



Smart-Oriented Partnership Business and Local Authority

Iryna Kalenyuk¹, Liudmyla Tsymbal^{2*}, Denis Djakons³, Iryna Uninets⁴, Olga Osypova⁵

¹ Research Institute of Economic Development, Kyiv National Economic University Named after Vadym Hetman, Kyiv 03057, Ukraine

² Department of International Economy, Kyiv National Economic University Named after Vadym Hetman, Kyiv 03057, Ukraine

³ RNU of Applied Sciences, Riga LV-1019, Latvia

⁴ Department of Economics, Kyiv National Economic University Named after Vadym Hetman, Kyiv 03057, Ukraine

⁵ Department of Artificial Intelligence, Modelling and Statistics, Kyiv National Economic University Named after Vadym Hetman, Kyiv 03057, Ukraine

Corresponding Author Email: l.tsymbal@ukr.net

Copyright: ©2026 The authors. This article is published by IETA and is licensed under the CC BY 4.0 license (<http://creativecommons.org/licenses/by/4.0/>).

<https://doi.org/10.18280/ijstdp.210834>

ABSTRACT

Received: 19 March 2026

Revised: 18 June 2026

Accepted: 25 June 2026

Available online: 31 August 2026

Keywords:

smart-oriented partnership, economic development, business–local authority partnership, local authorities, business–government relations, public–private cooperation, smart development, local development, Ukraine

The development of smart cities requires effective cooperation between business and local authorities, particularly in the context of Ukraine's economic recovery and ongoing military aggression. However, the scale, forms, and barriers to such cooperation remain insufficiently explored from the perspectives of both key stakeholders. The study aims to assess the current state of business–local authority cooperation in addressing urban development challenges and to identify the main factors limiting its development in Ukraine. The empirical basis comprises two sociological surveys conducted among business representatives and local government representatives across Ukraine, excluding temporarily occupied territories. Quantitative data were collected through self-administered questionnaires and supplemented by in-depth interviews, while descriptive statistics and comparative analysis were used to identify common patterns and differences in stakeholder perceptions. The results indicate that cooperation occurs through joint business–local authority projects, social initiatives, and institutional arrangements such as councils, hubs, and incubators. At the same time, the intensity and perceived effectiveness of cooperation remain limited. Respondents identify insufficient financial resources, low levels of business trust in local authorities, lack of incentives for cooperation, inflexible management practices, corruption and lack of transparency, and limited business readiness for long-term collaboration as major barriers. The findings demonstrate that strengthening systematic and mutually beneficial cooperation between business and local authorities is an important condition for advancing smart urban development and supporting Ukraine's economic recovery.

1. INTRODUCTION

Interaction between business and government, in particular with local governments, is an important factor in economic and social development. This is a synergistic process in which, on the one hand, the power and development of business strengthen the economic potential of local governments. On the other hand, the effectiveness of government is largely determined by how it is able to involve business in solving current and strategic problems of urban development. If government support really helps strengthen business, and business actively participates in solving urban problems, then in general such interaction becomes a significant driver of city

development. In today's conditions of global competition and rapid urbanization, the task of developing and implementing effective mechanisms for cooperation between the business sector and local governments remains relevant. This interaction is of particular importance in the context of smart city development, where business participation can be one of the key components for achieving strategic goals. However, despite the existence of individual successful examples of partnership, the general nature of such relationships in Ukraine remains fragmented and lacking in systematization [1]. This negatively affects the involvement of business, in particular representatives of small and medium-sized businesses, in the processes of strategic planning and implementation of city

programs. In addition, the lack of stable institutional mechanisms of partnership significantly narrows the opportunities for the integration of innovative approaches, digital technologies and socially significant initiatives. Local governments often have an insufficient resource base and limited management capacity, which complicates coordination with business structures [2]. As a result, the potential for interaction between municipal authorities and the business sector remains largely untapped. Smart-oriented projects are implemented in a targeted manner; their dynamics depend mainly on the initiatives of individual entities, rather than on systematic efforts. Against this background, the problem of developing and implementing effective models of smart-oriented partnership is becoming more urgent. Such models should be aimed at harmonizing the interests of business and government, ensuring the gradual implementation of strategic priorities for the development of urban areas, while complying with the principles of sustainability, inclusiveness, and a multidimensional approach to urban environment management.

In the modern understanding, the perception of business as an ecosystem – an entrepreneurial ecosystem – prevails. With this approach, attention is focused not just on the institution of business itself. It focuses first of all on its interactions and communications, which generally shape the success of the entire business environment. Spigel [3] considered a business ecosystem as “a set of interdependent entities and factors coordinated in such a way that they contribute to productive entrepreneurship in a certain territory”. According to Spigel [4], an entrepreneurial ecosystem has three main resources: a common cultural understanding and institutional environment, social networks in regions for the transfer of knowledge between firms and universities, and a material component. According to Adner [5], the value of the ecosystem concept lies in supporting the unification of heterogeneous participants to create powerful competitive advantages. In the new world, companies compete to bring together disparate actors to create powerful integrated solutions or experiences, and then create thriving business ecosystems dedicated to delivering these solutions to customers. According to Audretsch et al. [6], effective entrepreneurial ecosystems are based on three institutional pillars: regulatory, cognitive, and normative institutions that provide incentives for entrepreneurial behavior. An entrepreneurial ecosystem is defined as “... the dynamic institutionally embedded interaction between the entrepreneurial attitudes, abilities, and aspirations of individuals that drives the allocation of resources through the creation and operation of new enterprises” by Sussan and Acs [7].

2. LITERATURE REVIEW

The conceptual framework for public-private partnerships (PPPs) in real estate management was explored by Ibrahim et al. [8]. Reed and Reed assess the role of public-private partnership (PPP) through their diversity, identifying four different types of business partnerships based on different degrees of social control: traditional business; corporate social responsibility; corporate accountability; and social economy [9]. Ahmed et al. [10], using the example of river basin management in Malaysia, demonstrated that local governments can play a leadership role in developing appropriate partnerships with multiple stakeholders to

implement multi-purpose activities. Esperilla-Niño-de-Guzmán et al. [11] provided a comprehensive overview of research on PPPs in road infrastructure projects over the last 30 years.

McCarter and Kamal [12] discussed the success factors of PPPs as a popular strategy for creating global sustainable value, supply chains and social dilemmas. Trang et al. [13] explored how to achieve greater impact of joint partnerships on supply chain performance and measure it.

The effectiveness of PPPs was studied by Hodge and Greve [14], proposing a new conceptual model of PPPs. They noted that there are many criteria by which the success of PPPs can be assessed: policy- and management-oriented, more traditional utilitarian political goals related to project implementation or value for money (VfM). Azarian et al. [15] identified the main driving forces and milestones that contributed to the evolution of PPPs. Based on bibliometric analysis at the next stage, they proved the impact of PPPs on the development of various sectors, in particular, urban development, public infrastructure, transport, healthcare and education.

A large body of scientific publications is devoted to the problems of PPPs and sustainable development. Dzhengiz [16] explored partnerships focused on sustainable development, developing the concept of a “sustainable alliance portfolio” to draw scholars’ attention to the broader picture of firms’ partnership efforts to achieve sustainable development. Mahajan et al. [17] explored the formation of sustainable partnerships, addressing contemporary sustainability challenges such as artificial intelligence and the dynamics of developing countries; balancing economic progress with environmental sustainability, integrating financial development considerations with environmental responsibility; promoting equity and well-being by emphasizing the impact of business and managers on societal well-being; and developing governance frameworks for sustainable production and consumption. Akomea-Frimpong et al. [18] proposed key models and interventions for sustainable public infrastructure development based on identifying key success factors. Akomea-Frimpong et al. [19] contributed to the management of sustainable performance assessment of PPP projects. Akomea-Frimpong et al. [20] discovered sustainable and green finance, the innovative skills and competencies of project teams, green financial risk models and inclusive cost reduction strategies as crucial to minimising financial risks in PPP project delivery. Akomea-Frimpong et al. [21] analyzed key sustainability indicators for PPP infrastructure projects in Ghana.

Ma et al. [22] explored the instrumental attributes of PPP and their contributions to the SDGs by developing a theoretical model to demonstrate their relationships. Rosenstock et al. [23] explored the creation of inclusive and adaptive climate-smart business models, which requires rapid collective collaboration, experimentation, and reflection among all stakeholders.

An equally important area of research is the governance of PPP projects. Kumar et al. [24] emphasized the importance of governance mechanisms and collaborative approaches in enhancing PPP effectiveness. Li and Wang [25] demonstrated the significant impact of the institutional environment on the effectiveness of PPP projects in China. Studying the failures of several projects, they concluded that the larger the government share, the greater the probability of failure. Conversely, a favorable business environment for private

capital can mitigate the failure rate of local PPP projects. Adebayo et al. [26] developed and presented an institutional design that can integrate environmental and social sustainability principles into PPP infrastructure projects (sustainable PPPs). They define rules that guide the involved participants towards sustainable PPPs and take into account the expected results of environmental and social sustainability. Meng et al. [27] looked for the causes of ineffective urban governance and proved the need to implement the concept of lean governance within the framework of community modernization within the framework of PPPs, based on the inclusion of the philosophy of "Green, Ecological and Low-Carbon" in the life cycle of an urban green community. In his study, Nazarchuk [2] argued that the contemporary model of interaction between business and government in Ukraine is gradually transforming from informal clientelist practices toward more institutionalized forms of partnership. The author paid particular attention to the role of civil society and emphasized the need to expand the representation of small and medium-sized enterprises in the process of public policy formulation. Zorenko [1] highlighted that PPPs in Ukraine are still undergoing institutional formation, whereas in developed economies PPPs function as a well-established mechanism for financing and managing public infrastructure projects. The study identifies key differences between Ukrainian and international practices, including weaker regulatory frameworks, lower transparency of decision-making processes and limited managerial experience, which continue to hinder the effective implementation of PPP projects. Thus, we can confirm that the issue of PPPs remains very relevant; it is developing and expanding in new contexts: sustainable development, SDGs, smart development, etc. This issue is particularly relevant in Ukraine, where scholarly research has primarily focused on the regulatory, legal, and organizational aspects of interaction between business and local authorities. However, the potential of digital technologies, smart governance tools, and real-time data utilization to enhance partnership effectiveness, improve decision-making transparency, and foster the sustainable development of territorial communities remains insufficiently explored.

3. METHODOLOGY

In order to clarify the assessment of the scale and obstacles in business cooperation with local authorities, surveys were conducted: one among business representatives, the other among representatives of local governments. The first was conducted among enterprises throughout the country, except for the occupied part (March 2025). The second survey was conducted among representatives of local governments (May 2025). Both surveys were conducted within the framework of the research works "Smart imperatives of digital transformation of the knowledge ecosystem in the conditions of economic recovery in Ukraine" and "Global smartization as the basis for post-war economic reconstruction in Ukraine", carried out by scientists of the Vadym Hetman Kyiv National University of Economics. The surveys were conducted by the consulting company Aktiv-Group on the basis of a combined study, which included a quantitative and qualitative component.

The research methodology included the following stages:

- 1) Development of a list of questionnaire questions to form the empirical basis of the study. The first survey

concerned business, the second - representatives of local governments.

- 2) Conducting a survey of business and local government based on a combined study, which included: a quantitative component (self-filling out questionnaires using the CAWI method) and a qualitative component (in-depth interviews with business and local government representatives).
- 3) The formation of the primary data array was carried out using the SunFlower Sociology online panel toolkit, which made it possible to ensure the efficiency of information collection, as well as to attract a relevant group of respondents - representatives of the business community, directly involved in entrepreneurial activity. The recruitment of participants was carried out through targeted invitations in digital communication messengers, which made it possible to adapt the survey procedure to the specifics of the business environment and create conditions for maximum convenience of participation. The survey covered 300 business respondents throughout the country. The business structure is dominated by micro-enterprises (58.0%), followed by small enterprises (16.75%), medium-sized enterprises (15.0%), and large enterprises (10.3%) [28]. The second survey covered 111 respondents throughout the country (representatives of local authorities of Ukrainian cities), except for the occupied part. The structure of the surveyed cities included: cities with a population of up to 10 thousand - 14.41%, 10–50 thousand - 23.42%, 50–100 thousand - 4.50%, 100–200 - 2.70%, 200–500 - 28.83%, 500–700 thousand - 2.70%, 700–900 thousand - 9.01%, more than 1 million - 14.41%. Generalized groups: up to 100 thousand - 42.3%, 100–500 - 31.6%, 500–more than 1 million - 26.1% [29].
- 4) Quality control: each received questionnaire underwent a verification procedure for logical consistency of responses, which allowed increasing the level of internal validity and ensuring analytical reliability of the data set. The territorial coverage of the study included the entire territory of Ukraine, except for temporarily occupied territories, where fieldwork was objectively impossible.
- 5) Within the framework of the selected quantitative research strategy, the processing of the collected empirical material was carried out using descriptive statistics methods using IBM SPSS Statistics 30 software. This made it possible to obtain basic statistical characteristics for each variable, which allowed to identify general trends based on the received data set and to formulate conclusions regarding the dynamics of smart development processes in Ukrainian cities, main barriers, trends and prospects.
- 6) Comparative analysis of the results of both studies: each of these surveys had its own goals and obtained certain results and conclusions. Important goals of these studies were to clarify the processes of digitalization, urban development, the state of cooperation between business and local authorities, the main obstacles to its development, etc. At the same time, we believe that it is interesting to conduct a comparative analysis, to evaluate the answers of

different subjects to similar questions. Such a comparative analysis can be useful in understanding how each subject assesses the state and prospects of mutual cooperation. How do these subjects assess the problems and obstacles in cooperation?

In addition to descriptive comparisons, the study conducted statistical comparisons using categorical variables. First, an intergroup comparison of the response profiles of business and local government representatives to identical questions was performed. Second, within each group (separately for business and local government), it was checked whether the distributions of responses varied depending on the size of the settlement using the same criteria. This two-stage approach allows us to distinguish between differences caused by the positions of stakeholders (business and local government) and differences related to the scale of the city within each group. Accordingly, the results are interpreted taking into account both intersubject asymmetry and spatial heterogeneity, which strengthens the validity of the conclusions and contributes to the formation of differentiated recommendations for cities of different sizes.

In order to formally test the differences in the distributions of responses between two independent samples, Pearson's χ^2 test of independence was applied, which tests the hypothesis that the distribution of responses does not depend on the group membership of respondents (i.e., the response profiles in the groups are the same). Null hypothesis H_0 : the distributions of responses in the groups are the same (the responses do not depend on the group membership); alternative H_1 : the distributions are different (Agresti [30]).

For a table of size $R \times C$ with observed frequencies O_{ij} , the expected frequencies are calculated as

$$E_{ij} = \frac{\sum_j O_{ij} \cdot \sum_i O_{ij}}{n} \quad (1)$$

where,

$\sum_j O_{ij}$ = number of all responses in group i ;
 $\sum_i O_{ij}$ = number of responses j in total in all groups;
 n = total number of observations in the table.

Pearson statistic is calculated by the formula:

$$\chi^2 = \sum_{i=1}^R \sum_{j=1}^C \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \quad (2)$$

Comparing the obtained χ^2 value with the critical value $\chi^2_{\alpha, df}$ (for a given significance level α), H_0 is rejected if $\chi^2 \geq \chi^2_{\alpha, df}$. Usually $\alpha = 0.05$ is taken; sometimes a more stringent threshold $\alpha = 0.01$ or, conversely, $\alpha = 0.10$, depending on the research context. In reports, this is given, for example, as $p < 0.05$.

Along with the significance test for χ^2 , the strength of the association between two categorical variables is given, which is quantified by Cramer's V coefficient. For an $R \times C$ table, this indicator is calculated as:

$$V = \sqrt{\frac{\chi^2}{n(k-1)}}, k = \min(R, C) \quad (3)$$

The value of the coefficient V lies in the range [0;1] and is

interpreted as the degree of divergence in the distributions (strength of association) between variables. In practice, the following ranges are used: small effect for $V < 0.20$; moderate – $0.20 \leq V < 0.40$; moderate to large – $0.40 \leq V < 0.50$; large – $V \geq 0.50$.

4. THE PURPOSE

The purpose of the article is to assess the state of cooperation between business and local governments in solving urban development problems based on a comparison of their positions based on the results of sociological surveys.

5. RESULTS

Cooperation between business and government is an important element of economic development at all levels. It is on its activity and consistency that the involvement of business in important local and national development projects and the solution of urgent social and environmental problems depend. No less important is the inclusion of business and government in knowledge chains, the effectiveness of which determines the innovativeness of the entire economy. As part of the conducted survey of the business environment, participants assessed the quality of interaction with state authorities in the process of implementing the city's development goals. In parallel, the study aimed at local governments focused on the analysis of cooperation with business representatives in the same context. As a result, the synthesis of data from both surveys allows us to compare the views of the parties on the assessment of partnership in achieving strategic priorities of urban development (Table 1).

Table 1. Comparative characteristics of responses from business representatives and local governments regarding cooperation in implementing urban development goals

Answers	Local Government	Business
Yes	54.1%	16.3%
No	14.4%	69.3%
In the future	31.5%	14.3%

A comparison of the responses of business representatives and local government bodies regarding actual cooperation shows a statistically significant difference in the distributions: according to the Pearson test for contingency tables, the distributions of the responses differ ($\chi^2 = 100.93$; $p < 0.001$), and Cramer's V coefficient = 0.496 indicates a large effect size, i.e., a strong association between group affiliation (business/local government) and response type. In terms of meaning, this means a significant difference in the response profiles of the two samples: as can be seen from Table 1, local governments are significantly more likely to report cooperation ("Yes" – 54.1%) compared to business (16.3%), while "No" responses dominate in business (69.3% versus 14.4% among local governments).

Next, separately for each group of respondents, it was checked whether the estimates vary depending on the size of the settlement (see Figure 1). It is important to note that in the two surveys, the scales of the size of settlements were not identical (for business - six gradations, for local government - four other intervals). Given the different logic of sample formation, we did not unify these categories artificially, so as

not to lose information and not to shift the frequencies. At the same time, a sensitivity test was performed: the enlargement of the categories into agreed bins gives qualitatively the same conclusions regarding the deviation/non-deviation of H_0 and the assessment of the strength of the connection by the coefficient V . Among business representatives, the relationship “city size $\times$ response” is statistically significant ($\chi^2 = 31.54$; $p < 0.001$) with a moderate effect size ($V = 0.229$), i.e., the structure of responses differs significantly between megacities, large, medium and small towns/villages. Among

local governments, a significant relationship between the size of the settlement and the response was also recorded ($\chi^2 = 16.72$; $p < 0.001$; $V = 0.274$), which indicates moderation of assessments by city size. Taken together, this means not only a clear intergroup asymmetry in the perception of cooperation, but also intragroup heterogeneity by type of settlement, which should be taken into account when interpreting the results and formulating recommendations for cities of different sizes.

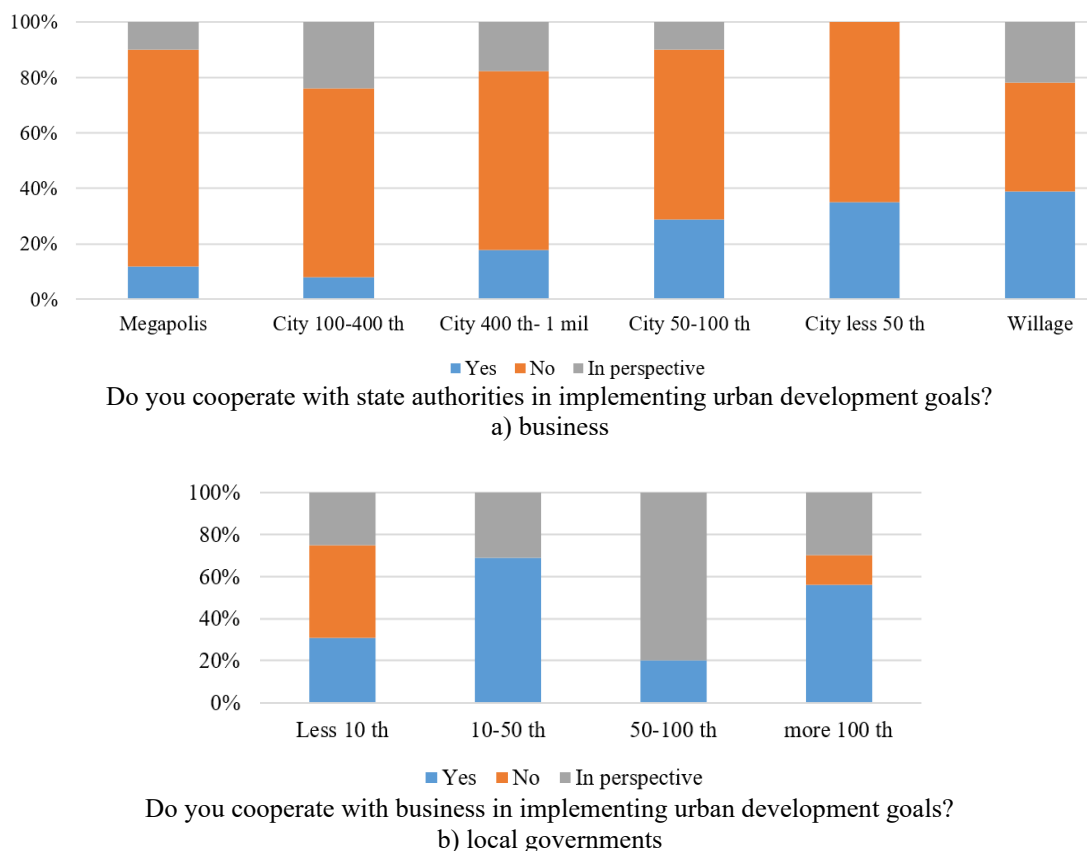


Figure 1. Share of responses regarding actual cooperation by city scale, %

In general, cooperation between local governments and business in implementing urban development goals is quite insignificant, although different entities assess it differently. The main formats of interaction take place in two planes - through institutionalized councils, business associations and entrepreneurship support programs, as well as through the implementation of individual joint events or initiatives. The scale, involvement of different sectors and sustainability of cooperation between business and city authorities vary significantly. The most significant is cooperation with industrial giants ("Zaporizhstal", "Motor Sich"), which takes place within the framework of the development of strategic city projects. The participation of large companies is recorded as a sustainable tool for influencing urban development. In some cities, business participation in specific social projects is observed, but, unfortunately, this is not a widespread phenomenon. For example, in Rivne, a city program to support veterans is mentioned, which is implemented with the participation of the Council of Entrepreneurs. This example demonstrates the combination of business social responsibility with a municipal initiative. In general, experts point to the low representation of small businesses in urban development processes, due to both the low initiative of entrepreneurs

themselves and the lack of focus on the part of local authorities.

Since, in general, cooperation between business and government can take place in very different formats, we tried to specify the issue. The current trend of our time is the implementation of ideas and principles of sustainable development or smart development in cities. Therefore, an important emphasis in the survey of local authorities was to find out how involved business is in these projects (Figure 2).



Figure 2. Level of business involvement in the implementation of smart projects in cities, 2025

Only 32.4% of respondents confirmed the existence of joint projects, which indicates the absence of consistent or systematic examples of cooperation with business in the context of smart or sustainable development. At the same time, there is insufficient awareness of the participation of small businesses. This indicates low visibility or documentation of such interaction, as well as the probable absence of a system of accounting or communication of such projects at the government level.

However, businesses do not show a high level of interest in the implementation of smart projects; only 11.7% of respondents confirmed participation in city smart projects; 85.0% answered that they did not have any joint projects on sustainable or smart development with local authorities. The most that took place was a discussion of environmental issues.

Statistical analysis confirms that business and local governments assess the presence of joint projects on sustainable or smart development differently: according to the Pearson test for contingency tables, the distributions of responses differ ($\chi^2 = 24.76$; $p < 0.001$), and Cramer's $V = 0.245$ indicates differences of moderate strength. This is manifested in a higher proportion of the answer "Yes" among representatives of local governments (32.4%) compared to business (11.7%) and a correspondingly lower proportion of "No" (64.0% versus 85.0%). Additionally, the dependence of assessments on the size of the settlement was checked separately for each sample. No statistically significant dependence was found among business representatives ($\chi^2 = 13.09$; $p > 0.10$; $V = 0.148$), i.e. the differences between types of cities are rather weak. In contrast, in the sample of local governments, there is a statistically significant dependence ($\chi^2 = 11.75$; $p < 0.10$; $V = 0.230$) with a noticeable trend of scale: in large cities (over 100 thousand) the share of "Yes" is noticeably higher ($\approx 44\%$), while in cities of 50–100 thousand, "No" prevails (almost 100%), and in small settlements (up to 50 thousand) "Yes" remains at the level of about 19%. Thus, the discrepancy between groups regarding the facts of joint projects is statistically confirmed, and within the group, the scale of the city rather modifies the assessments of local governments (the share of "Yes" tends to increase with the size of the city), while in business such an effect is not reliably observed.

It is worth noting that according to the survey, according to business representatives, business itself is the key initiator of the development of smart projects in the city (48.3%), the public is in second place (31.0%), and the city government initiates about 20.7%. At the same time, none of the respondents to the qualitative component of the study said that their company was the initiator of joint projects. The assessment from local government bodies identifies the initiative of business at 27.8%, the public at 27.8%, the city government at 25.0%, the regional council at 8.2%, the central government – 5.6%, international donors – 5.6% (Figure 3).

The assessment of the initiators of joint projects on sustainable/smart development in both groups was generally similar. For correct comparison of responses when calculating the Pearson test and Cramer coefficient, the list of categories was unified: the analysis was carried out only for three common positions - "business", "public", "city government"; rare options in the responses of local government bodies ("regional government", "central government", "international donors") were removed as small in number. According to the Pearson test for the contingency tables between the groups, no statistically significant differences were found ($\chi^2 = 2.50$; $p >$

0.10), and the Cramer coefficient $V = 0.087$ indicates a very small strength of association. The quantitative test did not reveal any statistically significant differences, which is generally consistent with the descriptive picture (see Figure 2): business more often emphasizes its own initiative, while in the responses of local governments, the initiative is rather divided between three subjects; however, these differences are not sufficient to be considered statistically convincing.

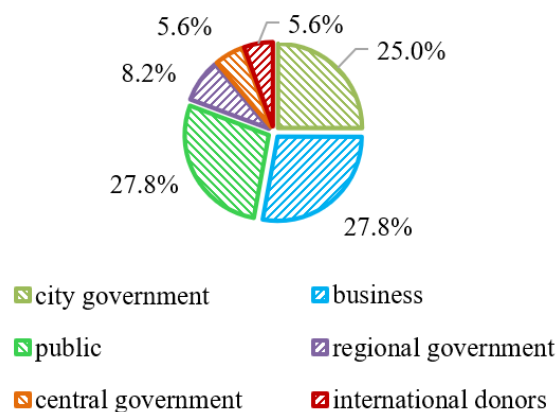


Figure 3. Activity of economic entities in the formation of smart projects, 2025

It was separately tested whether the ideas about the initiator change depending on the size of the settlement. Among business representatives, no differences between the city size categories were recorded ($\chi^2 = 10.38$; $p > 0.10$; $V = 0.132$). Among representatives of local governments, only a tendency to variation is observed ($\chi^2 = 7.41$; $p = 0.116$; $V = 0.358$), i.e., the p-level slightly exceeds even the "soft" threshold of 0.10. A likely factor is the small number of observations in the sub-task ($n = 29$ – only those who had joint projects). Therefore, the conclusion about systemic differences between business and local governments in terms of initiative is not confirmed, and the influence of the city scale on these estimates is limited.

Respondents to in-depth interviews do not have sufficient information about the launch of joint projects between business and local governments. In general, this indicates a lack of initiative on both sides. This may indicate that neither side — local government nor business — is showing a systematic leadership role in establishing partnerships, even in areas that are potentially mutually beneficial (technological solutions, spatial development, green transformation, etc.).

An important issue of this study is to identify the obstacles that hinder the development of cooperation between local governments and business. Local governments define obstacles to cooperation with business as a set of factors (Figure 4).

From the point of view of local government representatives, the experts' answers allow us to identify two main barriers that hinder the development of partnerships between business and government in implementing local development initiatives, in particular in a smart or sustainable format: a low level of business trust in government; competition and internal contradictions within the business environment itself, in particular competition for customers, resources and influence.

One of the respondents notes that despite the declarations and individual attempts at cooperation, the vast majority of businesses refrain from active participation due to distrust in the sincerity or transparency of intentions on the part of local

governments. This creates a passive business position in the field of social partnership and partially inhibits the implementation of joint development projects.

In such conditions, the need for joint coordination or participation in common projects is perceived as a potential risk of losing a position in the market. At the same time, it is assumed that obstacles can be eliminated if businesses realize specific benefits. This indicates the need to develop communication mechanisms and a transparent partnership model in order to turn latent readiness into real projects.

The business point of view on obstacles to cooperation with local governments is somewhat different. To the question “What, in your opinion, hinders the development of cooperation with state authorities?” we can see the following distribution of opinions. In the first place, businesses believe that these are financial constraints (31.7%), followed by bureaucratic obstacles (26.3%), lack of incentives from local authorities (18.7%), lack of incentives for cooperation from business (12.0%), inflexibility and obsolescence of the management system in local government bodies (7.7%), and business orientation towards short-term rather than strategic goals (3.7%) (Figure 4).

Statistical testing confirms that the perceptions of business and local governments about key barriers differ significantly: according to the Pearson test for contingency tables, the distributions of responses differ ($\chi^2 = 52.76$; $p < 0.001$), and Cramer's V coefficient = 0.358 indicates a moderate effect size. This is consistent with the data in Figure 3: businesses more often emphasize financial constraints and bureaucratic obstacles, while local governments, in addition to the financial factor, also highlight the business's orientation to short-term rather than strategic goals. It was also checked separately for each sample whether these estimates depend on the size of the settlement. For business, no statistically significant dependence “city size $\times$ barrier” was found ($\chi^2 = 23.63$; $p > 0.10$; $V = 0.126$), and for local governments, no convincing differences between city types were recorded ($\chi^2 = 14.65$; $p > 0.10$; $V = 0.210$). Thus, intergroup differences in the assessment of barriers are confirmed, while intragroup city size does not significantly moderate the structure of responses in either business or local governments.

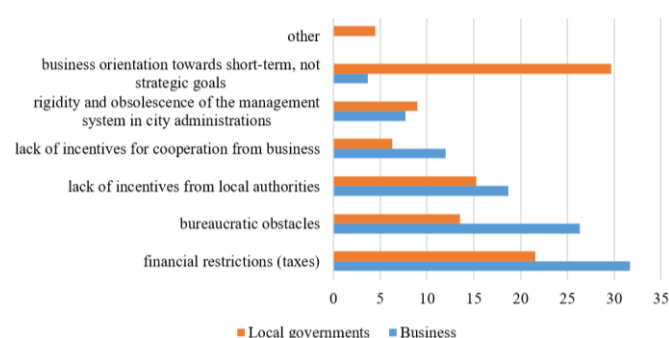


Figure 4. Key barriers to implementing cooperation between business and local governments, 2025

According to the qualitative component of the study, the development of cooperation with state authorities is most hindered by corruption and opacity of authorities. In particular, it was indicated that state structures are often not ready for transparent cooperation, even in the case of mutually beneficial initiatives. Therefore, some businesses limit their cooperation and refuse to participate if it requires providing money directly. Some entrepreneurs believe that cooperation

with the authorities makes sense only in the event of problems that really affect the business.

Currently, increasing transparency and interest of the authorities is extremely important for the development of business cooperation with local governments. Without this, business will continue to see no point in deepening interaction. Thus, both representatives of local governments and businesses note the need to transform authorities. Trust in authorities can grow only in the case of consistent actions to increase the transparency of all activities, reduce corruption, and significantly increase support for business and its initiatives. The spread of e-government is the trend that allows these issues to be gradually resolved. This is actually happening now in Ukraine, but it requires further consistent steps to develop the institution of government.

On the other hand, the development of the institution of business itself in Ukraine is also urgent. In advanced countries of the world, business has long gone beyond the narrow limitation of focusing exclusively on profit. The concept of social responsibility is already a permanent component of modern business, which finds many manifestations and forms in both its internal and external activities. The transition to such an active socially responsible position did not occur immediately, not by order. This is a consistent trend that became a reality as a result of a set of measures: legislative initiatives, the introduction of standards and reporting on corporate social responsibility, awareness of the importance of this imperative in society, etc.

No less important is the expansion and deepening of cooperation and partnership mechanisms between business, government, universities and the public. World experience provides numerous examples of such mechanisms that have allowed the successful implementation of smart projects in cities. These include PPP projects that allow for the co-financing of large infrastructure investments; joint social partnership projects that focus on social initiatives (in education, in ensuring inclusive access, etc.); and joint innovation spaces (hubs, clusters, incubators, etc.). Business cooperation with local governments (or local communities) can also take place within the framework of corporate social responsibility (CSR), when business voluntarily participates in solving social problems in the community. In this case, partners focus not on infrastructure projects, but on social initiatives, for example: landscaping the town, building a playground, sponsorship of vulnerable groups, support for young talents, etc.

Such forms of cooperation are very important for the development of a modern community, as they help to combine the resources of the two parties, experience and expertise to achieve common goals. In order to spread the best experience of PPP, international financial organizations have developed recommendations that serve as the basis for the development of national standards and the assessment of PPP projects. These include: Principles for PPPs in Infrastructure [31]; Global Principles for Good Governance of PPPs [32]; Guidelines for Effective PPPs (World Bank and UN) [33]. These documents, although not rigid "standards", fulfill their function. They set general rules that help minimize corruption, increase the effectiveness of projects and ensure their sustainability, which is the basis for trust between the state and business, for the social and economic development of communities. In general, global practice has accumulated significant experience in implementing successful PPP projects at the local level, such as waste management,

reconstruction of roads, schools or hospitals, provision of water supply or city lighting services, etc.

In Rome, the first smart city development plan did not start from the top down, but from people and dialogue, identifying their main problems, goals and daily challenges. First, the heads of all municipal departments were interviewed, followed by businesses. The main questions were related to what obstacles they faced in achieving their mission, and what digital solutions could help them do so. The next step was to involve universities and civil society associations. Using the research capabilities of 15 Roman universities created a valuable exchange that helped to shape a shared understanding of the city's priorities [34].

Dublin has become a leader in the smart city field over the past decade, thanks to its growing recognition as a hub for innovation and technology. The city council, in partnership with three other local authorities, has created a collaborative model that brings together industry, academia, the city and communities to co-develop solutions that address urban challenges and improve services and outcomes. A key element in delivering Dublin's smart city vision has been collaboration with universities. At Dublin City University (DCU), the Smart DCU programme is a collaboration between Dublin City Council and DCU partners Alpha, Enable Ireland and SFI's Insight Data Analytics Research Centre. The idea is to make DCU campuses a microcosm of the smart city, allowing partners to test new solutions in real-world settings. The campuses act as mini-testing grounds for smart city solutions, providing space to experiment with new applications before scaling up. To support 5G on smart campuses, DCU has partnered with Cellnex, the country's largest independent telecommunications infrastructure provider. Dublin City Council's long-standing partner is Bentley Systems, with the collaboration initially focusing on software, but now involving joint research and innovation. Bentley works closely with universities, including DCU, to research emerging technologies such as artificial intelligence and digital twins [35].

Barcelona, a well-known leader in smart cities, used a PPP arrangement to improve the efficiency of investments, management of its networks and monitoring. The project worked on the basis of a creative business model, where a concessionaire provides corporate services to the city, and the Municipal Institute of Information Technologies (IMI), on behalf of the city, allows the concessionaire to sell the free capacity of the city's infrastructure created under the PPP. Tradia assumed the risks of construction, financing, inflation, demand, operation and supply of equipment, while IMI assumed the risks related to the acquisition and availability of land and premises, as well as political risks. Both partners shared the design risk. Under this scheme, the private operator finances the investment in the modernized IT infrastructure and, in return, receives availability payments and the right to sell excess network capacity to telecommunications operators. This network sharing model allowed businesses to make initial investments in new and improved IT infrastructure, and for the city, created a new source of income [36].

In Latvia, PPP projects are used in the field of affordable housing. The European Investment Bank (EIB) [37], the Latvian Ministry of Finance and the Latvian State Real Estate (SRE) have joined forces to expand affordable housing in Latvia. In parallel, in Riga, a wide range of Latvian municipalities signed cooperation agreements with the SRE to develop affordable and energy-efficient housing for young

professionals and their families in sectors important to the state and local authorities. These include teachers, doctors, firefighters, police officers, military personnel, state and municipal employees. In the first stage, it is planned to build up to 2,260 apartments in various cities by 2030.

6. CONCLUSIONS

The effectiveness of the implementation of smart city projects largely depends on the activity of involving all interested stakeholders and building sustainable, open and transparent communications on the basis of trust and mutually beneficial collaboration. The results of the survey indicate that in general, all forms of interaction between business and government in implementing urban development goals take place in Ukraine. Big business has joint projects with local authorities, as the survey shows. There are numerous (although not always large in volume) joint social projects of business and local authorities. Various innovative institutions are being created: councils, hubs, incubators, etc. But their intensity and effectiveness still leave a huge space for development. Financial constraints are also a significant factor and are especially exacerbated in conditions of military aggression. At the same time, it should be noted that no city began the path to a smart city in conditions of sufficient financial resources. The implementation of the "smart city" project requires significant additional resources that are not within the current budget. That is why various financial mechanisms are being developed; there is extensive international grant support. At the same time, we consider the main factors that form the general environment for systematic interaction between business and local authorities: low level of business trust in the authorities, lack of incentives for cooperation, inflexibility and outdated management methods in local governments, corruption and opacity of authorities, unpreparedness of business for long-term collaboration, etc. Only overcoming these factors on a systemic basis can open up space for the active development of smart cities and thereby contribute to economic recovery in Ukraine.

REFERENCES

- [1] Zorenko, K.R. (2023). Interaction of business structures with authorities and society in Ukraine and ways of its optimization. *State and Regions. Series: Public Administration*, 1: 43-48. <https://doi.org/10.32840/1813-3401.2023.1.7>
- [2] Nazarchuk, O.M. (2025). Interaction between business and government in Ukraine: Controversy and prospects. *Regional Studies*, 40: 62-66. <https://doi.org/10.32782/2663-6170/2025.40.10>
- [3] Spigel, B. (2020). *Entrepreneurial Ecosystems: Theory, Practice and Futures*. Edward Elgar Publishing. <https://doi.org/10.4337/9781788975933>
- [4] Spigel, B. (2017). The relational organization of entrepreneurial ecosystems. *Entrepreneurship Theory and Practice*, 41(1): 49-72. <https://doi.org/10.1111/etap.12167>
- [5] Adner, R. (2017). Ecosystem as structure: An actionable construct for strategy. *Journal of Management*, 43(1): 39-58. <https://doi.org/10.1177/0149206316678451>
- [6] Audretsch, D.B., Belitski, M., Cherkas, N. (2021).

- Entrepreneurial ecosystems in cities: The role of institutions. *PLOS ONE*, 16(3): e0247609. <https://doi.org/10.1371/journal.pone.0247609>
- [7] Sussan, F., Acs, Z.J. (2017). The digital entrepreneurial ecosystem. *Small Business Economics*, 49(1): 55-73. <https://doi.org/10.1007/s11187-017-9867-5>
- [8] Ibrahim, I., Daud, D., Sa'ad, U.B., Adamu, A., Modi, B.U. (2025). Facilities management in public private partnerships (PPP) in Nigeria: Conceptual framework review. *International Journal of Built Environment and Sustainability*, 12(2): 1-8. <https://doi.org/10.11113/ijbes.v12.n2.1229>
- [9] Reed, A.M., Reed, D. (2009). Partnerships for development: Four models of business involvement. *Journal of Business Ethics*, 90(S1): 3-37. <https://doi.org/10.1007/s10551-008-9913-y>
- [10] Ahmed, M.F., Mokhtar, M.B., Lim, C.K., et al. (2023). Integrated river basin management for sustainable development: Time for stronger action. *Water*, 15(13): 2497. <https://doi.org/10.3390/w15132497>
- [11] Esperilla-Niño-de-Guzmán, Y.Y., Baeza-Muñoz, M.deL.Á., Gálvez-Sánchez, F.J., Molina-Moreno, V. (2024). Public-private partnership (PPP) in road infrastructure projects: A review of evolution, approaches, and prospects. *Sustainability*, 16(4): 1430. <https://doi.org/10.3390/su16041430>
- [12] McCarter, M.W., Kamal, D.F. (2013). Recognizing and resolving social dilemmas in supply chain public-private partnerships. *Journal of Business Logistics*, 34(4): 360-372. <https://doi.org/10.1111/jbl.12033>
- [13] Trang, N.T.N., Nguyen, T.T., Pham, H.V., Cao, T.T.A., Trinh Thi, T.H., Shahreki, J. (2022). Impacts of collaborative partnership on the performance of cold supply chains of agriculture and foods: Literature review. *Sustainability*, 14(11): 6462. <https://doi.org/10.3390/su14116462>
- [14] Hodge, G.A., Greve, C. (2017). On public-private partnership performance: A contemporary review. *Public Works Management & Policy*, 22(1): 55-78. <https://doi.org/10.1177/1087724X16657830>
- [15] Azarian, M., Shiferaw, A.T., Stevik, T.K., Lædre, O., Wondimu, P.A. (2023). Public-private partnership: A bibliometric analysis and historical evolution. *Buildings*, 13(8): 2035. <https://doi.org/10.3390/buildings13082035>
- [16] Dzhengiz, T. (2020). Bridging the gap: Organisational value frames and sustainable alliance portfolios. *Green Finance*, 2(4): 323-343. <https://doi.org/10.3934/GF.2020018>
- [17] Mahajan, R., Kumar, S., Lim, W.M., Sareen, M. (2024). The role of business and management in driving the sustainable development goals (SDGs): Current insights and future directions from a systematic review. *Business Strategy and the Environment*, 33(5): 4493-4529. <https://doi.org/10.1002/bse.3712>
- [18] Akomea-Frimpong, I., Jin, X., Osei-Kyei, R., et al. (2024). A review of circular economy models and success factors on public-private partnership infrastructure development. *Built Environment Project and Asset Management*, 14(1): 109-126. <https://doi.org/10.1108/BEPAM-01-2023-0014>
- [19] Akomea-Frimpong, I., Jin, X., Osei-Kyei, R. (2022). Mapping studies on sustainability in the performance measurement of public-private partnership projects: A systematic review. *Sustainability*, 14(12): 7174. <https://doi.org/10.3390/su14127174>
- [20] Akomea-Frimpong, I., Jin, X., Osei-Kyei, R. (2024). Mitigating financial risks in sustainable public-private partnership infrastructure projects: A quantitative analysis. *Systems*, 12(7): 239. <https://doi.org/10.3390/systems12070239>
- [21] Akomea-Frimpong, I., Jin, X., Osei-Kyei, R. (2026). Sustainable performance assessment of public-private partnership infrastructure projects in Ghana. *Engineering, Construction and Architectural Management*, 33(6): 4574-4600. <https://doi.org/10.1108/ECAM-10-2024-1463>
- [22] Ma, M., Wang, N., Mu, W., Zhang, L. (2022). The instrumentality of public-private partnerships for achieving sustainable development goals. *Sustainability*, 14(21): 13756. <https://doi.org/10.3390/su142113756>
- [23] Rosenstock, T.S., Lubberink, R., Gondwe, S., Manyise, T., Dentoni, D. (2020). Inclusive and adaptive business models for climate-smart value creation. *Current Opinion in Environmental Sustainability*, 42: 76-81. <https://doi.org/10.1016/j.cosust.2019.12.005>
- [24] Kumar, C.R., Kannan, B., Keshavammaiah, P.H., Parayitam, S. (2025). Public private partnership for the sustainable infrastructure development: A systematic literature review. *Quality & Quantity*, 59(3): 2733-2751. <https://doi.org/10.1007/s11135-025-02102-0>
- [25] Li, Z., Wang, H. (2024). Institutional quality, economic development, and the sustainable outcomes of PPP projects: An empirical analysis of failed PPP projects in China from 2014 to 2020. *Heliyon*, 10(10): e30977. <https://doi.org/10.1016/j.heliyon.2024.e30977>
- [26] Adebayo, A.A., Lulofs, K., Heldeweg, M.A. (2023). Indicators, strategies, and rule settings for sustainable public-private infrastructure partnerships: From literature review towards institutional designs. *Sustainability*, 15(12): 9422. <https://doi.org/10.3390/su15129422>
- [27] Meng, Q., Raslim, F.M., Mansor, N.S. (2024). Evaluating lean governance of urban green community retrofit under public-private partnership. *Planning Malaysia*, 22(3): 515-529. <https://doi.org/10.21837/pm.v22i32.1523>
- [28] Tsymbal, L., Kalenyuk, I. (2025). The role of business in the recovery of the Ukrainian economy: The development of the knowledge ecosystem in the context of the emergence of a smart economy. *Zenodo*. <https://doi.org/10.5281/ZENODO.17668686>
- [29] Kalenyuk, I., Tsymbal, L. (2025). The role of local government in the restoration of Ukraine's economy: Regional potential and smart development. *Zenodo*. <https://doi.org/10.5281/ZENODO.17659086>
- [30] Agresti, A. (2007). *An Introduction to Categorical Data Analysis* (2nd ed.). Wiley. <https://doi.org/10.1002/0470114754>
- [31] OECD. (2012). *Recommendation of the council on principles for public governance of public-private partnerships*. OECD Publishing. <https://www.oecd.org/investment/OECD-Principles-Public-Private-Partnerships-Infrastructure-EN.pdf>
- [32] OECD. (2017). *G20/OECD Principles for good governance of public-private partnerships*. OECD Publishing. <https://www.oecd-ilibrary.org/docserver/5j9754f9j485-en.pdf>
- [33] PPP Knowledge Hub. The World Bank Group.

- <https://ppplibrary.worldbank.org/>.
- [34] Antoniou, L. (2025). Dialogue, partnership, community: Putting people first in urban innovation. Smart Cities World. <https://www.smartcitiesworld.net/special-reports/dialogue-partnership-community-putting-people-first-in-urban-innovation>.
- [35] SmartCitiesWorld. (2025). SmartCitiesWorld City Profile – Dublin. <https://www.smartcitiesworld.net/city-profile/smart-cities-reports/smartcitiesworld-city-profile-dublin-11399>.
- [36] IT Network integration, Barcelona, Spain. The World Bank Group. <https://ppp.worldbank.org/telecom-and-ict/it-network-integration-barcelona-spain>.
- [37] EIB. (2024). Latvia: EIB and Latvian government to collaborate on affordable rental housing. <https://www.eib.org/en/press/all/2024-357-eib-and-latvian-government-to-collaborate-on-affordable-rental-housing>.