

CHAPTER 33
TRAJECTORY DEPENDENCE
AND THE “HISTORICAL LEGACY EFFECT”
IN THE DEVELOPMENT OF THE ECONOMIC SYSTEM
DURING POST-WAR RECONSTRUCTION

Olena Shevchenko

INTRODUCTION

The development of modern economic systems in global and national contexts is characterised by high dynamism, inherent complexity and significant historical determinism. A study of economic development processes shows that modern economies are not the product of random events or short-term political decisions, but are shaped by multi-level historical, institutional and socio-cultural factors. The issue of trajectory dependence and the effect of historical legacy, which determine the long-term dynamics of development and the possibilities for the transformation of the economic system, is becoming particularly relevant.

The concept of path dependence posits that economic systems have a tendency to reinforce existing structures and institutions, which determines the choice of specific development paths and makes it difficult to deviate from established trajectories (Arthur, 1994)¹. It explains why historically established models of economic behaviour, sectoral structures and institutional rules may remain stable, particularly when new technological opportunities or reform initiatives emerge.

A related and interlinked phenomenon is the effect of historical legacy, which acts as a multi-level system of influence comprising civilisational, institutional, structural and behavioural components. This legacy not only constrains development but also creates resources for shaping new trajectories, determining the economy's potential for adaptability and its capacity for innovative breakthroughs. For Ukraine, which finds itself in a situation of post-war recovery, the study of this effect takes on particular relevance, as historically formed institutions, economic structures and socio-cultural

¹ Arthur, W. B. (1994). *Increasing Returns and Path Dependence in the Economy*. Ann Arbor, MI: The University of Michigan Press. DOI: <https://doi.org/10.3998/mpub.10029>

practices determine the starting conditions for modernisation and integration into the global economy.

An analysis of theoretical approaches shows that previous studies have mainly focused on a passive perception of trajectory dependence, where the role of governance was limited to minimal correction of existing processes. In contrast, the concept proposed in this monograph envisages a managed transformation of the development trajectory, integrating institutional, structural and innovative mechanisms, thereby enabling a systematic influence on the long-term dynamics of the economic system and optimising its adaptation to contemporary challenges.

The scientific novelty of this study lies in the systematic generalisation of trajectory dependence and the effect of historical legacy as integrated mechanisms for shaping economic dynamics; the identification of a multi-level structure of historical legacy, which allows for the analysis of the interaction between civilisational, institutional, sectoral and behavioural factors; the development of a concept for the managed transformation of the development trajectory, ensuring the practical implementation of strategies for post-war recovery and economic modernisation.

The aim of the study is to provide a theoretical justification, conduct an empirical investigation and develop practical recommendations regarding the managed influence on the development trajectories of the economic system in the context of historical legacy and post-war recovery.

The research tasks include:

- identifying the mechanisms of trajectory dependence and historical legacy;
- assessing the impact of historical legacy on institutional and structural transformations;
- developing models of the controlled transformation of the economic system;
- formulating recommendations for state economic policy and sustainable development strategies.

The relevance of the research stems from the fact that trajectory dependence and historical legacy determine the opportunities and constraints of economic recovery, integration into international economic systems, and the assurance of long-term competitiveness. At the same time, the approach of managed transformation opens up new horizons for the targeted adaptation of the national economy to contemporary global and regional challenges.

33.1. Theoretical and Methodological Foundations of the Study of Path Dependence

Path dependence is a fundamental concept in modern economic theory, which has emerged at the intersection of evolutionary and institutional economics. In general terms, it describes dynamic processes in which the system's previous states significantly constrain or determine the range of possible future development trajectories. In this context, the key principle is "history matters", according to which economic outcomes are not solely a function of current factors, but are shaped by historical events, decisions and structural conditions.

Recent research presented by international scholars clarifies that path dependence arises from a combination of three basic mechanisms: self-reinforcing effects, increasing returns, and the locking-in effect, which restricts changes in trajectory even in the presence of more efficient alternatives.

Within the framework of modern economic dynamics theory, scholars have demonstrated that path dependence can lead to multiple equilibrium states and the long-term impact of even temporary shocks. In particular, studies in economic geography have shown that short-term changes can have permanent consequences for the spatial organisation of economic activity, altering the long-term equilibrium of the system.

An important characteristic of trajectory dependence is its non-linear and non-ergodic nature, which implies the absence of a single, predetermined outcome of development. Unlike neoclassical models, where the system converges to a single equilibrium, in these systems the final state depends on the sequence of events, not merely on their aggregate. Thus, we consider that trajectory dependence serves, firstly, as an explanatory principle of the historical conditioning of economic processes; secondly, as an analytical tool for studying institutional inertia; and thirdly, as a methodological basis for analysing today's post-conflict economies.

Let us analyse the initial stage of scholars' research into the formation of the conceptual foundations (technological determinism and contingency) of trajectory dependence.

Thus, Paul David's scientific contribution lies in introducing into economic theory the idea that historical contingencies can have a long-term system-forming effect². His research demonstrated that economic choice is not always

² David Paul A. *Understanding the Economics of QWERTY: The Necessity of History. Economic History and the Modern Economist*. Ed. by William N. Parker. N.Y., Basil Blackwell, 1986. P. 30-49.

determined by efficiency, but is often the result of initial conditions and accumulation effects. We see the analytical significance of his theory in the shift of emphasis from equilibrium models to historically conditioned processes, the formation of a conception of the economy as a non-linear system with multiple equilibria, and the introduction of the concept of 'inefficient stability'. In our view, one limitation of his scientific approach is that the focus is predominantly on technological systems, and the scholar pays insufficient attention to institutional and political factors.

Brian Arthur expanded David's concept by creating a formalised mathematical framework for it. His key contribution is the demonstration that market processes can lead to inefficient outcomes through mechanisms of increasing returns. The researcher obtained scientific results regarding the justification of the role of positive feedback, the explanation of the phenomenon of market dominance by random technologies, the demonstration of the instability of classical equilibrium, and so on. It can be argued that the model-based nature of such research limits its application to complex socio-economic systems and that insufficient attention is paid to the role of institutions and the state.

Douglas North demonstrated the institutionalisation of the concept of path dependence in his works³. The scholar made a qualitative breakthrough in the development of the theory by integrating path dependence into the institutional analysis of economic development. He proved that institutions are a key mechanism for the transmission of historical heritage. In his research, he interprets institutions as carriers of historical inertia; explains long-term inefficiency through institutional traps; and reveals the interaction between formal and informal institutions. He has transferred the concept to the macro level and provided a means of explaining differences between countries. Furthermore, we can assert that there is a lack of sufficiently developed mechanisms for overcoming institutional inertia and a limited toolkit for the practical management of change.

Within the framework of the evolutionary approach, Richard Nelson and Sidney Winter proposed a concept according to which economic systems evolve through the accumulation of routines and gradual adaptation. The scholars introduce the concept of 'organisational routines' as an analogue of genes; they explain the stability of economic structures; and they elaborate on the role of innovation as a mechanism for changing trajectories. In our view,

³ Douglass C. North (2012). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9780511808678>

the focus on the micro level (firms) limits macroeconomic conclusions, and there is insufficient attention to the political and institutional factors of development. Giovanni Dosi made a significant contribution through the concept of technological paradigms and trajectories, which determine the direction of innovative development. He provided an explanation for the limitations of technological choice; the integration of innovation into the concept of path dependence; and the formation of links between science, technology and the economy. There is a concentration on the technological aspect and limited consideration of socio-institutional factors.

The spatial dimension (economic geography) is addressed in the research of Ron Martin and Peter Sunley⁴. These researchers have extended the concept to the level of regional development, demonstrating that the economic specialisation of regions is historically determined. They argue that regional economies have ‘fixed’ trajectories, development is constrained by available resources and capabilities, and diversification faces historical limitations. Furthermore, there is a marked lack of integration of macroeconomic factors, and limited attention is paid to the role of public policy.

Ron Boschma proposed the concept of linked diversity, which explains how regions can change their trajectory. This involves the formation of a mechanism for evolutionary transformation and an explanation of the conditions for successful diversification.

The current stage of research brings to the fore the role of agents and the creation of new trajectories. Thus, researchers Raghu Garud and Peter Karnøe proposed the concept of “path creation”⁵, which emphasises the active role of agents in changing trajectories: when trajectories can be altered through innovation, agency plays a decisive role, and development is the result of the interaction between structure and action. However, there is insufficient attention to the systemic level and a lack of a coordinated mechanism for managing transformation.

Thus, based on the analysis conducted, it is possible to trace the evolution of scientific thought and demonstrate the genesis of the theory of trajectory dependence through its main stages. Firstly, the technological stage focuses on chance and technologies (David, Arthur); secondly, the institutional stage

⁴ Ron Martin and Peter Sunley (2006). Path dependence and regional economic evolution. *Journal of Economic Geography*. Vol. 6, No. 4 (August 2006), pp. 395-437. URL: <https://www.jstor.org/stable/26160962>

⁵ Raghu Garud, Arun Kumaraswamy and Peter Karnøe (2010). Path Dependence or Path Creation? *Journal of Management Studies*, 47. URL: https://www.researchgate.net/publication/227375565_Path_Dependence_or_Path_Creation

emphasises rules and structures (North); thirdly, the evolutionary stage reveals the role of innovation and behaviour (Nelson, Winter, Dosi); fourthly, the spatial stage analyses regional trajectories (Martin, Sunley, Boschma); fifthly, the agent-oriented stage correlates the creation of new pathways (Garud, Karnøe).

Despite the significant contributions of scholars, there are substantial limitations in their scientific theories. We can speak of the fragmentary nature of the approaches (the absence of a single integrated theory), the predominance of descriptiveness (insufficient focus on practical management), insufficient attention to the macro-level of transformation, the absence of a concept of managed trajectory change, and so on.

An analysis of the contributions of leading scholars shows that the theory of trajectory dependence has undergone a complex path of development – from explaining technological phenomena to an interdisciplinary concept of economic development. At the same time, the current state of research requires a transition to a new stage – the substantiation of mechanisms for the managed transformation of trajectories, which allows theoretical achievements to be combined with the practical needs of economic policy, particularly in the context of post-war reconstruction.

The effect of historical legacy is a derivative yet distinct category that specifies the influence of the past on contemporary economic processes. Whilst trajectory dependence describes the mechanism itself, historical legacy reflects the substantive content of this mechanism in the form of institutions, structures and behavioural norms.

In modern economic history, historical legacy is viewed as the accumulated result of previous economic decisions, the structural memory of the economic system, and institutional inertia that reproduces previous models of development.

Research shows that historical legacy is shaped by so-called critical junctures – turning points (wars, crises, transformations) that determine the future direction of development. Following such a choice, reproduction mechanisms emerge that reinforce the chosen trajectory. In structural terms, it is useful to distinguish between institutional heritage (rules of the game, formal and informal institutions, governance models), technological heritage (level of production development, technological platforms, infrastructure), and socio-cultural heritage (economic culture, trust, behavioural patterns).

Empirical studies within the framework of evolutionary economic geography confirm that even under identical external conditions, different regions demonstrate distinct development trajectories precisely because of their

different historical legacies and capacity for adaptation. It can therefore be argued that the effect of historical heritage determines the starting conditions for post-war recovery, shapes the constraints and opportunities of economic policy, and acts as a key factor in the differentiation of development models.

Research into trajectory dependence and historical legacy requires the application of a comprehensive interdisciplinary approach combining methods from economic theory, history and institutional analysis.

The basic methodological approaches are:

1. The historical-economic method. This allows the reconstruction of the sequence of events and the identification of cause-and-effect relationships between historical decisions and contemporary economic outcomes.

2. The institutional approach. This focuses on the role of formal and informal rules that ensure the reproduction of a development trajectory.

3. The evolutionary approach. This views the economy as a dynamic system that changes under the influence of adaptation, selection and innovation.

4. Comparative analysis. This allows us to identify differences in the development trajectories of different countries or regions following crisis events.

Contemporary research emphasises that integrating these approaches helps explain why some economies remain trapped in an ‘institutional trap’, whilst others demonstrate the capacity to forge new development trajectories.

33.2. Mechanisms Underlying the Formation of Path Dependence in Economic Systems

One of the key mechanisms underlying the formation of path dependence is institutional inertia, which manifests itself in the persistence of economic rules and practices even when external conditions change. Institutions formed in previous periods tend to reproduce themselves due to reduced transaction costs when used, their embedding in the behavioural models of economic agents, and political support from interested groups.

This leads to the emergence of a “lock-in” effect, a situation where the economic system becomes ‘locked’ into a specific development trajectory, which may even be inefficient from the perspective of long-term optimality.

Contemporary research indicates that lock-in arises through the accumulation of specific capital, network effects and high switching costs.

Thus, institutional inertia is a key factor explaining the persistence of economic imbalances in post-conflict economies.

Critical turning points serve as the starting point for the formation of new development trajectories. They arise during periods of profound

transformation, particularly following wars, economic crises or political changes. Unlike gradual changes, critical moments are characterised by high uncertainty, a multitude of possible alternatives and a significant role played by random factors.

It is during these periods that the so-called “path choice” takes place, which is subsequently reinforced through self-reinforcing mechanisms. As highlighted in contemporary research, once a critical juncture has passed, the system enters a phase of increasing determinism, where the scope for changing course is significantly limited.

In the context of post-war reconstruction, such junctures play a key role, as they determine the type of economic model, institutional architecture and long-term development trajectory.

Self-reinforcing processes are the central mechanism for cementing trajectory dependence. They produce a cumulative effect whereby initial advantages or disadvantages are amplified over time. Key forms of self-reinforcement include: firstly, increasing returns (each additional use of a technology or institution enhances their effectiveness); secondly, network effects (the value of a system increases as the number of its participants grows); and thirdly, cumulative causation (the development of one sector stimulates the development of related sectors).

Empirical studies confirm that such mechanisms are capable of transforming temporary shocks into long-term structural changes, forming alternative equilibrium states of the economy

Theoretical analysis shows that trajectory dependence and the historical legacy effect form a single scientific analytical framework that explains the stability of economic structures, the diversity of post-war recovery models, and the complexity of institutional reforms.

We will conduct an in-depth scientific analysis of the mechanisms underlying the formation of trajectory dependence in economic systems, structured by system type (institutional, production-technological, financial, socio-economic and spatial). The focus is on the internal mechanisms of reproducing and consolidating trajectories without repeating previously stated provisions.

Within the institutional system, trajectory dependence is formed through the successive consolidation of rules and norms governing economic behaviour. The key point is that institutions not only reflect past practices but also actively reproduce them in the future. The mechanisms of formation include four structural elements. Firstly, cumulative normative consolidation, where each new regulatory act is not created “from scratch” but is based on previous

regulatory decisions. This leads to the accumulation of norms that mutually reinforce one another, limit the scope for radical change, and form stable regulatory frameworks. Secondly, institutional complementarity, given that institutions form interdependent complexes (for example, the tax system – fiscal policy – social security). Changing one element without transforming the others reduces the effectiveness of reforms and encourages a return to the previous state. Thirdly, the mechanism of legitimising consolidation, whereby norms that have existed for a long time acquire public legitimacy, even if they are ineffective. This, in turn, reduces political support for reforms and reinforces the system's inertia. Fourthly, reproduction through administrative practices, since even with formal changes to legislation, the actual practice of implementation may remain unchanged, creating an effect of dual institutionalality.

Within a production system, path dependence takes on a tangible form, as it becomes embedded in the physical infrastructure, technologies and production linkages. The mechanisms of formation include, firstly, the capitalisation of technological choices, where investment in specific technologies creates long-term commitments (changing technology requires significant expenditure; alternative solutions become economically unviable). Secondly, there is infrastructure inertia: transport, energy and production infrastructure determine the development opportunities of sectors and limit the options for structural transformation. Thirdly, technological compatibility and standardisation, where the use of certain standards creates network effects: new technologies must be compatible with existing ones, and this slows down the introduction of radical innovations. Fourthly, the effect of production chains, where established production links between enterprises cement the sectoral structure and complicate reorientation towards new markets.

The financial system acts as a key channel through which historically established priorities are transformed into future investment decisions.

The mechanisms of formation include: firstly, the institutionalisation of financial flows (financial resources are channelled into traditional sectors through established lending practices, institutional preferences and state support); secondly, risk-oriented inertia in conditions where financial institutions tend to finance well-known and proven projects and sectors with historically stable returns, which, in turn, limits the development of new sectors; thirdly, the financial lock-in effect, where previously invested resources create expectations of a return and encourage continued funding even for inefficient projects; fourthly, fiscal inertia – budgetary policy often

replicates previous expenditure structures, which reinforces existing economic priorities and limits opportunities for resource reallocation.

At the level of the socio-economic system, path dependence is formed through entrenched patterns of economic behaviour and social expectations. We consider it necessary to take into account the effective mechanisms of formation, namely: cognitive inertia (economic agents rely on familiar behaviour patterns and past experience, which reduces their willingness to take risks and innovate), the socialisation of economic practices (economic behaviour is transmitted through education, professional environments and intergenerational ties); institutions of trust and distrust (determining the propensity for cooperation and the effectiveness of contractual relations); and the expectations effect, where economic agents' expectations are shaped by past experience and influence investment decisions, consumer behaviour and market dynamics.

The spatial-regional system illustrates the mechanisms of territorially fixed development. In the spatial dimension, trajectory dependence manifests itself through the entrenchment of regional economic specialisation. The mechanisms of formation include agglomeration effects, the localisation of knowledge and skills, institutional localisation, and demographic inertia. The concentration of enterprises reinforces specialisation and creates a self-sustaining development effect. Knowledge accumulates in specific regions, which limits its transfer and reinforces the territorial structure of the economy. Regional institutions shape specific conditions for development that differ between territories and determine distinct trajectories. Migration processes and population structure influence the labour market and determine the development potential of regions.

The analysis shows that trajectory dependence is formed not through a single mechanism, but through a combination and mutual reinforcement of mechanisms: institutional norms determine the rules, the productive base materialises these rules, the financial system ensures their reproduction, behavioural factors sustain them at the agent level, and spatial structures anchor them in the territorial dimension.

The result is a coherent system of self-sustaining development, which possesses the properties of stability, inertia and limited adaptability.

The mechanisms of trajectory dependence formation in economic systems are multidimensional and interrelated, making it impossible to analyse them within a single level or subsystem. They form a complex system of self-reproduction in which institutional, material, financial, behavioural and spatial factors interact and mutually reinforce one another.

This approach allows us to move from a simplified understanding of trajectory dependence to its interpretation as a systemic phenomenon that determines the long-term dynamics of economic development, and creates a methodological basis for the development of tools for its managed transformation.

33.3. Historical Legacy as a Determinant of Post-War Economic Recovery

Historical legacy manifests itself primarily through the structural continuity of the economy, which determines the configuration of productive forces, sectoral specialisation and the proportions between sectors. The conditions for post-war recovery are not formed ‘from scratch’, but are the result of the transformation of an already existing, albeit partially destroyed, economic system.

Contemporary research into economic dynamics has demonstrated that the sectoral structure that had formed prior to a shock (in particular, war) exhibits high inertia, as it is based on accumulated physical and human capital, supported by infrastructure networks, and reproduced through value-added chains.

Empirical studies within the field of evolutionary economic geography confirm that regions with a high concentration of traditional industries demonstrate limited capacity for diversification, which complicates structural restructuring following crisis events (Boschma, 2015; Martin & Sunley, 2006).

In this context, the concept of “related variety” is important, according to which economies have greater potential for transformation when new industries are linked to existing competencies. Accordingly, historical legacy can act not only as a constraint but also as a resource for recovery, if it provides a basis for evolutionary diversification. Thus, we can assert that in the post-war period, structural continuity determines the starting conditions for economic growth, limits the pace of transformation, and creates risks of reproducing inefficient models of specialisation.

The institutional component of historical legacy is decisive for the effectiveness of post-war recovery, since it is institutions that shape the ‘rules of the game’ for economic agents.

According to the approaches of new institutional economics, institutions possess the property of long-term stability, which is explained by the learning and habit effects, political inertia, and the asymmetry of benefits from reforms.

In their work, Daron Acemoglu and James Robinson argue that it is the quality of institutions (inclusive or extractive) that determines the long-term

trajectory of economic development (Acemoglu & Robinson, 2012)⁶. In post-conflict settings, this is particularly relevant, as experience shows that weak institutions foster corruption and inefficient resource allocation, whilst strong institutions ensure transparency, trust and investment attractiveness.

Research published by scholars indicates that countries with higher levels of institutional quality demonstrate faster rates of recovery following armed conflicts (North, 1990; Rodrik et al.⁷, 2004).

Social capital, which encompasses levels of trust, norms of interaction and civic engagement, plays a distinct role. A lack of social capital can significantly slow down the implementation of reforms and reduce the effectiveness of public policy.

Thus, institutional legacy determines the effectiveness of recovery mechanisms, influences the allocation of resources and shapes the conditions for sustainable development.

Technological legacy encompasses the level of development of production technologies, innovation potential and the state of infrastructure. In the post-war period, it takes on a dual significance, since, on the one hand, the destruction of infrastructure creates significant constraints, whilst on the other, it opens up opportunities for technological renewal.

Contemporary research shows that countries which use reconstruction as an opportunity for modernisation are capable of realising the effect of “creative destruction” described by Joseph Schumpeter.

Development economics literature demonstrates that investment in modern infrastructure and digital technologies enables countries to narrow the technology gap, boost productivity and integrate into global value chains.

At the same time, if recovery is focused on reproducing outdated technologies, there is a risk of perpetuating backwardness, which reinforces path dependence. Thus, technological heritage determines the potential for modernisation, influences the competitiveness of the economy and shapes long-term development trajectories.

33.4. Trajectories of Post-War Recovery: A Comparative Analysis

Contemporary economic literature identifies several basic models of post-war recovery, which differ in terms of the depth of structural change and the role of the state.

⁶ Acemoglu, D. and Robinson, J.A. (2012) *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. Crown Publishing Group-A Division of Random House, Inc., New York. URL: <https://www.scirp.org/reference/referencespapers?referenceid=1836336>

⁷ Rodrik, D. (2007). *One Economics, Many Recipes: Globalization, Institutions, and Economic Growth*. Princeton University. DOI: <https://doi.org/10.1515/9781400829354>

1. The reconstruction model involves restoring the pre-war economic structure. It is characterised by rapid reconstruction, a low level of institutional change, and the risk of reproducing previous imbalances.

2. The modernisation model focuses on a partial transformation of the economy through infrastructure upgrades, the introduction of new technologies, and institutional reform.

3. The innovation-driven leapfrog model envisages a radical shift in the development trajectory through the use of cutting-edge technologies, digitalisation and integration into global markets.

Research shows that it is the third model that ensures the most sustainable economic growth, but it requires high-quality institutions and significant investment.

A comparative analysis of post-war economies (Europe after the Second World War, East Asian countries, the Balkans) allows us to identify the key factors for successfully overcoming negative trajectory dependence. These include institutional reforms (the creation of effective state institutions), external financial support (for example, the Marshall Plan⁸), economic integration (access to international markets), and investment in human capital.

The long-standing historical experience of the Marshall Plan is a unique example of a systematic approach to post-war reconstruction, combining financial aid, institutional reforms and international coordination. It is precisely this experience that allows us to trace the transition from a war economy to a model of economic growth focused on long-term development⁹.

Ukraine's post-war reconstruction will take place against a backdrop of massive economic, social and institutional losses, the depth of which exceeds the classic post-war challenges faced by Western European countries in the mid-20th century. At the same time, the experience of the Marshall Plan allows us to systematically identify the main problems that may hinder the transition from a war economy to sustainable development in the Ukrainian context.

One of the key problems is the profound structural distortion of the national economy caused by prolonged military operations. Ukraine's war economy is characterised by the dominance of defence spending, the destruction of production chains, a reduction in investment in civilian sectors, and an

⁸ The Marshall Plan: America, Britain and the Reconstruction of Western Europe. Cambridge University Press, 1987. 482 p. URL: [https://www.google.com.ua/books/edition/The_Marshall_Plan/wVp0UsB1ITIC?hl=ru&gbpv=1&dq=inauthor:"Michael+J.+Hogan"&printsec=frontcover](https://www.google.com.ua/books/edition/The_Marshall_Plan/wVp0UsB1ITIC?hl=ru&gbpv=1&dq=inauthor:)

⁹ Rodric D. The Real Exchange Rate and Economic Growth. *Brookings Papers on Economic Activity*, 2008, vol. 39, issue 2 (Fall), 365-439. URL: <https://EconPapers.repec.org/RePEc:bin:bpeajo:v:39:y:2008:i:2008-02:p:365-439>

increased role for state-led resource reallocation. There is a risk that, in the post-war period, there will be an inertial reproduction of the war economy model, where resources are directed primarily towards physical reconstruction without a profound modernisation of the production structure. The lessons of the Marshall Plan¹⁰ show that successful reconstruction is only possible if the economy is reoriented towards innovative, export-oriented and high-tech sectors. For Ukraine, this means moving away from a raw materials-based specialisation, which has historically increased the economy's vulnerability to external shocks, and formulating a new industrial policy in line with sustainable development.

Unlike the recipient countries of the Marshall Plan, Ukraine currently faces the problem of insufficient institutional capacity, manifested in the fragmentation of public administration, corruption risks and limited trust from society and international partners. Institutional theory emphasises that formal rules without effective mechanisms for their implementation are incapable of ensuring long-term economic growth. In this context, the key challenge for Ukraine is to align large-scale international financial assistance with genuine institutional reform, rather than its formal imitation. The Marshall Plan demonstrates that conditional aid, combined with international monitoring and coordination, became a key factor in the institutional foundations of European economies. For Ukraine, a similar mechanism could act as an external catalyst for reform, but only provided there is political will and public support.

A significant problem is the scale of social and demographic losses, including population decline, forced migration, loss of human capital and rising inequality. In the post-war period, these factors may limit the potential for economic growth and complicate the implementation of sustainable development strategies. The experience of the Marshall Plan demonstrates that the social dimension of recovery – employment, income, access to basic services – was critical for stabilising societies and legitimising reforms. For Ukraine, the challenge lies in the need to combine physical reconstruction with policies to rebuild human capital (through investment in education, healthcare and programmes to encourage the return of migrants).

Unlike post-war Western Europe, which received a significant portion of its aid in the form of grants, Ukraine faces the risk of excessive debt dependency. The rise in public debt could create long-term fiscal constraints and reduce the scope for implementing sustainable development policies. The lesson of the

¹⁰ De Long J.B., Eichengreen B. (1991) The Marshall Plan: History's Most Successful Structural Adjustment Program. NBER Working Paper No. w3899. URL: <https://ssrn.com/abstract=226738>

Marshall Plan is that financial aid was not only substantial but also structurally directed towards investment rather than current consumption. It is critically important for Ukraine to ensure that international resources are used as a tool for transformation, rather than temporary stabilisation.

Military operations cause significant damage to the environment, creating additional challenges for recovery, and raising issues regarding renewable energy, efficient infrastructure and the circular economy.

Thus, the main challenges of Ukraine's post-war development (structural economic distortions, institutional weakness, socio-demographic losses, financial constraints and environmental challenges) are systemic in nature. The experience of the Marshall Plan shows that overcoming these challenges is only possible through a comprehensive approach that combines international aid, domestic reforms and a strategic focus on sustainable development.

Research on this issue emphasises that the success of recovery depends not only on the volume of resources, but also on the quality of their use and the capacity for institutional change.

Changing the development trajectory is a complex process requiring a combination of internal and external factors.

Key determinants include political will (the ability to implement far-reaching reforms), the quality of economic policy (coherence of development strategies), the state's institutional capacity, international support and integration.

Contemporary research demonstrates that a change in trajectory occurs through the mechanism of "path creation", which involves an active role for the state and innovative agents in shaping new directions of development (Garud & Karnøe, 2001; Martin, 2010).

Building economic resilience in the context of post-crisis recovery requires transparent institutions for managing financial resources, a clear system of priorities for state economic policy, the alignment of international aid with national development strategies, as well as the active participation of civil society and business. As the experience of international financial organisations illustrates, a lack of institutional capacity negates the positive effect of even substantial amounts of external aid.

The effectiveness of post-crisis development models for Ukraine is determined by the specifics of its current situation – large-scale infrastructure and physical losses resulting from the war, structural imbalances in the economy (a large share of raw material sectors), significantly limited domestic financial resources, dependence on external financial support, a strategic course towards European integration, and the need for both rapid recovery and long-

term modernisation. It is precisely under these conditions that universal or liberal-market models prove insufficient; hybrid and combined approaches are the most appropriate for the situation.

For Ukraine, the international cooperation model is structurally inevitable given that the scale of required funding significantly exceeds domestic capacity, the recovery process must take place within the context of European integration and reforms, and international partners act not only as donors but also as guarantors of institutional quality. The advantages offered by this model include: access to grants, guarantees and preferential loans; a reduction in institutional risks due to the conditional nature of the aid; the implementation of European governance standards; coordination between donors; and so on. This logic is relevant for Ukraine.

In times of war and during the post-war period, market mechanisms are unable to drive recovery on their own; there is a need for centralised planning, the identification of priority sectors, and the coordination of infrastructure and industrial projects. A state-institutional model facilitates the restoration of critical infrastructure, the development of the defence-industrial complex, and investment in human capital. It is important for Ukraine not to replicate the pre-war resource-based model, but to use the recovery process to digitise the state and business sectors, reduce energy dependence, and stimulate productive employment. The high social costs of the war make a socially oriented model essential. We believe that the most effective model for Ukraine is an integrated post-crisis recovery model, which combines resources and standards (the international cooperation component), coordination and strategy (the state-institutional component), modernisation (the innovation and structural component) and human capital (the socially oriented component). It is precisely this combination that corresponds both to the historical steps of successful recovery programmes and to the contemporary requirements of the country's economic stability.

Economic stability in the post-crisis period is shaped by the complex interplay of domestic reforms and international cooperation. Historically proven models of post-war recovery demonstrate that international aid is most effective when integrated into national strategies for structural transformation. For a modern state in a state of profound economic upheaval, the key task is not the mechanical replication of historical models, but the adaptation of their institutional logic to national development conditions.

We emphasise that historical legacy determines not only the starting conditions for post-war recovery, but also the range of possible development trajectories. At the same time, comparative analysis shows that negative

trajectory dependence can be overcome; institutional reforms and innovative policies play a key role, and effective recovery entails not a reproduction of the past, but the formation of a new model of economic development.

33.5. Overcoming the Negative Effects of Historical Legacies in the Context of Post-War Reconstruction

Overcoming the negative effects of historical legacies requires, first and foremost, a profound institutional transformation aimed at changing the “rules of the game” within the economic system. Within the framework of institutionalism, institutions are viewed as persistent constraints that structure the interaction of economic agents, and their transformation as a necessary condition for changing the trajectory of development.

According to Douglas North’s approach, institutional changes are cumulative in nature and are largely determined by historically formed structures of power and interests (North, 1990). In post-conflict economies, this means that formal reforms without changes to informal institutions often fail to produce the expected effect.

Contemporary research emphasises that effective institutional transformation must include the dismantling of extractive institutions that restrict competition and innovation; the formation of inclusive institutions that ensure equal access to resources; and the improvement of the quality of public governance, including transparency and accountability.

The works of Daron Acemoglu and James Robinson demonstrate that it is inclusive institutions that create the conditions for long-term economic growth (Acemoglu & Robinson, 2012).

Furthermore, contemporary literature emphasises the importance of institutional consistency in reforms. A mismatch between the pace of reforms and society’s capacity to absorb them can lead to institutional dysfunction (Rodrik, 2007).

Thus, institutional transformation serves as a fundamental tool for breaking away from an ineffective development trajectory, creating new economic incentives, and ensuring sustainable post-war recovery.

The second key area for overcoming the historical legacy is the structural restructuring of the economy, which involves changing the sectoral structure and reallocating resources towards more productive activities.

Contemporary research on economic development has demonstrated that structural changes are a necessary condition for increasing productivity and

ensuring long-term growth (Lin, 2012) ¹¹. In post-war conditions, this means moving away from the reproduction of outdated production models and transitioning to new sectors.

The key elements of structural policy are economic diversification (reducing dependence on a limited range of sectors), the development of high value-added sectors (engineering, IT, biotechnology), and integration into global value chains as a source of technological modernisation.

Empirical studies show that countries which actively implemented structural reforms following crises demonstrated higher rates of recovery and more sustainable growth (Hausmann & Hidalgo, 2014) ¹².

At the same time, structural restructuring is associated with risks of social losses in traditional sectors, rising inequality, and short-term falls in employment. This necessitates combining economic policy with social adaptation mechanisms, including retraining and employment support.

In the context of post-war recovery, the possibility of implementing a “leapfrog” technology strategy – which involves skipping certain stages of development and transitioning to more modern technological systems – takes on particular significance.

The theoretical basis for this approach is rooted in Joseph Schumpeter’s ideas regarding the role of innovation as a driving force of economic development. In the current context, leapfrogging is achieved through the digitalisation of the economy, the adoption of green technologies, and the development of innovation ecosystems.

Research by the World Bank and the OECD shows that countries which actively invest in digital infrastructure are able to significantly narrow the technology gap and enhance competitiveness.

At the same time, the successful implementation of this strategy requires a developed institutional framework, access to financial resources, and a high level of human capital. Thus, innovative development makes it possible to overcome the constraints of historical legacy, shape a new trajectory of economic development, and ensure integration into the global economy.

¹¹ Lin, J. Y. (2012). *New Structural Economics: A Framework for Rethinking Development and Policy* (pp. 371). World Bank. DOI: <https://doi.org/10.1596/978-0-8213-8955-3>

¹² Hausmann, R., Hidalgo, C.A., Bustos, S., Coscia, M., Simoes, A. and Yildirim, M.A. (2014). *The Atlas of Economic Complexity: Mapping Paths to Prosperity*. MIT Press, Cambridge, MA. URL: <https://www.scrip.org/reference/referencpapers?referenceid=2020777>

33.6. A conceptual Model for Managing the Trajectory of Post-War Recovery

Effective management of post-war recovery requires treating historical legacy as both a constraint and a resource. Ignoring historical particularities can lead to ineffective reforms and the recurrence of dysfunctions.

Contemporary research emphasises the importance of a context-oriented approach that takes into account the specifics of the institutional environment, cultural and social characteristics, and the level of economic development.

Works (Rodrik, 2007) note that universal economic policy prescriptions are ineffective without adaptation to local conditions.

Thus, integrating historical heritage involves identifying key constraints, utilising existing competitive advantages, and formulating realistic development strategies.

In today's climate of uncertainty, an adaptive economic strategy capable of responding to changes in the external environment takes on particular significance.

Such a strategy is based on a scenario-based approach (the development of alternative development scenarios), flexible management (the ability to adjust policy), and a risk-oriented approach (the identification and minimisation of risks).

Research in the field of strategic management confirms that adaptive systems have greater resilience to shocks and a greater capacity for recovery (Teece, 2016)¹³.

In the context of post-war recovery, this implies the need to combine long-term planning with operational flexibility, coordination between the state, business and international partners, and the use of modern data management tools.

Assessing the effectiveness of development trajectory management requires the establishment of a system of indicators that reflect not only economic but also institutional and social changes.

Key groups of indicators include economic indicators (GDP growth rates, labour productivity, export structure), institutional indicators (level of the rule of law, corruption indices, effectiveness of public administration), and social indicators (employment rates, income inequality, access to social services).

¹³ Teece, D., Peteraf, M., & Leih, S. (2016). Dynamic Capabilities and Organizational Agility: Risk, Uncertainty, and Strategy in the Innovation Economy. *California Management Review*, 58, 13-35. DOI: <https://doi.org/10.1525/cm.2016.58.4.13>

Contemporary approaches involve the use of composite indices, which allow for a comprehensive assessment of reform outcomes (World Bank Governance Indicators; OECD Better Life Index). Thus, the system of indicators enables the monitoring of changes, allows for policy adjustments, and enhances the transparency of governance.

We note that overcoming the negative effects of historical legacy is a complex, multi-level process requiring institutional transformation, structural economic reform and an active innovation policy.

At the same time, effective management of the development trajectory is possible only if the historical context is taken into account, adaptive strategies are formulated and modern assessment tools are utilised.

This creates the conditions for the formation of a new, more effective model of economic development in the post-war period.

33.7. The Applied Dimension of Trajectory Dependence and Historical Legacy in Ukraine in the Context of Post-War Recovery

Ukraine's historical legacy is a complex, multi-level system of interrelated institutional, structural and socio-cultural characteristics that have taken shape under the influence of prolonged historical transformations. Its specificity lies in the combination of elements from different economic models, which accounts for the heterogeneity of the modern economic system.

First and foremost, the post-Soviet institutional legacy is decisive; it is characterised by the dominance of formally established but not fully implemented market institutions, the significant role of informal practices in regulating economic relations, and a low level of trust in state institutions.

According to Douglas North's approaches, such an institutional configuration creates institutional traps that limit the effectiveness of reforms and contribute to the reproduction of inefficient practices (North, 1990).

The second important element is the structural legacy of the economy, shaped within the framework of the Soviet industrial model. This manifests itself in a high proportion of basic industries (metallurgy, energy, raw materials production), a low level of economic diversification, and dependence on external raw materials markets.

Empirical studies show that such structures are highly inertial, which complicates their transformation in times of crisis (World Bank, 2020).

The third component is socio-cultural heritage, which encompasses the level of social capital, economic culture, and the population's adaptability to change.

In this context, the combination of low institutional trust with a high capacity for self-organisation is significant, creating both risks and opportunities for reform.

Thus, Ukraine's historical legacy currently imposes constraints on rapid transformation, determines the starting conditions for post-war recovery, and simultaneously creates the potential for a new development trajectory.

In the context of post-war recovery, the key threat is the reproduction of existing inefficient economic models, which could lead to the entrenchment of a negative trajectory.

One such risk is the preservation of an oligarchic economic structure, characterised by a high concentration of economic power, limited competition, and influence over political processes.

In the research of Daron Acemoglu and James Robinson, such systems are classified as extractive, limiting economic growth and innovation (Acemoglu & Robinson, 2012).

A second significant risk is the economy's reliance on raw materials, which increases dependence on external markets, limits opportunities for technological development, and exacerbates macroeconomic instability.

A third risk is institutional inertia, manifested in the slowness of reforms, the superficial nature of changes, and the perpetuation of ineffective management practices.

Research within the framework of path dependence theory demonstrates that, without targeted reforms, such systems tend to self-reinforce negative effects, making them harder to overcome (Arthur, 1994; David, 2001).

A particular threat is also posed by the risk of 'rebuilding the past', where resources are directed towards restoring outdated production structures without modernising them.

Thus, in the post-war period, the key risks for Ukraine are the perpetuation of institutional dysfunctions, the reproduction of an inefficient sectoral structure, and constraints on innovative development.

Shaping a new development trajectory for Ukraine requires a comprehensive approach that combines institutional, structural and innovative transformations.

In institutional modernisation and European integration, a key priority is the establishment of inclusive institutions that ensure the rule of law, the protection of property rights and effective public administration.

European integration is a key factor in changing the development trajectory, as it involves the implementation of EU standards and integration into the single

market. Research shows that institutional convergence with the EU contributes to increased economic efficiency (Rodrik, 2007; World Bank, 2022).

The formation of a new development model within the framework of the economy's structural transformation involves economic diversification, the development of high value-added sectors, and support for small and medium-sized enterprises.

Integration into global value chains plays a particular role, enabling an increase in the technological level of production, the expansion of export opportunities, and the assurance of sustainable economic growth.

An innovative development model is a key instrument for overcoming trajectory dependence. It involves the development of the digital economy, support for research and development, and the creation of innovation ecosystems.

In this context, the use of a leapfrogging strategy is important, as it allows Ukraine to transition to modern technological paradigms without going through all the stages of industrial development.

Human capital is a key factor in shaping a new development trajectory. Policy in this area should be aimed at improving the quality of education, developing professional competencies, and encouraging the return of the labour force. Research shows that investment in human capital yields the highest returns in the long term (OECD, 2021).

Post-war recovery must take regional disparities into account and focus on rebuilding infrastructure, developing local economies, and supporting decentralisation. This will help avoid the concentration of economic activity and ensure balanced development.

We believe that Ukraine's historical legacy determines both the constraints and opportunities for its post-war recovery. Its influence manifests itself through institutional, structural, and socio-cultural mechanisms that shape the trajectory of economic development. At the same time, an effective recovery strategy should not aim to replicate the previous model, but rather to shape a new development trajectory based on institutional modernisation, structural transformation, innovative development and integration into the global economy.

It is precisely this model that can ensure sustainable economic growth and enhance Ukraine's competitiveness in the long term.

CONCLUSIONS

The conducted comprehensive study allows us to formulate systemic generalizations regarding the role of trajectory dependence and the effect of historical heritage in the formation and transformation of economic systems, as well as to determine the conceptual principles of overcoming them in the conditions of post-war recovery.

Firstly, it is proven that trajectory dependence is a fundamental characteristic of economic development, which is manifested in the stability of established institutional, structural and behavioral models. It determines the limitations of alternative development scenarios and causes the emergence of "institutional blocking" effects that can consolidate both effective and ineffective economic practices. Thus, economic dynamics is nonlinear and is determined not only by current factors, but also by the sequence of historical events and decisions.

Secondly, it is substantiated that the effect of historical heritage should be considered as a multi-level system of influence that covers the civilizational, institutional, structural-industry and behavioral levels. It is established that the interaction of these levels forms a complex network of constraints and opportunities that determines the nature of economic development. Historical heritage is not only a factor of inertia, but also a potential resource for transformation if its elements are integrated into new development models.

Thirdly, it is established that the mechanisms for the formation of trajectory dependence are based on self-reinforcing processes, institutional inertia and cumulative causality, which ensures the long-term stability of economic structures. At the same time, these mechanisms can lead to the consolidation of inefficient business models, especially in conditions of limited institutional capacity and a high level of uncertainty.

Fourthly, it is proven that historical heritage is a key determinant of post-war economic recovery, as it determines the starting conditions, institutional constraints and structural characteristics of the economic system. It has been established that the effectiveness of restoration depends on the ability to integrate the positive elements of the legacy and minimize the negative effects, including institutional weakness, structural disparities, and technological backwardness.

Fifth, it is substantiated that overcoming the negative effects of historical heritage is possible only under the condition of a comprehensive transformation of the economic system, which includes institutional reforms, structural restructuring and innovative development. It is proven that isolated measures

do not provide a sustainable result, while a systemic approach allows changing the development trajectory and increasing the adaptability of the economy.

Sixth, the concept of managed transformation of the development trajectory, which constitutes the scientific novelty of the study, has been developed and substantiated. Unlike traditional approaches that consider economic dynamics as a predominantly historically determined process, the proposed concept proves the possibility of targeted influence on changing the trajectory through the coordination of institutional, structural and innovative mechanisms. It is established that effective transformation requires multi-level management, strategic planning and adaptability of economic policy.

Seventh, it is determined that the key conditions for successful transformation are institutional quality, political will, human capital development and integration into global economic processes. A special role is played by the state's ability to ensure the coherence of reforms, the effective use of resources and the formation of trust between economic agents.

Eighth, it is established that a comparative analysis of the international experience of post-war reconstruction indicates the decisive role of institutional reforms and innovation policy in overcoming trajectory dependence. It is proven that the most successful are those models of reconstruction that are focused not on the reproduction of previous structures, but on the formation of new competitive sectors of the economy.

Ninth, it is determined that for Ukraine, the historical legacy has a dual nature, combining significant limitations (institutional inertia, structural deformation, raw material orientation) with potential opportunities (human capital, adaptability, integration prospects). This necessitates the transition from the reconstruction model to the transformational development model.

Tenth, it is substantiated that the formation of a new trajectory of Ukraine's development should be based on institutional modernization, structural diversification, innovative development and regional balance. The implementation of this model will ensure sustainable economic growth and increase the competitiveness of the national economy.

Summarizing the results of the study, it should be emphasized that trajectory dependence and historical heritage are not fatal limitations of economic development, but are complex systemic factors that, under effective management, can be transformed into a source of long-term advantages. The proposed concept of managed transformation opens up new opportunities for the formation of effective economic policy aimed at ensuring sustainable development in the face of global challenges and post-conflict transformation.

SUMMARY

The section carries out a comprehensive theoretical, methodological and applied study of the phenomena of trajectory dependence and the effect of historical heritage as key determinants of the development of economic systems in the context of post-war recovery. It is substantiated that modern economic dynamics is formed under the influence of multi-level historically determined processes that determine not only the initial conditions of the economy's functioning, but also the limits of its transformation capacity. A theoretical interpretation of trajectory dependence as a systemic phenomenon based on cumulative causality, self-reinforcing effects and institutional inertia is developed. It is proven that economic systems have the property of reproducing established development models through the interaction of institutional, technological, financial and behavioral factors, which determines the stability of both effective and ineffective structures. In this context, the content of the category of historical heritage as a multi-level system of influence covering the civilizational, institutional, structural-industry, socio-behavioral and spatial levels is clarified. Particular attention is paid to the analysis of the mechanisms of formation of trajectory dependence in various subsystems of the economic system. It is established that institutional mechanisms consolidate historically formed rules through regulatory inertia and complementarity of institutions; production and technological - through capitalization of previous decisions and infrastructure inertia; financial - through the reproduction of investment priorities and risk-oriented behavior; socio-economic - through cognitive inertia and socialization of economic practices; spatial - through agglomeration effects and localization of knowledge. It is substantiated that the interaction of these mechanisms forms a holistic system of self-sustaining development, which determines the long-term dynamics of the economy.

It is proven that in the conditions of post-war reconstruction, historical heritage acquires a dual meaning: on the one hand, it acts as a source of limitations associated with institutional inertia and structural deformation of the economy, and on the other hand, it forms the potential for transformation through accumulated human capital, adaptive social practices and available production resources. This necessitates the transition from the reconstruction model to the model of structural and institutional transformation.

The scientific novelty of the section is the substantiation of the concept of managed transformation of the trajectory of the economic system development, which provides for the possibility of targeted influence on economic dynamics through the coordinated use of institutional, structural and innovative mechanisms. It is proposed to consider the transformation of the trajectory not

as a spontaneous process, but as the result of strategic management based on the principles of multilevelness, adaptability, institutional coherence and inclusiveness. The practical significance of the results obtained lies in the formation of scientifically sound approaches to the development of economic policy for post-war recovery, aimed at overcoming the negative effects of historical heritage and forming a new development trajectory. The proposed provisions can be used in the development of strategies for economic modernization, structural restructuring, innovative development and integration into global economic processes.

The study forms a holistic view of trajectory dependence and historical heritage as systemic factors of economic development and lays a theoretical and methodological foundation for studying the mechanisms of their controlled transformation in conditions of post-crisis and post-conflict changes.

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Information about the author:

Olena Shevchenko

Doctor of Economics, Professor,
Professor in the Department of Management and Social Sciences
Donbas State Engineering Academy
72 Akademichna Str., Kramatorsk, 84313, Ukraine;
Leading Researcher of the Department of Economic History,
State Organization "Institute for Economics and Forecasting
of the National Academy of Sciences of Ukraine"
26 Panasa Myrnoho Str., Kyiv, 01011, Ukraine