. There was no direct correlation between the population of the host city and the audience size. Additionally, the ratio of the audience size to the population of the host city was analyzed and was the highest in the case of the WOGs. However, the real effort of the host city to adapt to the increased tourist traffic is reflected by the rate at which it accounts for the time criterion. The WOGs had the highest rate due to the small size of the host cities and the relatively short duration of the event. Therefore, the organization of the WOGs is not only a platform for promotion but also a serious logistical challenge. The WIEs and HEs indicated a similar rate. The ECoCs had the lowest rate, which usually means that the existing hotel infrastructure can accommodate the increased number of visitors to the city.

In terms of duration, the analyzed projects were divided into 3 groups — the shortest: SOGs and WOGs, recently lasting 17 days on average; events not exceeding 6 months: WIEs and HEs; and the longest: ECoCs, which last up to 12 months on average.

The area of a GCP can only be specified in exhibitions whose uniform scale is less than 100 hectares on average.
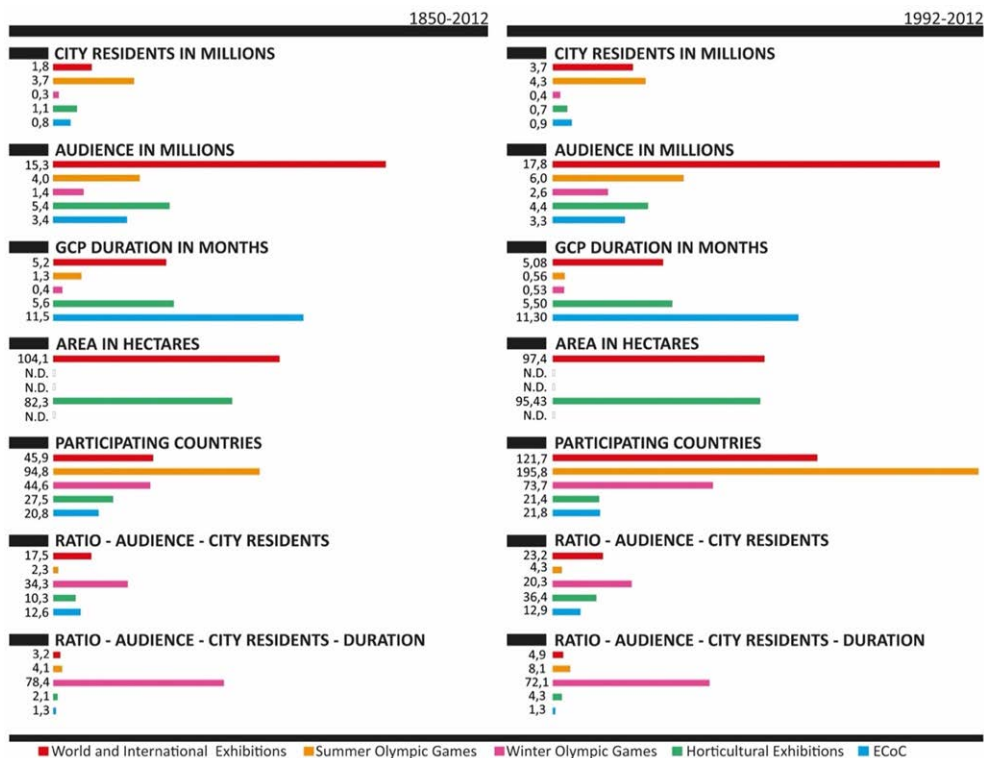
Figure 5. The graphic summary of cross-sectional research in terms of GCPs scale. (Author; based on organizers' websites and controlling institutions BIE, MKOI, AIPH, EU).

6.3. The location of GCPs

Initially, exhibitions were organized in the existing park areas where temporary buildings were located. Since the end of the 19th century, exhibitions have increasingly contributed to preserving urban green structures and improved the quality of their development and facilities. An excellent example of a GCP leading to the creation of new structures of greenery and brownfield revitalization was an exhibition organized in New York from 1939 till 1940.

In the 1930s, it was necessary to take some steps to overcome the effects of the international financial crisis of 1929. These attempts, however, were stopped short by World War II, after which both targets and models of territorial planning and urban design had to be reduced and adapted to the new reality. As Victor Perez Escolano (2008) pointed out, the paradigm of progress had been exhausted, and the creation of astonishing buildings and landscapes was no longer sufficient. Education and entertainment have become an integral part of the new model for GCPs. The division, introduced by the International Exhibitions Bureau (Bureau International des Expositions — BIE), of world and specialized (international) exhibitions, made some of the organizers opt out of the patronage of the institution — as in the case of the international trade fair in New York in 1964 and 1965. That exhibition, similar to

the exhibitions organized under the auspices of the BIE in Brussels (1958), Montreal (1967), Osaka (1970), Seville (1992), and Hanover (2000), was categorized as a world exhibition because of its size and thematic scope. Specialized exhibitions organized on a smaller scale, with specific goals and less expenditure, were more frequent.

Nevertheless, all exhibitions were subordinated to pragmatic intentions and used as an instrument of urban transformation, changing the image of an entire city or a selected district. This tendency is especially distinct in the process of choosing the location of the exhibition. Parks and green areas were no longer the surroundings for exhibitions, which began to be located in areas that required transformation and revitalization. These included port areas, seashores, or riverbanks — areas requiring reorganization, located either in the center (South Bank in London in 1951), away from the center (near the Tagus River in Lisbon in 1998), or in the suburbs (as Flushing Meadows — Corona Park, Queens, New York in 1939 and 1964).

Figure 6 shows that ECoC is a kind of GCP that entirely takes advantage of the infrastructure of the city center. Since the second half of the 20th century, the GCPs have contributed to the urban renewal processes, as in Liverpool ECoC in 2008. Nonetheless, most of the projects are organized on the outskirts, supporting the urbanization of peripheral areas. The existing green areas have played a huge role as a natural place for the location of WOGs' organization. Moreover, the importance of green areas has increased in the case of SOGs (e.g., in London, the Olympic Festival took place in Hyde Park) and remained at a 50% level in the case of ECoCs. The existing greenery has been less frequently used as locations for WIEs and HEs in recent years. On the contrary, the waterfront areas have prevalent over the entire history of GCPs, exceeding 60% for all types (e.g., Glasgow waterfront transformation, initiated by the Garden Exhibition and continued by the ECoC, shows consistent use of GCPs as a tool for the realization of the strategic goals).

Remote locations in a city are typical for the OGs as well as ECoCs, which, on the one hand, is due to the special requirements of the GCP types, but on the other hand, facilitates city transformations (e.g., Barcelona, where multiple locations of Olympic competitions led to regeneration of considerable parts of the city and the improvement of the public transport infrastructure). The remote locations are used much less frequently for exhibitions. The importance of urban transformation beyond the GCPs' area has increased significantly in the recent period, except for HEs, which slightly declined. This may mean that the cities consciously use the GCPs as a tool for transforming not only the area of the location of the event but also other functional elements or spatial urban infrastructure, seemingly unrelated to the area of the GCPs.
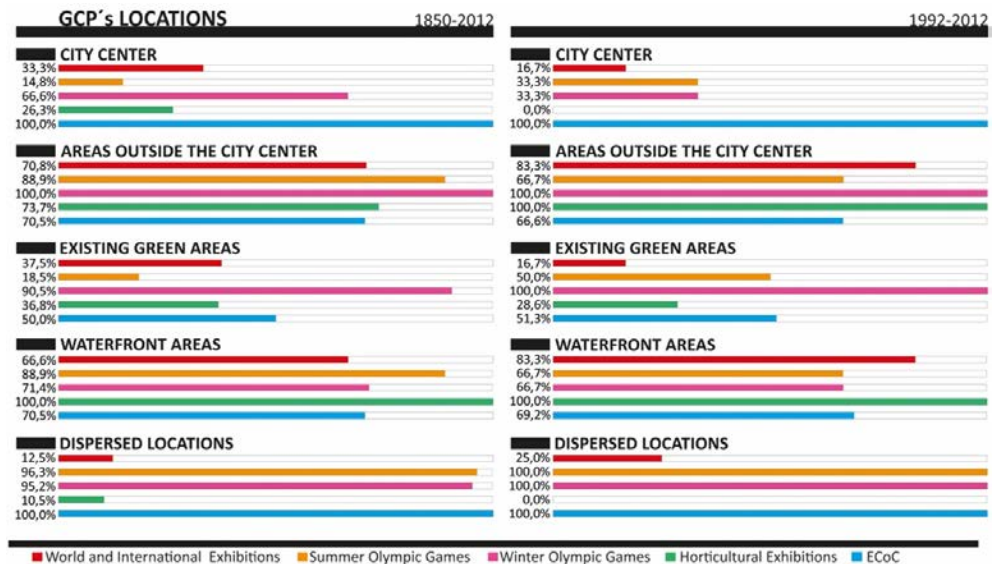
Figure 6. The graphic summary of cross-sectional research in terms of GCPs' locations.
(Author; based on organizers' websites and controlling institutions BIE, MKOI, AIPH, EU).

6.4. The urban heritage of the GCPs

The choice of the location is strictly related to the planned urban transformations, which constitute the urban heritage of the event. On the one hand, it can be used for the existing degraded areas' renewal. On the other hand, it can serve as a tool for expanding the city to new non-urbanized areas. The GCPs have also been a catalyst for the transformations in areas outside their location, facilitating the creation of new transport infrastructure and green areas in cities. There are several differences between the heritage of different GCP types. ECoCs, for example, contribute to the revitalization of urban areas in over 65% of cases but contribute to the development of the non-urbanized areas in only 4.5% of cases. On the contrary, the WOGs are the type of GCP that most frequently engender the development of the non-urbanized areas (over 76% of the cases), road infrastructure, and public transport. In recent years, the changes in the road infrastructure and public transportation have become increasingly important in more than 80% of cases, appearing in all types of the GCPs except ECoCs. Such changes were often planned for a long time, and the corresponding GCP catalyzed their implementation. The innovations were accompanied by the creation of communication service facilities — especially for the SOGs and the WIEs. Park areas are an inseparable heritage of HEs and, frequently, of SOGs, having been used as recreational areas, accompanying the Olympic Village and sports infrastructure. Park areas have been a part of about 40% of organized projects in WIEs and ECoCs (see Figure 7). Urban heritage has lasting effects on the city structure. Figure 8 illustrates the urban transformations due to the Expo Zaragoza 2008, registered in 2021.
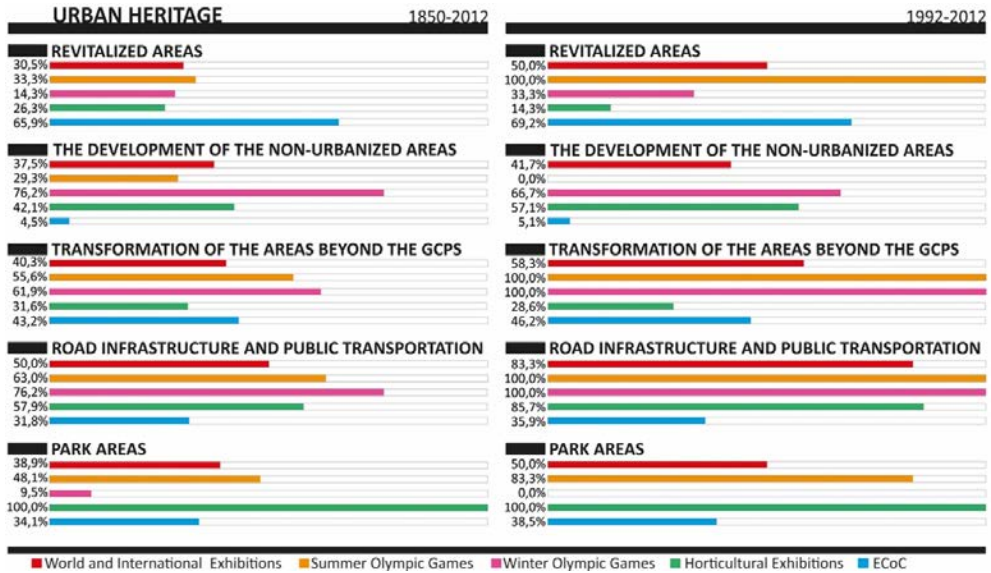
Figure 7. The graphic summary of cross-sectional research in terms of GCPs' urban heritage.
(Author; based on organizers' websites and controlling institutions BIE, MKOI, AIPH,
and EU).

Figure 8. The urban heritage of Zaragoza 2008 Expo — view in 2021. (Author).
8A. Revitalized areas of the Ebro riverfront / 8B. Park area —Water Park / 8C. Road
infrastructure — Third Millennium Bridge.

6.5. The architectural heritage of the GCPs

Almost all GCPs have left a valuable architectural heritage — buildings of different types and functions (see Figure 9 and 10). Initially, one main building, a container, constituted the whole exhibition area; gradually, the expo areas were composed of a set of pavilions and buildings, often designed for later use. From the beginning, exhibitions have been a great experimental field for new construction technologies, spatial forms, and new aesthetics, bolder in expression due to the transient nature of exhibitions. Moreover, not only did exhibitions represent the future world image and an expression of pride but also a source of hope for a better tomorrow regardless of the current political and economic situation. Buildings of culture and science are a characteristic heritage of WIEs; buildings of physical culture and sport, as well as hotels and residential facilities, are commonly associated with SOGs and WOGs. Fewer examples can be found in other categories of GCPs, especially ECoCs, wherein the fewest examples were recorded. All organizers strive to create recognizable buildings, which can become the city's new icons (e.g., the Atomium in Brussels, the tower in Seattle, the Millennium Dome in London). However, designing such an iconic element with respect to the city's image is not easy; therefore, it is rarely successful (in approximately 24% of all cases). Interestingly, the number of symbolic buildings in cities created for SOGs has increased in the last few years, probably connected with the grand scale architecture of sports compounds and their great significance to modern society.
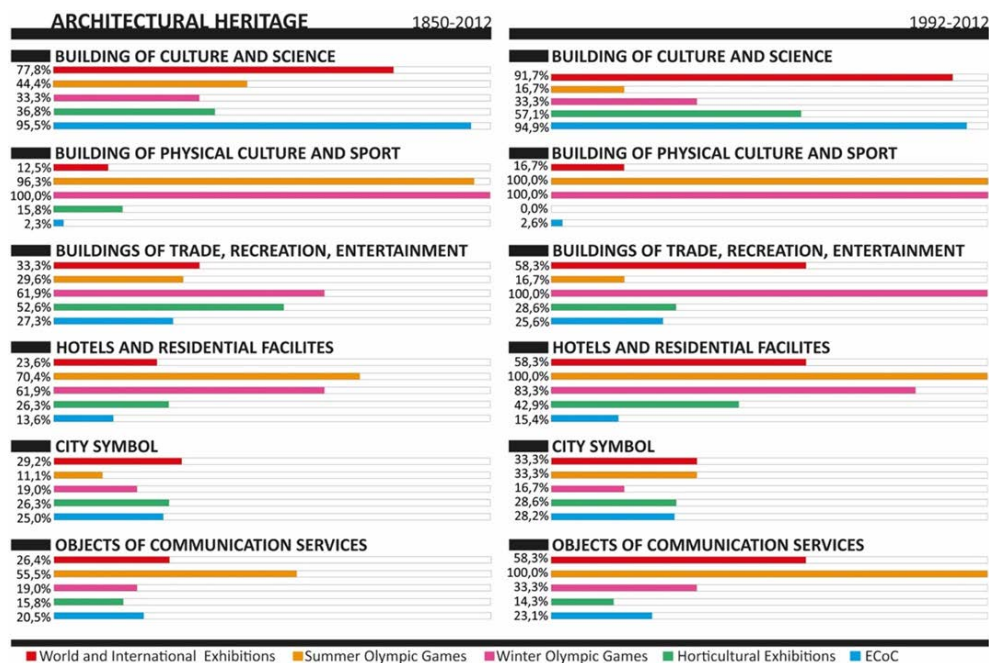

Figure 9. Graphic summary of cross-sectional research in terms of GCPs architectural heritage. (Author; based on organizers' websites and controlling institutions BIE, MKOI, AIPH, and EU).

Figure 10. Architectural heritage of 2008 Expo Zaragoza in 2021. (Author). 10a. Conference center / 10b. Aquarium / 10c. Zaha Hadid Bridge pavilion — city symbol / 10d. Hiberus Hotel.

7. The opportunities and risks of the GCPs

The analysis made it possible to define the potential risks and opportunities related to the GCPs (see Figure 11). Opportunities have been classified in the following areas: strategy, urban transformation, economy, promotion, culture, and society. In terms of risks, politics, urban transformation, economy, ecology, safety, and society have been identified as susceptible sectors.

This classification was based on the analyzed examples; however, it can be argued that each area has potential opportunities and risks, so a control strategy should be planed from the beginning of the development of a GCP proposal. Monitoring procedures should be implemented during GCP development.

OPPORTUNITIES

STRATEGY

Creation of a vision of the city development
Manchester - the city unsuccessfully applied for hosting the Olympic Games. Despite this, in 2002, the city organized the Commonwealth Games and realized the prepared revitalization program.

Accelerated accomplishment of planned investments by activating specific financial means and procedures
Olympic Games Munich in 1972-revitalization processes were conducted. Theirs implementation was initially planned for a period of over 20 years.

URBAN TRANSFORMATION

Urban transformations, the change in the ownership structure of land
Zaragoza exhibition of 1908 – the areas designated for the exhibition development had been undeveloped for a long time because of the difficult administrative and legal situation. It was not solved until the organization of the GCP.

Revitalization, implementation of projects changing the structure and function of parts of the city
Glasgow ECoC - 1990 - revitalization of coastal areas; SOG Barcelona - 1992 – transformation of a post-industrial area into an Olympic Village.

Improvement in public transport
On the occasion of SOG in Tokyo in 1964, the following were created: 22 new highways, 18 expressways, 4 freeways (50 miles of roads), 2 underground lines and a high-speed train connecting Tokyo and Osaka.

Innovative, experimental architectural solutions
Paris Expo 1989 – the Eiffel Tower; Montreal Expo 1967 - Biosphere (Fuller), Habitat (Safdi).

ECONOMY

New functional and economic profile of the city
Expo Zaragoza 2008 – the city of congresses; Glasgow ECoC 1990, Liverpool ECoC 2008 – the city of culture, Calgary WOG 1988 – the center of winter sports.

Stimulating economic activity and employment
Sapporo in 1965, when chosen to host the WOG, had a population of 760 thousand inhabitants, in 1972 after the Olympics - more than 1 million. Population growth resulted from an increase in employment with regard to redevelopment of large areas of the city.

PROMOTION

Branding attractiveness, perception and recognition of the city in the international arena
ECoC in Linz in 2009- 25 thousand articles devoted to the city appeared in the international and national press. One of the most effective campaigns to promote the city was carried out on the occasion of 1988 Winter Olympics in Calgary.

Tourism promotion and tourist infrastructure
Expo in Osaka in 1970 attracted 64 million visitors, the Expo in Shanghai in 2010 attracted 73 million visitors. After the end of the Expo, part of installations was turned into a tourist attraction.

Strengthening or establishing international contacts
In the last 20 years of anlyzed the GCP organization, more countries have participated in the event- average figures: -World's Exhibitions -152 countries, -International Exhibitions -106 countries, -SOG-196 countries, -WOG -74 countries, -HE - 21 countries, -ECoC - 22 countries.

CULTURE AND SOCIETY

Social activation and integration - involvement of volunteers, tolerance, identity, cultural interaction
SOG, London 2012 - 70 thousand volunteers, Expo Shanghai 2010 - 70 thousand volunteers, out of more than 560 thousand entries, were selected. During ECoC in Berlin in 1988, cultural events accompanied social and political transformations.

Popularization of ideas, knowledge and innovations
Tribuna del Agua, functioning during Expo Zaragoza 2008, held conferences and debates that ended with the signing the Charter of Zaragoza, describing a sustainable use of water resources.

The improvement of the dynamics of cultural city life
In Glasgow ECoC in 1990 there was an increase in the number of people participating in cultural events from 4.7 million in 1989 to 6.6 million in 1990.

RISKS

POLITICS

The use of GCP as a tool of political propaganda
The Olympics in 1936 in Berlin were prepared so as to exploit the potential of the GCP for propaganda of National Socialism. The infrastructure itself was later used for military purposes and mass events.

Lack of strong political and social support
In 1989 in Paris, the exhibition was to be held to commemorate the 200th anniversary of the French Revolution and the 100th anniversary of the creation of the Eiffel Tower; the exhibition in Chicago in 1993 was to commemorate the centenary exhibition of Colombia in 1893; exhibition in Budapest in 1996, also did not take place.

The influence of changes in economic and political situation on the planning of GCP
Spain has been in crisis since 2009, which made it abandon the plans to organize Expo Paisajes 2014 in Zaragoza. Meeting immediate needs gains grater support of the public and politicians than the implementation of projects that would be excessively positive for the city but in a long-term perspective.

URBAN TRANSFORMATION

Creation of oversized building, inadequate to the needs of the city after the GCP
During Expo in Seville in 1992 an excessive number of hotel rooms were created, which contributed to the crisis and the fall in prices in the industry after the end of the expo. SOG in Athens in 2004 - great scale investment not supported by a thorough economic analysis was the cause of long-term financial problems of the city.

Concentration of investment and capital for one location, negligence of other parts of the city
At the time of F. Mitterrand's government , the main investment expenditure was allocated for Great Parisian Projects (the cost of over 600 Grand Projects - more than 250 million pounds). These projects did not lead to the city renovation but to negligence of areas in the center and in the suburbs of Paris.

ECONOMY

Excessive involvement of public funds – a city indebtedness, economic losses
Expo 2000 in Hanover - resulted in economic losses but its infrastructure, although impossible to be quickly adapted, is a lasting legacy of this city. Expo 1984 in Louisiana ended in bankruptcy before the end of the exhibition.

Corruption and mismanagement
There are cases of corruption in the selection process of Salt Lake City to host the WOG in 2002. In the case of WOGs in Sochi the cost connected with corruption is estimated at more than $ 50 million.

ECOLOGY

Negative ecological effects
During the construction of ski lift for WOG in Albertville in 1992, a 100-acre forest, which had been previously protected, was cut down. WOG in Sochi (2014) resulted in the degradation of the river valleys and the healing properties of the area.

SAFETY

The terrorist threat
During the SOG in Munich in 1972 there was a terrorist attack as a result of which 11 people were killed.

SOCIETY

Negative social consequences, gentrification
Transformations of the coast of Sochi (WOG 2014) and Rio de Janeiro (SOG 2016) are accompanied by processes of gentrification. Large groups of people are displaced (in Brazil a total of over 30 thousand families). Increase in property value and rents.

Figure 11. Opportunities and risks connected with the organization of GCPs. (Author).

8. Discussion

The data and results presented in tabular summaries, which are based on the research findings, should be considered while accounting for a possibility of inconsistencies since the heritage cases were not differentiated based on the quality or quantity of development; in other words, only the existence or facilitation of development was considered in each of the analyzed cases. As for audience size, the results could not be compared across the sample due to differences in the registration of the number of visitors. For example, in some cases, employees entering the exhibition grounds were added to the number of visitors every day, or people with free passes were not counted. In contrast, in other cases, the number of tickets sold was counted without checking whether the tickets had actually been used. However, these numbers can be regarded as indicators of the scale of the interest and audience size of the GCPs. Concerning the event area, some parts of the terrain — for example, parking areas — were sometimes included in the exhibition area or treated as urban infrastructure not belonging to the GCP. Regarding the Olympics, the lack of data on the size of the area of the GCPs was because they were mostly held in scattered locations and not in one precisely defined area. The data collected for the ECoCs did not allow the identification of the areas where the events took place because the ECoC covers the entire area of the city center virtually and often its more remote parts and outskirts.

Every year new GCPs provide data that may affect the assessment of related opportunities and risks and even the very nature of a particular type of GCP; thus, the conducted studies must be constantly updated. At present, it is too early to assess the influence of events related to the global Covid-19 pandemic on the development of GCPs, but changes will undoubtedly occur. Events in virtual environments and strict control of audiences are just some of the possible modifications. Priorities of urban development will change as well. In the 19th century and the beginning of the 20th century, these priorities were primarily the processes of urbanization, industrialization, and demographic and economic growth. At the end of the 20th century, two concepts were defined: sustainable development and smart growth. This gradual evolution of objectives indicates how some GCPs can have spectacular effects.

A modern knowledge-based economy provides entirely new opportunities for the qualitative development of cities supported by the values of culture, education, and information. Therefore, GCPs can gain a new dimension in virtual space and influence the reality of 21st-century cities in several ways.

9. Conclusions

The findings of this study demonstrated a significant and lasting impact of GCPs on the functional and spatial structure of host cities. GCPs have contributed to urban transformations in 87.63% of the cases analyzed, including revitalization of degraded areas (the greatest contribution since the 90s: SOGs — 100%, ECoCs — 69.2%, and WIEs — 50%) or development of non-urbanized areas (WOGs — 66.7%, HEs — 57.1% and WIEs — 41.7%). Moreover, GCPs have catalyzed changes in neighboring areas, including the creation of new transportation infrastructure and green areas in the city. Almost all GCPs (96.23%) have left architectural heritage — buildings

of culture and science, physical culture and sports, trade, catering, recreation and entertainment, and hotels and residential facilities. These iconic buildings have permanently changed the image of their respective cities, significantly contributed to the cities' recognition, and increased the tourist attractiveness in 24% of the cases.

The synthesis of the research results enabled defining the possibilities, opportunities, and risks connected with the organization of GCPs and comparing the different types of GCPs.

As the detailed study results show, all four analyzed GCP types differ significantly despite having much in common. These differences are multi-leveled and relate to both the procedural issues (the time required to propose candidacies and prepare the GCP, the criteria to be met) and the financial impact on the various economic sectors of the city. The discrepancies concern various opportunities and threats, listed in the table in Figure 9, connected with the organization of particular GCP types to different extents. The analysis indicated that the size of the city is not a key criterion for the possibility of organizing any type of GCP because each type has been hosted by cities of different sizes. The average audience size, which different types of the GCPs can attract, is varied and depends on the type of the GCP. Necessary infrastructure, such as hotel accommodation and transportation, is connected with the audience size and duration of the GCP.

Comparing different types of GCPs has valuable implications for cities that are considering hosting a GCP regarding selecting a GCP that best suits their development strategy objectives.

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Abbreviation list

AIPH — Association Internationale des Producteurs de l'Horticulture — The International Association of Horticultural Producers
BIE — Bureau International des Expositions
ECoC — European Capitals of Culture

GCP — Great Cultural Project
HE — Horticultural Exhibitions
IOC — International Olympic Committee
SOG — Summer Olympic Games
WIE — World and International Exhibitions
WOG — Winter Olympic Games

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