SMART GREEN EVENHANDED METROPOLIS ACTIONS AGAINST URBAN PLANNING IN EUROPEAN UNION

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ABSTRACT: Today development is related to globalization and transition to digital economy as well as to growing pressures on the environment and the society. As the proportion of the urban population is rapidly increasing, cities are becoming more and more the focus of these changes this paper. Most cities in the European Union (EU) are increasingly promoting smart green just actions, trying to learn from the experience of more advanced cities in this field. These actions obviously affect urban strategies and urban planning implementation. However, the rapid that these solutions alone will lead to a sustainable city future and urban planning will drastically shrink. Thus, there are some fundamental questions here: have the implemented smart green just interventions adequately addressed the urban planning objectives? How can this degree of correspondence be evaluated? In this context, the paper starts from: (a) A critical presentation of the concepts of smart, green, and just cities and the complementarities and interconnections among them (b) The green just urban actions (c) A discussion of the role of digitalisation, mainly driven by private investments, to the urban actions. On the basis of these three points, we discuss the interaction of the above specific actions with urban planning; then, we further specify this discussion in this research. The paper highlights the necessity to enhance synergies between the implementation of smart green just urban actions in the EU and urban planning; to this end appropriate adaptations of both the actions and urban planning are necessary; priority should be given to further supporting the existing tools and procedures ensuring synergies as well as promoting new ones.
KEY WORDS: urban planning, information technology, smart city, innovation adoption, geographic information systems

INTRODUCTION

Today development is related to globalization and transition to digital economy as well as to growing pressures on the environment and the society. As the proportion of the urban population is rapidly increasing, cities are becoming more and more the focus of these changes this paper. Most cities in the European Union (EU) are increasingly promoting smart green just actions, trying to learn from the experience of more advanced cities in this field. These actions obviously affect urban strategies and urban planning implementation. However, the rapid that these solutions alone will lead to a sustainable city future and urban planning will drastically shrink. Thus, there are some fundamental questions here: have the implemented smart green just interventions adequately addressed the urban planning objectives? How can this degree of correspondence be evaluated? In this context, the paper starts from: (a) A critical presentation of the concepts of smart, green, and just cities and the complementarities and interconnections among them (b) The green just urban actions (c) A discussion of the role of digitalisation, mainly driven by private investments, to the urban actions. On the basis of these three points, we discuss the interaction of the above specific actions with urban planning; then, we further specify this discussion in this research. The paper highlights the necessity to enhance synergies between the implementation of smart green just urban actions in the EU and urban planning; to this end appropriate adaptations of both the actions and urban planning are necessary; priority should be given to further supporting the existing tools and procedures ensuring synergies as well as promoting new ones. Today's cities are increasingly affected by globalisation and the transition to the digital economy, which are linked to growing pressures on the environment in relation to climate change as well as increase of economic and social inequalities. Cities are the focus of these general changes to the extent that the proportion of the population living in urban areas is constantly rising [1]. As we have already noted, the main global developments are increasingly linked to cities. As our planet is becoming more and more "urban", cities are the focus of interest of local, regional, and national authorities. A big share of the urban population increase is on the one hand due to migration from rural areas to cities in the hope of a better standard of living: finding a job, better education, and care opportunities, accessibility to public services, etc.; on the other hand, migration from poor countries or countries with social and military conflicts to

developed countries. According to UN estimations, the world's population will continue to grow in the coming years and is expected to reach around 9.7 billion in 2050. In 2018, 55% of the world's population lived in cities, while by 2050 this figure will have risen to 68%. The share of the urban population in total is even higher in the European Union (EU). This proportion is projected to rise to just over 80 % by 2050. The main current challenges of cities are related: (a) both to globalization and the transition to the digital economy, (b) to increasing pressures on the physical environment: environmental degradation, air, land, and water pollution etc. (also linked to climate change) as well as the built environment: land use, buildings, urban form and, (c) to widened social inequalities and social exclusion (indicatively: increasing poverty), migration and unemployment. [1-5]

LITERATURE REVIEW

To confront the above new challenges, we need to formulate new strategies and measures for the cities. The analysis of the challenges as well as the elaboration of strategies relates necessarily to new concepts and terminologies. In this frame, we should understand the creation of the concepts of smart city, green city and just city. In this paper we assume that smart city, green city and just city concepts are not equated but interrelated to a considerable degree; more precisely, while smart city integrates green and just dimensions, green city integrates smart and just ones and, finally, just city integrates smart and green dimensions. Starting from the smart city, the term appeared in the late 20th century and was primarily associated with the application of user-friendly information and communication technologies in cities. As we will see next, the concept has been extended to refer to a more general "smart development" of cities; However, there is no commonly accepted definition of a smart city. Following the same logic of holistic approach, which wants to emphasize that everything in the economy and society interacts with the environment, United Nations (among other international bodies) has put under the umbrella of "sustainable development goals" all economy / development, environment, and society goals. According to the above, economy goals, environment goals and society goals, belonging to a total (seen globally) are interconnected but at the same time complementary, more precisely they have common areas of interest with each other. It is reasonable that the EU approach to sustainable cities follows a similar "tripartite" division: smart city, sustainable / green city, inclusive / just city; again, the different aspects belonging to a whole, are interconnected but at the same time complementary; to be more specific they have common areas of interest with each other. Furthermore, a similar approach is followed by scientists and stakeholders. It refers to all territorial levels: local, national (all countries) and international. Here, we should emphasize at first that the sustainability set of concepts is complex and holistic since de facto the changes in the economy, the society and the environment are more and more interrelated. Second, while it is expected that scientists and policy makers involved in individual areas of sustainable development (as for example, the physical environment) will pay more attention to these areas, we should keep in mind that scientific analyses and policy proposals should consider the holistic nature of sustainability or of sustainable city. These areas include several respective sub-areas. In this ranking, indicatively, SMART ECONOMY (Competitiveness) includes the following sub-actions: Innovative spirit, Entrepreneurship, Economic image & trademarks, Productivity, Flexibility of labour market, International embeddedness, Ability to transform. In the same ranking again, SMART ENVIRONMENT (Natural resources) includes: Attractively of natural conditions, Pollution, Environmental protection, Sustainable resource Management. SMART PEOPLE (Social and Human Capital) include Level of qualification, Affinity to lifelong learning, Social and ethnic plurality, Flexibility, Creativity, Cosmopolitanism / Open-mindedness, Participation in public life. SMART LIVING (Quality of life) includes Cultural facilities, Health conditions, Individual safety, Housing quality, Education facilities, Touristic attractively, Social cohesion. Let us see now which specific Smart city actions have green and just effects. In the field of Mobility, the objectives are to improve the accessibility, economy and security of transport systems, the shift of citizens to integrated transport systems that are environmentally friendly, the reduction of "harmful" movements by promoting compact urban development and rebuilding of transport policies. A more specific smart action in the transport sector is the use of "intelligent" systems of control, monitoring and managing of movements. The green

effects of this smart intervention include reducing energy consumption for travel, improving air quality due to reduced carbon dioxide emissions, and reducing noise pollution. Other smart actions with green effects are the Intelligent Parking Management System and applications for "car sharing". Improving air quality can be achieved by using special devices for environmental measurements which are displayed in real time and allow benchmarking and identification of trends that could lead to preventive and remedial measures. In the field of waste, their smart management includes, in addition to the modernization and creation of treatment facilities before their final disposal, various other intelligent management applications using ICT (Information and Communication Technologies) tools, such as the use of sensors to inform the collection centre in real time on the completeness of the bins. The aim is to optimize the paths and frequency of the itineraries and the immediacy of collection. The utilization of technology and especially the electronic charting of the functional characteristics of the water supply network, the development of specific management software and the integration of sensors and automation, form a powerful and innovative tool for the management of the water supply networks, achieving higher quality water supply. In the field of "governance", which includes the participation of citizens, changes in the procedures of administration - coordination and planning are promoted through the encouragement of public participation, cooperation between competent authorities and "opening" in business. A particularly important goal is to make public digital data widely accessible. A first attempt to develop a comprehensive system of indicators for measuring the progress towards urban sustainability, i.e., assessment of whether cities turn green, was the European Commission program on which a respective report was based. In recent years, many efforts have been made to develop key performance indicators for smart green just cities, to be used in the formation of respective universal rating / ranking indexes (e.g., international standardization organizations, research teams / researchers, applications, programs funded by European Union, market analysis organizations, etc.). Here are some of the most important of these efforts. See in more detail in. The standard ISO 37120: 2014 "Indicators for city services and quality of life", which was revised in 2018, concerns the measurement of service efficiency and quality of life, sets seventeen key indicators for evaluating the performance of cities: economy, education, energy, environment, finance, fire and emergency response, governance, health, leisure, security, housing, solid waste, telecommunications and innovation, transport, town planning, sewage, water supply and sanitation. For the most effective implementation and evaluation of any smart green just urban actions, in addition to the creation of widely accepted relevant criteria and evaluation indicators, relevant scientific databases should be created and constantly expanded. There are two categories of such databases: (a) for cities and (b) for smart and / or green urban actions. (a) From a database of cities, data can be obtained that make it possible to compare cities, both nationally and globally, as well as to assess the progress made within them over time. A first attempt to create a database is the "Urban Audit" which is implemented with the support of the European Commission and concerns the quality of life in many European cities. At the same time, Eurostat produces other urban data in addition to those of Urban Audit.. (b) Several databases for smart and green actions in EU cities have already been set up [1-10].

RESEARCH METHODOLOGY

In Overall quantitative analyses of urban green nature have initially emerged in Europe; In 2009, a Green City Index (GCI) was calculated for 30 European major cities. The project proceeded with the calculation of the GCI for many large cities of the other continents. According to the ranking obtained from the evaluation of European cities by the EIU, in the first places for their overall performance as green cities were cities of Northern Europe, while low performance was recorded mainly in Balkan cities. Indicatively, in terms of cities with a high level of "smart" actions, based on the results of the VUT survey for 2014, Luxembourg ranked first in smart economy policies, while, respectively, Sweden's Eskilstuna in the field of society [1-7].

An overview of most European smart green just city ratings shows that: (a) Regarding the countries where the cities evaluated are located, the Nordic countries and the countries of Central and Western Europe are ahead, followed by

countries of Southern Europe, while the countries of Eastern Europe have lower performance (b) As for the cities themselves, despite the differences that appear according to the field of action, the same cities appear consistently in high-ranking positions: Copenhagen, Stockholm, Oslo, Vienna, Amsterdam, and a few others. We have pointed out that confused conceptualizations of smart green just cities and actions limit considerably the reliability and the usefulness of the evaluations. This was demonstrated to a large extent in this section. As we have seen, all the above rankings and ratings of smart cities, green cities and just cities and actions taken separately include almost the same range of issues, with different grouping of thematic areas depending on the policy priorities set by each evaluation method [15-20].

The already reduced reliability of criteria and indicators is further decreased by weaknesses regarding the technical structuring of the indicators used; weaknesses regarding the data used should be considered, as well. All the above reduce reliability of the quantitative models of evaluation. The smart green just city actions are based on a conceptual framework which includes initially three components: smart, green, just. This framework becomes even more complex from leading to a holistic framework including digitalization / smart green just. The use of this framework often in a fragmentary and non-balanced way has created confusion and has drastically limited the usefulness of the evaluations of the actions for the urban planning which should be comprehensive. The same applies when evaluation criteria and indicators are used on the basis of different definitions of smart green just city. Of course, differences in the technical structuring of indicators decrease even more the comparability of the different respective. Urban planning needs to be more flexible and adaptable. It should specifically adapt to include potential smart green just city actions; priority should be given to those which may have more immediate massive effects on improving urban sustainability; thus, urban plans should incorporate the most effective, the most feasible, in this sense, actions. More: the evaluations of the effectiveness of the smart green just actions (including digital innovation) need to focus not only on the narrow consequences of the actions, but also on the impact they have on the whole economy, society, and the environment of the city as well as on its wider region. Thus, each comprehensive urban plan should include a separate analysis and proposal module for the use of smart green just city actions. The implementation of this guideline depends obviously on the hierarchy of urban plans and the specific content of each by level applicable in each specific country. There are already several appropriate tools (as for example URBACT) and procedures intended to ensure the necessary synergies at different territorial levels. However, there is a need, for the immediate future and beyond, for more powerful tools and better procedures. These should be primarily more effective [15-20].

CONCLUSION

The smart green just city actions are based on a conceptual framework which includes initially three components: smart, green, just. This framework becomes even more complex from leading to a holistic framework including digitalization / smart green just. The use of this framework often in a fragmentary and non-balanced way has created confusion and has drastically limited the usefulness of the evaluations of the actions for the urban planning which should be comprehensive. The same applies when evaluation criteria and indicators are used on the basis of different definitions of smart green just city. Of course, differences in the technical structuring of indicators decrease even more the comparability of the different respective. Urban planning needs to be more flexible and adaptable. It should specifically adapt to include potential smart green just city actions; priority should be given to those which may have more immediate massive effects on improving urban sustainability; thus, urban plans should incorporate the most effective, the most feasible, in this sense, actions. More: the evaluations of the effectiveness of the smart green just actions (including digital innovation) need to focus not only on the narrow consequences of the actions, but also on the impact they have on the whole economy, society, and the environment of the city as well as on its wider region. Thus, each comprehensive urban plan should include a separate analysis and proposal module for the use of smart green just city actions. The implementation of this guideline depends obviously on the hierarchy of urban plans and the specific content of each by level applicable in each specific country. There are already several appropriate tools

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