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CAPITAL CONSOLIDATION AND CONCENTRATION IN DIGITAL BUSINESS STRUCTURES: INSTITUTIONAL DESIGN AND MANAGEMENT METHODS

The article analyses qualitative changes in the institutional environment under the influence of the digitalisation of the economy, which is a condition and factor for the consolidation and concentration of capital as a strategic economic resource for development. At the same time, research into the nature of the origin of capital has shown that no single form of capital dominates. The successful combination of all forms of capital leads to the emergence of digital innovations, which, in turn, contribute to the formation of digital competencies at the level of economic entities and their implementation in the justification of management decisions. It is noted that these processes underlie significant changes in the promotion of innovative products and information and communication technologies in developed and developing countries. It has been proven that an unfavourable institutional environment stands out as the main reason for the slowdown in the digitalisation of the Ukrainian economy and the consolidation and concentration of business capital. Given this, there is a pressing scientific interest in the rationale, development and solutions in the digital economy with appropriate institutional support from state policy to improve the structure and quality of capital. The focus is on the peculiarities of the formation of digital business structures, in particular platform-type structures, as well as on the institutional design that determines the rules for the consolidation and concentration of capital in such structures. It has been found that digital technologies are changing the very nature

of business structures and their behaviour in virtual life, with a transition to digital platforms, virtual business mobility and data exchange as a new form of capital. This is evidence that the digital economy is transferring capital and the activities of business structures from the real to the virtual world. The object of this study is the consolidation and concentration of capital, and the subject of the study is the essential characteristics of the digital economy, the institutional design that determines the rules for the consolidation and concentration of capital and methods for managing them. Methods for managing the processes of capital consolidation and concentration are outlined, taking into account the specifics of the formation of digital business structures. The influence of new digital technologies on the consolidation and concentration of capital to ensure the financing of innovative renewal and restructuring of the economy is shown.

Keywords: *institutional design, institutional development, capital, capital consolidation, capital concentration, digital business structures, mergers and acquisitions, management methods*

JEL classification: *G34, L86, D85, O33*

У статті проаналізовано якісну зміну інституційного середовища під впливом цифровізації економіки, що є умовою та фактором консолідації та концентрації капіталу як стратегічного економічного ресурсу розвитку. При цьому дослідження природи походження капіталу показало, що домінування будь-якої форми капіталу відсутнє. Вдале поєднання саме всіх форм капіталу призводить до зародження цифрових інновацій, які, у свою чергу, сприяють формуванню цифрових компетенцій на рівні економічних суб'єктів та їх реалізацію при обґрунтуванні управлінських рішень. Відзначається, що дані процеси лежать в основі істотних змін у сфері просування інноваційних продуктів та інформаційно-комунікаційних технологій у розвинених країнах та країнах, що розвиваються. Доведено, що несприятливе інституційне середовище виділяється як головна причина гальмування цифровізації української економіки та консолідації й концентрації бізнесом капіталу. Враховуючи це, актуальним є науковий інтерес до обґрунтувань, розробок та рішень у цифровій економіці за відповідної інституційної підтримки політики держави у вдосконаленні структури та якості капіталу. Зосереджено увагу на особливостях формування цифрових бізнес-структур, зокрема платформного типу, а також на інституційному дизайні, який визначає правила консолідації та концентрації капіталу у таких структурах. Виявлено, що цифрові технології змінюють саму природу бізнес-структур, їх поведінки у віртуальному житті, відбувається перехід до цифрових платформ, віртуальної мобільності бізнесу, обміну даними як новій формі капіталу. Це є свідченням того, що цифрова економіка переносить капітал і діяльність бізнес-структур із реального у віртуальний світ. Об'єктом даного дослідження розглядаються консолідація та концентрація капіталу, предметом дослідження є сутнісні характеристики цифрової економіки, інституційний дизайн який визначає правила консолідації та концентрації капіталу та методи управління ними. Окреслено методи управління процесами консолідації та концентрації капіталу з урахуванням специфіки формування цифрових бізнес-структур. Показано вплив нових цифрових технологій на консолідацію й концентрацію капіталу для забезпечення фінансування інноваційного оновлення і реструктуризації економіки.

Ключові слова: *інституційний дизайн, інституційний розвиток, капітал, консолідація капіталу, концентрація капіталу, цифрові бізнес-структури, злиття та поглинання, методи управління*

JEL classification: *G34, L86, D85, O33*

Statement of the problem. In the 21st century, institutions, institutional transformation and development, consolidation and concentration of capital are becoming extremely important in the context of digitalisation and

reindustrialisation, ensuring the viability, security and competitiveness of the economy of virtually any country. Institutional changes taking place in the digital economy convincingly demonstrate the need to intensify the processes of capital consolidation and concentration in all economic systems, regardless of their scale, form of ownership and sphere of activity. At the same time, we emphasise that the improvement of state institutions as the developer of the «rules of the game» and the arbiter responsible for their enforcement plays a key role in the institutional support of capital consolidation and concentration policies as a tool for increasing capital through compulsory or voluntary mergers, as well as the absorption and merger of previously independent capital in the context of digital transformation. The digitalisation of the economy has defined new institutional approaches to capital consolidation and concentration in the context of mergers and acquisitions of corporate organisations and enterprises. That is why the institutional approach allows us to study the institutional conditions and factors of capital consolidation and concentration, the driving forces behind the development of the digital economy, their characteristics in the context of the relevant institutional support of the state regulation system, and the emergence of new forms of capital consolidation and concentration, which are facilitated by structural changes in the modern digital economy.

Analysis of recent studies and publications. Theoretical and practical aspects of capital consolidation and concentration have been the subject of attention since classical political economy. Certain aspects of this problem, namely the nature, causes and consequences of the processes of capital consolidation and concentration, were developed, in particular, by A. Smith [1] and K. Marx [2]. Further scientific research is related to the development of the concept of “capital structure – economic behaviour – the result of acquisitions and mergers”, presented in the works of W. Baumol [3], O. Williamson [4], and J. Tirole [5]. A significant contribution to the study of the problem of capital consolidation and concentration, as well as state regulation of these processes, was made by P. Krugman [6], D. Morris [7], J. Sinky [8] and others. In Ukraine, the processes of capital consolidation and concentration as one of the factors influencing innovative modernisation and digital transformation of the economy are studied by S. Danilina [16], A. Ignatyuk [21], N. Kraus [12], N. Tsyganova [14, 15], Yu. Umanets [9] and others.

The theoretical and methodological basis for our study of the above-mentioned problem is primarily provided by the theories of institutional evolution and institutional change developed by D. North [10], J. Hodge [11] and other authors. Unlike classical economists and Marxists, institutionalists studied not the process of consolidation and concentration itself, but its consequences: minimisation of costs, effective management of large firms in order to achieve the economic effect arising from the scale of production.

At the same time, it is of great interest to study how the institutional environment and the structure of institutions are changing under the influence of the digitalisation of the economy, as structural changes are taking place here that determine the further vectors of capital consolidation and concentration. The current stage of digitalisation of the economy is giving rise to important new technological and organisational and management strategies for business mergers

and acquisitions, aimed at obtaining economic benefits in the future. All of the above justifies the relevance of the chosen topic and allows us to formulate the aim of the article.

Formulation of the article's objectives. The purpose of this article is to study the influence of institutional factors on the process of capital consolidation and concentration in the context of the formation and development of the digital economy, and on this basis, to provide a scientific justification of the main motives for mergers and acquisitions of corporate organisations and enterprises, which are facilitated by qualitative changes in the institutional environment under the influence of the spread of new digital technologies.

Presentation of the main research material. Modern digital technologies are actively influencing the growth in the number, size and strength of large corporate organisations and enterprises. The growth rate of large businesses significantly exceeds the growth rate of the economy as a whole. Recently, NVIDIA's market capitalisation reached \$3.34 trillion. The company surpassed Microsoft with a capitalisation of \$3.32 trillion and Apple with \$3.29 trillion [13]. There are only six countries in the world with a GDP exceeding \$3 trillion: the United States, China, Japan, Germany, India and the United Kingdom. For comparison, Ukraine's GDP in 2021 was \$155.6 billion. Thus, the processes of concentration of production and capital, which determine current development trends, including those of the national economy, are relevant, and solving the problems of their development in the context of digitalisation, globalisation and hybrid wars is of scientific interest and value.

The processes of capital consolidation and concentration are also undergoing significant changes under the influence of financial innovations. Constant structural transformations of the economy are naturally accompanied by innovations in the spheres and links of the financial system, which, in turn, tend to promote innovative business renewal. Contemporary trends in globalisation and the formation of a digital economy are taking financial innovation to a whole new level [14]. Financial innovation is the introduction of new or significantly improved financial technologies, products, services and organisational forms that have a positive impact on the functioning of the financial sector and the economy. They encompass changes in financial instruments, markets, intermediaries and business models. At the same time, it should be noted that the most dynamic changes in modern conditions are taking place in the field of communications and digital technologies, which financial institutions use quite intensively due to the emergence of new forms of capital consolidation and concentration. They are among the innovative leaders in the process of capital consolidation and concentration in the era of digitalisation.

Research into the impact of the digital economy on the processes of capital consolidation and concentration began relatively recently, and thanks to developments in economic science, it has begun to be studied using institutional theory methods. However, most studies focus on individual institutions of the digital economy and the impact of digital technologies on capital consolidation and concentration. At the same time, the most interesting thing is to see how the institutional system of the economy and the structure of institutions change under the influence of digital technologies, because this is where qualitative changes

take place that determine further processes and motives for capital consolidation and concentration.

The economic basis for the consolidation and concentration of capital is the discrepancy between the amount of capital available for investment and the demand for it. The role of capital consolidation and concentration is that it can be used in different markets. At the same time, each form of capital consolidation and concentration has its advantages and disadvantages in the process of its organic growth (Table 1).

Table 1

Advantages and disadvantages of capital consolidation and concentration

Advantages	Disadvantages
Organic growth	
Lower risk when expanding and diversifying production Focus on using own resources No need to consolidate and concentrate significant capital at a specific time	Limited opportunities for diversification of production Increased costs during the implementation of the set goal More working time is required to achieve positive results Lack of knowledge and experience within the company to use new digital technologies

Source: completed by the authors

Mergers and acquisitions are one form of capital consolidation and concentration. A study of the essence of capital consolidation and concentration has revealed some differences in the modern interpretation of these categories. Consolidation (from Latin *consolidatio* – to strengthen, to grow together) involves the unification and consolidation of individual economic entities to strengthen their position in order to concentrate material, intellectual and financial capital to achieve common goals. Consolidation of economic activity is the concentration of strategic marketing and management functions in geo-economic structures based on the concentration of capital or the creation of digital business models that have common institutional complementarity, intangible assets, long-term framework assets and a logistics centre without the consolidation of physical capital.

The concept of consolidation has a wide range of applications and is actively used in economics: in a broad sense, it refers to business consolidation, and in a narrow sense, to the consolidation of capital, digital technologies or digital platforms of companies. Capital consolidation can take place at different levels: micro (or individual), meso (regional), macro (national) and mega (international). Depending on the level, consolidation processes differ in scale, prerequisites and consequences.

J. Sinky suggests distinguishing between four types of consolidation in the financial services sector:

- consolidation within an industry in a single country;
- inter-industry consolidation within a single country;
- inter-industry consolidation in different countries [8].

All of the above types of consolidation are clearly visible in the financial sector. However, the development of international competition and integration processes

significantly intensify the latter two. Moreover, the role of not only interbank M&A but also other financial structures with high market capitalisation, which provide leasing, factoring and insurance services, credit services to individuals, etc., is growing. The consolidation of financial institutions is mainly motivated by opportunities for cooperation in the field of comprehensive customer satisfaction, when customers are offered not just one service, but a whole package, which stabilises the customer base, creates additional channels for promoting financial services to the market and provides competitive advantages to all participants in the consolidation processes [14, pp. 38-39].

Depending on the participation of state regulators in the processes of capital and property consolidation, a distinction is made between consolidation of an economic and administrative nature [15].

Economic consolidation is based on market processes, among which competition dominates. Administrative consolidation is associated with shortcomings in state regulation of measures. In practice, these two types of consolidation can be organically combined. An example of the combination of administrative support for consolidation and economic methods is the US financial sector at the end of the 20th century. American analysts attribute this to numerous financial innovations in the 1970s, the emergence of new financial instruments and the relaxation of administrative and legal restrictions on the activities of financial institutions in the markets.

When revealing the essence of the concept of concentration as an economic category, we should note that this term comes from the Latin «concentration», meaning «centre» or «focus». Concentration as a process can occur with certain quantitative and qualitative changes, which makes it possible to characterise it as extensive or intensive development. Both forms, being independent, are in fact interrelated in accordance with the law of dialectics of the transition of quantitative changes to qualitative ones [16]. The analysis of modern forms of capital concentration requires the formation of an updated conceptual apparatus and the differentiation of a number of established economic terms. In this regard, we will introduce some terms that will be used in this article.

Based on theory, three types of concentration can be identified.

1. Concentration of capital — an increase in its value achieved through the capitalisation of profits, the absorption of other capital or mergers.

2. Industrial concentration. This concept refers to either the share of large enterprises in an industry that dominate in terms of production volume and market sales, or the process of concentrating production in large enterprises in order to exploit economies of scale and agglomeration effects¹.

3. Market concentration is the share of large sellers that dominate the market. The relationship between processes such as capital concentration, production and market concentration, and capital and production consolidation can be understood through economic concentration (Fig. 1).

¹ Agglomeration economics – economic benefits from the territorial concentration of production and other economic objects in cities and agglomerations.

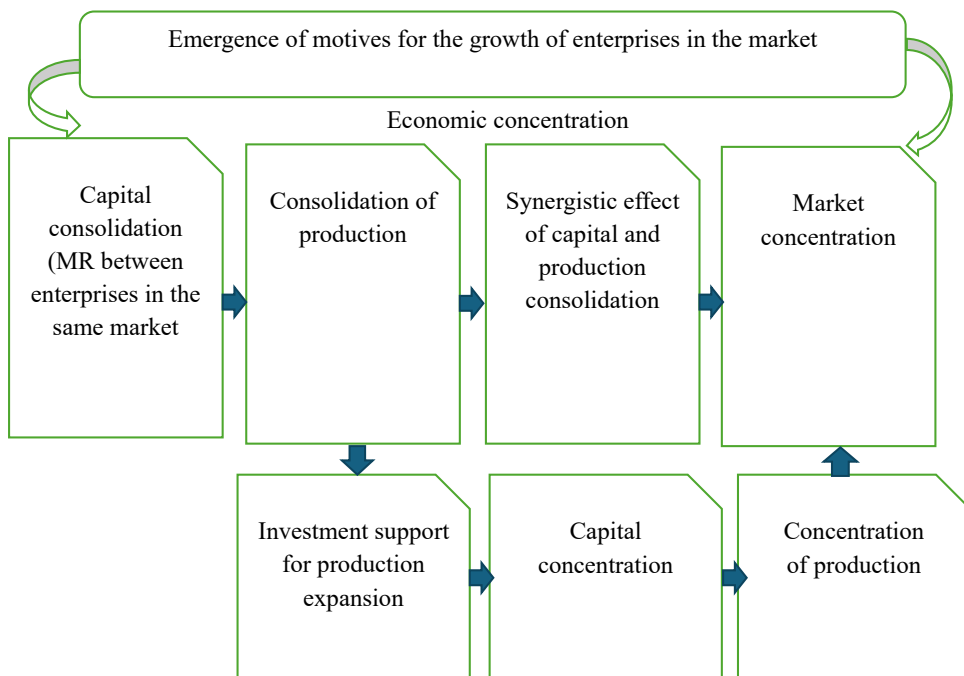


Fig. 1. Synergy between different types of economic consolidation and capital concentration

Source: completed by the authors

Consolidation and concentration of capital and production are necessary and sufficient conditions for market concentration only if: 1) they occur between enterprises operating under the same criteria, or 2) their main goal is to increase market share or gain market power [17].

The methodological basis for understanding the nature and functions of capital is the theoretical legacy of the founders of Marxism. The most important point of Karl Marx's theory of capital is the concentration of capital: «... it is the accumulation of large capitals by destroying small ones — a form of the process which transforms labour conditions into capital and individual capitals into larger ones, and finally separates the capitals formed in many points of society from their owners and centralises them in the hands of large capitalists» [2, p. 593].

The consolidation and concentration of capital lead to the growth of capital power. This ensures the development of productive forces and economic growth. K. Marx clarifies that «with the corresponding industrial struggle of nations on the world market, everything depends on the accelerated development of capital» [2, p. 593].

The law of concentration of capital and production studied by K. Marx in Capital does not work in a straightforward manner, among other things because economies of scale in modern conditions are not the only and predominant type of economy. As the size of a firm increases, a level is reached at which the costs of organising the exchange of resources within the firm (centralised planning, management and control) begin to exceed the costs of market operations. Further

growth in the size of the enterprise becomes unprofitable even without taking into account the macroeconomic effect of lost profits due to the decline in initiative among entrepreneurs who have lost their businesses. As a result of excessive growth, management cannot process all the information and efficiently allocate production factors to maximise profits. Losses from inefficient use of resources and increased management costs and bureaucracy begin to exceed the costs of trading on the open market.

It is for this reason that many large corporations at the end of the 20th century opted for outsourcing, i.e., the creation of independent subsidiaries, as well as the development of links with affiliated enterprises, to which not only auxiliary and service operations were transferred, but also core production operations that did not belong to the core competence of the parent company. The concentration of capital as an organic unity of large corporations that produce mass products and implement large-scale investment and innovation projects is combined with the concentration of network management of small and medium-sized enterprises that develop specialised market niches as subsidiaries.

The main problem of consolidating economic activity as a modern form of capital concentration in the context of digital transformation lies in reconciling two opposing trends. On the one hand, there is the concentration of capital and ownership, i.e. the growth in the average size of enterprises and corporate entities, and on the other hand, there is the decentralisation of operational management with a reduction in the average size of enterprises. As for the concentration of production, it contributes to improving the quality of management.

The choice of the measure of «size» of an enterprise can significantly affect the results of the calculation of concentration indicators. The concentration ratio (CR) is measured as the sum of the market shares of the largest enterprises operating in the market. The market share of a seller can also be calculated based on the ratio of the number of employees, the value of assets or the value added of a given enterprise to the total values for the market as a whole.

The concentration index is measured in shares or percentages. The higher the value of this indicator, the stronger the market power of the largest enterprises, the higher the degree of concentration in the market, and the weaker the competition. As a rule, it is advisable to examine the index value for three or four large companies in the market. The following criteria are used to compare market structures:

- the market is considered unconcentrated when the index value for 3 firms is below 45%;
- moderately concentrated – when the concentration index is 45-70%;
- highly concentrated – with a concentration index of > 70%.

The concentration index determines the size of enterprises that are not included in the enterprises for which this indicator is calculated, as well as the relative size of enterprises in the sample.

The concentration index is not sufficient to characterise the market power of enterprises, as it does not reflect the distribution of shares both within the group of the largest enterprises and outside it, among the outsider enterprises. This shortcoming can be overcome with the Herfindahl-Hirschman Index. The Herfindahl-Hirschman Index (HHI) calculates market concentration and symmetry based on the market shares of economic entities:

$HHI = S_1^2 + S_2^2 + S_3^2 + \dots + S_n^2$, where n is the number of firms in the market;

The more companies there are on the market, the lower the HHI, and the more asymmetrical the market, the higher the HHI. It is assumed that the higher the HHI, the less competitive the environment in the selected segment. Due to its sensitivity to changes in the market share of an enterprise, the Herfindahl-Hirschman index can indirectly indicate the amount of economic profit obtained as a result of exercising monopoly power. $S^{(2)}$ – indicator of the dispersion of market shares of enterprises, calculated as:

$$S^2 = \frac{1}{n} \sum_{i=1}^n (X_i - X)^2$$

where X is the average market share of an enterprise, equal to $1/n$.

If companies in the market control an equal share, the dispersion index is zero, and the value of the HHI is inversely proportional to the number of companies in the market. With a constant number of companies in the market, the greater the difference in their shares, the higher the index value. Therefore, the greater the unevenness in the distribution of shares, the more concentrated the market is under other equal conditions. Dispersion is used as an auxiliary analysis tool, as it does not provide characteristics of the relative size of enterprises and is used more to assess inequality in the size of enterprises than to assess the level of concentration.

The entropy index (E) shows the average value of the logarithm of the value, reversed to the market share of enterprises, weighted by market shares:

$$E = - \sum_{i=1}^n X_i \ln X_i$$

The successful application of the NNI gave impetus to the search for new similar indicators capable of conveying certain features of market concentration in the industry. Such indices include the Hone and Kay (HK) index [18], which differs from the Herfindahl-Hirschman index in that the degree to which the market shares of enterprises are raised when they are summed up can take different values (depending on the purpose of the study):

$$HK = \sum_{i=1}^n \delta_i X_i$$

where: δ_i – share of enterprise i in the industry market;

– index of degree, which is selected depending on the purpose of the study.

The quantitative methods for determining market concentration used in global practice define only one side of the modern market – its structure. These methods do not characterise the other side, namely the market behaviour of enterprises; they only state the specific situation that has developed on the market at a certain point in time and do not always allow reliable information to be obtained about the use of their monopoly position by enterprises. Moreover, even the very effect of the existence and use of market power by enterprises can be viewed and assessed from different perspectives, which, accordingly, allows researchers to offer conflicting recommendations on the implementation of antitrust regulation of markets.

An analysis of the competitive environment in the goods and services markets in Ukraine shows that, despite relatively low levels of concentration of production by industry at the sub-sector level, there is still a dangerous level of concentration. This makes it possible to identify “risk zones” — sub-sectors and product groups where control by antitrust authorities is most needed, including when deciding on mergers, acquisitions, transformations, and liquidations of business entities [19].

Mergers and acquisitions are among the methods of capital consolidation and concentration whose synergy potential is formed, on the one hand, as a result of interrelated innovations by enterprises, leading to successive upward pulsations, which, according to A. Schumpeter, determine further economic development, and on the other hand, as a result of the targeted influence of capital owners and the random influence of the institutional environment.

Whatever the outcome of the process of capital consolidation: consolidation, concentration, reorganisation – there is an emergence effect and a reaction (expectation) effect from the perception of such consolidation by capital owners.

In the modern economy, capital concentration can occur both on the basis of profit capitalisation and as a result of capital centralisation, with the ratio of these processes and their intensity varying depending on the state of the economy and the phase of the economic cycle. Usually, in a situation of economic upturn, the share of internal sources decreases, while external sources increase, accelerating the processes of concentration based on capital centralisation. As the business environment deteriorates, the role of profit increases while external sources of capitalisation decrease.

The processes of capital consolidation and concentration contribute to the realisation of capital as a value that brings additional value. The aim of the process of capital consolidation and concentration is to strengthen the competitive advantages of an enterprise in the market, to obtain technological and innovative advantages, and to increase reliability through increased risk resistance. The processes of capital consolidation and concentration, combined with the economies of scale and scope of production, make it possible to maintain relative capital adequacy and efficiency at a constant (not lower than the achieved) level.

Digital platforms, which are the result of the development of digital technologies, are the driving force behind the consolidation and concentration of capital. Digital platforms that facilitate interaction between users, now referred to as n-sided platforms or marketplaces, largely underpin the business models of large digital economy companies. A comparison of the largest global companies by market capitalisation shows that seven out of ten companies in 2020 are high-tech and/or based on a platform business model: the creation of digital communities and marketplaces (Price Waterhouse Coopers, 2020) [20]. An analysis of the top 100 global companies by market capitalisation shows that the market capitalisation of such companies is growing, as in 2013 only 4 out of 10 such companies were in the ranking. It is not only the date on which such a ranking was compiled or its source that is important, but also the trend towards significant growth in the market capitalisation of such companies [21]. The business models of these digital platforms are based on the use of network effects, which arise when the value of a digital platform for its users depends not only on the characteristics and functioning of the platform itself, but also increases with the number of other users and their interactions.

Thus, Amazon is the true leader among the best digital marketplaces with more than 300 million active users worldwide. In terms of numbers, the platform boasts more than 2.5 million active sellers and over 12 million products across all categories. Digital platforms can achieve network effects through digital technologies, contacts (connections), rules of interaction between network participants, and their mutual trust. K. Shapiro and M. Katz explained how digital platforms work, saying that “Many products have little or no value on their own, but create value when combined with others.” [22], thereby identifying an important economic function of platform business models – the ability to increase the number of users, which in turn contributes to the growth of platform capitalisation and, consequently, the concentration of capital in the relevant market segment.

The conclusion is obvious: active users who participate in the digital platform on a regular basis increase the capitalisation of platforms. In general, this is a form of scale effect in a digital ecosystem.

However, it is important not only to attract users, but also to maintain their current activity in order to realise network effects that lead to capital concentration. In other words, increasing the capitalisation of a platform through digital technologies and rules of interaction requires users to actively participate in digital platforms, rather than simply registering and/or passively observing [23].

Amazon is a price benchmark for at least 44% of online shoppers. Multilateral platforms are rapidly spreading across various industries, including education (Goursera, Duolingo); transportation (Uber); healthcare and pharmaceuticals (SimplyInsured, Cohealo, tabletki.ua, liki24.com); job search (OnFrontiers, robota.ua), etc., which have effectively become centres of capital concentration.

Over the past decade, numerous digital platforms have emerged around the world that use business models and radically change the strategy and mechanisms of capital consolidation and concentration. The emergence of a huge number of digital platforms is directly related to their ability to collect and analyse digital data, but their interests and actions largely depend on how they monetise such data to generate revenue. This can be done by selling targeted advertising online, using e-commerce platforms, transforming traditional goods into rentable services () or providing cloud services on a rental basis. Thus, it is their ability to collect, process, transmit, store, analyse and interpret data that enables digital platforms to form fundamentally new value chains that stimulate mechanisms for the consolidation and concentration of capital to achieve greater efficiency, reduce costs and gain a dominant position in the market, enabling them to influence prices and competitive conditions.

The digital platform acts as a de facto institutional intermediary, not only providing the technical infrastructure for interaction, but also actively influencing the formation of rules for access, visibility and acceptable behaviour of economic and business models of organisations. It sets the framework for what is considered acceptable or expected in the behaviour of “business models” as part of Industry 4.0, regulates the conditions for using the potential profits from the consumer value produced, and modernises content and actions. This division of functions brings the platform closer to the role of an organisational coordinator capable of influencing the norms of interaction without a formal mandate from a state regulator. In this sense, a special form of digital normativity emerges, based not

on legislative procedure but on the architecture of code, interface and algorithmic design. It defines the contours of behaviour within a specific platform, creating a new level of institutional order that functions in parallel with formal regulatory mechanisms of capital consolidation and concentration [24].

The acceleration of capital consolidation and concentration processes, the changing role and functions of business platforms in the context of the digital transformation of the economy, and innovations in technologies that simplify the movement of investment flows are not only of great importance for accelerating the dynamics of economic development, but also pose potentially significant financial risks and threats. National economies are becoming more sensitive to global financial and economic crises, and the effectiveness of international capital movement regulation is declining. This raises questions about the extent to which it is necessary to stimulate internationalisation processes in the financial sector, about the threats and limits of national economic openness, about the pace of cross-border capital flows and the necessary regulatory measures in this area. It is understood that in the global financial environment, capital movement not only ensures the interconnection and proportionality of reproductive processes, but also the international redistribution of financial resources using the tools of modern investment models of social reproduction [25].

Methods for studying capital movement in international financial markets show that these processes are based on competitive relations in the context of digital transformation, which cause capital movement in general: the desire to increase efficiency, i.e., movement to markets with high borrowing costs and relatively free capital.

The scale of capital consolidation and concentration indicates that financial institutions in developed countries have reached the limit in terms of increasing their own and borrowed capital on national markets. The institutionalisation of mergers and acquisitions in the financial sector is becoming increasingly problematic due to difficulties in obtaining permission from antitrust authorities. However, the processes of liberalisation of capital movements and national systems of incentives and encouragement for foreign investors are prompting them to expand beyond their national borders. This is facilitated by the process of reducing barriers to the development of market trends in global capital markets and the simultaneous creation of positive standards and requirements for international capital movements.

An important element of the institutional framework for international capital movement is the introduction of legal framework conditions and mechanisms for their implementation. At the same time, the intensification of crisis phenomena and the existence of real threats and problems in the financial sector testify to the inability of existing international financial institutions to resolve them.

Important steps towards institutionalising the processes of mergers and acquisitions in financial markets include the formation of stable mechanisms and principles that determine the effectiveness of interaction between participants in M&A transactions. According to N. Tsyganova, such general principles of effective interaction between financial market participants include trust, information transparency, alignment of interests, responsibility, compliance with ethical standards, financial inclusion and mutual benefit (Fig. 2). This type of interaction

should be based not only on ethical principles of business platform development, but also on effective regulation of digital transformations in the economy and the introduction of institutional and legal frameworks and mechanisms for their implementation.

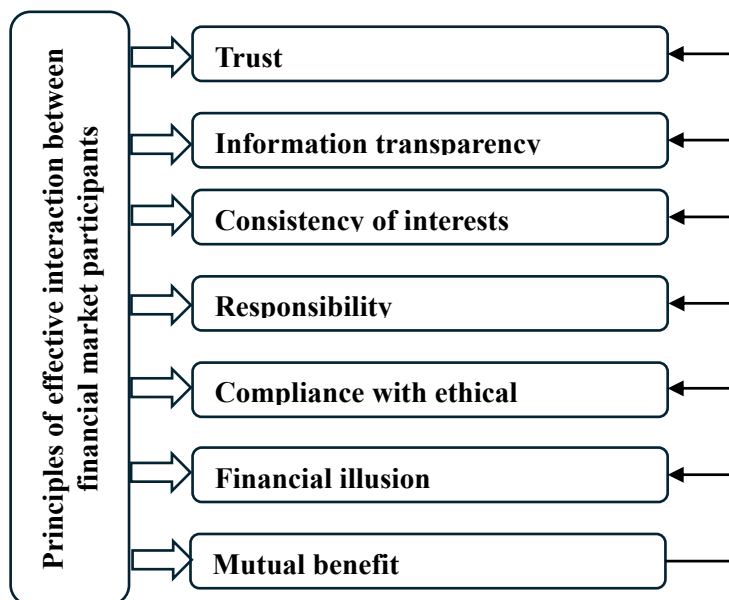


Fig. 2 Principle of effective interaction between financial market participants in a digital economy

Source: completed by the authors [14].

In Ukraine, the institutionalisation of merger and acquisition processes requires further development of the legislative framework and improvement of the regulation of these processes. To date, regulatory acts determine the possibility of certain types of reorganisation without proper legislative consolidation of clear procedures for mergers, acquisitions, spin-offs and divisions. At the same time, the dominant transaction in merger and acquisition processes is the acquisition of Ukrainian business platforms by foreign investors, which requires the implementation of appropriate state policy in the field of digital consolidation through the application of antitrust legislation to understand and analyse new trends in capital concentration. It is important to eliminate pressure from the authorities and block informal factors of influence related to procedural issues in the conduct of such transactions. The contradictory consequences of capital concentration as a result of mergers and acquisitions require an active search for stabilising, balancing institutional mechanisms to manage the processes of ensuring the coordination of interests between business platforms, states and global capital [14].

In the long term, digital transformation will contribute to further changes in the institutional configuration of capital consolidation and concentration. Artificial intelligence technologies, automated service systems and adaptive algorithms for consolidating equity capital increasingly perform the function of regulators

and management methods, modifying the main motives for capital consolidation and concentration. Specific motives for capital consolidation and concentration that explain the active development of business platforms include: solving the problem of insufficient capitalisation; business diversification; the opportunity to acquire additional competitive advantages; and the rise of investment activity and innovation processes. Business platforms are becoming conditionally self-sufficient institutional environments that combine the functions of development, evaluation, modernisation and digital management. At the same time, the very nature of trust in digital platforms and information sources is changing, increasingly focusing not on institutional stability in the classical sense, but on digital convenience, speed and meeting business expectations. In this sense, new forms of digital consolidation are emerging, based on information interaction with business platforms, rather than solely on expert assessment of their characteristics. In such a situation, it becomes important not only to ensure the consolidation and concentration of capital, but also to form an institutional architecture that would guarantee equal conditions for all participants in the digital economy, both in terms of functional access and in terms of the means of achieving the set goals.

Conclusions. Summarising the results of the study, it should be noted that digital transformation not only changes the technological parameters of capital consolidation and concentration, but also acts as a catalyst for profound institutional changes that alter the logic of business platform development. Digital business platforms are becoming institutional structures that shape new rules for capital consolidation and concentration. The institutional design and management methods for these processes must take into account both economic and technological global challenges. This makes it possible to strengthen the power of business platforms and gain new competitive advantages. In the digital economy, capital consolidation and concentration is an objective and inevitable process. There is a global trend towards the consolidation of financial capital. These processes are based on the contradiction between the financing and servicing needs of business platforms and the available capabilities of financial institutions. The institutional limits of capital consolidation and concentration are determined by the parameters of the financial market, and its quantitative indicators are determined by the degree of development of financial systems. The spread of capital consolidation and concentration processes necessitates changes in existing regulatory mechanisms and the ability of the state and society to realise real opportunities for business expansion. Further research into the processes of capital consolidation and concentration should be based on a systematic approach that will allow us to understand not only the economic but also the managerial and institutional dimensions of interaction in the new digital economy.

The practical significance of the results obtained lies in the possibility of applying institutional approaches during the consolidation and concentration of capital in the financial sector based on an analysis of the dynamics of mergers and acquisitions in the digital economy. The application of these approaches will improve the process of capital consolidation and provide an opportunity to raise the quality of business structure management to the proper level and contribute to improving the possibilities for managing them in the digital environment amid the existing uncertainty in the conditions of war.

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CAPITAL CONSOLIDATION AND CONCENTRATION IN DIGITAL BUSINESS STRUCTURES: INSTITUTIONAL DESIGN AND MANAGEMENT METHODS

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The article analyses the qualitative change in the institutional environment under the influence of the digitalisation of the economy, which is a condition and factor for the consolidation and concentration of capital as a strategic economic resource for development. At the same time, research into the nature of the origin of capital has shown that no single form

of capital dominates. The successful combination of all forms of capital leads to the emergence of digital innovations, which, in turn, contribute to the formation of digital competencies at the level of economic entities and their implementation in the justification of management decisions. It is noted that these processes underlie significant changes in the promotion of innovative products and information and communication technologies in developed and developing countries. It has been proven that an unfavourable institutional environment stands out as the main reason for the slowdown in the digitalisation of the Ukrainian economy and the consolidation and concentration of business capital. Given this, there is a pressing scientific interest in the rationale, development and solutions in the digital economy with appropriate institutional support from state policy to improve the structure and quality of capital. The focus is on the peculiarities of the formation of digital business structures, in particular platform-type structures, as well as on the institutional design that determines the rules for the consolidation and concentration of capital in such structures. It has been found that digital technologies are changing the very nature of business structures and their behaviour in virtual life, with a transition to digital platforms, virtual business mobility and data exchange as a new form of capital. This is evidence that the digital economy is transferring capital and the activities of business structures from the real to the virtual world. The object of this study is the consolidation and concentration of capital, and the subject of the study is the essential characteristics of the digital economy, the institutional design that determines the rules of capital consolidation and concentration, and methods of managing them. Methods for managing the processes of capital consolidation and concentration are outlined, taking into account the specifics of the formation of digital business structures. The impact of new digital technologies on the consolidation and concentration of capital to ensure the financing of innovative renewal and restructuring of the economy is shown.

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