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PRIORITIES OF CANADA URBAN DEVELOPMENT: FROM SUSTAINABLE TO SMART CITIES

PRIORYTETY MIEJSKIEGO ROZWOJU W KANADZIE: OD ZRÓWNOWAŻONYCH DO MIAST INTELIGENTNYCH

ПРИОРИТЕТЫ ГОРОДСКОГО РАЗВИТИЯ КАНАДЫ: ОТ УСТОЙЧИВЫХ ДО УМНЫХ ГОРОДОВ

Abstract


The article deals with the priorities and dynamics of the Canada urban development and describes the sustainable cities evolution. The purpose of the work is to compare the main achievements in the implementation of sustainable cities in Canada and to outline the problems and prospects of the formation of smart cities. To date smart cities is also an innovative system, where technologies are used to improve the relationship between citizens and their governments and provide social innovation and improve quality of life. A sustainable and smart cities is a place where citizens work with local authorities to improve service delivery, develop community initiatives and create solutions to improve quality of life. In this context, it is important to analyze the current policy of sustainable urban development in Canada in order to identify problem points and formulate recommendations for further development.

Keywords: *urban development, sustainable city, smart city, metropolises, Canada, innovation model*

Streszczenie

Artykuł dotyczy priorytetów i dynamiki kanadyjskiego rozwoju miast oraz opisuje ewolucję miast zrównoważonych. Celem pracy jest porównanie głównych osiągnięć w zakresie wdrażania miast zrównoważonych w Kanadzie oraz przedstawienie problemów i perspektyw tworzenia miast inteligentnych. Do tej pory inteligentne miasta to także innowacyjny system, w którym technologie są wykorzystywane do poprawy relacji między obywatelami a ich rządami oraz zapewnienia innowacji społecznych i poprawy jakości życia. Zrównoważone i inteligentne miasta to miejsce, w którym obywatele współpracują z władzami lokalnymi w celu poprawy świadczenia usług, rozwoju inicjatyw społecznych i tworzenia rozwiązań poprawiających jakość życia. W tym kontekście ważne jest przeanalizowanie

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obecnej polityki zrównoważonego rozwoju miast w Kanadzie aby zidentyfikować punkty problemowe i sformułować zalecenia dotyczące dalszego rozwoju.

Słowa kluczowe: *rozwój miejski, zrównoważone miasto, inteligentne miasto, metropolie, Kanada, model innowacji*

Аннотация

В статье рассматриваются приоритеты и динамика развития городов Канады, описывается устойчивая эволюция городов. Целью работы является сравнение основных достижений в осуществлении устойчивых городов в Канаде и очертить проблемы и перспективы формирования умных городов. На сегодняшний день умные города также являются инновационной системой, где технологии используются для улучшения отношений между гражданами и их правительствами, а также для обеспечения социальных инноваций и улучшения качества жизни. Устойчивые и умные города - это место, где граждане работают с местными властями, чтобы улучшить оказание услуг, развить общественные инициативы и создать решения для улучшения качества жизни. В этом контексте важно проанализировать текущую политику устойчивого городского развития в Канаде, чтобы определить проблемные моменты и сформулировать рекомендации для дальнейшего развития.

Ключевые слова: *городское развитие, устойчивый город, умный город, мегаполисы, Канада, инновационная модель*

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Statement of the problem in general outlook and its connection with important scientific and practical tasks.

In recent decades the role and significance of cities in the modern structure of national economic systems has been steadily increasing. Today cities around the world are the key centers for the development of social, economic, environmental and political spheres. On this issue, Canada is no exception, as evidenced by the fact that the seven largest metropolises of the country produce almost 45% of the country's total GDP (Bradford 2002, p. 6]. Accordingly, the is-

sue of urban development, especially ensuring their sustainability and the possibility of evolution as a means of confronting contemporary globalization challenges, becomes a key issue in both the formulation of regional policy at the national level and local development strategies. In particular, the key elements in shaping these policies are the inclusion of such issues as finding a global niche, managing energy costs and demographic changes.

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Analysis of latest research where the solution of the problem was initiated.

The research of the priorities of Canada urban development was carried out by such scientists as N. Bradford (Bradford N., 2002), C. Doberstein (Doberstein C., 2011), N. Gaussier, C. Lacour, S. Puissant (Gaussier N. et al., 2003), D. Hiebert (Hiebert D., 2017), M. Orlando (Orlando

M. et al., 2005), Z. Spicer (Z. Spicer, 2015) and others.

However, in the publications of scientists there is still open question about determining the priorities of Canada urban development in the context of sustainable and smart cities growth.

Aims of paper. Methods.

The purpose of the study is to determine the priorities of Canada urban development and provide analysis of sustainable and smart cities evolution.

In the research, the methods commonly used in economic science are applied: theoretical, comparative and retrospective analysis – to reveal the theoretical foundations of the development of the sustainable

cities taking into account the prospects for the smart cities development; generalization – to improve methodological approaches to the analysis of the Canada urban development in the context of cities evolution – from sustainability to smartness.

Exposition of main material of research with complete substantiation of obtained scientific results. Discussion.


Taking into account the importance of cities for the national economy and the proportion of Canadian citizens living and working in cities, the federal government is interested in making the cities successful. Many modern political courses include the urban aspect (National Urban Strategy Report, p. 9). The federal government has direct authority that affect the functioning of cities, including immigration, taxation and trade. However, most of the other authorities are under the jurisdiction of the provinces, many of which are delegated to municipalities.

The indicated challenges and the actual importance of cities in the structure of the national economy are not a fundamentally new issue. Over the past decades this issue has been observed by various scholars, politicians and specialists in specific areas. The definition of specific trends and potential drivers of urban development is aimed

to create a basis for the formation of a unified policy of sustainable cities development and their transformation (in some cases, the creation of entirely new settlements) in smart. There are three groups of factors – both internal and external – that will have a decisive impact on the development of Canadian cities in the short term:

1) Growth of metropolises – the trend towards urbanization will continue to intensifying. There will be a process of «polytonization of metropolises» - the concentration and coordination of economic, political and mass cultural events around the world in large urban regions (Gaussier N., Lacour C., Puissant S., 2003, p. 255). This will create a basis for a new economic system in which there will be dependence on more intensive geographical concentration of economic activity which means that productivity is largely determined by cities and is shaped by their inhabitants and the organizations for which they work.

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2) Rising energy costs and the impact of infrastructure on the efficiency of cities urbanization – the growth of world demand for hydrocarbons, combined with a decrease in the availability of readily available fossil fuels, will increase the cost of energy. In turn, this will contribute to a qualitative restructuring of the economic system which will mean a reduction in energy consumption in the short term and a departure from carbon production and consumption. As the infrastructure has a durable effect (often lasting up to half a century) it is important to ensure a reasonable investment in any new public or private infrastructure and modernization or rebuilding of existing infrastructure (McKinsey and Company, 2009).

3) Demographic changes, immigration and social cohesion – in the coming years, in the absence of any political interference, Canada will face the decline and aging of the population as well as the slowdown in labor force growth. Immigration is currently the main engine for population growth and Statistical Office of Canada predicts that it will be the only source of population growth. Moreover, if immigration continues in the coming years, this process will contribute to increasing the diversity of large cities in Canada (Hiebert D., 2015).

Proceeding from the specifics of the self-government system Canada currently lacks a federal policy of urban development, due to the ownership of a wide range of rights and powers in the provinces which are responsible for the management of urban development. Policies related to urban development are implemented through national sectoral policies and through sub-national policies. For the exchange of information and ideas, federal, provincial and territorial conferences and meetings of the first ministers are held regularly, which enables them to find common goals and general

policies. Much of the work in intergovernmental relations is taking place in a growing number of meetings of federal, provincial and territorial ministers responsible for developing cooperation in specific policy areas from the environment to social policy (OECD, 2015).

The federal government's sectors that affect urban development including infrastructure, monetary, economic and housing policy (UNHABITAT, 2015). Canada's infrastructure indirectly promotes urban development performing its responsibilities as a major funding partner cooperating with provinces, territories, municipalities, the private sector and non-profit organizations and other federal agencies (OECD, 2015).

Also, there are operating six regional development agencies (Regional Development Agencies, RDAs): the Western Economic Diversification Canada (WD); the Atlantic Canada Opportunities Agency (ACOA); the Canada Economic Development Agency for the Regions of Quebec (CED); the Federal Economic Development Agency for Southern Ontario (FedDev Ontario); the Canadian Northern Economic Development Agency (CanNor); the Federal Economic Development Initiative for Northern Ontario (FedNor).

These structures are currently grouped and placed under the leadership of the federal structure of Innovation Science Economic Development (ISED). RDAs promote urban development by taking the lead in regional economic development. Through their mandates, RDAs contribute to the economic development of cities by supporting the innovative ecosystem of cities and attracting FDI. Also, RDAs play an important role in collecting local economic divestiture and advocacy policies to integrate a regional perspective into national policy formulation.

Since 1995, the federal government has approved urban development agreements with some cities in the western provinces. These agreements were aimed at addressing specific issues for each city by improving coordination between federal, provincial and municipal authorities (OECD, 2010). However, all urban development agreements were suspended until 2010 (Doberstein C., 2011).

An interesting and unique initiative in Canada was the Urban Aboriginal Strategy [Urban Aboriginal Strategy], which was developed in 1997 to respond to the needs of indigenous people living in key urban centers. Owing to the Urban Aboriginal Strategy, the Canadian government seeks to increase indigenous peoples' participation in the economy.

In 2001, the City Working Group at the headquarters of the Prime Minister recommended the development of a national «Urban Strategy», a long-term source of funding for affordable housing, transit and infrastructure and the ministries of urbanization. Despite the fact that the proposal of the Department of Urbanization was rejected, the recommendations of the Working Group influenced on further policy (Spicer Z., 2015). In December 2003, the Prime Minister created the City Secretariat as part of the Secret Council Office and provided the Secretariat with special responsibility for the city. In July 2004, the City Secretariat was merged with another federal structure – Infrastructure Canada (Infrastructure Canada). In addition, the government created an external advisory committee on the issues of cities and communities. In 2004/2005 new proposals for cities and communities were created. The tasks were to provide predictable long-term funding for communities of different sizes, provide a more effective infrastructure support and social priority program, give com-

munities a stronger voice and improve co-operation between federal, provincial, territorial and municipal authorities. To achieve these goals, municipalities were given additional resources by increasing their share of taxes and increasing their transfers. In addition, the government agreed to formally consult with the municipal representatives before each federal budget approval (OECD, 2017, p. 25).

In order to modify the policy of sustainable urban development many studies and prepared analytical reports have been conducted. Thus, the federal agency Policy Horizons Canada prepared a scientific report «canada@150» (Policy Horizons Canada, 2010) which included recommendations for the further development of policies on sustainable urban development. According to the report key instruments are:

1) Innovation Fund for Urbanization. In order to improve economic innovation Canada must rely on the natural benefits of large cities. First, cities have deep resource markets that reduce the time and effort spent on the purchase of specialized labor and equipment. Secondly, cities provide positive knowledge that increases the productivity of skilled labor force (Orlando M., Verba M., 2005, p. 35-36). Cities that are truly successful in developing their natural benefits in innovation are those who have invested in key infrastructure, including an efficient transport system, widely available Internet connectivity, higher education institutions and multinational organizations.

2) Local Candidate Program (Immigrate as a provincial nominee) – under this program, the federal government will allow municipalities to nominate a certain number of migrants for immigration to Canada; the main criterion will be the fact that prospective immigrants will be necessary to address the needs of the local labor market.

The number that each municipality would be allowed to nominate will depend on their population (Immigrate as a provincial nominee).

3) Criteria for sustainable development to finance local budgets – the federal government will spend nearly 9 billion dollars over the next seven years on infrastructure for municipalities through the Building Canada Fund and another 2 billion dollars a year for the transfer of gas taxes. The federal government has indicated that funding will be spent, for example, on environmentally friendly infrastructure such as public transport. However, only a small part of all costs of built infrastructure – from local roads to office buildings – are provided by the federal government; the rest by private parties or those at other government levels. While the federal government can fund projects that can conform the criteria supporting cities that maintain stability, the vast majority of other capital investment in the emerging environment does not have such criteria and can counteract the goals of sustainable growth.

4) Tax incentives to promote a sustainable and private sector of urban development – suburban areas have an economic advantage over urban areas because of the price of commercial and residential space as well as green spaces. But the cost differentiation is partly existing due to external impacts associated with the development of suburban areas such as pollution costs associated with less densely populated areas, inaccessible public transport or public benefit costs (water, sewage, garbage and social services). In the latter case, costs are borne by the municipalities and distributed evenly through the municipal tax base.

This creates false incentives for the creation or placement of businesses and houses in suburban areas, since the cost of the owner does not take into account other expenses associated with servicing these buildings. In municipalities that have an assessment of the market value tax such an approach can also create unjustified inequalities between urban and suburban or rural taxpayers (Hemson Consulting Ltd., 2009, p. 23), with urban residents who paying more taxes but receiving a lower level of service. To overcome such a market failure, the federal government could use its tax authority for recalibration of urban and suburban land markets in order to better reflection on their real social and environmental costs and encouraging more sustainable urban development.

5) Improved funding for municipal governments – municipalities are generally responsible for services within their competence such as construction and operation of roads, distribution and treatment of water and sewage, solid household waste management and recreation facilities. In the recent past, local jurisdictions have become more important in infrastructure provision, as municipalities have seen that their contribution to infrastructure development has actually increased from 35 to 52 percent of total investment in infrastructure while the share of federal and provincial spending has fallen by nine and eight percent respectively (TD Economic Paper, 2004).

The use of any of these tools can be done independently of government and other interested parties. However, efficiency will be significantly higher if implementation takes place in the context of new forms of city management.

Conclusions.

Thus, the role of cities will continue to grow in the coming years. Cities will increasingly become centers of global economic, social and cultural activity. Competition for new investments and immigrants among cities depends primarily on their viability and cost effectiveness.

Major Canadian cities have already made some progress on some of these issues. However, the federal government could play a leading role in helping them to do more. In this context, traditional approaches to urban policy implementation are inadequate. That is why new joint processes are needed.

It is precisely ensuring sustainable urban development as a key concept for sustainable development of the state in general. Re-orienting the economy to intellectualism creates the preconditions for transforming cities into smart ones. This ongoing development and evolution of existing agglomerations, in our opinion, is the best option

for development. Based on the specifics of the geographical location and historical preconditions for the settlement of Canadian territory, the practice of setting up new smart urban settlements will not have a practical effect for Canada.

The specificity of regulatory and legal control and the distribution of powers between authorities of different levels in Canada, in fact, implies strengthening the role of federal structures. It is the federal structures within its powers, of course avoiding the mechanisms for transferring powers to local authorities, should act as policy coordinators for sustainable urban development.

Consequently, the current issue is the development and adoption of a federal strategy for the sustainable development of cities and urban settlements, as well as a plan of action to stimulate urban evolutionary processes as part of the functioning of smart cities as the basic elements of an innovative economy.

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