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COOPERATIVE DIGITAL PLATFORMS IN THE RENEWABLE ENERGY SECTOR

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Abstract

Purpose. The study identifies the effects of the small local networks of renewable energy generation on the economy. It defines the potential and necessary conditions to establish value creation networks, or distributed production systems, based on participant cooperation.

Design. The paper examines increasing opportunities to guarantee sustainable economic development. At the same time, the challenges of digital technologies also create serious threats to the community's social cohesion. The monopolization of digital platform marketplaces and the emergence of "platform capitalism" follow the growth of the platform business model. The proprietors of the core of digital platforms own disproportionate market dominance.

Findings. The emergence of "platform capitalism" and "platform cooperativism" models discussed in the contingent upon certain socio-cultural conditions. It has proven that cooperative digital platforms are particularly vital during the full-scale war of Russia

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against Ukraine and the post-war reconstruction period.

Originality. A proposed cooperative digital platform-based model develops a microgrid ecosystem to produce renewable energy. Digital platform cooperatives exemplified the benefits of geographic or specialty localization (specialization) with the activities' globalization. Digital platforms allow united independent developers of scientific and technical innovations and technological knowledge, as well as owners of material funds and financial resources.

Keywords: platform capitalism, platform cooperativism, renewable energy

JEL Codes: F64, P18, Q01.

Introduction

The fundamental process of modernity is the transition from the industrial market to the information-network economy. The transition process goes through three natural stages: information-analog, information-digital, and neural network (Hrytsenko, 2021). Now society is at the informational and digital stage. Digitization has a significant impact on the transformation of all components of life. The introduction of digital technologies ensures an increase in labor productivity, an expansion of the assortment, and an increase in the quality of goods and services. A radical transformation of organizational forms of social interaction is taking place. At the same time, the initial euphoria about the potential of the "sharing economy" quickly changed to pessimism about the social consequences of universal digitalization. A vivid example is the evolution of the policy of the leadership of the People's Republic of China regarding the development of the sharing economy (McKnight et al, 2023). The capacity of digital platforms to combine users from industries and regions into a single manufacturing process. It has a substantial influence on their competitiveness. As a result, fundamentally new goods emerge that may mix and replace the activities of prior administrators, replacing them, and international trade is regionalized and manufacturing is globalized inside value networks (Nosova & Lypov, 2021). The perception of digital platforms as a means of strengthening social interaction quickly changed with their role recognition in increasing the threats of growing social inequality in society.

Digital platforms play a basic role in the dominant organizational form of doing business. In this way, they created the basis for statements about the "platform capitalism" model. the formation. Concentrating the functions of data accumulation, analysis, control, and redistribution turns it into a key profit-making tool in the era of digitalization. The network form of business organization opens the way for many productivity-enhancing effects (Lypov, 2021). At the same time, actual absolutization of the interests of digital platform owners is taking place. They concentrate the management of external economic resources in their hands. This leads to further deepening of social inequality in society. According to

McKinsey Work, the emerging model is much worse than the traditional idea of capitalism (McKinsey, 2019).

The development of capitalism on the technological basis of platforms significantly changes socio-economic relations, bringing them beyond the boundaries of traditional ideas about capitalism. But this is not socialism. We are talking about something "third", according to G.V. Kolodko (Heyets & Grytsenko, 2019). An alternative to "platform capitalism" in the context of modern information and digital transformations can be defined as "platform cooperativism" - a model of interaction based on the digital platform of a group of independent producers of individual components of goods and services that form a distributed system of production within the network (chain) of the creation of added value. The review of the organizational principles of production activity is based on the use of the possibilities of combining the functions of ownership, management, and participation in the production process provided by the digital platforms on the part of all its participants. This ensures the preservation of the social foundations of the system of social distribution of labor.

The development of the "platform cooperativism" model is especially relevant in the context of military operations and solving the problems of post-war recovery of Ukraine's economy. The loss of a significant part of human, material, and capital resources makes it necessary to find ways of more active involvement and effective use of existing funds. Digital platforms unite independent developers of scientific and technical innovations and technological knowledge, and owners of material funds and financial resources. They remain equal participants in the production process. The possibility of creating "distributed production structures" based on cooperative contact emerges. The prerequisites for success are explained by compliance with the group-cooperative nature of values characteristic of national culture.

The purpose of the proposed work is to reveal on the example of small local networks of renewable energy generation (LNREs) the potential of creating distributed production systems - networks (chains) of value creation based on ensuring cooperative relations between participants.

Objectives of the study are the following:

justification of the relevance of supporting the development of platform cooperatives as an alternative to platform capitalism.

Determination of the historical prerequisites for the evolution of the social content of the production process during the industrial revolutions.

Identification of the socio-cultural basis of differentiation of market capitalization models of "platform capitalism", "platform cooperativism" and "state-controlled platform capitalism."

Investigation based on the analysis of the role position of the motivation of the cooperative participants of the digital platforms.

Proposal of the interaction mechanism of the cooperative participants of the digital platforms on the example of a microgrid of renewable energy generation.

The novelty of the approach is an analysis of digitalization's influence on the process of the third industrial revolution. There was an improvement to the system of factors that determined how the social character of the production process changed from the first to the third industrial revolution. The requirements of the global division of labor, peculiarities of organizational structures, ownership distribution patterns of means of production, activity coordination, instruments for ensuring interaction and management, the impetus behind the activity, the significance of knowledge, and geographic location are not a substantial number.

The system of determinants supplemented the evolution of the social content of the production process from the first to the third industrial revolution. These include the prerequisites of the global division of labor, peculiarities of organizational forms, forms of distribution of ownership of means of production, coordination of activities, tools for ensuring interaction and management, the driving force of activity, the role of knowledge, and spatial location.

The models of "platform capitalism", "platform cooperativism" and "state-controlled platform capitalism" substantiated the individualistic, corporatist, and communitarian principles of the dominant cultures of the respective regions on the formation of the diverse behavior features. The paper analyzed the peculiarities of ownership relations, management organization, financing, business models, organizational structure, scale, types of market structures, the nature of data use, customers' relationships, and economic value.

The proposed model of motivational factors for the interaction of participants of the corporate platforms' cooperative developed. It defines the role position, current needs, long-term goals, non-financial benefits, interest in attracting equity capital, peculiarities, and expected results.

The mechanism proposed for the interaction between the participants of cooperatives of the corporate platforms - microgrid of renewable energy generation.

1. Literature review

The publication of N. Srnicek's research "Platform Capitalism" drew attention to the fundamental changes generated by the active spread of the platform form of business processes organization (Srnicek, 2017). At the center of the attention of scientists are ambiguous social consequences of the monopolization of power by digital platforms (Boyer, 2022). The task of finding alternative forms of business organization updated. Researchers investigate the potential study of a cooperative form interaction (Solidarity as a business model, 2017). Attention is focused on the positive influence of joint ownership and management on the formation of solidaristic principles of economic activity (Scholz, 2016), the mechanisms of the formation of cooperative interaction on digital platforms (Andreotti al, 2020), the ways of combining individual and public interests (Arcidiacono & Pais, 2018), the cultural prerequisites for ensuring the success of the development of the cooperative

movement based on the corporate form of interaction (Arcidiacono & Pais, 2020). The need for a multidisciplinary approach in collaborative economy research is applied (*Multidisciplinary Framework on Commons Collaborative Economy*, 2017). The origins, grounds, and prospects of the success of the development of cooperative interaction in the cooperative platform ecosystems in Ukraine are evidenced by the historical experience of the development of the cooperative movement, reflected in the works of such scientists as M. Tugan-Baranovsky (Tugan-Baranovsky, 1918), V. Marochko (Marochko, 1995), O. Shmorgun (Shmorgun, 2010).

The field of small renewable energy generation has significant potential for the development of cooperative structures based on the cooperative' platform. Its development is the result of a complementary combination of achievements in energy generation technologies, electricity transmission, development of digital technologies, overcoming environmental challenges, and ensuring sustainable development. The complex nature of the tasks that arise in the phase of forming local energy networks leads to the emergence of a wide range of research aimed at solving individual components of the task of forming local networks of renewable energy generation.

Among them are the definition of the potential of the development of renewable energy generation (Shmorgun, 2010), and the role of the central government in local networks of renewable energy generation in their formation (Hossain, 2016). Some scientists examined the mechanisms of market interaction within local networks of renewable energy generation (Kiesling, 2016), and the development of the green economy (Henninger & Mashatan, 2022). A special place among the problems under investigation is the issue of ensuring cooperative interaction between the participants of local networks of renewable energy generation (Mensin et al, 2022), the presume of the solar energy generation market (Lo Prete & Hobbs, 2016; Parag & Sovacool, 2016), and models of combining the functions of the producer and consumer of electricity (Schill, 2017).

1.1. Platformization as a component of the industrial revolution

The introduction of digital technologies leads to the unfolding of fundamental transformations, the depth of which is quite comparable to the first and second industrial revolutions (See Table 1). The first industrial revolution in the international division of labor resulted in the possibility of the global movement of goods.

The second industrial revolution created the need and opened the way for mass international labor migration. In turn, because of the third industrial revolution, the key to the division of labor in global markets is the possibility of duplicating individual functions of product production within the network of value creation based on digitization. Digital data is becoming a major economic resource.

Table 1. Industrial revolutions and changes in the social context of the production process *

Category/era	The First Industrial Revolution	The Second Industrial Revolution	The Third Industrial Revolution
The premise of the global division of labor	Movement of commodities	Movement of people	Movement of production data
Organizational form	Factory	Corporation	Digital platform
Ownership of means of production	Private, concentrated	Distributed ownership of the combined funds of production	Distributed ownership of distributed funds
Coordinator	The invisible hand of the market	Control hand visible	Digital platform hand
Interaction tool	Direct economic coercion	Hierarchy	Chain
Management	Entrepreneurship	Collective management body	The core of the platform ecosystem
Driving force	The interest of the entrepreneur-owner	Execution of the command	The performer's interest
Knowledge	Personal knowledge of performers	Knowledge of physical capital	Knowledge as social capital
Spatial coverage	Local	National and international	Global
Theoretical concepts	The general theory of equilibrium	Transaction costs, economics, and institutional economics	Two-sided markets, network theory, and complex systems

Compiled by the authors based on (Energy Prosumers in Europe citizen participation in the energy transition, 2022; Baldwin, 2016).

The "digital hand of platforms" replaces the "visible hand of the hierarchy of management structures" and the "invisible hand of the market". Network interaction of independent participants in the production process creates the possibility of more efficient use of production resources. The platformization of production systems, the creation of digital duplicates of the production process, and the introduction of 3D printing technologies ensure the transition from chains to networks of added-value, distributed production systems (Energy Prosumers in Europe, 2022). The possibility of pursuing a personal interest in the conditions of network interaction within the framework of a distributed production system unleashes the initiative of participants. The digital platform core coordinates their activity. A participant in the cooperative platform ecosystem gets the opportunity to

function as a prosumer (a combination of the functions of a consumer and a producer of a product or service).

1.2. Socio-cultural prerequisites of platformization models

The unreserved dominance of the global markets by the digital platforms representing the US (predominance of individualistic values), the absence of the digital platforms of China (communitarian culture) and the European Union (corporatism) can serve as an important indication of the influence of culture on the commercial success of "platform capitalism". According to the scale of the market, the European Union is in no way inferior, and in some cases even surpasses its more successful rivals. At the same time, the progress of corporations representing the People's Republic of China slowed significantly after the country's government revised its policy on digital giants (McKnight et al, 2023). The monopolization of digital markets causes an awareness of the negative social consequences on society. In turn, the European Union focuses attention on the formation of the legal field of their functioning. The social component of digital businesses is a priority element. Digitalization of the corporate and cooperative traditions of European culture ensures the creation of favorable conditions. They apply it as tools for uniting and coordinating joint efforts in solving certain tasks. The platformization concept contributes to the restoration of these traditions. Dispersion of ownership rights to distributed production funds in distributed production systems significantly complicates the distribution of authority in the digital platform ecosystem. In the case of "platform capitalism", such an organizer is an entrepreneur who controls the core of the digital platform. It aims at obtaining its benefit based on the use of the potential of the participants of the digital platform ecosystem. An alternative option - the model of "platform cooperativism" involves the initiation by potential participants of an association based on the digital platform. The participants of its ecosystem control from the digital platform's core.

Table 2. Market capitalization growth of leading corporations by business areas and countries of origin (March 2023 / March 2009)

Company name	Capitalization (billion dollars)		Changes, %, %	Sector	Country
	2023 p.	2009 p.			
Apple INC	2 609	94	2 775	Information Technology	USA
Microsoft Corporation	2 146	163	1 316	Information Technology	USA
Saudi Arabian Oil Company	1 893	25	7 572	Energy	SA

Alphabet INC	1 330	110	1 209	Communication Services	USA
Amazon.Com INC	1 058	31	3 413	Retail	USA
NVIDIA Corporation	685	5	1 316	Information Technology	USA
Berkshire Hathaway Inc.	676	134	504	Finance	USA
Tesla INC	659	2*	32 950	Production	USA
Meta Platforms	550	63**	873	Communication Services	USA
Visa	464	47	987	Finance	USA

**On 29.06.2010.*

*** At the end of 2012*

Source: Conducted on the data of (Global Top 100 companies, 2023; Global Top 100 companies, 2017; Market cap history of NVIDIA, 2023).

Production cooperation based on the cooperative platform, as an intermediary between private and state forms of entrepreneurship, ensures the activation of personal interest in achieving the social components of production. A participant in the production process not only makes management decisions within the limits of his direct competence and competence but also gets the right to influence the policy of the digital platform. Table 3 presents the comparative characteristics of the features of the cooperative platform models, which are formed based on the dominance of individualistic (USA), cooperative (European Union), and communitarian (communitarian) cultures. These differences lead to the emergence of models of "platform capitalism", "platform cooperativism" and "state-controlled platform capitalism".

Methodology

A combination of specialized and general scientific methods, data analysis, network value creation, and interdisciplinary approach used in the research. The monopolization of digital platform marketplaces and the emergence of "platform capitalism" follow the growth of the platform business model. The proprietors of the core of digital platforms own disproportionate market dominance. The set of tools for influencing the behavior of customers is getting stronger. The core of digital platform commercialization turns it into a vehicle for achieving financial success. Under these circumstances, the interests of actual producers of goods and services participants in the digital platform's ecosystem become tertiary and derivative. The degree of social inequities in society is rising.

Results

In the case of the European Union, efficiency depends on returning to the principle of corporatism characteristic of European culture. At the same time, digital technologies open the way to strengthening group-cooperative value orientations. According to them, a person perceives himself as a part of the universe and social order. "Everyone must find his role in it, voluntarily submit himself to higher goals, fulfill his duties, and realize his purpose through cooperative interaction with others. Harmonization of public and individual interest achieved by democratizing the adoption of socially important decisions" (Hawrylyshyn, 1980). Creating technology platforms, new values, and benefits, and providing virtual services suggested strong international collaboration among nations to obtain new opportunities to use digital technologies. The three main pillars of digital transformation are increased state spending on R&D, IT services extension to all economic sectors, and infrastructure development for the digital economy (Nosova et al, 2020). Active "platformization" and the advent of information and communication technologies provide opportunities to increase the engagement of users in digital platform ecosystems in the realization of these ideals. At the level of enterprises, there is a return to the form of corporation-cooperative, characteristic of medieval Europe. The cooperative spirit is getting a second wind (Scholz, 2016; Arcidiacono & Pais, 2020). The revived corporation model determines the relationship between the owners and the management decision-making system. Interest in cooperation is the complicity model (Andreotti et al, 2020), and collaboration (Arcidiacono & Pais, 2018) between participants of the digital platform ecosystem is growing (Parag & Sovacool, 2016).

The digital platform is the common property of ecosystem participants. All of them get the opportunity to participate in management. Efficiency indicators estimate the functional specialization and reliance on the professional competencies of the initiator of the management decision. Investments of members of the cooperative are the leading source of financing. Membership in a cooperative is a prerequisite for formation and a tool for achieving common goals. The reverse side is the limitation of the scale of activity, localization by spatial coverage, or the specificity of the product of joint activity. At the same time, the opened way suggested spatial niche glocalization (a variant of in-depth specialization by removing spatial restrictions on the involvement of participants in the value creation network). The presence of common goals does not exclude the possibility of competitive relations between participants. The data is the common property of all members of the cooperative. An ecosystem can have a two-loop character. The members of the cooperative created the first contour. The second contour is formed by potential consumers who are not cooperative members.

A key component of ensuring the success of the cooperative's digital platform is the combination of several role functions by their members. They combine the roles of owners of production assets and the platform itself, its managers, producers, employees, consumers, participants, and managers of the value creation network (distributed production

system), and members of the local community (in the case of its spatial localization). Each of these roles provides specific conditions for inclusion in the cooperative digital platform, short-term and long-term expectations, and goals (Table 4). Their comprehensive consideration is of primary importance to ensure success.

Table 4. Factors of cooperative interaction on the digital platform by role position of the participant

The role of participants	Current needs	Long-term goals	Non-financial benefits	Attracting own capital	Expected result
Owner	Quick response to changes	Capital investment	Ability to control risks	Material, financial, knowledge	Profit on capital, satisfaction of own needs
Consumer	Control of product location and price	Price guarantee and availability of special goods and services	Strengthening positions as a consumer	Social	Stable and high-quality provision of consumer needs
Producer	Coverage of production costs	Risk reduction, income stability, market development	Knowledge of production, specialized product	Material, financial, cognitive, social	Predictability of the sales market
Employee	Reliable place of work, fair salary	Security, respect, paid work, stability	Knowledge of production, specific work skills	Professional knowledge and skills, social	Workplace stability
A member of the value creation network	Use of production facilities	Expansion of the sales market	The possibility of diversification of production	Material, financial, cognitive, social	Expansion and stability of product sales markets
A member of the local community	Ensuring the needs of the community	Successful local economy	Social development of the community	Social, financial, and material.	Meeting a certain need of the community

Conducted on the Solidarity as a Business Model, 2017.

Peculiarities of the evolution of Ukrainian business culture led to a contradictory combination of elements of individualism and communitarianism. This facilitates integration into the European Union economy based on the cooperativism traditions. There is a task

of considering the process of strategy development for the growth of the national economy and the potential advantages and limitations imposed on the formation of a business model of platform cooperativism.

The universality of the central processing unit as an organizational form of conducting business opens significant opportunities for its use in all spheres of economic activity. It is worth noting that digital platform cooperatives are created both on a commercial basis and as non-commercial organizations. The significant scientific, technical, and educational potential is preserved in Ukraine. In these conditions, the task of forming a state policy of stimulating the innovative activity of cooperatives' digital platforms aimed at revitalizing the life of local communities, searching for and creative commercial use of opportunities. It actualizes in the process of digitalization. In addition, the combination of various roles by the participants of the cooperative digital platform is an important and effective policy tool for activating the formation of human capital (Libanova et al, 2020) (See Table 4).

Thrifty (sharing) platforms have significant development potential as cooperatives' digital platforms. An example can be cooperative digital platforms of joint lending, use of cars, joint purchases, childcare, and social support. At the level of local communities, there is a significant role digital platform in the formation of civil society. The communication cooperatives' digital platform can inform residents about notable events in the life of the community, join in their efforts to solve current problems, and jointly celebrate major events in the life of the community. Of particular interest, there are innovation-investment cooperatives' digital platforms. These cooperatives were created to facilitate the unification of potential investors and participants in the process of introducing modern technologies, and products, and the development of new markets, methods, and areas of application of already-known products. The development of the "Industry 4.0" and "Industry 5.0" models opens prospects for the creation of production cooperatives' digital platforms. They unite the owners of innovative solutions capable of providing high-tech niche specialization in the production of goods and services in demand on global markets.

Support for the development of the cooperative movement based on platformization takes on special importance in the context of overcoming the devastating social consequences of Russia's military aggression against Ukraine during the post-war reconstruction. In this context, it is worthwhile because of the universality of digital platforms. The wide range of roles played by the members of the cooperative - the digital platform can serve as a powerful tool for minimizing societal threats generated by the hybrid nature of hostile actions on the part of the aggressor (Burlay et al, 2023).

The creation of small local networks of renewable energy generation and communities of owners of energy generation facilities of multi-apartment buildings can serve as a vivid example of the potential opportunities that stimulate the development of a cooperative movement based on platforms.

The challenge of creating additional sources of power will get harder because of Russia's actions to undermine the energy system in Ukraine. Private houses' energy generation is an essential part of it. Even with the considerable portion of capacity lost in 2014 from the

Autonomous Republic of Crimea and the occupied portions of the Luhansk and Donetsk regions, the data in Table 5 attests to the strong pace of expansion of renewable energy in Ukraine from 2011 to 2021.

Table 5. Dynamics of expansion of renewable energy generation in Ukraine in 2011-2021 (MW)*

Fields/ years	2011	2012	2013	2014*	2015	2016	2017	2018	2019	2020	2021
Wind energy	151	194	334	651,8	426	438	465	533	1170	1314	1673
Solar energy	191	326	616	818,9	432	531	742	1388	4925	6094	6227
HESs**	-	-	-	0,1	2	17	51	157	553	779	1205
Small hydro-power plants	71	73	75	80	87	90	95	99	114	116	121
Biomass		6	17	35	35	39	39	52	55,9	91	152
Biogas		-	7	14	17	20	34	46	70,3	103	124
That's all	413	599	1049	1599,8	999	1135	1425	2275	6882	8497	9502

**Until 2014, considering the capacities located in the Autonomous Republic of Crimea and the occupied parts of the Luhansk and Donetsk regions (a total of 633.7 MW).*

*** HESs - Household solar energy generation stations.*

Sources: Data of the State Agency for Energy Efficiency and Energy Saving of Ukraine. Energy efficiency.[URL: https://saee.gov.ua/uk/content/energy-efficiency

Among the factors that complicate the development of renewable energy generation in Ukraine, it is worth highlighting the limited financial resources of potential participants, the insufficient level of return on investment, the need for parallel expansion of storage capacities, the complexity of bureaucratic procedures for connecting to energy networks, significant dependence on weather conditions, high investment risks due to military aggression on the part of Russia, curtailment of the practice of providing "green tariffs" (Lypov, 2023).

The specific characteristic of renewable energy generation development in Ukraine was the concentration of a significant share of material resources in the Southern and South-Eastern regions. As a result, in the first months of the war, up to 40% of renewable energy generation power plants, or about 1,120–1,500 MW of installed capacity were destroyed. The renewable energy generation assets worth more than 5.6 billion US dollars ended up in the war zone and 3.6 billion US dollars – in neighboring regions. The energy generation reduced by more than half. Due to the infrastructure destruction because of direct hostilities and damage prevention to electrical equipment, problems of complicating the balancing of supply and demand were added (Konechenkov &Omelchenko V, 2023). M. Topalov wrote that the share of renewable energy generation in energy generation decreased from 13.4%

to 5-6% (Topalov, 2023).

The association of small renewable energy generation producers based on the creation of a cooperative digital platform can significantly facilitate the solution of many of the problems they face. It ensures the activation of the attraction of investment resources in the creation of small renewable energy generation facilities by combining the efforts of local communities, small and medium enterprises, and households, facilitating the conditions for obtaining grant assistance, subsidies, and lending. The optimized use and the payback period of the corresponding equipment were shortened. The risks of a total power outage due to missile strikes on large power generation and electricity distribution facilities are decreasing. Local communities receive additional sources of energy supply. Local renewable energy generation microgrids supplement the national power generation system for electricity distribution. Entities-owners of energy generation means, joining together in microgrids, can accumulate and redistribute surpluses of its production within local communities. The load on centralized power generation systems is reduced. Figure 1 presents the structure of the cooperative digital platform of the microgrid of renewable energy generation.

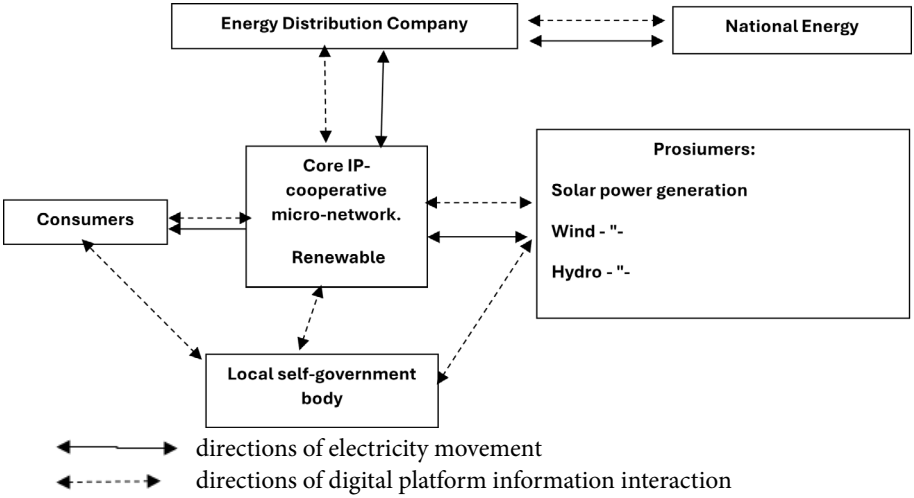

Figure 1. Structural and functional complementarity of elements of micro-network digital platform cooperatives. Compiled by the authors based on (Lypov, 2023).

It unites the means of generating and accumulating electricity from households, SMEs, and farms, jointly owned by the local community. The core of the digital platform ensures the exchange of data on the movement of energy flows between members of the cooperative, external consumers, and the energy distribution company.

The local self-government body takes over the functions of initiation of creation, investor, coordinator of the activities of other members of the cooperative digital platform, and

ensures coordination of organizational issues with state authorities, external investors, and the energy distribution company. He can be the owner of energy generation equipment and centralized energy storage. Members of the cooperative are participants who have energy generation and energy storage equipment connected to the microgrid.

Consumers may be members of the local community who do not have their power generation capacity and are not members of the cooperative. Joining the national energy system provides an opportunity to overcome imbalances in the production, accumulation, and consumption of electricity.

Local energy distribution companies are an important participant in the ecosystem of platform microgrids. They ensure the physical unity of the participants of the digital platform as a virtual corporation - an electricity producer. At the same time, they retain their role as a supplier of energy to regular consumers who are not its participants and connection to the national system.

Digital platform cooperatives of local network renewable energy generation can serve as an excellent example of the prospects for the development of a cooperative movement based on digital platforms, capable of combining the advantages of spatial or niche localization-specialization with the globalization of the results of its activities.

Conclusions

The development of digital technologies leads to radical changes in the business model. Digital platforms are taking over the role of the dominant organizational form. The spread of the characterization of the modern economy as "platform capitalism" determines the platform's role. The concentration of digital functions for data control and redistribution turns digital platforms into a key tool for generating profits. The network form of business organization opens the way to obtaining the effects of increased productivity. At the same time, it allows you to avoid investing needs in your funds in the formation of material production assets, professional qualifications of personnel, scientific and technical developments, and social protection.

The virtualization of the main capital of the digital platform (data) combines the leadership role of the digital platform core in the distributed production system (value creation network). It provides high mobility and openness to constant changes. The recognition of the interests of the direct producer as secondary to the interests of the platform owner and the consumer demonstrates the monopolization of the market. The comparison of forms of manipulating behavior with the refusal of social responsibility with the work performers aggregates the fulfillment of duties. The actual absolutization of the interests of the platform owners, who concentrate the management of external economic resources in their hands, leads to the further deepening of social inequality in society.

An alternative to "platform capitalism" is determined as "platform cooperativism". This model involves interaction based on the platform of a group of independent producers of

individual components of goods and services. They form a distributed production system within the network (chain) of value creation. The prerequisites for the success of cooperative interaction in this business model are the combination of the functions of management, ownership, participation in the production process, and consumption by the participants.

The practical implications deal with solving the problems of the post-war recovery of Ukraine's economy. The "platform cooperativism" model is especially relevant in the context of energy generation. The loss of a significant part of human, material**,** and capital resources makes it necessary to find ways of more active involvement and effective use of existing funds. Digital platforms allow united independent developers of scientific and technical innovations and technological knowledge, and owners of material funds and financial resources. The cooperative form of organization ensures that it retains the functions of ownership, management, and participation in the production process.

The prerequisite for success is its compliance with the group-cooperative nature of values characteristic of national culture. An example of a promising field of development of "platform cooperativism" in Ukraine can be local microgrids of renewable energy generation.

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