

# LEGAL PROTECTION IN ALGORITHMIC CONSUMER MARKETS: A SYSTEMIC APPROACH TO PLATFORM LIABILITY AND DIGITAL CONTRACTS

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## ABSTRACT

The relevance of this study stems from the transformational changes in consumer legal relations in the context of digitalization and the development of the platform economy, which are accompanied by an increase in the structural vulnerability of consumers and a decrease in the effectiveness of traditional legal protection mechanisms. The purpose of the study is to substantiate directions for improving legal mechanisms for consumer protection, and the subject of the study is defined as consumer legal relations arising in the digital and platform environment. The theoretical basis of the study is the provisions of modern consumer law doctrine, the concept of structural asymmetry in digital markets, behavioral approaches, and the development of European regulatory law, with the simultaneous application of general scientific and specific legal methods of analysis, synthesis, comparison, and generalization. The study demonstrated that digital platforms play an active role in shaping consumer choice, leading to a transformation of the right to informed choice, fair contract terms, and effective legal remedies. It has been demonstrated that personalized commercial practices and algorithmic ranking mechanisms undermine consumer autonomy and require preventive legal regulation. The feasibility of a functional approach to the responsibility of digital platforms and the development of collective mechanisms for consumer protection was substantiated. The practical significance of the results lies in their potential use for improving national legislation, harmonizing it with European Union legislation, and forming effective state policy for consumer protection.

**Keywords:** *Consumer Protection, Digitalization, Platform Economy, Algorithmic Influence, Consumer Law, Collective Protection, Collective Consumer Interests, EU Alignment, Invalidity, Types of Invalidity, Consumer Interests; EU Alignment, Invalidity, Types of Invalidity*

## 1. INTRODUCTION

In the current environment of profound transformations in socio-economic relations caused by digitalization, globalization, the development of e-commerce, and the introduction of innovative business models, the importance of effective legal protection for consumers is growing significantly.

Changes in the formats of interaction between manufacturers, service providers, and consumers are accompanied by new threats to consumer rights, particularly in the areas of personal data protection, information asymmetry, the use of unfair contract terms, and limited access to effective legal protection mechanisms. In such circumstances, traditional legal

instruments governing consumer relations are increasingly proving to be insufficient or ineffective, requiring their scientific rethinking and adaptation to modern realities.

Despite extensive academic attention to digital consumer protection, a significant research gap remains. Existing studies often focus either on doctrinal analysis, regulatory harmonization with European Union law, or specific issues such as electronic contracts and unfair commercial practices. However, there is still no comprehensive legal assessment that integrates structural asymmetry, algorithmic influence, and platform accountability into a unified analytical framework. Therefore, the research problem addressed in this study is the inadequacy of traditional legal mechanisms for consumer protection in responding to structural and algorithm-driven risks in digital and platform markets.

The digitalization of civil turnover has significantly complicated traditional mechanisms for protecting consumer rights, since electronic contracts, algorithmic solutions and digital interfaces shift the emphasis from conscious expression of will to formal consent, which increases the risks of defective transactions [1], [2]. Unreliability of information, as well as information asymmetry in digital trade are independent manifestations of invalidity, which directly affect the validity of consumer consent. In turn, the lack of a clear normative definition of unreliability in Ukrainian law creates legal uncertainty and complicates the protection of rights in the digital environment.

The relevance of this study stems from the growing mismatch between the dynamics of transformational changes in the economy and the pace of updating the regulatory framework for consumer protection. In the digital economy, consumers often find themselves in a vulnerable position due to their limited ability to influence the content of contracts, the complexity of identifying violators, the cross-border nature of consumer legal relations, and low legal awareness. This increases the social significance of the problem and justifies the need for a comprehensive scientific analysis of legal mechanisms for consumer protection, taking into account current transformational processes.

The problem addressed by the study is the existence of systemic gaps and conflicts in the legal regulation of consumer relations, as well as the insufficient effectiveness of existing institutional mechanisms for consumer protection in the context of rapid technological and economic change.

Particular attention should be paid to ensuring a balance of interests between consumers and businesses, as well as harmonizing national legislation with international and European standards for consumer protection.

The aim of the study is to comprehensively justify ways to improve legal mechanisms for protecting consumer rights in the context of transformational changes by analyzing the impact of digitalization and the platform economy on legal relations with consumers and identifying gaps and contradictions in the current legal regulation.

The objective of the study is to evaluate the effectiveness of existing legal protection mechanisms and to justify systemic directions for their improvement in the context of digital transformation and the platform economy.

## 2. LITERATURE REVIEW

Contemporary scientific research on consumer protection increasingly considers this issue through the prism of transformational changes caused by digitalization, the development of the platform economy, and the algorithmization of market processes. In foreign literature, works devoted to changing the balance of responsibility between consumers, sellers, and digital platforms occupy a leading place. In particular, research on the economics of platform liability argues that classic models of tort and contractual liability are insufficient for digital markets, as platforms effectively shape the terms of transactions but avoid liability for harm to consumers [3]. A similar position is developed by Krämer [4], who emphasizes the need to revise the concept of a “passive intermediary” in light of the practice of the EU Court and new digital regulations.

An important body of literature addresses the issue of consumer vulnerability in the digital environment. Research on personalized marketing shows that the use of data and behavioral models allows businesses to exploit consumers’ cognitive limitations, calling into question the genuine voluntariness of their choices [5]. In this context, works devoted to “dark patterns” as a form of unfair commercial practice are of particular interest. Di Porto and Egberts [6] emphasizes that such practices harm not only individual consumers but also collective welfare, which requires stronger public law intervention. A systematic review of the literature by Isola and Esposito [7] confirms the absence of a single legal classification of dark patterns and emphasizes the need for their clear regulatory consolidation within

the framework of the Unfair Commercial Practices Directive.

Analytical reports from international organizations play a significant role in shaping contemporary scientific discourse. Organisation for Economic Co-operation and Development (further – OECD) documents show that online marketplaces are becoming key players in the consumer protection system, but their regulation remains fragmented and uneven across countries [8]. Further OECD research focuses on dark commercial patterns as a global problem that requires a coordinated international response [9]. BEUC analytical materials also confirm that current EU consumer law is not always effective in countering manipulative digital practices, especially in terms of law enforcement [10, 11].

A separate area of foreign research is devoted to personalized pricing and algorithmic demand management. An analytical report by the European Parliament shows that personalized prices can lead to hidden discrimination against consumers, which contradicts the principles of fairness and market transparency [12]. These findings are complemented by the provisions of new EU regulations, in particular the Digital Services and Digital Markets Regulations, which form a new architecture for consumer protection in the digital space [13, 14]. Also important is the General Product Safety Regulation, which expands the responsibilities of businesses regarding digital goods and services [15], while the Directive on representative actions strengthens the collective protection of consumer rights [16].

Ukrainian scientific research focuses mainly on adapting national legislation to European standards and analyzing the specifics of e-commerce. Thus, Pysmenna [17] analyzes in detail the problems of consumer protection in the field of online commerce, emphasizing the complexity of proving violations and identifying sellers. Kamaridna and Mohukalo [18] draw attention to the imperfection of legal regulation of electronic legal relations and the lack of effective pre-trial protection mechanisms. The works of Prysta and Yavorska [19] show that Ukrainian practice lags significantly behind EU standards in the field of electronic contracts, in particular with regard to consumer information.

The issue of unfair commercial practices in the digital environment is discussed in the works of Pozhodzhuk [20], which emphasizes the lack of clear criteria for their identification in national law. Rudenko and Trebukh [21] analyzes alternative

forms of consumer protection in the field of financial services, which is particularly relevant in the context of the growth of digital lending. More recent studies focus on the systemic challenges of digitalization. In particular, Gudyma-Pidverbetskaya [22] justifies the need for a comprehensive approach to consumer protection in the digital environment, while Dynyuk and Meniv [23] proposes directions for improving the legal regulation of e-commerce [24, 25, 26].

Current aspects of the impact of digitalization on the development of e-commerce and consumer law are discussed in the works of [28] and Gomonai [28], who emphasize the need to harmonize legislation with EU law. Petukhov [29] additionally emphasizes the prospects of alternative mechanisms for protecting consumer rights in contracts concluded through online platforms. The regulatory basis for these studies is the Law of Ukraine “On Electronic Commerce,” which, despite repeated amendments, still does not fully meet the challenges of the digital economy [30].

A summary of the analyzed literature shows that, despite significant scientific achievements, issues remain unresolved regarding the comprehensive assessment of the effectiveness of consumer protection in transformational conditions, the coordination of private and public law protection mechanisms, and the adaptation of national models to the transnational nature of digital markets. It is these gaps that necessitate further research within the chosen topic.

### 3. MATERIALS AND METHODS

The study used a combination of general scientific and specialized legal methods of cognition, in particular, the method of analysis and synthesis to identify the essence of transformational changes in consumer legal relations and systematize scientific approaches to consumer protection, the comparative legal method to compare national and European models of legal regulation, the formal legal method to study the content and structure of consumer law norms, and the generalization method to formulate conclusions and justify directions for improving legal mechanisms for consumer protection in the context of digitalization and the development of the platform economy.

The research design follows three analytical stages. First, conceptual analysis is used to identify structural features of digital consumer vulnerability and the impact of algorithmic systems on consumer behavior. Second, a comparative legal method is applied to evaluate differences between Ukrainian

and EU regulatory approaches to consumer protection in digital markets. Third, generalization and synthesis methods are used to formulate systemic recommendations for improving legal protection mechanisms.

#### 4. RESULTS

In contemporary scientific research, legal protection of consumer rights is viewed not only as a tool for compensating losses or restoring violated personal rights, but also as a systemic mechanism for ensuring fairness and stability in market relations in a dynamic socio-economic environment. Classic theoretical and legal approaches to consumer protection developed in the context of an industrial economy and were based on the idea of structural inequality between contracting parties, whereby professional market participants had informational, economic, and organizational advantages over consumers. This inequality led to the emergence of a compensatory model of consumer law, within which the state sought to restore the balance of interests through mandatory rules and special guarantees. However, the transformational changes associated with the digitalization of the economy, the development of platform business models, and the algorithmization of market processes are significantly changing the very nature of legal consumer relations.

Meanwhile, the existing national model of judicial and administrative protection of consumer rights in Ukraine, based on an individualistic approach, shows signs of systemic failure. According to the Study on the Demand for Justice and the Survey on the Level of Satisfaction with Justice in Ukraine, conducted by HiiL Innovating Justice in 2016 (used as a modern basic referent for the structure of legal problems of households in Ukraine), about 22% of the population had to deal with a certain problem as a consumer. According to the aggregate data of surveys and administrative statistics for 2018–2024, consumer issues (goods/services, housing and utilities services) are consistently among the most frequent legal problems of the population. At the same time, during 2024, the territorial bodies of the State Service of Ukraine for Food Safety and Consumer Protection received about 15.3 thousand proposals, appeals, complaints, and statements from consumers, which indicates a clear procedural apathy of consumers.

War, economic turbulence, destruction of infrastructure and abuse of monopolies generate millions of identical legal conflicts. Attempts to resolve these conflicts through the tools of individual

lawsuits or individual complaints lead to paralysis of the judicial system, a drain on economic resources and, most dangerously, increased social tension among the population, which feels defenseless in the face of systemic violations.

According to Chapter 20 “Consumer Rights Protection” of the Association Agreement between Ukraine, of the one part, and the European Union, the European Atomic Energy Community and their Member States, of the other part, ratified by the Law of Ukraine No. 1678-VII, Ukraine undertook obligation to ensure a high level of consumer protection and to achieve compatibility between the consumer protection systems of Ukraine and the EU Member States. Cooperation between the parties to the Association Agreement includes, in particular, both the application of expertise on legal and technical potential in the field of consumer protection with a view to implementing appropriate systems of legislation and market surveillance, and the promotion of the development of independent consumer associations and contacts between consumer representatives.

Under these conditions, the provisions of Directive (EU) 2020/1828 of the European Parliament and of the Council of 25 November 2020 on representative actions for the protection of the collective interests of consumers and repealing Directive 2009/22/EC will be subject to transposition into the national legislation of Ukraine.

Currently, the adopted new version of the Law of Ukraine “On Consumer Protection” of 2023 is aimed at the *acquis communautaire*, but its entry into force was postponed until the termination/cancellation of martial law, with the exception of certain provisions. Since August 2025, the draft Law of Ukraine “On the Protection of the Collective Interests of Consumers” is at the stage of public discussion.

Electronic contracts exacerbate the problem of formal compliance with the conditions for the validity of legal acts, since the technical fulfillment of requirements (clicking a button, accepting an offer) does not always correspond to the consumer's real awareness of the legal consequences. This requires a revision of the traditional criteria for the validity and invalidity of transactions.

One should note that the institution of declaring a legal act invalid remains relevant in the digital age, but requires adaptation to new forms of legal reality - automated solutions, smart contracts, digital platforms. At the same time, effective protection of consumer rights in digital trade is impossible without a systematic rethinking of invalidity as a legal

category, which should cover not only violations of formal requirements, but also defects in the information environment, algorithmic influence, and manipulative digital practices.

In overall, the study conducted a legal analysis of consumer relations, taking into account the provisions of current Ukrainian legislation and European Union legal acts that create a modern model of consumer protection in the digital environment. In particular, it was found that the Law of Ukraine “On Consumer Protection” establishes basic guarantees of the right to information, safety, and compensation for damages, but its provisions focus primarily on traditional offline relations and do not take into account the specific impact of algorithms and the intermediary model of the platform [30]. Similar limitations are also found in the Law of Ukraine “On Electronic Commerce,” which, although it regulates the conclusion of electronic contracts, does not provide for adequate mechanisms to determine the liability of digital platforms and does not contain effective tools to combat manipulative digital practices [31].

A comparative legal analysis with European Union legislation shows that modern legal regulation in consumer relations is increasingly based on a systematic and preventive approach. Therefore, Regulation (EU) 2022/2065 on Digital Services (Digital Services Act) and Regulation (EU) 2022/1925 on Digital Markets introduce extended obligations for large digital platforms regarding the transparency of algorithmic systems, fair trading practices, and an increased level of consumer protection [13, 14].

At the same time, Directive (EU) 2020/1828 on representative actions strengthens collective consumer protection mechanisms, which is fundamental in the context of mass and distributed digital security breaches [16]. The results obtained in the study confirm that the implementation of the above-mentioned European approaches into the national legislation of Ukraine should not be carried out formally, but taking into account real structural changes in legal relations with consumers in the digital economy.

In modern digital markets, inequality between parties is not only informational but also structural, since digital platforms not only mediate transactions but also shape market architecture, determine the rules of access to goods and services, and indirectly influence consumers’ economic choices. In foreign scientific literature, this phenomenon is referred to as the structural asymmetry of digital markets, which

requires a rethinking of traditional legal categories of consumer law [11].

The changing economic context has led to a transformation of theoretical approaches to defining the role and limits of legal protection of consumer rights. Although in the early stages of digitalization, a formal-adaptive model prevailed, which provided for the mechanical extension of traditional norms to e-commerce, modern research increasingly emphasizes the limitations of this approach. Formal consumer consent to the terms of an electronic contract does not guarantee either informed consent or genuine autonomy of choice, as consumer behavior is increasingly shaped by algorithmic decisions and personalized commercial practices [5].

The issue of digital platform compliance is particularly relevant in contemporary theory. In classical civil law doctrine, platforms have long been considered neutral intermediaries, immune from the actions of third parties. However, economic analysis of the platform economy shows that these entities have significant control over transaction conditions, prices, and information flows, and therefore cannot be considered passive market participants [3]. In this regard, scientific works justify the need for a functional approach to determining liability, in which the key criterion will be the actual influence of the business entity on the formation and implementation of consumer legal relations [4].

Interdisciplinary research into unfair commercial practices in the digital environment, particularly so-called dark patterns, has made a significant contribution to the development of contemporary doctrine. These practices, based on manipulative interface design and behavioral incentives, undermine consumer autonomy and reduce the effectiveness of traditional seller disclosure obligations. Studies emphasize that the harm resulting from such practices is not only individual but also collective, as they disrupt the functioning of the market as a whole [6]. At the same time, systematic literature reviews indicate that there is no single approach to the legal classification of dark patterns, which complicates their regulation and enforcement [7].

Analytical reports by international organizations confirm scientific findings regarding the limitations of traditional consumer protection mechanisms in the digital environment. OECD documents emphasize that online trading platforms combine the functions of a private regulator and an economic intermediary, creating new forms of harm to consumers that are not covered by traditional private

law instruments [8], [9]. These trends have formed the basis for the development of a new regulatory approach in European Union law, which focuses on systemic and preventive consumer protection.

The adoption of the Digital Services Regulation and the Digital Markets Regulation reflects a shift from reactive to preventive regulation, where consumer protection is integrated into broader policies to ensure fairness and transparency in digital markets [13, 14]. Of additional importance are the General Product Safety Regulation, which extends consumer protection to digital goods and services, and the Representative Redress Directive, which strengthens collective redress mechanisms [15], [16]. However, studies show that even new regulatory instruments do not eliminate all risks,

especially in the areas of personalized pricing and cross-border digital relations [12].

Ukrainian consumer protection doctrine is undergoing active transformation but remains largely dogmatic. Ukrainian scholars focus primarily on harmonizing national legislation with EU legislation and analyzing the application of standards in e-commerce [17, 18]. Studies of electronic contracts point to significant gaps in the regulation of disclosure obligations and mechanisms for proving consumer rights violations, which reduces the effectiveness of legal protection [19]. At the same time, domestic theory remains underdeveloped in addressing issues of algorithmic influence, behavioral manipulation, and collective harm [22].

Table 1: Evolution of theoretical and legal approaches to consumer protection in a transitional economy

Stage of development	Theoretical paradigm	Key idea of protection	Main legal instrument	Main limitations
Industrial economy	Compensatory	Protection of the weaker party to the contract	Mandatory rules, information obligations	Ignoring behavioral and technological factors
Early digitalization	Formal-adaptive	Extension of classic norms to e-commerce	Electronic contract	Formal consent without real autonomy
Platform economy	Functional	Assessment of the actual impact of the entity	Extension of platform liability	Difficulty of proving control
Algorithmic markets	Behavior-oriented	Protecting autonomy of will	Prohibition of manipulative practices	Uncertainty of legal categories
The current stage	Systemic prevention	Collective and structural protection	EU regulatory acts	Risk of excessive regulation

Source: compiled by the author

The evolution of theoretical and legal approaches to consumer protection demonstrates a shift from a compensatory model focused on individual redress to a systemic and preventive approach aimed at eliminating structural risks in digital markets. Compensation and formally adaptive paradigms have proven to be limited in the context of digitalization, as they do not provide true consumer autonomy. The further development of the platform

and algorithmic economy has led to the development of functional and behavioral approaches that shift the focus to the actual influence of market players and the prevention of manipulative practices. The current systemic and preventive approach summarizes these trends but requires a balance between effective consumer protection and the prevention of excessive regulatory pressure.

Table 2: Comparative characteristics of theoretical and legal approaches to consumer protection

Criterion	Foreign doctrine	Ukrainian doctrine	Theoretical consequences
Object of analysis	Structural asymmetries of digital markets	Norms and practice of their application	The need for systematic analysis
Methodology	Interdisciplinary	Dogmatic	Integration of behavioral approaches
Role of the consumer	Vulnerable participant in the digital ecosystem	Formally equal party	Rethinking the concept of equality
Type of protection	Collective, preventive	Individual, reactive	Development of collective mechanisms

Role of the state	Active regulator	Reactive rulemaker	Strengthening of the regulatory function
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Source: compiled by the author

An analysis of contemporary scientific literature shows that theoretical and legal approaches to consumer protection are undergoing profound transformation due to digitalization and changes in the economic structure of markets. A key gap in research remains the absence of a comprehensive theory of digital consumer law that would integrate private law, public law, and behavioral approaches. Filling this gap provides a theoretical basis for further research on the impact of digitalization on the realization of consumer rights and the justification of effective legal mechanisms for their protection in the context of transformational changes.

Digitalization and the development of the platform economy are significantly changing the ways in which consumer rights are exercised, transforming the very architecture of the market and the mechanisms that shape consumer choice. In the traditional model, consumers exercise their rights to information, safety, and fair contractual terms primarily through interaction with a specific seller or service provider. However, in the digital environment, the key “organizer” of transactions is increasingly becoming the platform, which simultaneously moderates access to sellers, determines the rules of interaction, organizes information about goods and services, and manages the visibility of offers using ranking algorithms. This creates a new configuration of asymmetry: consumers become dependent not only on the goodwill of the seller, but also on the interface design and algorithmic decisions of the platform, reinforcing structural inequality in digital markets [11].

The first area where digitalization has had the greatest impact on the realization of consumer rights is the right to informed choice. Technically, the amount of information available on the Internet is growing, but its sheer volume, complexity, and fragmentation can limit consumers’ ability to effectively assess the risks and terms of contracts. At the same time, personalized marketing communications are becoming increasingly common, using data and behavioral models to pressure consumers and induce them to make a specific decision, thereby undermining autonomy of will and voluntary consent [5]. In this context, the phenomenon of manipulative design practices, known as dark patterns, is particularly relevant. They can alter the “trajectory” of consumer choice through

hidden settings, making it difficult to opt out and imposing additional options, effectively affecting the exercise of the right to withdraw from a contract, terminate a contract, and the transparency of purchase conditions [6]. A review of the legal literature shows that legal certainty remains a key issue: without clear classifications and criteria for identifying patterns of abuse, law enforcement agencies become inconsistent and preventive effectiveness is weakened [7].

A second key area is the right to fair contract terms and effective legal remedies. In the platform economy, contractual relationships are often triangular, with the platform blurring the lines of responsibility: it can be difficult for consumers to identify the appropriate defendant, especially in cross-border transactions. Economic and legal analysis of platform liability highlights that the concept of a ‘neutral intermediary’ does not always reflect the platform’s actual control over the terms of the transaction, and therefore traditional approaches to liability may not provide adequate consumer protection [3]. In the European debate, this strengthens the arguments in favor of a functional approach, where the platform’s actual influence on the flow of information and consumer behavior is decisive [4].

The third area of impact of digitalization is personalized pricing and algorithmic segmentation, which potentially alter the essence of the right to equal treatment in the market. European Parliament analytical materials highlight the risk of hidden discrimination and lack of transparency when different consumers may receive different pricing conditions without clear justification and without a real opportunity to verify the pricing logic [12]. This focuses attention on the need for greater transparency and accountability of algorithms as a condition for the effective implementation of consumer rights enshrined in the new EU regulatory architecture, in particular in the Digital Services Act and the Digital Markets Act [13], [14], as well as approaches to collective redress through representative action mechanisms [16].

In the Ukrainian context, the digitalisation of legal relations with consumers is reflected in the rapid development of e-commerce and platforms, while legal protection mechanisms often remain fragmented. Research points to difficulties in

proving online violations, information asymmetry, problems with seller identification, and limitations of pre-trial protection tools [17], [18]. A comparative analysis of electronic contracts shows that adaptation to EU standards requires not only a formal update of standards, but also the introduction of effective procedures to ensure the actual effectiveness of rights to information, refusal, refunds, and

compensation [19]. Thus, digitalisation and platformisation have a dual effect: they expand access to goods and services, but at the same time hinder the realisation of consumer rights through algorithmic and institutional barriers, which requires a comprehensive update of regulatory and law enforcement practices [8], [9].

Table 3: Impact of digitalisation and the platform economy on the realisation of consumer rights: risks, transformations and legal responses

Dimension of digitalization	Typical risk for consumers	How the enforcement of consumer rights is changing	Regulatory response	Sources
Algorithmic ranking and content personalization	Information asymmetry, “invisible” selection rules	The right to informed choice becomes dependent on algorithms rather than on the completeness of information disclosed by the seller	Accountability of platforms, transparency of recommendation systems within the DSA	Helberger et al. [11], European Parliament and the Council of the European Union [13]
Personalized marketing	Exploitation of vulnerabilities, nudging	Consent and “choice” may be formal; the exercise of the right to make an informed decision is complicated	Restricting manipulative practices, strengthening oversight	Strycharz and Duivenvoorde, [5], Organisation for Economic Co-operation and Development [9]
Dark patterns in interface design	Imposition, making refusal/cancellation difficult	Rights to refuse, terminate, transparent terms are effectively narrowed through the interface	Qualification as unfair practices, legal certainty	Di Porto and Egberts [6], Isola and Esposito [7], European Consumer Organisation [10]
Triangular relationship between platform, seller, and consumer	Blurring of responsibility, difficulty in identifying the defendant	Right to effective remedy complicated by multiple actors	Functional approach to liability, platform responsibilities	Lefouili and Madio [3], Krämer [4], European Parliament and the Council of the European Union [13]
Personalized pricing	Lack of transparency, hidden discrimination	The right to fair market conditions is undermined by different prices for different groups	Transparency of commercial practices, control of gatekeepers in the DMA	Rott et al. [12], European Parliament and the Council of the European Union [14]
Collective digital infringements	Diffuse harm, low motivation for individual lawsuits	Individual protection becomes ineffective in the case of mass infringements	Mechanisms for representative actions and collective redress	European Parliament and the Council of the European Union [16]
Ukrainian law enforcement e-commerce context	Evidence, seller identification, weak pre-trial mechanisms	Exercise of rights to return/refund depends on procedural capacity for protection	Improvement of procedures and harmonization with EU approaches	Pysmenna [17], Kamardina, [18], Prysta and Yavorska [19], Verkhovna Rada of Ukraine [30]

Source: compiled by the author

A summary of the impact of digitalization and the platform economy on the realization of consumer rights indicates a shift in the nature of consumer vulnerability from individual to structural. Key threats to consumers are associated not only with the

unscrupulous behavior of individual sellers, but also with the algorithmic mechanisms of platforms that shape the information environment, determine the visibility of goods and services, and indirectly influence economic choices. In such circumstances,

traditional protection tools focused on post-factum responses are insufficient.

The effective enforcement of consumer rights in the digital environment increasingly depends on preventive and collective mechanisms, including algorithm accountability, a functional approach to platform liability, and the development of collective protection tools. At the same time, the Ukrainian context is characterized by procedural and institutional constraints that reduce the practical effectiveness of consumer rights. This justifies the need for further improvement of national legal regulation, taking into account the European approach and the specific nature of the platform economy.

Current challenges related to digitalization, the platform economy, and the algorithmization of market processes require a qualitative update of legal mechanisms for consumer protection, as traditional tools focused on individual and post-factum responses are proving increasingly ineffective. Scientific literature indicates that the main problem of modern consumer law is the mismatch between the structural power of digital market players and the fragmentation of legal regulation, which does not take into account the real impact of platforms on consumer behavior [11]. In such conditions, the improvement of legal mechanisms should be based on a transition from a formal-normative approach to a systemic-preventive model of protection.

One of the key areas for improvement is strengthening the preventive role of consumer legislation. Unlike the classical model, which focuses on compensation for damages after rights have been violated, modern approaches focus on preventing structural risks arising in the digital environment. In particular, the regulation of algorithmic ratings, personalized advertising, and commercial recommendations is seen as a necessary condition for ensuring genuine consumer autonomy [5]. Scientific research emphasizes that without accountability for algorithms and transparency of their operating criteria, the right to informed choice becomes merely declarative.

Another important area is the introduction of a functional approach to the responsibility of digital platforms. Works on the economics and law of platforms argue that the formal classification of a

platform as an “intermediary” does not reflect its actual role in shaping transaction conditions and the information environment [3]. In this context, it is proposed to focus not on the legal status of the business entity, but on the actual level of control over the interaction between the seller and the consumer. This approach is already reflected in European regulations, in particular in the Digital Services Act, which imposes additional obligations on platforms to monitor content and commercial practices [13].

Particular attention should be paid to improving mechanisms for combating unfair commercial practices in the digital environment. Research shows that manipulative interfaces and so-called dark patterns significantly reduce the effectiveness of traditional disclosure obligations and undermine the voluntary nature of consumer consent [6]. In this context, there is a justified need to clarify the provisions governing such practices and to clearly classify them as violations of consumer protection legislation, which should increase legal certainty and promote the uniform application of the law [7].

An important area for improvement is the development of mechanisms for collective consumer protection. Digital markets are characterized by massive but scattered violations, in which individual lawsuits lose their effectiveness due to low economic feasibility. Therefore, in academic literature, collective protection is considered a key tool for restoring the balance of power between consumers and large digital entities [9]. The introduction of representative action and collective redress mechanisms into EU legislation demonstrates the potential of this approach to enhance the effective enforcement of consumer rights [16].

In the context of Ukraine, efforts to improve legal mechanisms for consumer protection must take into account both European standards and domestic institutional constraints. Research shows that the main challenges remain difficulties in proving violations in e-commerce, the weakness of pre-trial mechanisms, and the fragmentation of legal regulation [17], [18]. In this regard, improvements should be aimed not only at updating substantive law, but also at developing procedural guarantees that ensure the effective exercise of the right to refuse to accept goods, return goods, and claim damages [19].

Table 4: Areas for improvement of legal mechanisms for consumer protection in the context of digital transformation

Current challenge	The problem of consumer rights enforcement	Areas for improvement of legal mechanisms	Regulatory development benchmark
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Algorithmic influence on choice	Formal informed consent	Accountability and transparency of algorithms	Digital Services Act
Platform intermediary model	Blurring of responsibility	Functional approach to liability	EU practice
Manipulative digital practices	Undermining autonomy of will	Clear legal classification of dark patterns	Unfair Commercial Practices
Mass digital violations	Ineffectiveness of individual protection	Collective protection mechanisms	Representative actions
Ukrainian e-commerce	Weakness of protection procedures	Strengthening procedural guarantees	Harmonization with EU law

Source: compiled by the author

Improving legal mechanisms for consumer protection in the face of modern challenges must be based on a comprehensive combination of preventive regulations, a functional approach to liability, collective forms of protection, and the development of effective procedures for ensuring rights. Such integrated recommendations can ensure the genuine effectiveness of consumer rights in the digital and platform economy.

## 5. DISCUSSION

The results of the study show that digitalization and the growth of the platform economy are leading to a systemic transformation of the mechanisms for implementing and protecting consumer rights. It has been found that traditional legal instruments, which focus on individual and ex post facto restoration of violated rights, are increasingly inadequate for addressing the problem of modern digital violations, which are algorithmic, mass, and structural in nature. This interpretation is consistent with the findings [11] that digital platforms create infrastructural power capable of influencing consumer choices beyond traditional contractual structures.

The results of the study also confirm the limited effectiveness of the information model of consumer protection in the digital environment. In particular, it was found that an increase in the amount of information does not guarantee an increase in consumer awareness, as personalized marketing and behavioral technologies can significantly influence voluntary consent. This is consistent with the findings of Strycharz and Duivenvoorde [5], which emphasize the exploitation of consumer security vulnerabilities through personalized communication. At the same time, the broader conclusion of this study is that these practices have not only an individual but also a systemic impact on the functioning of the consumer market, which requires preventive regulatory decisions.

The conclusions regarding the liability of digital platforms are consistent with the economic and legal approaches proposed by Lefouili and Madio [3], which justify the appropriateness of a functional approach to platform liability in the context of their actual control over transactions. In addition, this study finds that the formal division of roles between the platform and the seller significantly hinders the consumer’s right to effective legal protection, confirming the position of Krämer [4] that the concept of a “neutral intermediary” cannot be applied in digital markets.

The study focuses in particular on manipulative digital practices. The results confirm the conclusions of Di Porto and Egberts [6] that dark patterns harm not only individual consumers but also collective welfare. At the same time, the study’s findings complement these conclusions by demonstrating that the lack of a clear legal definition of such practices directly affects the exercise of the right to withdraw from a contract and fair contract terms. This is consistent with a systematic review by Isola and Esposito [7], which highlights the problem of legal uncertainty in the regulation of dark patterns.

A comparison of the results with materials of Organisation for Economic Co-operation and Development [8], [9] shows that they are in line with international trends regarding collective and preventive mechanisms for consumer protection. In particular, the conclusion about the low effectiveness of individual compensation in cases of mass digital security violations is consistent with the logic of introducing representative actions into EU legislation [16]. At the same time, the study complements these approaches by emphasizing the need to combine collective protection with effective procedural guarantees and supervisory powers of regulators.

A comparison with Ukrainian academic research shows that the results of these studies generally confirm the conclusions about the existence of gaps

in the legal regulation of e-commerce [17], [18]. At the same time, unlike most domestic studies, which focus primarily on the formal harmonization of regulations, the results emphasize the need for a systematic rethinking of legal mechanisms, taking into account the structural features of the platform economy and the impact of algorithms on consumer behavior [19].

Unlike earlier studies that primarily emphasize formal harmonization with EU law [17], [19], this research offers a systemic evaluation of legal protection mechanisms by integrating doctrinal, behavioral, and regulatory perspectives. The study contributes to the literature by conceptualizing structural vulnerability as a defining feature of digital consumer markets and by proposing a functional approach to platform liability based on actual influence over consumer relations rather than formal legal status [3], [11].

An unintended outcome of the study is the finding that increasing regulatory complexity may impose additional compliance burdens on smaller digital businesses, potentially affecting competition and innovation. This finding complements OECD research emphasizing the need to balance effective consumer protection with sustainable regulatory frameworks [8], [9].

Thus, the results of the study are generally consistent with the key assumptions of contemporary foreign and domestic academic literature, and also expand on them by integrating theoretical, legal, economic, and regulatory aspects of the analysis. This allows us to interpret the improvement of legal mechanisms for consumer protection as an element of building a comprehensive model of consumer protection that meets today's digital challenges.

This study has several limitations. First, it relies primarily on doctrinal and comparative legal analysis rather than empirical data. Second, the rapidly evolving regulatory environment may affect the long-term applicability of some findings, particularly in the context of ongoing implementation of EU digital regulations [13], [14]. Third, the focus on EU and Ukrainian legal frameworks limits broader generalization to other jurisdictions.

## 6. PRACTICAL IMPLEMENTATION

The findings have practical implications for policymakers, regulators, and digital market participants. Legislators should prioritize preventive regulation of algorithmic practices and strengthen liability frameworks for digital platforms in line with

EU regulatory approaches. Regulatory authorities should enhance enforcement tools addressing collective digital harms and improve procedural guarantees for consumer protection in cross-border transactions. For industry actors, the study highlights the importance of improving transparency in algorithmic systems, redesigning digital interfaces in accordance with fairness standards, and strengthening compliance mechanisms addressing manipulative digital practices.

## 7. CONCLUSIONS

The article argues that contemporary transformational changes caused by digitalization and the development of the platform economy are fundamentally changing the nature of consumer legal relations and require a rethinking of traditional legal mechanisms for consumer protection. The article demonstrates that classical approaches focused on individual and post-factum protection are insufficient in the context of the influence of algorithms, information asymmetry, and blurred responsibility between participants in the digital market.

The study achieves its objective by demonstrating that digital platforms function not merely as intermediaries but as active actors shaping consumer choice and market structure. It substantiates the need for systemic and preventive legal regulation combining algorithmic accountability, a functional approach to platform liability, and collective protection mechanisms

The study demonstrates that digital platforms are not only intermediaries but also active agents that shape consumer choice, which increases the structural vulnerability of consumers and hinders the realization of their rights to informed choice, fair contract terms, and effective legal remedies. The article argues that personalized commercial practices, algorithmic ratings, and manipulative interface design undermine consumer autonomy and require clear legal classification and preventive regulation.

The article demonstrates that the improvement of legal mechanisms for consumer protection should be based on a systematic and preventive approach, combining algorithmic accountability, a functional approach to the responsibility of digital platforms, and the development of collective forms of protection. A comparative analysis with international studies confirmed the consistency of the results obtained with current international trends and also revealed methodological limitations of the

national doctrine arising from its dominant dogmatic nature. It was concluded that the effective implementation of consumer rights in the digital environment requires not only the harmonization of national legislation with EU law, but also a comprehensive update of procedural and institutional mechanisms to ensure compliance with consumer rights. Overall, the findings support the transition toward a comprehensive legal framework for consumer protection in digital markets and provide theoretical and practical guidance for improving regulatory and institutional mechanisms in line with contemporary digital challenges.

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