

Received: 05 May, 2026

Accepted: 20 August, 2026

Published: 25 August, 2026

Conceptual Foundations of Public Strategic Management of Post-War Reconstruction of Socio-Economic Systems: Human Capital, Partnership and Resilience

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Cite this article:

Kachan, Y., Mishchenko, K., Krasivskiy, D., Palii, O., and Boiko, V. (2026). Conceptual Foundations of Public Strategic Management of Post-War Reconstruction of Socio-Economic Systems: Human Capital, Partnership and Resilience. *Revista Cultura Científica*, (24), pp. 1160–1173.

Abstract

The article proposes a conceptual model of public strategic management for the post-war recovery of socio-economic systems, which integrates three interrelated components: human capital, partnership (collaborative) governance, and resilience. It is substantiated that human capital acts as a key driver of institutional capacity and economic recovery, while partnership governance ensures coordination between the state, business, and civil society in the processes of implementing recovery policies. Resilience is interpreted as an integral result of the effectiveness of public administration, reflecting the ability of socio-economic systems to adapt, recover, and transform under the influence of crisis shocks. The empirical basis of the study consists of data from the Worldwide Governance Indicators (World Bank) and indicators of human capital development. Methods of comparative analysis and the nonparametric Mann-Whitney criterion are

used to assess changes in the quality of governance in Ukraine during the pre-war and war periods. The results showed heterogeneous dynamics of institutional indicators, including a statistically significant decrease in the effectiveness of governance and the rule of law, as well as a partial improvement in corruption control. The proposed conceptual model of post-crisis development is consistent with the international frameworks for post-war recovery of the World Bank, the United Nations Development Programme, the OECD, and the European Union and expands them by integrating human-centered, institutional, and sustainable approaches into a single analytical framework of public strategic management.

Keywords: public strategic management, post-war reconstruction, human capital, partnership governance, collaborative governance, resilience

1. INTRODUCTION AND LITERATURE REVIEW

In the context of the post-war restoration of socio-economic systems, the problem of forming effective models of public strategic management is of particular relevance. Modern challenges related to the destruction of infrastructure, the transformation of the labor market and the need to restore human capital require a rethinking of traditional approaches to public administration.

In scientific discourse, integrated approaches that combine the principles of sustainability, partnership and inclusive development are becoming increasingly important. Human capital plays a special role as a key resource for recovery, as well as the interaction of the state, business and civil society in the formation of development strategies.

The article is aimed at substantiating the conceptual foundations of public strategic management of post-war recovery of socio-economic systems with an emphasis on human capital, partnership and ensuring sustainable development.

To place this objective within the existing scientific discourse, the relevant literature on post-war recovery, human capital, partnership governance, resilience, and their integration is considered below. The evolution of post-war recovery paradigms provides an important theoretical basis for this analysis. For a long time, post-war reconstruction was considered mainly as a process of reconstruction of destroyed infrastructure and restoration of economic activity. However, the accumulation of experience in the post-conflict development of different countries contributed to a gradual rethinking of the essence of recovery processes. Modern research increasingly interprets post-war reconstruction as a complex transformation of socio-economic systems, covering economic, social, institutional and political aspects of development.

Studies show that the consequences of armed conflicts far exceed the scale of physical destruction and affect the functioning of institutions, the demographic structure of the population, the labor market, social cohesion and the investment climate [1, 2]. Works on post-conflict transformations emphasize that recovery should not be seen as a return to the pre-war state, but as an opportunity to implement structural reforms and modernize public administration [3, 4].

Institutional theory plays an important role in the formation of modern approaches to post-war reconstruction. It has been proved that the quality of institutions determines the efficiency of the use of resources, the ability of the state to provide public goods and maintain long-term economic growth [5]. The development of this idea led to the conclusion that it is inclusive political and economic institutions that create the conditions for sustainable development, while weak or extractive institutions can inhibit recovery processes even in the presence of significant international assistance [6]. A similar position is supported by Fukuyama [7], which considers state capacity, the rule of law, and accountability as key components of good governance. This is consistent with the results of a study by Shebanina et al. [8], which prove that the quality of public administration is a determining factor in regional development and the effectiveness of institutional transformations.

Thus, the modern scientific literature is gradually shifting the emphasis from physical reconstruction to the formation of institutional capacity, social cohesion and long-term competitiveness of socio-economic systems.

Human capital as a strategic resource of recovery constitutes another central strand of the relevant literature. One of the central directions of modern research is the study of the role of human capital in ensuring economic development and post-war recovery. The theoretical foundations of the concept of human capital were formed in the works of Schultz [9] and Becker [10], who substantiated the need to consider education, professional skills and public health as a form of investment that ensures the growth of labor productivity and the well-being of society.

Further empirical studies have confirmed the decisive influence of human capital on long-term economic growth. In particular, the results of the study by Mankiw et al. [11] demonstrated that differences in the level of human capital significantly explain the difference in the rate of economic development between countries. Similar conclusions are presented in the works of Hanushek and Wößmann [12], which emphasize that it is the quality of education and professional competencies of the population that is one of the main factors of innovative development and international competitiveness.

In the context of post-war reconstruction, the importance of human capital is growing significantly. Wars lead to large-scale human losses, forced migration, deterioration of public health and destruction of educational infrastructure, which creates long-term risks to economic development. At the same time, the media play an important role in shaping public narratives and political discourse in wartime, influencing the perception of public policy and recovery processes [13, 14].

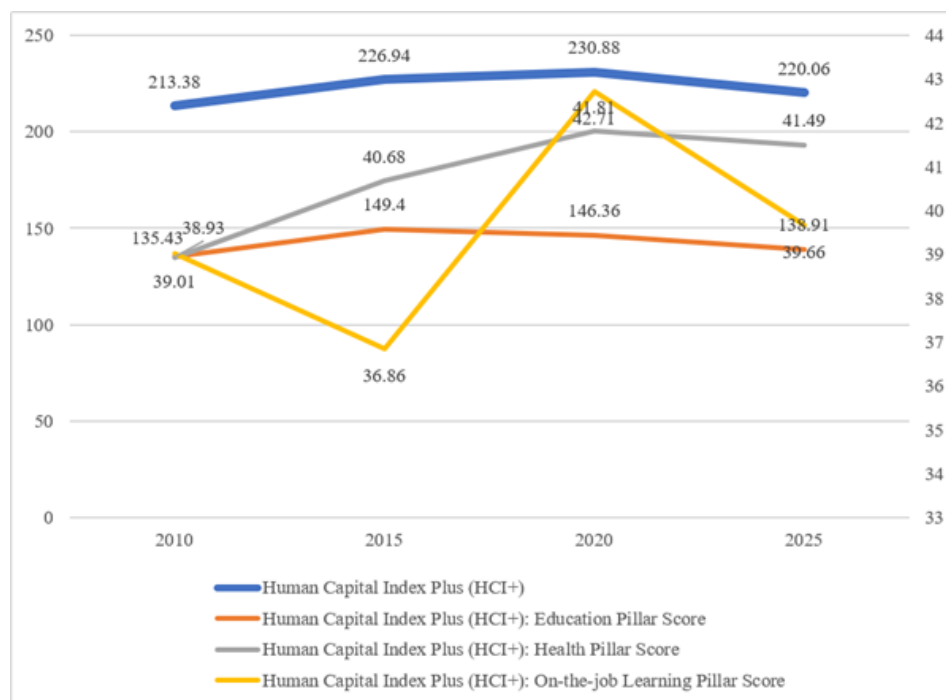
For empirical substantiation of the concept of decreasing the quality of human capital in the context of post-war recovery, it is advisable to supplement the theoretical provisions with quantitative indicators reflecting the scale of demographic, educational, and market-labor losses. The war in Ukraine has caused systemic disruptions in the reproduction of human capital, which manifests itself in population reduction, mass migration, destruction of educational infrastructure and structural labor shortages. A summary of key indicators is presented in Table 1.

Table 1. Empirical indicators of human capital quality decline in Ukraine (2022–2026)

Domain	Indicator	Empirical data	Source
Demographic losses	General migration (refugees)	5.7 million Ukrainians are abroad as refugees (as of 2025)	UNHCR [15]
	Internally Displaced Persons (IDPs)	3.7 million people remain internally displaced (as of 2025)	UNHCR [15]
	General demographic decline	Decrease in the population of Ukraine by 10 million people from 2022	Reuters [16]
Educational losses	Direct damage to educational infrastructure	3.9 billion USD of direct losses; significant destruction of schools, universities and scientific institutions	World Bank, United Nations Development Programme, & European Union [17]
	Recovery needs	\$33.5 billion needed for recovery (2026–2035)	Ministry of Education and Science of Ukraine [18]
	Learning disruption	5.3 million children have experienced disruption of access to face-to-face learning due to school collapse, security risks, and blended learning (as of 2023)	United Nations Children's Fund [19]
Labor market	Labor shortage	Forecast shortage of up to 4.5 million workers by 2030	Ukrinform [20]
	Impact of migration on employment	Forced migration increases the risk of unemployment by 7.5 percentage points among displaced people	Obrizan [21]
	Structural shortage of personnel	A massive outflow of the able-bodied population and mobilization losses form a chronic shortage of labor force	

Source: built by the authors

For an additional assessment of long-term trends in the development of human capital in Ukraine, the dynamics of the integral Human Capital Index Plus (HCI+), which covers the educational, medical and professional components of human capital formation, was analyzed. The results are shown in Figure 1.

**Figure 1.** Dynamics of Human Capital Index Plus (HCI+) in Ukraine

Source: built by the authors on the basis of the World Bank [22]

The analysis shows that during 2010–2020, in Ukraine, there was a gradual increase in the integral value of HCI+ from 213.38 to 230.88 points, which indicated the accumulation of human capital and the improvement of its qualitative characteristics. The main contribution to growth was provided by the educational component, the value of which increased from 135.43 to 146.36 points, as well as a gradual improvement in public health indicators [23].

At the same time, in 2025, a decrease in the integral indicator to 220.06 points was recorded. The largest reduction occurred in the educational component, which decreased to 138.91 points. This may be due to long-term disruptions in the educational process, population migration, destruction of educational infrastructure, and deterioration of access to quality

educational services during the war. Despite the relative stability of health indicators and vocational training, the overall dynamics of HCI+ indicate the loss of some of the human potential accumulated in previous years.

Thus, the results of the analysis confirm that human capital is one of the most vulnerable components of the socio-economic system in the face of war upheavals. This justifies the need to consider the development of human capital as one of the key priorities of public strategic management of post-war recovery.

In this regard, modern approaches to recovery are increasingly focused on the development of human potential as a key driver of economic transformation and social stability.

At the same time, most of the available studies analyze human capital mainly through the prism of economic growth. The issues of its integration into the mechanisms of strategic public administration and post-war governance remain insufficiently developed, which creates a need for the formation of more comprehensive conceptual approaches.

Partnership-based governance in post-war development represents a further important dimension of the literature. The transformation of public administration systems in the late twentieth and early twenty-first centuries contributed to the formation of new approaches to interaction between the state, business and civil society. In modern literature, the concept of network governance is becoming more and more widespread, according to which complex social problems cannot be effectively solved solely through hierarchical mechanisms of public administration [24, 25].

Within the framework of the concept of collaborative governance, the need to involve different groups of stakeholders in the processes of development and implementation of public policy is emphasized [26]. A similar approach is developed in the concept of New Public Governance, which considers the creation of public value as a result of the interaction of public authorities, the private sector and civil society [27].

For post-war recovery, partnership governance is of particular importance. The researchers note that the complexity of modern recovery processes requires the coordination of a significant number of actors, including authorities at different levels, international financial organizations, donors, business structures and local communities [3, 28]. It is partnership mechanisms that allow to ensure effective mobilization of resources, increase the transparency of management and create conditions for more inclusive development.

Despite the active development of research in the field of network governance, the mechanisms for integrating partnership models into the systems of public strategic management of post-war reconstruction remain insufficiently studied. This problem becomes especially relevant in the context of large-scale reconstruction programs, which require a high level of coordination between all stakeholders.

Resilience as a new paradigm of strategic public management provides another important theoretical perspective for understanding post-war recovery. In recent years, the concept of resilience has become one of the most influential areas of research in the field of public administration, economics and social development. Initially formed within the framework of ecological theory, it has gradually transformed into an interdisciplinary concept that explains the ability of systems to adapt to change, withstand crises and ensure further development in conditions of uncertainty [29].

Further development of the concept is associated with the work of Folke et al. [30], which consider resilience as the ability of systems not only to withstand external shocks, but also to transform in response to new challenges. The application of this approach to social systems made it possible to form a new vision of post-crisis development, where adaptability, innovation and the ability to self-organize are of key importance [31].

In the field of public administration, sustainability is increasingly considered as a new management paradigm. Researchers emphasize that modern states operate in an environment of high uncertainty, which requires management systems to be flexible, adaptable, and able to respond quickly to crisis phenomena [32, 33]. The role of institutional, social, and economic resilience is further emphasized as key factors for a successful recovery from large-scale shocks [34, 35].

At the same time, studies on economic resilience demonstrate that the speed of recovery largely depends on the structural characteristics of the economy, the effectiveness of institutions and the quality of public policies [36]. This allows us to consider resilience as an integral component of modern post-war development strategies.

The research gap and theoretical contribution emerge from the relationship among these previously discussed strands of literature. The analysis of the scientific literature allows us to conclude that modern research has formed a powerful theoretical basis for post-war reconstruction, human capital, partnership governance and the sustainability of socio-economic systems. At the same time, these areas developed mainly autonomously and were rarely considered as interrelated elements of a single system of strategic management.

Most of the existing research focuses either on the institutional aspects of reconstruction, or on human capital development, or on partnership or sustainability mechanisms. However, there are practically no conceptual models in the scientific literature that would integrate human capital, multi-level partnership and resilience within a holistic system of public strategic management of post-war recovery of socio-economic systems.

It is the elimination of this theoretical gap that constitutes the main scientific goal of this study and determines the need to develop an integrated conceptual model of public strategic management of post-war recovery, focused on ensuring long-term sustainability, inclusive development and increasing the competitiveness of socio-economic systems.

2. MATERIALS AND METHODS

The methodological basis of the study is an interdisciplinary approach that combines the provisions of institutional economics, the theory of human capital, the concept of resilience, and approaches to public governance. Both qualitative and quantitative methods of analysis were used in the study.

The empirical basis consists of international analytical data, in particular, indicators of the quality of governance from the Worldwide Governance Indicators [37], covering six key dimensions: Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. For the comparative analysis, two samples were formed: the pre-war period (2014–2021) and the war period (2022–2024).

Given the limited size of the samples and the lack of grounds for assuming a normal distribution, the nonparametric Mann–Whitney criterion was used to check the statistical significance of the differences. Data processing was carried out using methods of descriptive statistics and comparative analysis.

The theoretical generalization was implemented through a systematic analysis of scientific sources and international frameworks for post-war recovery (World Bank, UNDP, OECD, European Union), which made it possible to triangulate the results obtained and form a conceptual model of public strategic management.

To visualize the relationships between the key elements, the method of conceptual modeling was used, which made it possible to structure the system in the form of interrelated components: drivers, governance mechanisms, and results in the form of the resilience of the socio-economic system.

3. RESULTS

3.1. CONCEPTUAL FOUNDATIONS OF PUBLIC MANAGEMENT OF POST-WAR RECONSTRUCTION

Within the framework of the study, a conceptual generalization of modern theoretical approaches to the public management of the post-war restoration of socio-economic systems has been carried out. The analysis covers institutional development, human capital theory, partnership governance concepts, and approaches to sustainability, which made it possible to identify their key explanatory components and functional limitations.

In order to systematize these approaches and ensure analytical transparency, a generalization of these approaches was carried out, the results of which are presented in Table 2. The synthesis serves as an analytical basis for the further conceptualization of the integrated framework of public strategic management of post-war reconstruction, which is disclosed in the following blocks of the study.

Table 2. *Theoretical foundations of the formation of a model of public management of post-war recovery*

Theoretical approach	Key provisions	Limitations of the approach	Implications for research
Institutional Theory [5, 6, 38]	Institutions form a system of incentives that determines the effectiveness of economic development, the quality of governance, and long-term growth trajectories	Comparatively limited attention to human capital as an independent factor of transformation and to the post-conflict dynamics of recovery	Institutional effectiveness is seen as dependent on the quality of human capital and the system's ability to adapt
The theory of human capital [9–12]	Investments in education, skills, and health determine productivity, innovation, and economic growth	Preferential focus on economic results without integration into complex models of public administration	Human capital is interpreted as a basic resource for post-war reconstruction and a factor of institutional capacity
Theory of Partnership (Network) Governance [24, 26, 39, 40]	Effective governance is based on the interaction of the state, business, and civil society in the format of cooperation	Insufficient integration of partnership mechanisms into long-term post-crisis recovery strategies	Partnerships are seen as a tool for coordination, resource mobilization, and alignment of interests
The concept of sustainability [29, 30, 32, 41]	Systems are characterized by the ability to adapt, recover, and transform under the influence of shocks	Limited operationalization in the field of public administration and recovery policies	Resilience is defined as an integral characteristic of the efficiency and viability of a system
Postwar Reconstruction Studies [1, 2, 42]	Post-war reconstruction is a multi-dimensional process involving economic, social, and institutional transformations	Fragmentation of approaches and a lack of unified integrated models of strategic management	The need for a holistic model of public administration, focused on transformation rather than only reconstruction, is substantiated

Source: built by the authors

Systematization of the presented theoretical approaches (Table 2) allows us to identify a common characteristic of modern studies of post-war reconstruction, namely, their fragmentation and functional specialization. In particular, institutional theory focuses on the role of formal and informal rules in ensuring economic efficiency [5, 6], human capital theory focuses on the importance of knowledge, skills, and health as factors of productivity [10], approaches to partnership governance focus on mechanisms of cross-sectoral interaction and stakeholder coordination [26], while the concept of

resilience focuses on the ability of systems to adapt and transform under the influence of external shocks [30].

At the same time, these approaches function mainly in isolation and do not form a single analytical framework capable of comprehensively explaining the mechanisms of post-war recovery of socio-economic systems. This creates a theoretical gap between partial explanatory models and the need for a holistic approach to the strategic public management of recovery.

The identified theoretical gap creates the basis for the conceptual integration of these approaches within a single analytical framework, which makes it possible to reconcile the human, institutional, and system-adaptive dimensions of recovery. It is on the basis of this synthesis that the conceptual logic of the integrated model of public management of post-war recovery is further formulated, based on the interaction of three key components: human capital, partnership governance, and resilience.

In this logic, human capital is considered a basic system-forming factor, partnership governance as a mechanism for coordination and mobilization of resources, and sustainability as an integral characteristic of the effectiveness of the socio-economic system in the face of shocks and uncertainty.

3.2. STRUCTURAL COMPONENTS OF THE CONCEPTUAL FRAMEWORK OF PUBLIC MANAGEMENT OF POST-WAR RECOVERY

Based on the generalization of theoretical approaches (Table 1), three interrelated analytical components have been identified that form the conceptual basis for the study of public management of the post-war recovery of socio-economic systems: human capital, partnership governance, and sustainability.

The first component – human capital – is considered as a basic resource and system-forming element that determines the potential for the restoration of socio-economic systems. Its analytical role is to ensure the productivity of the economy, institutional capacity, and the ability to adapt innovatively in the context of post-crisis development.

The second component – partnership governance – serves as a coordination and integration mechanism that ensures interaction between state institutions, the private sector, international organizations, and civil society. Within the framework of post-war recovery, this component determines the effectiveness of resource mobilization, coordination of interests, and implementation of joint strategic decisions.

The third component – resilience – is interpreted as an integral characteristic of the functioning of the socio-economic system, reflecting its ability to adapt, recover, and transform under the influence of external shocks. In this context, resilience is not only a result but also a process characteristic of the dynamics of recovery.

The interaction of these components is systemic in nature and is manifested through the mutual reinforcement of their functions: human capital forms the basis of institutional and economic capacity, partnership governance provides mechanisms for the coordination and implementation of policies, while sustainability reflects the generalized effectiveness of the system's functioning under conditions of uncertainty.

Thus, the results obtained allow us to move on to the formation of an analytical framework that describes the logic of the interaction of key components of public management of post-war reconstruction and serves as a basis for further conceptualization of the integrated model.

3.3. MECHANISM OF INTERACTION OF COMPONENTS IN THE SYSTEM OF PUBLIC MANAGEMENT OF POST-WAR RECOVERY

The analysis of generalized theoretical approaches allows us to determine that the mechanism of public management of post-war reconstruction is formed as a multi-level system of interaction among management resources, institutional mechanisms, and characteristics of state policy effectiveness. In this context, the interaction between the components takes the form of cause-and-effect relationships that reflect the logic of the formation and implementation of the state recovery policy (Table 3).

The results obtained indicate that the system of public management of post-war reconstruction has a hierarchical and coordinative character, within which human capital determines the administrative capacity of the state and the quality of policy development. At the same time, partnership governance serves as an institutional mechanism for the implementation of public policy, ensuring coordination between state and non-state actors.

The resilience of the public system is interpreted as the result of the effectiveness of managerial decisions and political coordination, which reflects the ability of the state to ensure stability and adaptability in the process of post-war recovery. The institutional environment, in turn, acts as the basic regulatory framework that determines the effectiveness of all managerial interactions.

Thus, it has been established that the mechanism of public management of post-war reconstruction is based on the interaction of three key managerial dimensions: the administrative capacity of the state, coordination mechanisms of governance, and the effectiveness of public policy, which is manifested in the level of stability of the system.

Table 3. *The mechanism of interaction of components in the system of public strategic management of post-war recovery*

Component	Role in the public administration system	Managerial mechanism of influence	Function in the recovery policy	Theoretical justification
Human capital (public managerial capacity)	Formation of the administrative and institutional capacity of the state	Affects the quality of public decision-making and implementation, the effectiveness of the civil service, and recovery policies	Ensures the ability of the state to form and implement an effective recovery policy	[9, 10, 12]
Public governance mechanisms	A tool for the implementation of public policy through the interaction of the state, business, and society	Provide horizontal and vertical policy coordination, delegation, and collaborative decision-making	Increase the efficiency of the implementation of state recovery programs	[26, 39, 40]
Policy resilience	Integral indicator of public administration efficiency	Reflects the ability of the public administration system to adapt, minimize the effects of shocks, and ensure policy continuity	Determines the effectiveness of the state recovery policy in the face of uncertainty	[29, 30, 41]
Institutional environment of public administration	Regulatory and organizational basis of state policy	Establishes rules for actor interaction, levels of responsibility, and accountability mechanisms	Creates conditions for the effective implementation of recovery policies	[5–7]

Source: built by the authors

3.4. ANALYTICAL SUMMARY OF RESULTS, TAKING INTO ACCOUNT THE INTERNATIONAL RECOVERY FRAMEWORK AND THE CASE OF UKRAINE

To increase the analytical validity of the results obtained and their coordination with modern approaches to public administration, they were triangulated with the leading international framework documents in the field of post-war and post-crisis recovery (Table 4). This approach allows us to move from a purely conceptual interpretation to policy-based validation, which is typical of research in the field of public governance and strategic public management.

Special attention is paid to the case of Ukraine as a representative example of the comprehensive transformation of the socio-economic system in the context of a large-scale armed conflict. The Ukrainian context is considered as a practical reference point for checking the consistency of the proposed analytical provisions with the real processes of implementation of international recovery programs.

This allows us to interpret the results of the study in the broader context of global approaches to governance-based recovery and assess their compliance with the modern frameworks of the World Bank, the United Nations Development Programme, the OECD, and the European Union.

Table 4. *Triangulation of the results of the study with the international framework for public management of post-war recovery (taking into account the case of Ukraine)*

System Dimension	Conceptual result of the study	Public Administration Mechanism	International Recovery Framework	Ukrainian empirical context
State capacity	Human capital determines the effectiveness of the formation and implementation of recovery policies	Institutional strengthening of managerial capacity through competence development, digitalization, and civil service reform	Capacity-building of public administration and institutional building [43–46]	Public administration reform, digitalization of services, and adaptation of management to war conditions
Human development in recovery	Human capital is the basic driver of socio-economic transformation	Investing in education, health, and employment as the basis for recovery	Human-centered recovery and human development approach [44, 45, 47]	Migration, demographic losses, return, and retraining programs
Partnership Governance	Stakeholder coordination increases the effectiveness of recovery policies	Collaborative governance and cross-sectoral coordination mechanisms	Whole-of-society governance and multi-level coordination [26, 48, 49]	Coordination of international assistance (EU, WB, IMF) and national programs
System resilience	Sustainability is an integral result of management effectiveness	Adaptive management and system recovery capability	Resilience governance and adaptive systems management [30, 43, 44]	Support for critical infrastructure and the functioning of the state in wartime
Territorial differentiation of recovery	Recovery is spatially uneven	Place-based policy and decentralized governance	Territorial cohesion and regional resilience [45, 48, 50]	Different trajectories of restoration in frontline and rear regions

Source: built by the authors

The generalization demonstrates a high level of consistency between the results obtained and modern international approaches to the public management of post-war recovery. In particular, the dominance of the human-centered and institution-oriented recovery paradigm is confirmed, which is gradually replacing traditional infrastructural reconstruction models.

The World Bank and the United Nations Development Programme emphasize the priority of institutional capacity and human development as basic determinants of effective recovery, which directly correlates with the results of the study on the role of human capital as a backbone element of public administration.

The OECD and the European Union emphasize the need for multi-level and partnership governance, which confirms the importance of coordination mechanisms in the implementation of recovery policies. This is consistent with the function of partnership governance as a tool for integration and alignment of interests identified in the study.

The concept of resilience-based governance, which dominates modern international documents, confirms the inter-

pretation of resilience as an integral result of the functioning of the public administration system under conditions of uncertainty and crisis shocks.

Thus, the results of the study are not only consistent with the international frameworks of post-war recovery, but also conceptually integrate them into a single logic of public strategic management, which reinforces the theoretical and practical significance of the conclusions obtained.

3.5. EMPIRICAL VERIFICATION OF THE CONCEPTUAL FRAMEWORK

For additional empirical verification of the proposed conceptual framework for public strategic management of post-war recovery, an analysis of the dynamics of governance quality indicators in Ukraine was carried out. Given that one of the key elements of the proposed model is partnership governance and the institutional capacity of the state, it was considered appropriate to assess changes in the characteristics of public administration in the context of a full-scale war.

For this purpose, data from the international set of Worldwide Governance Indicators [37], which is compiled by the World Bank and covers six basic dimensions of the quality of governance, were used. Two independent samples were formed to assess the changes: the pre-war period (2014–2021; n=8) and the war period (2022–2024; n=3). Since the sizes of the samples are small and do not allow for a reasonable assumption of a normal distribution of data, a non-parametric Mann–Whitney criterion was used to check the statistical significance of the differences.

Table 5. Comparison of indicators of the quality of governance in Ukraine in the pre-war and war periods (Mann-Whitney test results)

Indicator	U-Stats	p-value	Interpretation
Voice and Accountability	13,0	1,000	No statistically significant differences were found
Political Stability	21,0	0,085	A trend towards change was revealed, but it was statistically insignificant at the standard level of 0.05 (but statistically significant at the level of 0.1)
Government Effectiveness	0,0	0,012	A statistically significant decrease was found
Regulatory Quality	13,0	1,000	No statistically significant differences were found
Rule of Law	1,0	0,024	A statistically significant decrease was found
Control of Corruption	24,0	0,012	A statistically significant improvement was found

Source: calculated by the authors based on data from [37]

The results of the analysis indicate a heterogeneous impact of the war on individual components of the governance system (Table 5 and Figure 2).

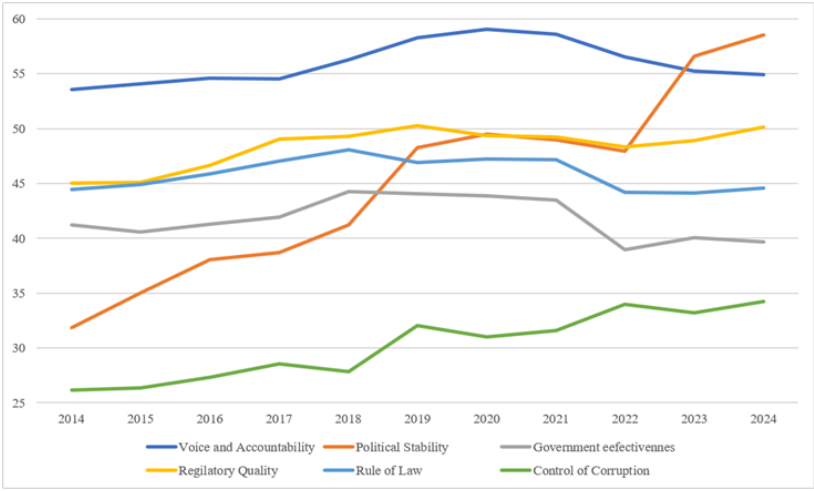


Figure 2. Dynamics of changes in Worldwide Governance Indicators for Ukraine for the period 2014-2025

Source: built by the authors based on [37]

Statistically significant changes were found in three indicators: Government Effectiveness ($p = 0.012$), Rule of Law ($p = 0.024$), and Control of Corruption ($p = 0.012$). At the same time, the effectiveness of public administration and the rule of law demonstrate a deterioration in indicators during the war period compared to the pre-war period, while corruption control, on the contrary, is characterized by positive dynamics. Also, statistically significant changes at the level of 0.1 were recorded for the Political Stability indicator ($p = 0.085$), which shows a positive trend.

For the Voice and Accountability and Regulatory Quality indicators, no statistically significant differences between the periods were established. This indicates the relative stability of individual institutional characteristics even in the face of large-scale security challenges.

The results obtained confirm the importance of the institutional dimension in the processes of post-war reconstruction and are consistent with the provisions of the proposed conceptual model. In particular, they show that the resilience of the socio-economic system depends not only on the availability of resources for recovery, but also on the ability of state institutions to maintain the effectiveness of governance, ensure the rule of law, and maintain an appropriate level of

accountability in the face of prolonged crisis impacts.

4. DISCUSSION

The conceptual model of public strategic management of post-war recovery proposed in this study allows for the integration of key theoretical approaches into a holistic analytical framework that explains the mechanisms underlying the formation of the resilience of socio-economic systems (Figure 3).

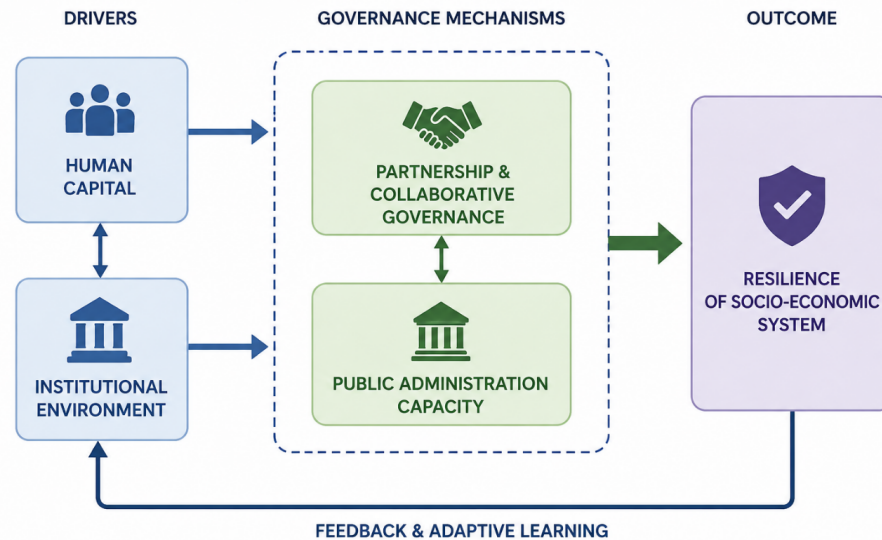


Figure 3. Integrated conceptual model of strategic public management for post-war socio-economic recovery: human capital, governance mechanisms, and systemic resilience

Source: built by the authors

The model consists of three interrelated levels: drivers, governance mechanisms, and outcomes, which are connected through a feedback loop and processes of adaptive learning.

Driver level: basic recovery conditions. The key drivers include human capital and the institutional environment, which form the foundation for the implementation of recovery policies. The results obtained confirm the provisions of human capital theory and institutional economics regarding the determining role of these factors in long-term development.

Human capital is not only a resource for economic growth but also a carrier of adaptability, innovation, and social cohesion. At the same time, the institutional environment determines the quality of rules, procedures, and norms that ensure the effectiveness of public administration.

Governance mechanisms: transformation of resources into results. The central element of the model is the block of governance mechanisms, which includes:

- partnership and collaborative governance;
- the capacity of public administration.

The interaction of these components ensures the transformation of basic resources into specific management results. Partnership governance performs the function of coordinating and integrating the interests of various stakeholders, including the state, international organizations, business, and civil society.

The capacity of public administration, in turn, determines the ability of the state to implement policies, ensure their effectiveness, and adapt to changes in the environment. The results of the empirical analysis (in particular, the decline in Government Effectiveness and Rule of Law) confirm the vulnerability of this component during wartime.

Result: resilience of the socio-economic system. The final result of the interaction between drivers and governance mechanisms is the resilience of the socio-economic system. Within the model, resilience is interpreted as an integral characteristic that reflects the ability of the system to:

- resist shocks;
- adapt to changes;
- restore its functioning;

- transform in response to new challenges.

This approach is consistent with modern concepts of resilience governance and adaptive governance.

Feedback and adaptive learning. An important feature of the model is the presence of a feedback and adaptive learning loop, which ensures the dynamic nature of the management system. This means that the results of recovery policies influence the further formation of institutional conditions and the development of human capital.

Thus, the model reflects not a linear but a cyclical management logic, which corresponds to the approaches of systems thinking and complex adaptive systems.

Theoretical and practical implications. The results obtained expand existing approaches to post-war recovery by integrating:

- the human-centric paradigm;
- institutional theory;
- concepts of collaborative governance;
- the resilience approach.

The practical significance of the model lies in the possibility of its use as an analytical tool for:

- the development of recovery strategies;
- policy evaluation;
- the coordination of international assistance;
- improving the efficiency of public administration.

In particular, for Ukraine, this means the need to simultaneously invest in human capital, strengthen institutional capacity, and develop partnership governance mechanisms.

5. CONCLUSIONS

The article proposes and substantiates a conceptual model of public strategic management of post-war recovery, which integrates the key theoretical approaches of institutional economics, human capital theory, collaborative governance, and the concept of resilience.

It has been demonstrated that the determining drivers of effective recovery are human capital and the institutional environment, which form the basis for the implementation of recovery policies. It is substantiated that their interaction is mediated through the mechanisms of partnership governance and the capacity of public administration, which ensure the transformation of available resources into development results.

It has been established that the key integral result of public strategic management is the resilience of the socio-economic system, which reflects its ability to adapt, recover, and transform in the face of crisis impacts.

Empirical analysis based on the Worldwide Governance Indicators showed a heterogeneous impact of the war on the governance system in Ukraine, in particular, a statistically significant decrease in the effectiveness of public administration and the rule of law, as well as an improvement in the control of corruption. This confirms the critical role of institutional capacity in ensuring the resilience of the system.

The results obtained are consistent with modern international approaches to post-war reconstruction (World Bank, UNDP, OECD, EU) and expand these approaches by integrating them into a holistic analytical framework. The practical significance of the study lies in the possibility of applying the proposed model to the development of recovery strategies, increasing the efficiency of public administration, and coordinating intersectoral interaction.

Prospects for further research are associated with the expansion of the empirical base, the use of panel data, as well as the deepening of the analysis of the relationships between the components of the model at different levels of public strategic management.

AUTHORSHIP AND CONTRIBUTIONS

According to the CRediT taxonomy, the authors contributed equally to the conception, development, and writing of the manuscript. Their collaboration included defining research objectives, conducting data analysis, interpreting results, and preparing the manuscript.

FUNDING STATEMENT

This research received no external funding.

CONFLICTS OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

Data are available from the corresponding author upon reasonable request.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

In the course of preparing this manuscript, the authors employed ChatGPT to improve the linguistic quality and readability of the content. After utilizing this AI tool, the authors conducted comprehensive review and necessary revisions to ensure the accuracy, integrity, and scientific rigor of the manuscript. All authors bear full responsibility for the final content of the published work, including any errors or inconsistencies that may arise.

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