“Management of wellness and recreation in urban agglomerations”

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MANAGEMENT OF WELLNESS AND RECREATION IN URBAN AGGLOMERATIONS

Abstract

The wellness and recreation situation in its complexity does not significantly differ from other socio-economic problems of urban agglomerations in Ukraine and needs to be addressed in the context of the Sustainable Development Goals, especially in improving public well-being and health. The purpose of this article is to identify the relationship between health improvement, recreation and tourism, displayed in the management structure of the urban agglomeration, and the social, environmental and economic state of wellness and recreation. The relationship is determined by the index method/geometric mean of relevant relative indices (inclusion, experience economy, health improvement with rest, recovery function of leisure, wellness and recreation ecology) with the 2009–2018 dynamics by regions with the largest urban agglomerations of Ukraine. The analysis of management structures of the Dnipro, Kyiv, Odesa and Kharkiv executive bodies reveals special aspects in reflecting the wellness and recreation functions, including tourism and urban ecology. Based on the comparison of rating analyses, it is justified whether wellness and recreation reflected in the structure of urban agglomeration management meets its social, environmental and economic health. Comparison results for the relative indices of wellness and recreation in urban agglomerations and regions of Ukraine by economic (income level, directing additional funds for recreation), social (health, no impact of diseases on performance) or environmental (air pollution per person) factors, as well as altogether (comparison of integral indicators), are the basis for smoothing the situation with wellness and recreation in the country according to the inclusive sustainable development principle.

Keywords sustainable development, recreation, health, inclusion, governance structure

JEL Classification I38, R58, Q26

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INTRODUCTION

According to the Sustainable Development Goals (Sustainable Development Goals Knowledge Platform, 2019), businesses that are socially- and environmentally-friendly and respect the interests of future generations, including promoting health and reducing inequalities in the population while preserving and restoring the environment, are priority areas. Goal 3: Good health and well-being and Goal 8: Decent work and economic growth are in line with the wellness and recreation related activities of the recreation and health sectors (social aspect), where people rebuild their strength in the environment (environmental aspect) to work again with a good result (economic aspect).

Wellness and recreation are good for people working in big cities. In 2030 (Wahba & Xinyuan Lin, 2016), the total urban development will at least double its current status. In Ukraine, the total population is declining. In particular, as of the end of 2018, only three cities with more than 1 million inhabitants remained in Ukraine, namely Kyiv, Kharkiv and Odesa, while Dnipro and Donetsk lost this status (United Nations, 2019). Meanwhile, combining recreation and tourism makes it popular among the population, regardless of place of residence or work or other social factors.

Managing the processes of ensuring healthy living and working conditions for the population is one of the main tasks of social and economic policy. Therefore, recreation should be included in the national strategy and programs of urban and regional development. The Strategy for the Development of Tourism and Resorts of Ukraine (Cabinet of Ministers of Ukraine, 2017) provides for the step-by-step revitalization of health care facilities, but does not include measures to restore recreational areas, in particular, parks, beaches, houses and recreation facilities. It is also necessary to eliminate the contradictions between the legislative and programmatic priorities for the development of recreation facilities.

1. LITERATURE REVIEW

Wellness and recreation and tourism, particularly in urban areas, is a multidisciplinary subject, widely publicized in the late 20th century. Jansen-Verbeke (1992) views recreation and tourism as new urban development sites in comparison to transport or production activities. At the same time, local authorities are increasingly paying attention to the tourist and recreational potential of urban areas and, accordingly, are making adjustments to the city's master plans: the example of the Rotterdam waterfront and ports, the development of which has become one of the main tasks of its economic reconstruction. English and Bergstrom (1994) consider recreation as a tool for developing retail in small settlements, which ultimately has an overall economic effect at the regional level. Kim and Fesenmaier (1990) explore the effect of spatial structure on recreation: its deployment depends on the number of recreational sites located close to each other. Shevchenko, Pakhomov, and Petrushenko (2016) analyze recreation management based on agricultural and recreational land use. Janeczko, Wójcik, Kędziora, Janeczko, and Woźnicka (2019) investigate the sport aspect of recreation using the example of green zones in the Warsaw agglomeration: the largest recreational activity is recorded in the nearby forests; its increase depends on the constant monitoring and promotion of active lifestyle of the population.

Beel, M. Jones, and I. R. Jones (2016) outlined organizational and economic factors for the agglomeration development, in particular those related to their inclusive growth. Using the UK as an example, the authors consider agglomerations as a spatial basis for consolidating the country's economic and social development. Fang and Yu (2017) see urban agglomeration as a highly developed spatial form of integrated cities in which competition is transformed into collaboration aimed at the healthy and sustainable development of agglomeration. Wu, Ye, and Li (2019) provide an example of urban metropolitan development in China's economic environment, in particular by examining the impact of fiscal decentralization on city size.

An important feature of managing socio-economic processes is the inclusiveness (accessibility, prevalence, inclusion) of the object (in this study, wellness and recreation), which is influenced by decision makers. Kastenholz, Eusébio, and Figueiredo (2015) see tourism as an important component of a developed economy, which is, however, inaccessible to the general public. Lack of inclusive tourism is due not to only physical or financial indicators, but also to cultural and social aspects. When it comes to traditional social inclusivity, tourism can, on the contrary, be a factor in involving people with disabilities in economic processes. Münch and Ulrich (2011) explore accessible tourism, which is an important part of socio-economic inclusion in both public and private ownership. Okhrimenko and Bovsh (2019) analyze inclusive tourism in Ukraine. Michopoulou, Darcy, Ambrose, and Buhalis (2015) explore the multidisciplinary context of inclusive tourism to develop accessible tourism futures as a basis for enhancing competitiveness in the tourism and recreation sector.

In the context of hospitality research, Pine and Gilmore (1998) consider experience management as a particular type of economic service in HoReCa. Prentice, Witt, and Hamer (1998) analyze the need to consider experience as an important motivational factor for historical and cultural tourism. A. Sharma and S. Sharma (2019), through the example of India, discuss "hereditary" tour-

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ism, which is based on the experience of cultural heritage specific to each individual and every nation. Devadze, Prokopenko, and Zhuravka (2019) analyze the problems of tourism development in Georgia. Drawing on the experience economy, Aşan and Emeksiz (2018) study the behavior of outdoor recreation tourists in an urban environment in Turkey and find a strong correlation between the motives for outdoor recreation and the benefit structure of such recreation. Harmon (2018) critically analyzes the experience economy model, particularly in the context of leisure management. Lundberg (2018) develops theoretical propositions outlined in Harmon (2018).

Considering environmental factors is a traditional issue for the study of tourism and recreation. Cherchyk (2008) analyzes the perspectives of recreation management in Ukraine. Petrushenko and Shevchenko (2013) explore issues of managing environmental and economic conflicts, in particular in the context of allocating recreational natural resources. Monz, Pickering and Hadwen (2013) study the environmental impacts of strategic outdoor recreation, particularly in parks and wildlife areas. Telizhenko, Shevchenko and Mishenina (2016) analyze municipal waste within the framework of sustainable urban management. While studying coastal well-being factors, Kreitler, Papenfus, Byrd, and Labiosa (2013) prioritize coastal recreation and water quality in their interaction to create wider ecosystem-based management opportunities.

Therefore, the purpose of the study is to analyze the relationship between health care, recreation and tourism in the structure of urban agglomeration management and the state of recreation, which is determined by a comparative assessment of relevant socio-economic indicators for regions with the largest urban agglomerations in Ukraine.

2. DATA AND METHODOLOGY

The study uses a structural analysis method (del Mar Delgado-Serrano et al., 2016; Gallardo-Vázquez, & Sánchez-Hernández, 2014; Nematpour & Faraji, 2019) (Figure A1) to explore urban agglomeration management structures (data from the websites of the Dnipro City Council, n.d.; Official portal of Kyiv, n.d.; Official Site of City Odesa, n.d; The Official Website of the Kharkiv City, n.d.) by the following criteria: availability of departments that perform functions related to wellness and recreation; direct/indirect nature of the functional interrelationships between these departments; influence/subordination between these departments and their units.

Statistical analysis methods are also used: index method/geometric mean determination:

1) to find averages of relative indices (products on the right side of formula (2)) with 2009–2018 dynamics (data from the State Statistics Service of Ukraine, 2017, 2018, 2018a):

$$I_{in,\ldots,ec} = \left(\prod_{i=1}^{10} x_i \right)^{1/10}, \quad (1)$$

where x_i is the value of the *i*-th relative indicator (*i* is the order number of the year; Table B1) in calculating the relative indicators/indices $I_{in,\ldots,ec}$, and

2) to calculate the integral index of the socio-ecological-economic status of wellness and recreation (by the principle of composite indexing (Kuzubov & Shvez, 2016; Yang, 2018) and in a similar manner to the Human Development Index in the United Nations, 2019):

$$I_{wr} = (I_{in} \cdot I_{ex} \cdot I_{hl} \cdot I_{re} \cdot I_{ec})^{1/5}, \quad (2)$$

where I_{in} is the index of wellness and recreation inclusion (by analogy with the inclusion index when calculating Social Progress Index in Social Progress Imperative (n.d.); is determined by the self-assessed household income, %), I_{ex} is the index of wellness and recreation experience (determined by the self-assessed level of directing additional household funds for recreation, %), I_{hl} is the index of recreation due to rest (defined by self-assessed households' level of good health, %), I_{re} is the index of restorative function of recreation (defined by self-assessed households' level of no influence of diseases on daily working capacity, %), I_{wr} is the integral index/wellness and recreation index, %.

A rating method is used to compare urban agglomerations (Ukrainian cities with a population of one million or more: Kyiv, Odesa, Kharkiv, Dnipro and Donetsk in 2018) by these indicators.

3. RESULTS

Despite difficulties of displaying wellness and recreation in the national economic structure (formally, it does not exist as a standalone industry) and GDP (statistics are not maintained by the percentage of income that is caused by improved working capacity due to recovery) of Ukraine, global trends are encouraging an increased attention to this area. The focus is on well-being (where physical, mental and emotional health is inextricably linked to social and financial health) as a benchmark for balanced social and market inclusive development of wellness and recreation, especially in urban agglomerations where there is solvent a demand for recreation.

According to the purpose, the stages of the study are as follows:

- to analyze the management structures of urban agglomerations for displaying health, recreation and tourism in the functions of their departments;
- to conduct a comparative assessment of the social, ecological and economic state of wellness and recreation in the regions with the largest urban agglomerations;
- to analyze the relationship between the functionality of the departments and the state of wellness and recreation in Ukrainian urban agglomerations.

An analysis of the management structures of the executive bodies of Dnipro, Kyiv, Odesa and Kharkiv (Figure A1 of the Appendix) revealed special aspects of the wellness and recreation functions in these structures, including tourism and urban ecology. Table 1 lists the results of evaluating the availability of departments that are directly related to these functions. Odesa received the highest rating of +++; its management structure has the Department of Ecology and Development of Recreational Zones, Culture and Tourism Department, as well as some other subdivisions. When evaluating departments by the criteria of direct/indirect interrelations with wellness and recreation, their provisions and policy documents are considered (for example, the 2020–2022 Health of Kyiv Residents target program). Thus, the specificity of the Dnipro management structure is the combination of improvement of parks and recreation in one department; contact with the health department is not direct in this situation. Kyiv emphasizes tourism development; recreation is considered as one of its functions; and there is a direct contact with the health department.

Table 1. The result of an analysis of the management structures of urban agglomerations for displaying health, recreation and tourism in the functions of their departments, 2018

Source: Analyzed based on the official websites of Kyiv, Dnipro, Odessa, Kharkiv.

Agglomeration, region	Availability of recreation-related departments	Information value of the health department's website	Information value of the agglomeration's tourist website	R^*_{st}
Kyiv	++	+++	++	I
Dnipro and Dnipro region	++	+	+	III
Odesa and Odesa region	+++	++	++	II
Kharkiv and Kharkiv region	+	+	+	IV

Note: $^*R_{st}$ – management structures' overall rating.

Health department websites and urban agglomeration tourist sites were also explored: Kyiv has had the highest rating (a City Health Center provides a wide range of health services to the population); Odesa (http://www.odessatourism.org/ua) and Kyiv (http://visitkyiv.com.ua/) have the best tourist sites.

Table 2 (State Statistics Service of Ukraine, 2018a) and Tables 3 and B1 (State Statistics Service of Ukraine, 2017, 2018) show the dynamics of the economic, ecological and social state of wellness

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Table 2. Considering the environmental factor* by regions with the largest agglomerations in Ukraine, kg/person

Source: Calculated based on the State Statistics Service of Ukraine data (ukrstat.gov.ua).

Agglomeration and region	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Kyiv	100.1	10.3	11.8	11.6	11.1	10.9	9.2	11.8	15.5	9.9
Dnipro and Dnipro region	294.0	278.9	286.1	290.7	285.5	260.5	221.7	256.9	203.5	190.9
Donetsk and Donetsk region	337.5	309.7	346.3	346.0	333.1	241.4	214.3	230.7	185.9	188.9
Odesa and Odesa region	73.2	12.2	12.8	11.8	10.9	9.7	10.9	11.0	12.4	15.7
Kharkiv and Kharkiv region	95.9	55.0	63.5	72.0	76.8	55.0	19.6	37.0	16.7	16.7

Note: * Environmental factor means emissions of pollutants into the atmosphere from stationary sources of pollution per person.

and recreation in the cities with a million-plus population, which are the centers of urban agglomerations of Ukraine.

Particular attention was paid to the environmental factor (Table 2): among agglomerations whose territory is less polluted (Kyiv, Odesa and Kharkiv), Odesa has the highest index, more than 98% (100% is an ideal condition for comparative assessment; in order for the environmental component to be commensurate with the other components, the absolute values of the Table 2 indicators are converted to relative values at the bottom of Table B1).

Analysis of integral indicators in Table 3 allows comparing the state of wellness and recreation in urban agglomerations and regions of Ukraine by economic (income level; directing additional funds for recreation), social (health status; no influence of diseases on working capacity) or environmental (air pollution per person) factors, as well as a set of factors that allows the competent public authorities to balance the situation in accordance with the principle of inclusion of sustainable development.

Comparing the results of the application of the rating analysis method (Table 4), one can conclude that displaying wellness and recreation in the management structure of urban agglomeration corresponds to its social, ecological and economic status. It is also advisable to analyze the agglomeration ratings by individual relative indicators (Table 3), which will give an idea of the strengths and weaknesses of each major city and region as a whole in terms of developing wellness and recreation.

There are currently no political, economic and social institutions in Ukraine that would effectively coordinate the socio-economic sector, including wellness and recreation of urban agglomerations. It is necessary to transform existing extractive institutions into inclusive ones (Acemoglu & Robinson, 2012, pp. 69-85), which will become a reliable basis for sustainable development (Figure 1), since:

Table 3. Relative indicators of social, environmental and economic assessment of wellness and recreation

Source: Calculated based on the State Statistics Service of Ukraine data (ukrstat.gov.ua), 2018.

Agglomeration and region	I_{in}	R_{in}	I_{ex}	R_{ex}	I_{hl}	R_{hl}	I_{re}	R_{re}	I_{ec}	R_{ec}	R_{Σ}
Kyiv	69.46808	I*	68.87496	I	47.97021	II	98.82845	I	97.94192	II	I
Dnipro and Dnipro region	58.81418	IV	54.61972	III	47.36465	III	93.53311	IV	74.23347	V	IV
Donetsk and Donetsk region	49.04640	V	53.34824	IV	40.43997	IV	75.23412	V	72.40098	IV	V
Odesa and Odesa region	61.66931	III	55.96362	II	52.78716	I	95.26673	III	98.17224	I	II
Kharkiv and Kharkiv region	43.32192	II	51.5999	V	33.31828	V	97.60592	II	94.88386	III	III

Note: * Agglomeration and region rating ($R_{in,...ec}$ – according to $I_{in,...ec}$ indicators; R_{Σ} – overall rating).

Table 4. An integral indicator of social, environmental and economic assessment of wellness and recreation and the agglomeration rating, 2018

Source: Calculated based on the State Statistics Service of Ukraine data (ukrstat.gov.ua).

Agglomeration, region	I_{wr}	R_{wr}^{*}
Kyiv	74.01739	I
Dnipro and Dnipro region	63,79258	III
Donetsk and Donetsk region	56,51184	V
Odesa and Odesa region	70,19184	II
Kharkiv and Kharkiv region	58,57894	IV

Note: *Agglomeration and region rating R_{wr} according to an integral indicator of I_{wr}

Source: Developed by authors based on Acemoglu and Robinson (2012, pp. 69-85).

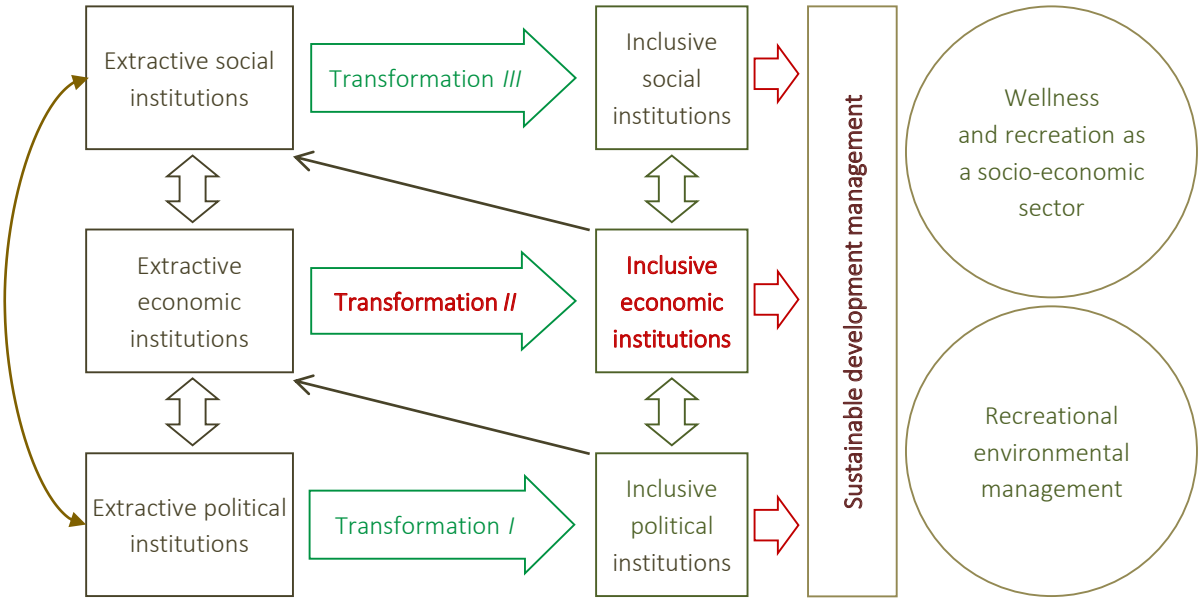

Figure 1. Transformation of extractive institutions into inclusive ones as a prerequisite for wellness and recreation development

- inclusive economic institutions (as opposed to extractive ones that are designed to collect income and benefits from one social group for the benefit of another) need and use the state as a tool and source for managing socio-economic processes;
- inclusive institutions create inclusive markets aimed at improving well-being, health and comfortable working conditions and leisure of the population.

4. DISCUSSION

Establishment of inclusive institutions in Ukraine will allow using the positive experience of effective management of urban agglomeration socio-economic development. For example, with the support from the World Bank and within the framework of MetroLab international events, Bangkok, Mumbai and Rio de Janeiro have adopted the best practices of New York, Paris, and Seoul (Ijjasz-Vasquez, Karp, & Sotomayor, 2017). UN 2016 Habitat III Conference on Housing and Sustainable Urban Development (Quito, Ecuador) identified urban governance and planning as one of the most important issues of sustainable urbanization for the next 20 years, which not only reduces threats but also seeks new benefits from urban sprawl (Wahba & Xinyuan Lin, 2016). However, the issues related to the man-made growth of agglomerations, as well as the contrast between the infrastructural security of the central part of cities and suburban areas, must first be ad-

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dressed. As part of urban recreation research, the positive effects of urbanization in the context of the 2030 Sustainable Development Goals are as follows:

- creating an environment where you can not only live and work normally, but also rest and improve your health;
- developing an infrastructure that combines comfortable transportation with innovative technical and building structures that allow expanding green areas and increasing biodiversity; and
- creating new jobs in the recreation and tourism sectors both in the center and within the whole territory of the urban agglomeration.

Given the recreational and other social needs of both future and current generations of urban population, the development of agglomerations in Ukraine can be achieved through the wide involvement of foreign investors, who will emerge subject to inclusive political mechanisms. The creation of civilized rules by the state and their enforcement will prevent corrupt practices and help improve the investment climate in the country. The further transformation of economic and social mechanisms towards inclusivity will stabilize the development of the market for socially oriented services, in particular, in the field of wellness and recreation.

CONCLUSION

Wellness and recreation management functions are distributed within the structure of executive bodies of urban agglomerations among the departments, which are directly responsible for recreation (including environmental protection, as in Odesa, or parks, as in Dnipro), tourism (in Kiev and Odesa), public health (within the health department, as in Kyiv), and urban improvement (parks, green recreation areas, sports fields, etc., as in Kharkiv and Dnipro), and among some other units. In each of the Ukrainian million-plus cities surveyed, such a structure has its own specific nature, which is explained by many factors, such as the availability of natural recreational resources, the overall environmental situation in the region, the geographical location of agglomeration, etc. However, the management factor is crucial for promoting and coordinating cooperation among departments, as well as for strengthening the work of their internal units; in particular, in the Health Department, which is underutilizing its potential to prevent disease or promote healthy lifestyle. The importance of the integrative role of recreational management is confirmed by a comparative assessment of the social, environmental and economic status of wellness and recreation: the agglomeration ratings on the integral index of wellness and recreation and on the structural characteristics of management in this field coincide. Equally important is the monitoring function of the implementation of organizational measures, such as the provision of recreational services in Kharkiv parks or holding mass recreation and sporting events in Kyiv. A common strategic guideline for all agglomerations, in line with the Sustainable Development Goals, is to transform extractive political, economic and social mechanisms into inclusive management levers and tools that can meet the broad public needs for recreation and wellness.

Further quantitative assessment of wellness and recreation in suburban metropolitan areas and its consideration when transforming urban metropolitan areas management structures are needed. It is also necessary to consider the domestic tourism factors, including seasonal trips to Odesa from other cities, which will show a more detailed picture of wellness and recreation in Ukraine.

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APPENDIX A

Source: Developed by authors based on the Dnipro City Council (n.d.), the Official portal of Kyiv (n.d.), the Official Site of the City of Odesa (n.d.), and the Official Website of the Kharkiv City Council (n.d.).

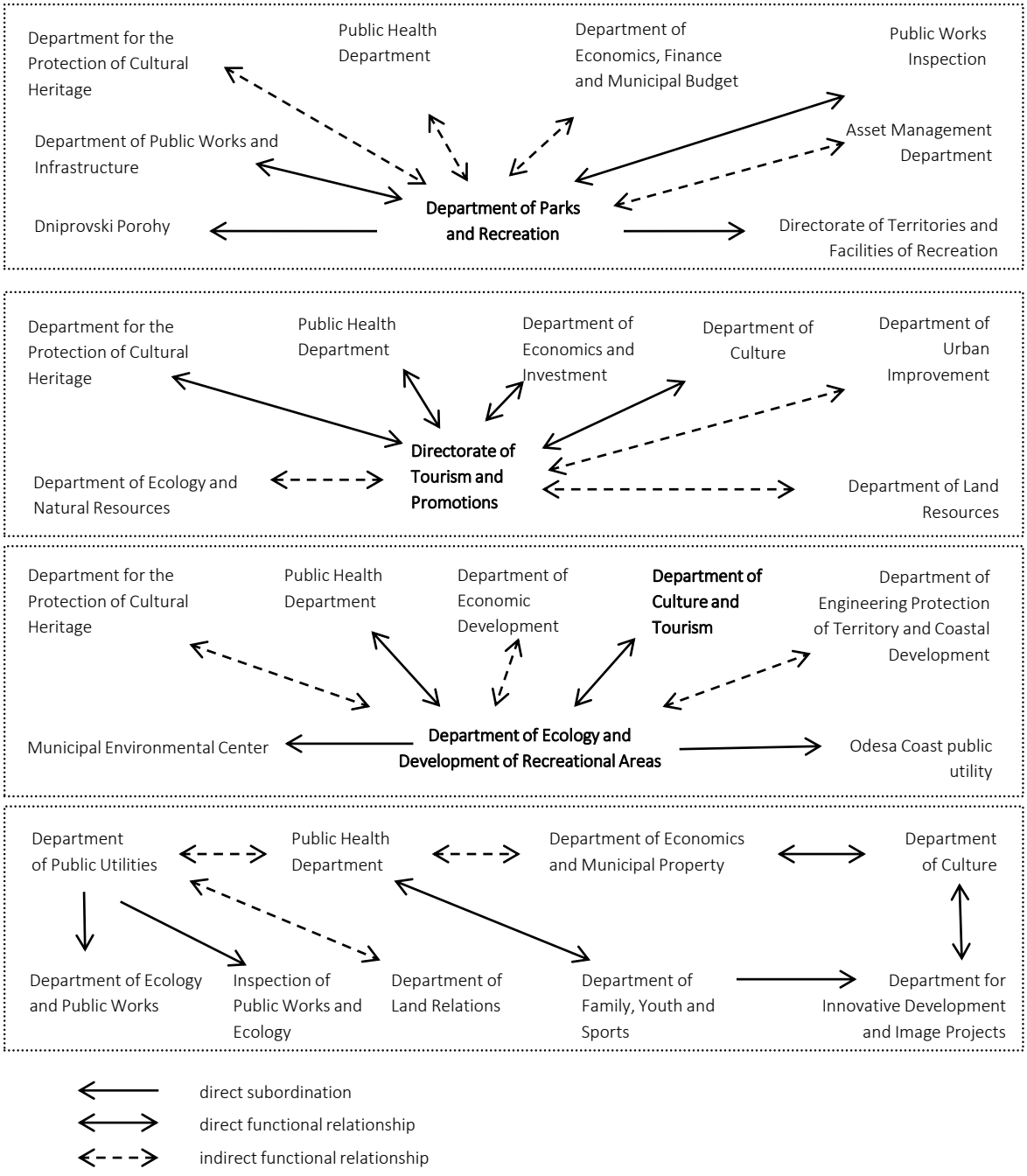

Figure A1. Wellness and recreation related departments within the municipal government structures of Dnipro, Kyiv, Odesa, and Kharkiv (from up to down)

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APPENDIX B

Table B1. Data for comparative assessment of wellness and recreation by regions with the largest urban agglomerations in Ukraine, %

Source: Compiled by the authors based on the State Statistics Service of Ukraine data (ukrstat.gov.ua).

Indicator	Region	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Year-around self-estimation of sufficient income	The city of Kyiv	70.6	74.8	78.3	73.3	69.5	66.8	57.6	64.8	71.6	69.6
	Dnipro	59.2	64.6	57.4	65.3	61.7	56.2	51.1	54.9	57.1	62.2
	Donetsk	41.6	53.3	46.3	48.2	54.4	39.4	45.0	46.1	67.3	54.4
	Odesa	60.6	62.2	55.7	56.5	68.0	64.4	59.8	60.0	66.8	63.9
	Kharkiv	27.5	35.1	43.8	47.8	53.0	44.0	48.7	47.0	48.4	44.6
Self-estimation of directing extra funds under significant increase in recreation income	The city of Kyiv	68.1	64.7	66.5	66.1	69.8	66.7	70.8	64.4	75.2	77.7
	Dnipro	49.4	49.5	53.4	57.9	57.6	56.6	53.6	53.0	55.6	60.7
	Donetsk	51.1	54.5	54.3	61.6	57.5	48.6	49.6	46.5	57.7	53.9
	Odesa	44.3	47.7	48.9	58.4	61.4	64.6	59.9	60.4	64.8	53.7
	Kharkiv	43.4	49.0	53.0	59.4	60.3	56.5	50.1	47.8	47.2	51.9
Self-assessment of good public health	The city of Kyiv	37.0	40.2	44.5	52.6	53.6	49.0	48.7	51.8	50.4	55.5
	The city of Kyiv	48.6	50.1	48.9	46.4	47.3	48.8	54.3	43.3	42.4	44.7
	Donetsk	30.1	36.6	37.7	43.3	38.7	41.5	42.8	45.6	42.7	48.6
	Odesa	51.0	48.4	48.6	52.8	57.2	51.1	52.7	55.1	56.1	55.7
	Kharkiv	46,9	28,5	26,1	32,9	31,1	38,9	33,5	32,2	33,8	33,3
Self-assessment of no disease effects on daily performance in the last 12 months	м. Київ	98.7	99.3	98.8	99.0	97.6	98.3	98.7	98.9	99.7	99.3
	The city of Kyiv	93.7	95.0	94.3	94.6	95.0	92.7	93.6	91.7	92.1	92.7
	Donetsk	81.1	81.7	81.8	84.0	83.1	74.6	74.0	45.1	75.4	81.8
	Odesa	93.8	95.0	96.6	94.4	97.5	95.7	97.6	96.0	93.1	93.1
	Kharkiv	97.9	98.2	98.6	98.8	98.7	98.3	91.3	98.2	98.2	98.1
Assessment of the environmental factor (atmospheric pollution from stationary sources per person)	The city of Kyiv	90.0	99.0	98.8	98.8	98.9	98.9	99.1	98.8	98.5	99.0
	Dnipro	70.6	72.1	71.4	70.9	71.5	74.0	77.8	74.3	79.7	80.9
	Donetsk	66.3	69.0	65.4	65.4	66.7	75.9	78.6	77.0	81.4	81.1
	Odesa	92.7	98.8	98.7	98.8	98.9	99.0	98.9	98.9	98.8	98.4
	Kharkiv	90.4	94.5	93.7	92.8	92.3	94.5	98.1	96.3	98.3	98.3