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UNINTENDED CONSEQUENCES AND THE PROBLEM OF ENSURING SUSTAINABLE DEVELOPMENT

The sources, types, and mechanisms of formation and tools for minimizing "unintended consequences" of economic reforms in Ukraine are considered. "Unintended consequences" are understood as unpredictable, unintentional, indirect, and incredible consequences of actions of initiators, organizers and executors of Ukrainian reforms, which were not included in their plans but happened in reality and had a decisive influence on the state of the national economy. The methodological basis of the study includes historical-genetic, comparative, statistical, and graphical analysis. The origins of the study of "unintended consequences" of human actions can be traced in the works of N. Machiavelli, J. B. Vico, B. Mandeville, A. Ferguson, W. Petty, A. Smith, J.-B. Say, K. Marx, C. Menger, W. Pareto, M. Weber, F. Hayek, and R. Merton.

Prerequisites for the "unintended consequences" of economic reforms in Ukraine include insufficient competence of initiators and organizers, errors in analyzing problems due to ignoring the specifics of the current situation, focus on achieving immediate results without the possibility to calculate long-term consequences of implemented measures, underestimation of the role of basic values of national culture and the impact of disclosure of predictions on the behavior of economic entities. The types of "unintended consequences" that affected the course of economic reforms in Ukraine include those that, while remaining functional for the system, rely on latent, unconscious and unplanned factors arising from latent dysfunctions. Varieties of mechanisms for the formation of "unintended consequences" of economic reforms in Ukraine include the manifestation of the results of latent functions, self-realization of social beliefs and self-destructive beliefs.

It is substantiated that the practice of mandatory preliminary testing at the local level on the basis of relevant information platforms makes it possible to eliminate shortcomings in advance, clarify and improve the implemented measures, determine their social effectiveness, and choose the best alternative. Conducting

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preliminary economic experiments avoids situations where, as a result of the reform, certain groups gain access to various types of rental income at the expense of society².

Keywords: digital economy, economic reforms, information (digital) platforms, sustainable development, unintended consequences

The Ukrainian state has celebrated its thirtieth anniversary. For an individual, this is the age of physical maturity, and entering a period of potential blossoming of intellectual, professional abilities and talents. No doubt, national states and national economic systems exist in different age dimensions. But for them, too, the thirty-year period can serve as a good benchmark for determining internal viability, efficiency of functioning and performance of assigned social and economic tasks, and competitiveness in foreign markets. Unfortunately, the results of Ukraine's three decades of economic transformation seem highly ambiguous. In this context, we can compare those results with neighboring Poland (Table 1).

Table 1

The dynamics of the Ukrainian and Polish economies (1990-2020)

Indicator	Ukraine			Poland		
	1990	2020	difference	1990	2020	difference
Population, million people	51.891	44.134	– 7.757	38.11	37.95	– 0.16
Birth rate	1.9	1.2	– 0.7	2.1	1.4	– 0.7
Life expectancy, years	70.1	72	+ 1.9	70.9	78	+ 7.1
GDP, \$ billion 2015 ³	154.546	97.692	-56.854	195.133	553.631	+358.498
GDP per capita, \$ thousand 2015	3.965	3.115	-0.850	5.120	14.588	+9.468
Share of industry in GDP, %	18.88	11.268	– 7.612	7.01	16.7	+ 9.69
Gross domestic investment, % of GDP	26	8	– 18.0	25	19.7	– 5.3

Source: compiled based on The World Bank data

(<https://databank.worldbank.org/reports.aspx?source=2&country=UKR> and

<https://databank.worldbank.org/reports.aspx?source=2&country=POL>), and UNIDO

(<https://stat.unido.org/database/MVA%202021,%20Manufacturing>)

The country's leadership did not expect such results. However, at the initial stage of the reforms, the unpredictable consequences of the reformers' activities were a determining factor in the unsatisfactory outcome. Could such consequences of Ukrainian reforms be foreseen or at least partially prevented? A study of unintended consequences, mechanisms of their action and possibilities for their prevention will help to answer this question. The methodological basis of the study includes historical-genetic, comparative, statistical and graphical analyses. Unintended consequences include unintentional and side effects of actions performed by the initiators, organizers and executors of Ukrainian reforms, which

² The article presents the results of a study conducted within the research project on "Economic Contradictions of Globalization and Localization: Forms of Movement and Solutions" (state registration No 0120U105800).

³ GDP in USD 2015 - data in 2015 prices expressed in USD.



were not included in their plans, happened in reality and had a decisive influence on the condition of the national economy.

From "shock therapy" to "unintended consequences"

From the position of a country that was one of the top ten or twenty industrialized economies of the world, Ukraine slipped to the poorest country in Europe, thereby creating the "Ukrainian miracle with a negative sign" [1]. A striking indicator of the devastating effects of economic reforms was the country's population decline. At 0.5 percent per year, Ukraine became one of the world's "leading" countries. The fertility rate per woman from 1990 to 2020 declined from 1.9 to 1.2. The country's GDP, calculated in 2015 prices, fell by more than a third, and its share per capita by 21.44%. The share of value added in the industrial sector in GDP decreased by more than a third during this period, and that of gross domestic investment - from 26 to 8%. A comparison of the dynamics of changes in GDP and GDP per one inhabitant of Ukraine and Poland, expressed in 2015 prices (Figure 1), clearly demonstrates the unpredictability of both immediate and long-term consequences of the "shock therapy".

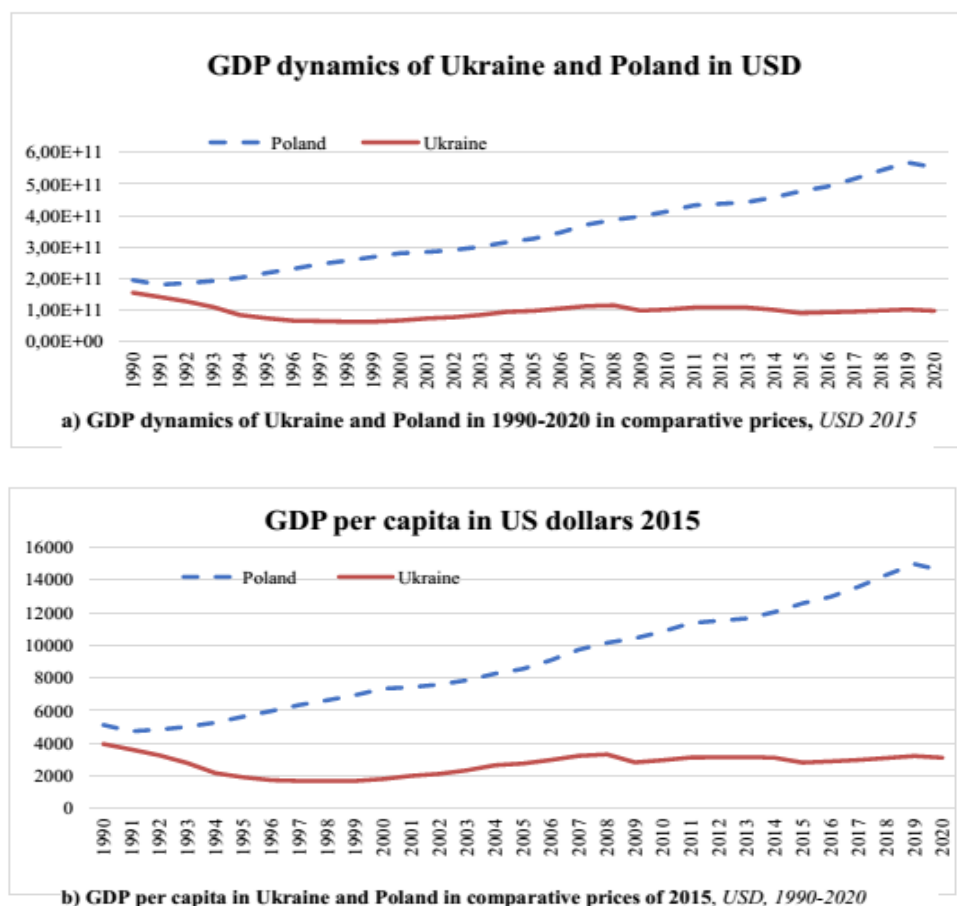


Figure 1. Dynamics of GDP and GDP per capita in Ukraine and Poland in 1990-2020 in comparative prices of 2015, USD

Source: World Development Indicators / The World Bank. URL:

<https://databank.worldbank.org/source/world-development-indicators#> (access date – 05.11. 2021)

The problem is not even that over the past decades Ukraine lost the developed potential of the third and fourth technological paradigms. In conditions of openness of the national economy and accelerated development of scientific and technological progress, successful economic development and competitive position in the global economy can be attained via active implementation of achievements of the fifth, and in the current decade the sixth technological mode [2]. The fourth technological revolution is fundamentally transforming the landscape of human economic activities [3]. The world is changing rapidly. Ukraine stepped on the path of transformation, got rid of the outdated model, but was not able to form a new, effective model of socio-economic development of society [4-6].

The origins of research into the "unintended consequences" of human actions

In contrast to the "invisible hand of the market"⁴, the term "unintended consequences" and its cognates "unanticipated", "collateral", "mediated", "improbable", "side" consequences, although attracting the attention of a wide range of researchers⁵, have not been recognized by modern economists⁶. Robert King Merton⁷, a sociologist, who in the 20th century laid down the main approaches to the study of this phenomenon, explains the lack of attention to it by the emphasis on the transcendental and moral sources of its origin [12, p. 895]. The return of interest for the study of the phenomenon of "unintended consequences" is based on a multidisciplinary approach. The latter allowed D. Lal to consider the influence of the interaction of factors of material and technological environment, culture and politics in the formation of the intensive economic growth model in the West [13].

Robert Merton identifies the sources, types and mechanisms of the formation of "unintended consequences" [12, 14, 15]. According to the scientist, the sources

⁴ The myth of the "rationalizing" process of social reproduction described by A. Smith, the action of the "invisible hand" of the market, suited the representatives of neoclassical theory well. This led to ignoring the fact that A. Smith himself first used the term more than a quarter of a century before the publication of "The Wealth of Nations" [7]. A. Smith used this metaphor in the "History of Astronomy", which J. Schumpeter recognizes a pearl of the early essays of the economist, without which "it is impossible to form a correct idea of the intellectual significance of Smith" [8, p. 233]. This refers to the influence of the ancient Roman god Jupiter. "The Theory of Moral Sentiments" (1759) attributes its origins to the influence of Providence on people's lives and actions [9, p. 185].

⁵ Among the thinkers who turn to this concept are N. Machiavelli, G.B. Vico, B. Mandeville, J. Locke, D. Hume, A. Ferguson, W. Petty, A. Smith, J.B. Say, K. Marx, F. Engels, C. Menger, W. Wundt, V. Pareto, M. Weber, P. Sorokin, F. Hayek.

⁶ At the same time, a huge interest in this phenomenon on the part of the general public seems indicative, a vivid manifestation of which was the multimillion-dollar reprints in dozens of languages of the world of N. Taleb's book "The Black Swan. About the (un)probable in real life" [10] and a special emphasis of the researcher on criticism of the economic models of the orthodox economists [11]. An important nuance to which special attention should be paid in the context of the theme of the article, which justifies the combination of the notions of unintended consequences of human actions and unpredictability of highly improbable prospects of certain phenomena, is the focus on explaining the causes and minimizing the risks associated with their occurrence.

⁷ Robert King Merton (1910-2003) was an American sociologist, a classic of structural functionalism, who used it to ground theories of social structure and anomie, bureaucracy, science; he formed the basis of sociological analysis of science as a particular social institution. He was the father of Robert Carhart Merton, winner of the Nobel Prize in Economics (1997).



of unintended consequences are: insufficient competence of executors; errors that occur in the process of analyzing the problem due to following the usual procedures; focusing on achieving immediate results while ignoring long-term consequences; the impact of core values; the negative impact of the promulgation of predictions on the logic of events, and the self-cancellation of predictions. The researcher distinguishes three types of "unintended consequences": those functional for the system, but based on latent factors; dysfunctional ones involving latent dysfunctions; and non-functional ones, affecting neither functionally nor dysfunctionally the system's condition. In turn, R. Merton includes among the varieties of mechanisms of their formation: self-realization of social beliefs, manifestation of the results of latent functions, and implementation of self-destructive beliefs.

Sources of unintended consequences

In 1996, R. Merton devotes a separate section to the study of the unintended consequences of social actions in his paper [15]. The sources of their occurrence include:

- insufficient competence of leadership, which results in the inability to fully and qualitatively understand the situation and, accordingly, the inability to adequately predict and anticipate its development;

- errors that arise in the process of analyzing a problem by following its habitual procedures, which worked and succeeded in the past but prove ineffective in the current situation;

- a situation where the focus on immediate results prevents the long-term effects of interventions from being monitored;

- the influence of core values. In some situations, they may require or prohibit certain actions, even though their long-term outcome may be undesirable or on the contrary, beneficial;

- the last group of reasons concerns the impact of the promulgation of predictions as to the actions of economic actors' on their behavior. Forecasting the unfolding of events can change people's motivation and the logic on which it was built. A situation is emerging in which anticipation abolishes itself.

Let us consider how, based on these factors, the unintended consequences of Ukrainian reforms can be explained.

Unlike most post-transition countries in Eastern Europe, no lustration of former authorities took place in Ukraine. Accordingly, at the initial stage of the reforms, we received the contradictory influence of several sources of unintended consequences, from which R. Merton begins his list. The management of the economy involved professional staff who were well versed in its features, and had significant management experience. At the same time, the skills of working in a planned economy did not always provide an opportunity to successfully solve the problems that arose in the process of transition to its market model, especially the information economy, which began to develop at the beginning of reforms. The other reasons of the obtained results include: the simplified idea of the mechanisms of market's functioning, the attempt to blindly follow the recommendations of

Western experts, who had only a general idea of the peculiarities of the economic environment where the reforms took place, and the disregard of these features on the part of the reformers themselves. The practice of quotas for executive positions in the process of determining the composition of the next government also did not contribute to the formation of a high quality and consistent economic policy.

The permanent crisis, the chronic lack of resources, the urgency of solving current problems, and frequent changes in the composition of the government certainly hampered the proper development of economic policy, its implementation and consistent execution, and the monitoring of its long-term effects. How effective is planning under such circumstances? Over the thirty years of the existence of the Ukrainian state, the head of government changed 21 times. Nineteen Prime Ministers of Ukraine held the office⁸. The period of real influence of Prime Minister on the economic processes was one year at best. Not to mention the leaders of the lower level, who were in direct charge of specific areas of work. Such frequent changes of the heads of government attest to the difficult operating conditions of the economy and the unsatisfactory solution of the problems it faces. This, in turn, forced the primary focus to be on solving current problems. The long-term results of the steps made by previous government were usually mixed with short-term results of current policies, which often provoked debate about who was really responsible for the faults.

The situation in which economic failures are attributed to the misguided actions of officials became systematically inevitable and predictable in such circumstances. Indeed, as a rule, a change of government was the result of a political force with an alternative view of economic development coming to power because of the unsatisfactory state of affairs, which required decisive changes. As a result, even forward-looking economic programs underwent significant changes. The unpredictability of the long-term effects of economic policy in these circumstances becomes quite logical, and sometimes even deliberate. After all, creating favorable conditions for a political rival who is going to replace you in power can hardly be part of politicians' plans.

It should also be borne in mind that while the reformers were guided by Western models of market economy established before the early 1990s, the information revolution was unfolding in Western countries. The late consideration of its potential and consequences, together with the reindustrialization in the Ukrainian way, led to a loss of competitive potential in high-tech industries, which were potentially capable of generating a significant share of value added. The result was the growth in the role and importance of agrarian sector, extractive industries and primary processing of natural resources. At the same time, informatization aggravated the contradictions in industrial activities and social relations and their new forms. Accordingly, the transition to market management was already in the beginning complicated by such a conflict.

⁸ Prime Minister of Ukraine. URL: https://uk.wikipedia.org/wiki/Прем'єр-міністр_України (access date – 18.05.2021).



The impact of culture on the formation of unintended consequences is the focus of D. Lal [13]. Such consequences are recognized as the result of a goal to be changed by the individual implicitly through the system of values and informal and formal rules of social interaction. The vast majority of them are laid down at the subconscious level. Studies of the institutional component of Ukraine's socio-economic development reveal the contradictory influence of pro-market and traditional communitarian features of national culture on the effectiveness of reforms. In the context of the topic of the present research - the unpredictable long-term consequences of Ukrainian reforms - we should also consider the impact of such a characteristic of national culture as the period, which serves as a reference point for members of a particular culture in their everyday behavior. G. Hofstede singles out short- or long-term alternative reference points (orientations). The results of a study carried out in accordance with G. Hofstede's methodology by Ukrainian scientists G. Pylypenko and N. Lytvynenko indicate their pronounced short-term nature (4.08 on the scale, where 0 means the priority of short-term orientation, and 100 - long-term orientation) [16, p. 151]. The instability of the economic environment, unpredictability of its development prospects, and high risks lead to a significant reduction in the time horizons of vital activities of Ukrainians. This can be evidenced by their comparison with G. Hofstede's⁹ data. The key importance in these circumstances is the reformers' ability of to find and use (as a starting point for reforms) the relevant features of national culture.

Types of unintended consequences

R. Merton identifies three types of "unintended consequences". The first includes those that, while remaining functional for the system, rely on latent, unconscious and unplanned factors. The second type includes dysfunctional consequences arising from latent dysfunctions. Finally, the third type includes unintended consequences that are insignificant for the system, and do not affect its condition in either functional or dysfunctional way [14, p. 105]. All three types of unpredictable consequences can be traced in the history of Ukrainian reforms.

The first one refers to a situation where success or failure is achieved - including through factors which were not taken into account in the planning process, but which have their effect as negative or positive externalities. This aspect is also being studied by Ukrainian researchers. [18]. The works of the Peruvian economist H. de Soto [19, 20] draws attention to the positive role and potential of the informal economy in the development of transitional economies, and unintended consequences in terms of traditional concepts of the shadow economy. The scientist's research forced a different perspective in explaining the genesis of the shadow economy. It is the bureaucratic organization of the legal sector that drives small and medium business out of it and creates obstacles to the

⁹ According to the data presented in Hofstede's own study, in terms of long-term orientation (86) Ukrainians yielded only to Confucian countries (South Korea - 100, Taiwan - 93, Japan - 88, China - 87), and our closest neighbors - Germany (83), Estonia and Belgium (82) [17, p. 255]. The permanent transformation crisis led to the formation of alternative Soviet mode of thinking in broad time categories.

development of competitive relations. An alternative institutional mechanism is formed in the non-legal sector that actively multiplies efficient forms of organization. The contradiction of the choice between spending on "obeying the law" and illegal activities is resolved in favor of the latter.

The reliance on informal rules helps economic players to better adapt to the rapidly changing situation, especially in times of crisis, when the law fails to respond to changes in the economic environment. Thus, according to the Ministry of Economy of Ukraine, the share of the shadow sector in 2020 was 31%. While the country's GDP fell by 5.4%, it increased by 3%. A similar picture could be observed in 2014. At that time, the shadow sector grew by 6% while GDP fell by 6.6% (Figure 2).

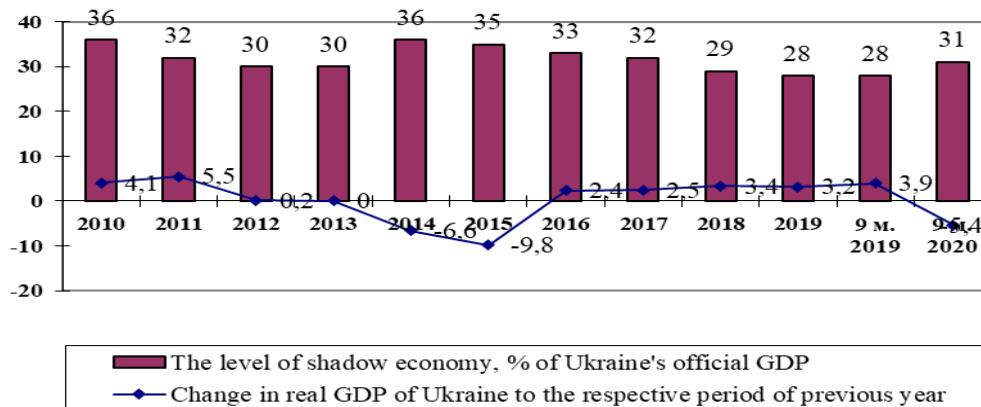


Figure 2. The dynamics of GDP and the level of shadow in Ukraine's economy (2010-2020)

Source: Shadow economy. Overall trends. January-September 2020. URL: <https://me.gov.ua> (access date - 04.06.2021)

H. de Soto focuses on the negative impact of the legal system in developing countries. It creates invisible obstacles to the active involvement of entrepreneurial initiative and economic resources of small businesses, like a "bell jar". H. de Soto borrows the idea of "bell jar" from F. Braudel [21, p. 248]. Wealth, excess of economic resources in the examples like Florence at the time of Lorenzo the Magnificent did not give any impetus to the development and expansion of efficient market (capitalist) relations. There is a striking parallel between the problems of the emergence of capitalism in Europe in the late Middle Ages and those faced by developing countries and transition economies. They appear to be equally related to the mechanisms of legalization of private property [20].

However, the underlying origins of the contradiction between the legal and illegal sectors of the economy remain unnoticed by H. de Soto. The shadow sector constitutes a significant share of the economy not only in developing countries and transition economies. The scholar draws attention to the developed economies, and ancient Mesopotamia and China, and medieval Europe. These preconditions are most clearly manifested in the unintended consequences of the clash of two traditions, which can be traced in the evolution of the European Western legal



system, and follow from the tools and mechanism for determining justice in social relations.

The Italian historian P. Prodi [22] studies this problem. The researcher's focus is on the clash between legal and moral norms of justice, the "law of morality" and the "morality of law". It is originated from a combination of parallel legal traditions - natural or Roman, universal or particular, divine or civil, canon law or codified law, and "jurisdiction of conscience" or "positive jurisdiction". The imbalance in legal practice between the alternative branches of the legal system, the predominance of "justice of law" over "law of justice" leads to the undermining of the basic principles and the very purpose of the legal system - achieving social justice¹⁰.

This is the source of problems in Ukraine's judicial system. Reference to the law or its absence turns into an instrument of justification of criminal actions or delaying court proceedings, and flourishing of legal nihilism, bribery, nepotism, and clientelism. Moreover, an excessive reliance on formal rules while ignoring the essence and purpose of the law becomes a threat to the very existence of the state. The situation is indicative with the annual delay - due to legal conflicts - in the introduction of a defense procurements, even in war conditions. As a result, deliveries of modern armaments to the army are delayed, defense enterprises are not financed in time, their workers do not receive salaries for months and qualified personnel are dismissed¹¹. In this context, it is worth remembering the experience of introduction of VAT in the 1990s. The legislator's interest in increasing budget revenues and ensuring fiscal discipline was accompanied by great changes in legislation, which quickly eliminated gaps and miscalculations in the relevant documents.

A rather wide and controversial range of variations of unintended consequences was brought about by the local government reform. A striking example can be seen in the consequences of the typical situation of day-to-day migration of the population of contiguous territorial communities. In cases where taxpaying enterprises are located on the territory of one community, while the bulk of the working staff resides on the territory of the neighboring community (a situation typical for suburban united territorial communities), significant

¹⁰ The statements of the French sociologist J. Ellul shows the problem of the unintended consequences of the one-dimensionality of the modern legal system, ignoring the "right to justice", the "moral right" for the sake of the "justice of law", the amoral "morality of law": "Law is essential to the life of society, but absolute reliance on law is pernicious because it completely denies the warmth, the flexibility, the fluidity of human relations, which are essential if the social body is to live (rather than to function)... It must be understood that the aim of law becomes not the establishment of justice, but the triumph of one over the other. By abandoning the flexibility of human relations, which could be represented through the rights of justice, we created a mechanism of human relations that does not ensure justice at all. The inhabitants of Rome noted: *summum jus, summa injuria* [supreme law - supreme injustice], the redundancy of law and legal revindication lead to a situation in which law becomes non-existent" (quoted from [22, p.10]).

Revendication (from Fr. *revendication* – claim) – in the context of J. Ellul's expression - excessive reliance on formalized legal rules.

¹¹ Downtime in defense system. Why the government order is delayed. URL:

<https://suspilne.media/142963-arena-konfrontacii-aka-rol-vidvoditsa-ukraini-u-bezpekovij-strategii-nato-u-cornomu-mori/> (access date – 18.05.2021)



imbalances arise in both communities in terms of financing social and infrastructure project needs.

Another illustrative example of unintended consequences is the requirement of NEURC Resolution No. 580 of 6.03.2020 on minimum gas consumption rates for households. In fact, households are being charged in the "take or pay" mode, even if you do not need to consume a certain amount of fuel. Due to Ukraine's dependence on an external supplier of "blue fuel", the scarcity of this resource and the frantic growth of its prices, in order to please the monopolists - private suppliers - the state regulator, instead of encouraging them to optimize their own expenses, approves regulations that put households before a choice: either pay for gas that is not consumed, or instead of saving the resource, which the state lacks, consume it, even though there is no need for this¹².

The dysfunctionality of the legal, political and economic mechanisms of social reproduction hinders the efficient use of the resources available to the economy. Let us discuss R. Merton's second type of formation of unintended consequences.

Privatization was seen as a key factor in the development of a socially oriented market economy. Its results largely laid the foundations of Ukraine's national economic system. Were the reformers' expectations fulfilled? The share of the state sector in the structure of the economy as of June 2020 was 11.9%. If the ultimate goal of privatization was denationalization, the result when Ukraine is one of the world's leaders in terms of minimization of the state sector, which is ahead of the countries with a developed market economy, can be considered a success. But can it ensure the social foundations of a new economic model? Rather the opposite is true. The belief that the state is unable to ensure effective management of property complexes and therefore they should be privatized, in a significant number of cases reminds the proverb "the guillotine is the best cure for a headache". World practice has developed a wide range of tools for effective management of state property, among which public-private partnerships should be highlighted [23, 24].

Miscalculations and unpredictable consequences of the policy of accelerated denationalization led to the formation of a stable oligarchic economic model in the country [25]. According to Yu. Kindzers`kyi, an underestimation of the impact of the applied methods, mechanisms of privatization, economic management system, the specifics of national mentality, different directions and inconsistency of reforming the components of the institution of property, and ignoring the obvious adverse circumstances that accompanied the privatization process, without creating motivation for self-development and mutually beneficial interaction among the subjects all played their roles. O. Baranovs`kyi and V. Sidenko noted that privatization "was accompanied by numerous deficiencies of conceptual, legal, organizational, methodological, economic, judicial, and informational nature, ... It

¹² Decision No 580 of 06.03.2020 on amendments to the Gas Distribution Systems Code / National Commission carrying out state regulation in the fields of energy and utilities. URL: <https://file:///C:/Users/ADMIN/Downloads/Постанова%20НКРЕКП%20№%20580%20від%2006.03.2020.pdf> (access date – 20.10.2021)



was often carried out by shady and often criminal methods, ... was not actually controlled by the state" [26, p. 4].

Another example of the dysfunctional and unpredictable effects of reforms whose premise goes far beyond the national economy and is based on the latent dysfunctions created by the introduction of ICTs is the emergence and rapid increase in e-crime [27, pp. 48-49].

The mechanisms of formation of unintended consequence

R. Merton includes self-realization of social beliefs, manifestation of the results of latent functions and self-destructive belief as a variety of mechanisms for the formation of unintended consequences [14, pp. 182-185].

The first one involves a situation in which a mistaken belief in the existence of certain circumstances forms its own confirmation. This is how the "bandwagon effect"¹³ works. Inflation expectations in the 1990s led to attempts by the population to exchange the coupons received as quickly as possible for certain goods. This accelerated the rate of money turnover in the economy, which was tantamount to an increase in the money supply. In times of crisis, an increased demand for dollars or euros leads to a depreciation of the national currency. Mistrust in state structures gives rise to doubts about the motives behind their actions, a critical attitude to all kinds of government programs and a readiness to ignore them. The situation of public confidence in the authorities in Ukraine contributes to this kind of mechanism of unpredictable consequences. Thus, according to a Razumkov Center survey (February 2020), the majority of respondents expressed distrust in the state apparatus (77%), judicial system (76%), commercial banks (71.5%), local courts (71%), prosecutors (68%), the Verkhovna Rada (65%), the government of Ukraine (64.5%), National Bank of Ukraine (60%) and trade unions (51%). An example of the expected unintended consequence in these circumstances is the attitude of the population towards government vaccination programs during the COVID 2019 epidemic. The effectiveness of government action in the context of total distrust of the country's population is called into question even with the best of intentions and ways of execution.

In the second case, the subject gets a result that was not determined by the objective of the activity due to the neglect of certain factors that affect the events, but remain unnoticed. Coming back to the example of Ukrainian privatization, it should be recalled that one of the reasons to justify it was the need to increase the efficiency of the use of productive assets accumulated by society. The reformers wanted to ensure private ownership. The result exceeded expectations: the private owner did ensure the most efficient use of private property, but only in terms of his own interests and with complete disregard for the social significance of the privatized property.

Everything started at the stage of privatization for next to nothing, when the future owner minimized the costs of acquiring the denationalized property. The sale of state-owned stakes in six leading energy companies of Ukraine by SCM Holding in 2011-2012 at a price that was only three times higher than the cost of the owner's London flat [25, p. 25]. Subsequently, the new owner "optimized" the

¹³ See e.g.: [27].

company's efficiency, minimizing investments in its development, getting rid of the inherited social sphere from the previous system of social protection of the company's employees, and reducing the staff. An even more "effective" use of the property privatized for next to nothing was the sale of equipment for scrap metal and lease out of vacated premises.

The prospects for the use of privatized enterprises were affected by a number of objective factors, usually ignored by privatization ideologists. Here are some of them: institutional uncertainty in the transition from planned to market economy, inflation, non-payment crisis, shrinking domestic market, high risks of doing business, increased tax pressure on legal businesses, inability to attract credit resources at a moderate rate, unsatisfactory investment climate, and increased competition with foreign producers. In these conditions, intermediary activities proved to be a much more efficient way of using the available resource than organizing the production process.

However, Ukraine should not be seen as an exception in this context. As far back as in the 70s of the twentieth century, Professor S. Melman of Columbia University investigated the policy of American corporations aimed at maximizing profits, regardless of the results of the production process [29]. On the one hand, the introduction of information technologies, platformization, virtualization of the bulk of assets, and availability of significant financial and human resources provide high dynamism, institutional adaptability, and adaptability to the external environment. On the other hand, they provide additional opportunities for big business to lobby its own interests at the highest levels.

Moreover, as it is estimated by Acer Group CEO Stan Shih on the example of computer technology development, among the participants of the value creation chain, profitability of those directly involved in the production process is the lowest compared to those engaged at the initial (design, organization and financing) and the final (sales and servicing) stages of value creation. The further from the central stage of product creation is a participant in the chain, the greater is the share of added value that he can get [30, p. 202].

Resource curse¹⁴ and the Dutch disease¹⁵ can be seen as intermediate between the first and second kind of mechanisms of unintended consequences. Both are paradoxical in nature. Economic dysfunction occurs precisely because of the presence of significant economic drivers capable of generating economic success. Both phenomena took place in Ukraine during the reform [31].

As far as the Resource curse is concerned, the key factor (as Ukraine is second after Russia among European countries in terms of natural resources) was the capital assets that remained after the collapse of the USSR. An unintended consequence of the privatization model was the redistribution of state property for rent-seeking purposes. Yu. Kindzers'kyi includes natural, monopoly, tariff,

¹⁴ *The Resource curse* is the stagnation of economic development in countries that produce and export significant quantities of oil or other types of natural resources, as a result of the interests of society's ruling and business elites being focused on maximizing their own rent income.

¹⁵ *The Dutch disease* is the diversion of investment flows and economic development from high-tech industries to capital-intensive industries, which are extracted because of the latter's higher rate of return.



redistributive and land rents among the sources of income that bring quick and easy money and become the basis for enrichment of the oligarchy and the state bureaucracy controlled by it [25, 29, 30].

In turn, the Dutch disease effect manifested itself in the restructuring of Ukraine's economy towards the priority of the agricultural sector, with giant holdings at its core. The ability to form an investment resource sufficient for the transition to industrialized and export-oriented agricultural production is combined with a focus on the manufacture of low value-added product. A similar behavior is characteristic for the companies engaged in exporting iron ore, other minerals and primary processing products. An alternative could be the sector of small and medium-sized enterprises, the break-even point of which objectively determines the necessity to focus on the production of craft high-quality products with impressive added value. However, its development is hindered by a number of institutional and financial problems, as well as insufficient support from the state in entering foreign markets.

R. Merton draws the origins of the study of "self-destructive, suicidal prediction" from a work of the 19th century English logician and statistician J. Venn. The latter tries to describe the situation in which prophets since John's times found themselves, when they declared "suicidal prophecies", that is, those based on a holistic consideration of the conditions and causes of the situation, except for those resulting from the consequences of the prophecies themselves [32, p. 262].

The mechanisms of the self-destructive action of "suicidal prophecies" are currently under active study¹⁶. Economists took up the findings of research on responses to certain predictions. The focus is on widespread examples of the mechanism of action of self-destructive social faith, when anticipation becomes a reason to prevent the occurrence of a certain event. One should remember the prediction made by Mikhail Gorbachev, the initiator of "perestroika", that the Soviet people "would live badly but not for a long time" in the conditions of the rapid construction of a successful market economy. Massive attempts of people to save for a "rainy day" when there is total scarcity of supplies only complicated attempts to carry out reforms. In turn, the policy of "shock therapy" provoked an accelerated destruction of the previous institutional system. However, the reformers had neither time nor a clear and effective program for the formation of alternatives [35]. The shock remained without therapy.

Quite typical in the history of Ukrainian reforms is the situation in which confidence in the victory of a party or individual in power causes relaxation, which leads to defeat. Self-confidence, based on a mistaken belief, generates a tendency to look for confirmation in the situation, even if such confirmation is wrong.

On the other hand, the bandwagon effect can cause a crisis situation even when there is no objective reason for it. Confidence in government policies, or its absence, can be a precondition for both the realization (the example of expected inflation) and the prevention of the realization of a certain prediction (due to the precautionary monetary policy measures of the government). They are capable of generating a reduction or increase in economic activity, and attempts to shift

¹⁶ See, for example, the works of Nobel Prize winners in economics R. Thaler [33] and D. Kahneman [34].

available resources and businesses to countries with more stable rules and predictable economic conditions or to maintain investment activity in the country.

The complex nature of the mechanisms of unpredictable effects was most evident at the start of the reforms. The attempt to curb inflation, which was inherited from the USSR and became much stronger at the initial stage of reforms (2000% in 1992¹⁷ and 101-55% in 1993¹⁸), through a tough monetary policy, resulted in a decline in effective demand for the products of domestic manufacturers. The problems of the latter were exacerbated by the complication, through the establishment of customs barriers, of the ties with production cooperation partners from other former Soviet republics and, at the same time, by the opening of national markets to foreign competitors from developed Western countries. Inflation and the non-payment crisis led to the depreciation and washout of working capital of companies. The latter lost the resource they needed to restructure their activities in the transition from planned to market economy. Production activity began to wind down.

The above tendency acquired a chain character. The reduced demand from final consumers led to reduced demand for the products of intermediate producers, and suppliers of raw materials and labor. The latter, in turn, combined with the policy of wage restraint, led to a further reduction in effective demand. This led to further worsening of problems with state budget revenues and increased tax pressure on businesses. The reaction of the latter, with a view to optimizing the respective expenditure items, was an increase in the creation of "shell companies", through which the revenues were withdrawn. This paved the way for a systematic redistribution of the results of production activity and a growing imbalance in the social sphere. The rapid enrichment of persons involved in the management of companies inherited from the Soviet Union was combined with the spread of wage arrears, shorter working hours, staff reductions, and mass layoffs. This initiated the negative process of the reduction of production capacities.

The triggering of these mechanisms becomes an unintended consequence of certain actions, decisions or beliefs. In one case, one is based on non-existing circumstances mistakenly assuming that they exist; in other cases, unintended consequences result from ignoring certain circumstances that exist in reality, which ultimately leads to an outcome that was not anticipated at all.

Testing economic innovations based on information platforms as a tool to minimize unpredictable effects

The slogan of the initiators of economic reforms in China, "Cross the river carefully, keeping a vigilant eye on the stones at the bottom", contains an answer to questions about the ways to minimize the unpredictable consequences that prevented the successful implementation of intentions cherished by Ukrainian

¹⁷ Inflation in Ukraine in 1992. URL: <https://www.statbureau.org/ru/ukraine/inflation/1992#:~:text=B%201992%20%20%20уровень%20инфляции,меньше%2C%20чем%20в%20следующем%201993> (access date – 18.05.2021).

¹⁸ Inflation in Ukraine in 1993 URL: <https://www.statbureau.org/ru/ukraine/inflation/1993#:~:text=B%201993%20%20%20уровень%20инфляции,Февр.> (access date – 18.05.2021).



reformers. The Confucian logic of the sage, adapting to the situation and focusing on maximizing the development potential contained within the situation, demonstrated advantages over the inherent Western logic of the hero aimed at transforming the world around him [36]. That was embodied in the active use of economic experiments to preliminary assess the effectiveness of proposed innovations. And only those that confirmed their effectiveness were spread throughout the country [37, p. 125-164]. In this context, the first word in the name "Special Economic Zone" is of key importance. Because it was on their basis that various options of economic reforms were tested. Subsequently, only those that demonstrated higher efficiency and were improved during the experiment were introduced into general practice.

The model of innovative development demonstrated its effectiveness when the initiator of an innovation, a legislative act or an organizational innovation, gets the opportunity to test it, then to finalize and improve it at the local level, so that the innovation gets the right to be widely implemented only after proving its effectiveness. Public institutions, legal rules, social insurance schemes, investment models, educational programs, and cultural projects, prior to being introduced into public life, must undergo preliminary practical testing to confirm the effectiveness and efficiency of the mechanism of their functioning. The practice of compulsory pre-testing at the local level makes it possible to avoid the situation when certain interest groups lobby for projects involving various kinds of rent incomes at the expense of society. If alternatives exist - and this situation is typical for the legislative creativity of the Ukrainian Parliament -, their preliminary testing at the local level would allow in advance to identify their social effectiveness, and the weaknesses of each of them in practice, in order to prevent losses, and to work out and improve the mechanisms of their implementation and functioning. Participation of initiators in the experiment under the conditions of competition between alternatives could be the best incentive for further preliminary improvement of the proposed project.

The creation of a national information platform (IP) as a centralized organizational and methodological basis for such pilot testing will unify the algorithms of their organization, conduct, current monitoring and correction, assessment of results, identification and improvement of mechanisms of action and further implementation. The use of IP in the process of the experiment provides the possibility of interactive communication between the participants, and rapid identification of weaknesses and promising areas of improvement of social projects planned for implementation. The model of network horizontal interaction in the framework of IP provides proper conditions for dissemination of the situation of development as constant improvement of joint activity of business entities based on the interaction through interactive data exchange.

Conclusions

A characteristic feature of Ukrainian reforms is a wide range of unintended consequences - unexpected, mostly negative results of initiated transformations. As unpredictable consequences are understood unpredictable side effects of actions performed by the initiators, organizers and implementers of Ukrainian reforms, which were not planned, but had a decisive impact on the condition of the national

economy. The study of their origins and ways of prevention is of particular importance.

The phenomenon of unintended consequences of human actions together with "invisible hand [of Providence/market]" that determined social life, attract the attention of scholars. At the same time, the restrained attitude of economists to this topic is due to its transcendent nature, and excessive complexity of the factors that influence the course of events.

The sources of unintended consequences of the Ukrainian reforms include: the focus on immediate results without taking into account the long-term consequences of the measures introduced; mistakes in analyzing the problems faced by the economy; lack of competence of the organizers and executors, which led to the failure to fully and properly understand the situation, and to the inability to adequately forecast its development; ignoring the impact of basic values of national culture on the effectiveness of the proposed measures; and the impact of the published forecasts on the motivation and logic of the behavior of economic entities to which they concerned. The types of unintended consequences that can be observed in the reform process include those that are functional for the vitality of the economy but are based on factors, which were latent, unclear to initiators and unplanned by them; those that arise from latent dysfunctions; those that are not essential to the system, and neither functionally nor dysfunctionally influence its condition. The mechanisms for the formation of unintended consequences are based on the acquisition of latent functions of key importance, self-realization of social beliefs and implementation of self-destructive beliefs.

The experience of successful reforms in China demonstrates the leading role of pre-testing practices in minimizing the occurrence of unpredictable effects of economic transformations and refining alternatives at the local level.

The use of digital platforms creates significant opportunities to improve the efficiency of economic experimentation in the pre-testing of proposed measures.

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НЕПЕРЕДБАЧУВАНІ НАСЛІДКИ І ПРОБЛЕМА ЗАБЕЗПЕЧЕННЯ СТАЛОГО РОЗВИТКУ

Розглянуто джерела виникнення, типи, механізми формування та інструменти мінімізації непередбачуваних наслідків економічних реформ в Україні. Як непередбачувані розуміються ненавмисні, побічні, опосередковані, неймовірні

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наслідки дій ініціаторів, організаторів та виконавців українських реформ, які, за їхніми планами не мали статися, але сталися і тепер визначальним чином впливають на стан національної економіки. Методологічна база дослідження включає аналіз історико-генетичний, порівняльний, статистичний, графічний. Витоки дослідження так званих непередбачуваних наслідків дій людини прослідковуються у працях Н. Макіавеллі, Дж.Б. Віко, Б. Мандевіля, А. Фергюсона, У. Петті, А. Сміта, Ж.Б. Сея, К. Маркса, К. Менгера, В. Парето, М. Вебера, Ф. Хайєка, Р. Мертона.

До передумов виникнення непередбачуваних наслідків економічних реформ в Україні віднесено: недостатню компетентність ініціаторів та організаторів; помилки аналізу проблем унаслідок ігнорування специфіки поточної ситуації; спрямованість на досягнення негайного результату, що не дає можливості прорахувати довгострокові наслідки заходів, які упроваджуються задля реформ; недооцінка ролі базових цінностей національної культури та впливу на поведінку економічних суб'єктів оприлюднення передбачень. До типів непередбачуваних наслідків, що вплинули на перебіг економічних реформ в Україні, віднесено ті, які, хоча і залишаються для системи функціональними, проте викликані латентними, не усвідомлюваними та не планованими чинниками, що виникають на основі латентних дисфункцій. До різновидів механізмів формування ненавмисних наслідків економічних реформ в Україні віднесено прояв результатів латентних функцій, самореалізацію соціальних переконань та саморуйнівні переконання.

Обґрунтовано, що практика обов'язкової попередньої апробації на локальному рівні на базі відповідних інформаційних платформ забезпечує можливість завчасного усунення недоліків, доопрацювання і вдосконалення впроваджуваних заходів, визначення їх соціальної ефективності, вибору кращої альтернативи. Практика проведення попередніх економічних експериментів дозволяє уникнути ситуацій, коли у результаті реформи окремі групи отримують доступ до різного роду рентних доходів за рахунок суспільства²⁰.

Ключові слова: економічні реформи, інформаційні (цифрові) платформи, непередбачувані наслідки, стійкий розвиток, цифрова економіка

²⁰ У публікації представлено результати дослідження, виконаного в рамках наукового проекту "Економічні суперечності глобалізації та локалізації: форми руху і розв'язання" (№ державної реєстрації 0120U105800).