

Forms of synergetic interaction between Industry 4.0 and regional tourism in the post-war reconstruction of Ukraine

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Abstract: *In the context of large-scale and diverse forms of international assistance for the post-war reconstruction of Ukraine, it is necessary to identify and offer foreign partners a format to support tourism in our country, especially inbound one. A possible proposal is to develop an international program to encourage foreign tourists to come to Ukraine on special tours, which will be partially funded by donor countries. Combining domestic tourist flows with foreign flows of this type is possible through tourist events, especially festivals. In this format, the festival will have significant synergetic potential, as it will be a point of unification of tourist flows in time and space. The experience of international kite festivals as a special form of event tourism is researched. It allowed to summarize certain features of festivals as tourist events. Certain aspects and features proved the complexity of such phenomena as a tourist event, festival event, the complexity of their preparation and conduct, active interaction with socio-economic processes in the territory.*

Keywords: TOURISM, SYNERGY, REGION, INDUSTRY 4.0, EVENT TOURISM, FESTIVAL, INTERNATIONAL KITE FESTIVAL, SUSTAINABLE TOURISM, POST-WAR RECONSTRUCTION

1. Introduction

In the conditions of a full-scale war on the territory of Ukraine, the domestic tourism industry is also suffering catastrophic losses. Related industries have refocused on humanitarian issues. Collective means of accommodation are used to resettle refugees; catering establishments are being closed in areas of hostilities or working in an intensified mode – in places where refugees arrive. The environment and specific recreational resources in general suffer irreparable losses, as well as unique historical and cultural resources do. In such conditions, the potential of the entire industry is rapidly declining, which leads to uncollected benefits in the future. At the same time, the President of Ukraine has clearly announced a course for the reconstruction of Ukraine, on the plan of which the government has begun to work during the war already. The tourism industry remains promising for post-war, peaceful Ukraine. The role of tourism as an effective form of cross-cultural interaction is undeniable and is especially important for a country in need of reconstruction and, in particular, investments.

The era of Industry 4.0 itself is characterized by the accelerated transformation of organizational and economic forms of management, the rapid restructuring of business processes in various industries. Due to the significant impact of globalization processes on it, the tourism industry is becoming a shining example of transformations and convergences at various levels. In prewar Ukraine, the development of tourism was determined by the general context of regionalization as a component of European integration. In these conditions, it is important to find tools to develop new tourist destinations after the war and bring to market new tourism products at the regional and community levels.

Event tourism is one of the most promising and mobile sub-sectors of world tourism. Although this type of tourism has suffered significantly during the pandemic and remains vulnerable due to obvious limitations, its feature is the ability to quickly transform, organizational and economic flexibility. This feature can also be used in post-war time. Foreign studies of economic and organizational principles of event tourism indicate its motivational role, importance in the formation of destinations and general importance in the process of consolidation of public space in territorial communities and regions [1].

Generally saying, tourism as a phenomenon is one of the most multifaceted objects of research for scientists in various fields. At the same time, the peculiarities of event tourism as a catalyst for the processes of inbound tourism and domestic tourism, in particular, in the territorial communities of our country, are studied insufficiently. Particular attention should also be paid to this phenomenon in connection with future risks associated with the violation of the territorial integrity of Ukraine, the actual war on its territory, as well as the current pandemic, which generally negatively affects the intensity of tourist flows in the world. Nevertheless, planning of future tourism development during the war should help not to lose

time after it, i.e. to push the industry to develop immediately after security conditions are sufficient.

2. Results

As we have previously studied [2], the economy of sustainable tourism should actively attract synergistic opportunities of the business environment, which contributes to the formation of new tourism products at the level of communities, regions and the country as a whole. From the standpoint of synergetics, such processes become especially significant when the system is going through a period of chaos. Obviously, the economy of tourism in Ukraine as a system during the pandemic had been in a phase of chaos already (perhaps, in chaordic phase), but it became even more chaotic after the war. After the war, this will give it the opportunity to rebuild its own organizational and economic structure. For tourism businesses, this means reengineering management processes. For the hotel and restaurant complex, this is a period of crisis that will help remove weak economic elements from the market. Directly for tourists, this is an opportunity to more consciously select tourist destinations for future visits.

From the standpoint of the tourism economics, we propose to consider the potential for recovery of the industry on the demand side and on the supply side. This will allow us to begin a clearer delineation of the role of tourism in the structure of the postwar economy.

An important factor in the rapid recovery of the tourism industry on the supply side (the activities of tour operators and agencies, excursion bureaus, hotels and restaurants sector, etc.) is the tax regulation by the state. This side lies beyond current research.

On the demand side, it is important to understand the changes in Ukraine's tourist attractiveness before and after the war. Well-known Ukrainian tourism scientist O. Lyubitseva notes that "... for tourist consumption is decisive in the realization of the purpose of travel and it determines the value of the tourist" [3]. From such positions, in the framework of "field research" in the period from March to April 2022 we conducted a series of rapid surveys and in-depth interviews with foreign nationals to determine attitudes towards Ukraine as a whole and identify changes in this attitude through the assessment of tourist attractiveness for the postwar future. The study was conducted remotely in March–April by audiovisual and textual communication and in person among the participants of the International Kite Festival Artevento–2022 in Cervia, Italy (from 22 to 27 April 2022). The analysis of the received data testifies to formation of such tendencies in relation to Ukraine after the beginning of war:

- admiration for the Ukrainian people, who are desperately defending the Motherland;
- sympathy for the death and suffering of people, the destruction of property;

– the desire in the future to visit such an amazing country, where such an amazing people lives.

Thus, the tourist attractiveness of post-war Ukraine has increased significantly. In our opinion, it is important not to lose such a competitive advantage, albeit at a terrible price. In the context of large-scale and diverse forms of international assistance for the reconstruction of Ukraine, it is necessary to identify and offer foreign partners a format to support tourism in our country, especially inbound. A possible proposal is to develop an international program to encourage foreign tourists to come to Ukraine on special tours, which will be partially funded by donor countries. Thematic areas need to be developed as part of the peacekeeping tours. The corresponding demand of tourists will be segmented in each direction. For example, business tourism: thematic tours for entrepreneurs to invest in the development of Industry 4.0 in Ukraine with visits to specific sites, territories, communities and regions in general. This can become a promising synergetic interaction between Industry 4.0 and Tourism 4.0. Combining domestic tourist flows with foreign flows of this type is possible through tourist events, including festivals. In this format, the festival will have significant synergy potential, as it will be a point of unification of tourist flows in time and space.

Festivals are a special and most common form of event tourism organization [1]. Ukrainian realities show that the term "festival" («фестиваль») is used quite widely. In prewar Ukraine, any organizers could call their event a festival, regardless of the number of participants, topics and more. Having analyzed the Ukrainian practices of festival tourism from the standpoint of tourism, we propose to divide our festivals into two types: tourist and non-tourist. In other words, a certain event, called a festival, may or may not be a tourist event [4]. In the latter case, most of them are festivals, the target audience of which is the local residents of the territorial community in which they are held. For example, the annual festival "Ukrainian watermelon – a sweet miracle" in Holoprystan city community of Kherson region. It is designed primarily to meet the cultural needs of the inhabitants of this community, so it should be attributed to cultural events, but not tourism. At the same time, such festivals can have tourist potential and in the process of development become tourist events [5].

Our study concerns the second type of festivals, which are a tourist event and can contribute to the development of tourism activities in local communities. In our opinion, they can also be divided into two types:

1. The festival, the main target audience of which is local residents, and tourists (guests of the local community) is an additional target audience.

2. Festival, the main target audience of which is tourists.

Here we consider it important to note that the term "tourist" is used in the meaning given in the current Law of Ukraine "On Tourism".

The first type includes festivals held in / near large cities. For example, the annual Atlas Weekend music festival in Kyiv. The economic model of such festivals takes into account the possibility of obtaining sufficient income from attending the event by locals, and the success of attracting tourists will determine the amount of additional income. On the other hand, such festivals are organized by experienced teams that can change the geographical location of the event if necessary. Therefore, the development of this type of festival is not suitable for most local communities, especially rural ones.

The second type includes festivals that are held in small communities, in rural areas, at remote sites of nature reserves [6]. For example, the Tryhuty International Kite Festival 2017, founded by the team of the Ukrainian Kites Association, was held in a number of communities and territories: Kherson, Askania-Nova Biosphere Reserve, Oleshkv Sands National Nature Park, Mykolaiv, Olshanske community of Mykolaiv region (the main event of the festival), the coast of the Dnieper-Bug estuary in Kherson region. In the following years, this festival became an annual event and took root in the Olshanske community. A feature of this type of festival is the significant number of tourists (relative to locals) who visit the

community for the sake of the festival and during its holding. For example, a festival event in the village of Trykhaty (Olshanske community) in 2017 gathered about 5–6 thousand visitors, and the village's own population is about 1 thousand people.

It is important to refer to the first or second types – and possibly a separate type – of festivals that are held in the resort areas during the holiday season (summer for Ukraine). For example, the annual children's festival "Black Sea Games" in Skadovsk city community of Kherson region. On the one hand, the number of vacationers (tourists) in the season significantly exceeds the number of local residents of the resort (as in the well-known village of Zalizny Port in Kherson region) or these figures are comparable (as in Skadovsk). The purpose of vacationers is to come to the resort (recreational tourism), and visiting the festival is a form of entertainment or an additional incentive to choose the dates of the holiday for the period of the festival. From these positions, such festivals can be attributed to the first type. On the other hand, such festivals can be visited by tourists just for the sake of the festival, and a few nights of accommodation at the resort are a must to participate in the event. Therefore, it is possible to single out such festivals as the third type, which has both the features of the first and the second types.

Thus, one of the forms of regional tourist activity, in particular, in territorial communities is the organization of the festival. Our categorization of festivals allows us to state that for the majority of territorial communities of Ukraine the most promising and generally possible is the organization of tourist festivals of the second type. For the development of not only domestic but also inbound tourism, the festival should be given international status, ie the participation of foreigners. A special thematic type of international festivals are kite festivals (Fig. 1).



Fig. 1 Artevento International Kite Festival 2022, Cervia, Italy

International kite festivals are a multifaceted global phenomenon based on the predominantly Asian kite culture [7]. At the same time, such festivals differ in the dominant focus – sports, art, entertainment, national and patriotic, and so on. Table 1 lists the most famous and significant international kite festivals with characteristics that correspond to the time before the COVID-19 pandemic.

To better "visualize" the topic and reveal the features of the studied type of tourist events, take as an example the famous international kite festival held on the island of Fanø in Denmark. It is literally not called an international festival, but an international meeting of kite flyers (specialists in kites) in Fanø. Every year in June, Fanø gathers about 5,000 professionals and kite enthusiasts from around the world [8]. Many participants design and manufacture their own kites, often in the form of people, cartoon characters, animals, etc. The competition itself is not held. In general, the island is quiet. Only when preparing for the festival do the islanders come together to prepare for the upcoming festival. Fanø's nature and culture contribute to active and useful family leisure is important. At the festival, against the background of the

main entertainment show of kites (kites), there are many types of additional attractions, such as: musical performances, mud baths, golf and more.

Table 1: Greatest international kite festivals *Note: IKF stands for international kite festival

Name of the festival	Country	Season	Duration, days
Gujarat IKF	India	January	10
Weifang IKF	China	April	3
Berck IKF	France	April	8
Fano IKF	Denmark	June	12
Artevento IKF	Italy	April – May	10
Dieppe IKF	France	September	7
Satun IKF	Thailand	February	2
El Dia - Muertos	Guatemala	November	2
Pasir Gudang IKF	Malaysia	February – March	6
Cape Town Kite Festival	South Africa	October	2

Consider international kite festivals as a special form of organizing event tourism in local communities based on the Ukrainian experience – on the example of the above-mentioned Tryhuty IKF. In May 2017, in the south of Ukraine, for the first time in its history, the International Kite Festival Tryhuty International Kite Festival 2017 was organized. As noted, the main event of the festival took place in the village Trykhaty of Olshanske community in Mykolaiv region. An international model typical for such festivals was chosen to organize the event. Among other things, it involves inviting foreign kite flyers from around the world. Inviting such participants from as many countries and continents in general (so-called diversity) is considered a measure of solidity and authority for such a festival.

9 foreign kite flyers from Europe and Asia were invited to the festival: Germany, France, Italy, Poland, Turkey, Vietnam, and the United Arab Emirates. Ukraine was represented by professionals from the Ukrainian Kite Association, which was the main organizer of the event. Numerous events were held as part of the festival, and foreign guests visited many culturally important locations. Communication between foreigners and locals was not formalized.

The importance of such a festival for the local community is unconditional. Tourism is not just an organized journey, but also the expansion of worldview, the establishment of a sense of human presence in a diverse and complex world; in the context of globalization, its function of forming the ability to understand other cultures and acquire a communicative culture is important. Thus, the very fact of the presence of foreign participants at the festival at least politically confirms the positive globalization and integration processes in Ukraine. Foreign guests, who are members of narrow international professional communities, gain an idea of our country and spread their vision of our country around the world. Ideas of peace, tolerance, friendship, European integration intentions – all this was realized in the framework of the studied international festival.

The organization of a comprehensive tourism product for a small number of professionals (transfer, hotels, food, excursion program) is a necessary condition for the demand for tourism products within the festival. The very fact of the presence of prominent foreigners at the festival becomes the basis for the presence of many times more spectators who consume the same services – they need to get there, eat, spend the night, have fun and

more. That is, on the other hand, the budget of the festival is a certain investment that can pay off due to the arrival of spectators. And this is an opportunity to interact with different types of Industry 4.0.

Considering our example, the budget of the International Kite Festival includes:

- costs of inviting and accommodating foreign participants;
- costs for arranging the location of the festival (preparation of the field for kite flyings, stage, sound, light, decoration, etc.);
- costs of promotion (advertising and work with the media, development of logos, symbols, presentations, etc.);
- other related costs.

Such costs are necessary to create a basis for additional interest of tourists, and they can partly be spent for Industry 4.0 products and services. That forms additional interaction possible, with strong synergetic potential.

In the case of the international kite festival, the interest is a spectacle of foreign kites, the uniqueness of such an event for Ukraine. Thus, indirectly, the festival as a phenomenon and object of interest transfers its value to the cost of related services provided during the festival: food and beverages, souvenirs, additional entertainment, etc. [9]. The transfer of value, from an economic point of view, provides a basis for the formation of economic interest, which in turn stimulates the inflow of capital. Such capital can also be partly distributed within Industry 4.0 products. For example, the organizers of the festival, whose actions are primarily aimed at ensuring the thematic component of the festival, provide certain rights or simply create opportunities to sell certain goods and services at the festival location, which is a kind of outsourcing. At the same time, the community on the territory of which the festival is held must ensure its own socio-economic interest, set appropriate conditions for the organizers of the festival. This proves the sustainability of the event.

The researched experience of international kite festivals as a special form of event tourism allows summarizing certain features of festivals as tourist events (Table 2). Certain aspects and features prove the complexity of such phenomena as a tourist event, festival event, sustainable event, and the complexity of their preparation and conduct, active interaction with socio-economic processes in the territory.

Table 2: Features of the festival as a tourist event

	Aspect	Features
1	Economic	Equipment is mostly rented. That is, there is no investment in fixed assets of enterprises in favor of financing working capital
2	Legal	In the legislation of Ukraine there is no definition of the terms "event tourism", "festival". The authors' practical experience shows that it is impossible to protect the (copy)rights for the festival
3	Social	Residents of the territorial community are involved, their well-being increases
4	Geographical and environmental	"Strength" of geographical reference – whether it is possible to change the territorial community for a particular festival without losing audience. The festival is held on the territory of the community, on the objects of the nature reserve fund, etc. This requires an analysis of the impact of the event on the environment and the ability of a single area to withstand the environmental impact of the festival

Festivals should become a part of regional tourism strategies as main tourist events of a region. The tourism industry of prewar Ukraine was a field for the development of two types of strategies

by the governing elements. The tourism business develops its own organizational strategies, which include business plans, company development plans, corporate strategies and more. This type of strategy, although it involves the achievement of certain financial and economic indicators, is still focused on structural development: the company's territorial representation, promising tourism products, consumer markets and more. Authorities and governments are more focused on achieving socio-economic change at the regional and community levels. Therefore, their strategies have a clear economic direction and operate with economic categories, such as: employment, tax revenues, infrastructure, and so on. Thus, the development of economic strategies in the tourism industry is the prerogative of government institutions – public authorities and local governments, relevant institutions.

The main tourist events of the region are proposed to be events that are recurring, form the region or communities in it as a tourist destination(s), attract the largest number of tourists compared to other events and have the most significant impact on the regional economy. An essential feature is the recognition of such events as the main organizational and economic strategy for sustainable development of tourism in the region, which reproduces the balance of interests of the state, business, regions and communities in the future. The question of what needs promotion and branding in the organization of the main tourist event of the region – the event itself, the destination, the region as a whole [10] remains open for further scientific discussions.

We proposed an approach to the corporatization of regional tourism, which involves the creation of a regional tourism corporation as a subject of pooling the resources of territorial communities – members of such a corporation [2]. However, such a corporation needs further modeling as a business entity in Ukrainian realities. The Regional Tourism Corporation should conduct its business activities for the development of regional tourism (Fig. 2). Thus, there is a wide participation in the regional economic system, which in Ukraine is characterized by an imbalance of responsibility of state authorities and territorial communities. An important theoretical position on which the methodology is based is the understanding that the tourist and recreational resources of a particular area do not belong and cannot belong entirely to either the territorial community or the state.

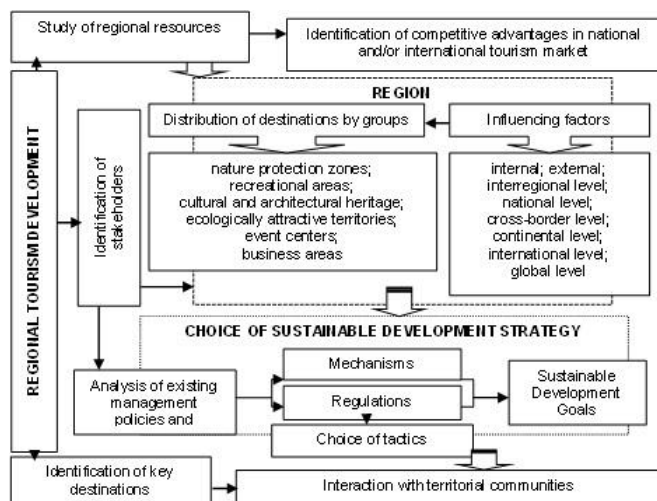


Fig. 2 Development mechanism of the Regional Tourism Corporation

Analysis of foreign, in particular, European experience proves that scientific and practical tools for sustainable development of regional tourism are synergies, feedback, practicality and a strong information and statistical base, formed by methods of quantitative and qualitative analysis. The current state of functioning of the regions in Ukraine and, in particular, the management of the tourism industry in them fully meets the parameters of European practices. In particular, the formation of sustainable tourist destinations can fundamentally begin with the organization of sustainable tourist events. From the standpoint of synergetics, any

tourist event is a system whose propensity for bifurcations is obvious. In this case, the bifurcations to which the leading element of such a system leads – the organizers of the event – may be aimed at diversification or specialization of such an event. Leading modern researchers point to the advantage of specializing in tourism-related events, according to their direct foreign participants, who are also tourists. If this is a first-time event, i.e. the product is just being launched on the market, there is a special need for an initial understanding of its system construction. In other words, the systemic issue of "diversify or specialize" must be addressed at the beginning of the creation of an event tourism product as the basis of a future sustainable tourist destination.

3. Conclusion

Thus, the role of tourism in the postwar reconstruction of Ukraine may become significant. The state, regions and stakeholders of the industry need to develop a plan for the post-war development of inbound and domestic tourism, including event tourism, in order to realize the potential that naturally arose from the current fascination with Ukraine and its people. Further research is possible in the direction of concretizing scientifically sound methods of restoring the tourism industry after the war.

The organization of an international festival is a very important, effective mechanism for intensifying tourism activities in local communities. This festival highlights important political and economic aspects of tourism. The presence of foreign guests at the festival, the dissemination of their experience, professional achievements should be considered at least an important political and economic event, as the participation of central and local authorities, business circles, and public in such an event is inevitable.

Thus, the development of event tourism through festival tourism, in particular, the organization of international kite festivals, should take into account the studied types of festivals to choose the most appropriate form for a particular territorial community. Festivals as a special type of tourist event are a powerful tool for the formation of tourist destinations in the region and communities and should be considered as a form of event tourism with appropriate resources.

Synergetic interaction between regional tourism and Industry 4.0 should be considered in modeling and can be managed by regional tourism corporation, with different festivals as main attractors within regions.

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